

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 97   | 251 | 08/09/1997 | 42122.30847             | 0.00018135   | 1.79667              | 289.68604                     | 48.42549                     | 356.91729             | 347.91905           |
| METEOSAT-7 | 97   | 258 | 15/09/1997 | 42167.84447             | 0.00017954   | 1.78085              | 289.53511                     | 301.04481                    | 113.30913             | 349.88069           |
| METEOSAT-7 | 97   | 265 | 22/09/1997 | 42165.60962             | 0.00023931   | 1.77568              | 289.47915                     | 295.54865                    | 125.71423             | 349.83569           |
| METEOSAT-7 | 97   | 272 | 29/09/1997 | 42167.02511             | 0.00020283   | 1.76168              | 289.37412                     | 322.76164                    | 105.43002             | 349.76218           |
| METEOSAT-7 | 97   | 279 | 06/10/1997 | 42166.13389             | 0.00015874   | 1.75961              | 289.39611                     | 295.23427                    | 139.80499             | 349.73480           |
| METEOSAT-7 | 97   | 286 | 13/10/1997 | 42166.80823             | 0.00023675   | 1.74443              | 289.39539                     | 312.10487                    | 129.82078             | 349.72402           |
| METEOSAT-7 | 97   | 293 | 20/10/1997 | 42165.74093             | 0.00026447   | 1.73954              | 289.57375                     | 309.76750                    | 138.85930             | 349.70706           |
| METEOSAT-7 | 97   | 300 | 27/10/1997 | 42166.46575             | 0.00026472   | 1.72561              | 289.58836                     | 330.46129                    | 125.04455             | 349.70429           |
| METEOSAT-7 | 97   | 307 | 03/11/1997 | 42166.49423             | 0.00019313   | 1.72129              | 289.82730                     | 314.70045                    | 147.45055             | 349.69165           |
| METEOSAT-7 | 97   | 314 | 10/11/1997 | 42165.78335             | 0.00029851   | 1.70399              | 289.90839                     | 321.58618                    | 147.38276             | 349.69361           |
| METEOSAT-7 | 97   | 321 | 17/11/1997 | 42166.30473             | 0.00029058   | 1.69463              | 290.26991                     | 323.20813                    | 152.29467             | 349.69141           |
| METEOSAT-7 | 97   | 328 | 24/11/1997 | 42165.74510             | 0.00031335   | 1.67719              | 290.32478                     | 337.73016                    | 144.62832             | 349.70377           |
| METEOSAT-7 | 97   | 335 | 01/12/1997 | 42166.75264             | 0.00021735   | 1.66677              | 290.67736                     | 329.35857                    | 159.54773             | 349.70538           |
| METEOSAT-7 | 97   | 342 | 08/12/1997 | 42165.03278             | 0.00034069   | 1.64525              | 290.71190                     | 330.35480                    | 165.42621             | 349.71507           |
| METEOSAT-7 | 97   | 349 | 15/12/1997 | 42166.80477             | 0.00030114   | 1.62984              | 291.08743                     | 334.57309                    | 167.74435             | 349.72691           |
| METEOSAT-7 | 97   | 356 | 22/12/1997 | 42165.12862             | 0.00034165   | 1.60950              | 291.01035                     | 344.82880                    | 164.49479             | 349.75512           |
| METEOSAT-7 | 97   | 363 | 29/12/1997 | 42166.77896             | 0.00022877   | 1.59387              | 291.28957                     | 340.56252                    | 175.39924             | 349.77134           |
| METEOSAT-7 | 98   | 5   | 05/01/1998 | 42164.65821             | 0.00036106   | 1.57071              | 291.12320                     | 337.40747                    | 185.63750             | 349.78640           |
| METEOSAT-7 | 98   | 12  | 12/01/1998 | 42166.87616             | 0.00030297   | 1.55233              | 291.35186                     | 346.16282                    | 183.58798             | 349.81903           |
| METEOSAT-7 | 98   | 19  | 19/01/1998 | 42164.88114             | 0.00034397   | 1.53301              | 291.06039                     | 353.54334                    | 183.43595             | 349.85392           |
| METEOSAT-7 | 98   | 26  | 26/01/1998 | 42166.46826             | 0.00022885   | 1.51664              | 291.17571                     | 355.25067                    | 188.54807             | 349.88676           |
| METEOSAT-7 | 98   | 33  | 02/02/1998 | 42164.70072             | 0.00035354   | 1.49606              | 290.82796                     | 347.57876                    | 203.49094             | 349.90805           |
| METEOSAT-7 | 98   | 40  | 09/02/1998 | 42166.48946             | 0.00029262   | 1.47834              | 290.92172                     | 356.98468                    | 200.94173             | 349.95713           |
| METEOSAT-7 | 98   | 47  | 16/02/1998 | 42165.05202             | 0.00031573   | 1.46531              | 290.49558                     | 2.15340                      | 203.15066             | 350.00745           |
| METEOSAT-7 | 98   | 54  | 23/02/1998 | 42165.79158             | 0.00021617   | 1.45242              | 290.54249                     | 7.98598                      | 204.22590             | 350.06160           |
| METEOSAT-7 | 98   | 61  | 02/03/1998 | 42165.07855             | 0.00031905   | 1.43974              | 290.13172                     | 354.34051                    | 225.21731             | 350.09668           |
| METEOSAT-7 | 98   | 68  | 09/03/1998 | 42165.81156             | 0.00026558   | 1.42526              | 290.21034                     | 8.06816                      | 218.37215             | 350.15828           |
| METEOSAT-7 | 98   | 75  | 16/03/1998 | 42165.50155             | 0.00027147   | 1.41927              | 289.88264                     | 7.21613                      | 226.51870             | 350.22604           |
| METEOSAT-7 | 98   | 82  | 23/03/1998 | 42164.99454             | 0.00019698   | 1.40870              | 290.04154                     | 17.15165                     | 223.39877             | 350.30194           |
| METEOSAT-7 | 98   | 89  | 30/03/1998 | 42165.62491             | 0.00028847   | 1.40092              | 289.82357                     | 355.09338                    | 252.62664             | 350.35544           |
| METEOSAT-7 | 98   | 96  | 06/04/1998 | 42164.96676             | 0.00024734   | 1.38695              | 290.04776                     | 13.18279                     | 241.29346             | 350.43801           |
| METEOSAT-7 | 98   | 103 | 13/04/1998 | 42165.89211             | 0.00022748   | 1.38339              | 289.97713                     | 7.40924                      | 254.12647             | 350.52921           |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 98   | 110 | 20/04/1998 | 42164.28521             | 0.00016963   | 1.37109              | 290.31454                     | 21.84366                     | 246.35394             | 350.63089           |
| METEOSAT-7 | 98   | 117 | 27/04/1998 | 42165.94110             | 0.00025022   | 1.36445              | 290.35247                     | 351.31690                    | 283.82658             | 350.71716           |
| METEOSAT-7 | 98   | 124 | 04/05/1998 | 42164.17600             | 0.00020942   | 1.34724              | 290.70880                     | 15.94623                     | 265.84786             | 350.82629           |
| METEOSAT-7 | 98   | 131 | 11/05/1998 | 42165.87367             | 0.00017921   | 1.34224              | 290.85627                     | 1.17950                      | 287.48718             | 350.94838           |
| METEOSAT-7 | 98   | 138 | 18/05/1998 | 42108.72859             | 0.00021835   | 1.32512              | 291.26759                     | 334.30511                    | 324.17949             | 354.27973           |
| METEOSAT-7 | 98   | 145 | 25/05/1998 | 42110.47026             | 0.00035040   | 1.31490              | 291.45376                     | 324.90915                    | 345.37529             | 359.36721           |
| METEOSAT-7 | 98   | 152 | 01/06/1998 | 42167.17526             | 0.00027241   | 1.29280              | 291.81521                     | 60.00035                     | 258.47549             | 1.02036             |
| METEOSAT-7 | 98   | 159 | 08/06/1998 | 42168.22018             | 0.00019606   | 1.28322              | 291.99058                     | 60.66129                     | 264.39870             | 0.87986             |
| METEOSAT-7 | 98   | 166 | 15/06/1998 | 42166.63073             | 0.00021142   | 1.26108              | 292.28485                     | 70.83931                     | 260.72161             | 0.77457             |
| METEOSAT-7 | 98   | 173 | 22/06/1998 | 42167.38841             | 0.00017969   | 1.24782              | 292.45886                     | 33.98000                     | 304.22205             | 0.68906             |
| METEOSAT-7 | 98   | 180 | 29/06/1998 | 42166.06223             | 0.00023195   | 1.22307              | 292.57294                     | 56.83775                     | 288.10352             | 0.64139             |
| METEOSAT-7 | 98   | 187 | 06/07/1998 | 42166.07597             | 0.00014786   | 1.21102              | 292.68367                     | 59.03379                     | 292.69110             | 0.63476             |
| METEOSAT-7 | 98   | 194 | 13/07/1998 | 42165.79161             | 0.00016819   | 1.18689              | 292.71174                     | 61.28750                     | 297.33926             | 0.66363             |
| METEOSAT-7 | 98   | 201 | 20/07/1998 | 42165.32577             | 0.00016028   | 1.17308              | 292.77115                     | 21.18136                     | 344.33952             | 0.71623             |
| METEOSAT-7 | 98   | 208 | 27/07/1998 | 42165.16287             | 0.00020628   | 1.14966              | 292.58110                     | 45.96664                     | 326.73158             | 0.80264             |
| METEOSAT-7 | 98   | 215 | 03/08/1998 | 42164.00410             | 0.00010999   | 1.13881              | 292.56048                     | 43.70717                     | 336.03759             | 0.92792             |
| METEOSAT-7 | 98   | 222 | 10/08/1998 | 42169.75615             | 0.00009529   | 1.11689              | 292.31416                     | 354.52739                    | 32.21786              | 0.78180             |
| METEOSAT-7 | 98   | 229 | 17/08/1998 | 42167.97044             | 0.00017804   | 1.10551              | 292.31860                     | 328.21971                    | 65.19274              | 0.55335             |
| METEOSAT-7 | 98   | 236 | 24/08/1998 | 42168.79137             | 0.00015702   | 1.08736              | 291.91456                     | 0.09701                      | 40.42245              | 0.35661             |
| METEOSAT-7 | 98   | 243 | 31/08/1998 | 42166.95394             | 0.00011949   | 1.08005              | 291.90467                     | 319.80204                    | 87.46420              | 0.19401             |
| METEOSAT-7 | 98   | 250 | 07/09/1998 | 42168.90780             | 0.00016758   | 1.06310              | 291.55056                     | 343.09698                    | 71.29673              | 0.06825             |
| METEOSAT-7 | 98   | 257 | 14/09/1998 | 42166.23141             | 0.00024375   | 1.05465              | 291.70478                     | 328.15070                    | 92.88720              | 359.96765           |
| METEOSAT-7 | 98   | 264 | 21/09/1998 | 42167.58545             | 0.00021561   | 1.04238              | 291.33911                     | 352.74392                    | 75.48884              | 359.89817           |
| METEOSAT-7 | 98   | 271 | 28/09/1998 | 42165.69340             | 0.00018347   | 1.03759              | 291.57545                     | 325.95290                    | 108.90356             | 359.85956           |
| METEOSAT-7 | 98   | 278 | 05/10/1998 | 42167.45297             | 0.00024988   | 1.02445              | 291.35887                     | 342.41187                    | 99.55821              | 359.85817           |
| METEOSAT-7 | 98   | 285 | 12/10/1998 | 42164.74994             | 0.00030951   | 1.01602              | 291.86115                     | 332.49884                    | 115.89067             | 359.88141           |
| METEOSAT-7 | 98   | 292 | 19/10/1998 | 42166.05434             | 0.00028114   | 1.00612              | 291.73515                     | 351.93379                    | 103.53716             | 359.93837           |
| METEOSAT-7 | 98   | 299 | 26/10/1998 | 42164.68035             | 0.00024418   | 0.99966              | 292.33663                     | 334.48148                    | 127.37329             | 0.02508             |
| METEOSAT-7 | 98   | 306 | 02/11/1998 | 42165.23773             | 0.00033529   | 0.98650              | 292.35488                     | 343.91336                    | 124.94601             | 0.14920             |
| METEOSAT-7 | 98   | 313 | 09/11/1998 | 42163.58261             | 0.00036640   | 0.97392              | 293.18191                     | 338.43765                    | 136.64413             | 0.29969             |
| METEOSAT-7 | 98   | 320 | 16/11/1998 | 42164.18017             | 0.00034651   | 0.96212              | 293.26842                     | 353.75941                    | 128.32214             | 0.48689             |
| METEOSAT-7 | 98   | 327 | 23/11/1998 | 42163.69714             | 0.00029422   | 0.94980              | 294.10925                     | 342.57647                    | 145.78183             | 0.70515             |

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|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 98   | 334 | 30/11/1998 | 42162.74357             | 0.00040942   | 0.93372              | 294.21705                     | 347.01790                    | 148.38630             | 0.95930             |
| METEOSAT-7 | 98   | 341 | 07/12/1998 | 42168.68269             | 0.00026922   | 0.91474              | 295.13973                     | 335.74547                    | 165.46219             | 0.78567             |
| METEOSAT-7 | 98   | 348 | 14/12/1998 | 42168.08002             | 0.00025808   | 0.89950              | 295.21306                     | 354.48062                    | 153.34367             | 0.57571             |
| METEOSAT-7 | 98   | 355 | 21/12/1998 | 42168.56318             | 0.00018965   | 0.88095              | 295.99278                     | 341.27245                    | 172.49385             | 0.39738             |
| METEOSAT-7 | 98   | 362 | 28/12/1998 | 42166.62925             | 0.00031810   | 0.86260              | 295.92625                     | 347.60979                    | 172.97344             | 0.24762             |
| METEOSAT-7 | 99   | 4   | 04/01/1999 | 42167.96246             | 0.00027283   | 0.83903              | 296.62436                     | 347.64568                    | 179.02598             | 0.13398             |
| METEOSAT-7 | 99   | 11  | 11/01/1999 | 42166.19793             | 0.00028686   | 0.82310              | 296.42417                     | 3.56178                      | 170.13068             | 0.05430             |
| METEOSAT-7 | 99   | 18  | 18/01/1999 | 42167.40647             | 0.00019625   | 0.80185              | 296.88553                     | 356.43331                    | 183.64961             | 0.00593             |
| METEOSAT-7 | 99   | 25  | 25/01/1999 | 42165.06668             | 0.00033293   | 0.78555              | 296.50488                     | 357.50544                    | 189.82874             | 359.97633           |
| METEOSAT-7 | 99   | 32  | 01/02/1999 | 42167.02147             | 0.00026450   | 0.76218              | 296.81767                     | 0.86655                      | 193.06790             | 359.98936           |
| METEOSAT-7 | 99   | 39  | 08/02/1999 | 42164.66137             | 0.00029215   | 0.75061              | 296.34879                     | 14.03152                     | 187.31651             | 0.03405             |
| METEOSAT-7 | 99   | 46  | 15/02/1999 | 42165.99448             | 0.00019247   | 0.73155              | 296.51251                     | 12.76399                     | 195.39822             | 0.11218             |
| METEOSAT-7 | 99   | 53  | 22/02/1999 | 42163.89451             | 0.00032421   | 0.72116              | 296.03468                     | 7.58711                      | 208.04108             | 0.20056             |
| METEOSAT-7 | 99   | 60  | 01/03/1999 | 42165.51681             | 0.00025066   | 0.70184              | 296.11074                     | 15.08498                     | 207.50789             | 0.34179             |
| METEOSAT-7 | 99   | 67  | 08/03/1999 | 42163.58278             | 0.00027480   | 0.69608              | 295.58210                     | 24.64714                     | 205.54140             | 0.50935             |
| METEOSAT-7 | 99   | 74  | 15/03/1999 | 42164.20933             | 0.00018518   | 0.68085              | 295.76150                     | 29.51325                     | 207.59906             | 0.71326             |
| METEOSAT-7 | 99   | 81  | 22/03/1999 | 42163.01137             | 0.00029954   | 0.67570              | 295.66059                     | 15.43267                     | 228.88896             | 0.92242             |
| METEOSAT-7 | 99   | 88  | 29/03/1999 | 42169.27045             | 0.00010244   | 0.65961              | 295.87549                     | 17.38957                     | 233.52216             | 0.82827             |
| METEOSAT-7 | 99   | 95  | 05/04/1999 | 42168.36128             | 0.00010651   | 0.65803              | 296.09484                     | 25.23970                     | 232.14101             | 0.61743             |
| METEOSAT-7 | 99   | 102 | 12/04/1999 | 42167.80555             | 0.00004081   | 0.64381              | 296.58014                     | 64.49055                     | 199.13362             | 0.44703             |
| METEOSAT-7 | 99   | 109 | 19/04/1999 | 42167.85393             | 0.00014265   | 0.63950              | 297.14390                     | 1.27734                      | 268.51360             | 0.27841             |
| METEOSAT-7 | 99   | 116 | 26/04/1999 | 42167.12021             | 0.00007485   | 0.62288              | 297.64955                     | 43.85603                     | 232.22255             | 0.17258             |
| METEOSAT-7 | 99   | 123 | 03/05/1999 | 42167.43604             | 0.00006172   | 0.61993              | 298.50279                     | 33.11777                     | 248.93189             | 0.09769             |
| METEOSAT-7 | 99   | 130 | 10/05/1999 | 42165.76985             | 0.00004593   | 0.60343              | 299.28017                     | 116.70798                    | 171.42781             | 0.06192             |
| METEOSAT-7 | 99   | 137 | 17/05/1999 | 42166.94786             | 0.00010532   | 0.59612              | 300.42632                     | 350.95910                    | 302.89769             | 0.02971             |
| METEOSAT-7 | 99   | 144 | 24/05/1999 | 42165.09052             | 0.00005252   | 0.57617              | 301.10261                     | 77.17246                     | 222.92855             | 0.05079             |
| METEOSAT-7 | 99   | 151 | 31/05/1999 | 42166.31764             | 0.00001791   | 0.56905              | 302.34311                     | 22.56282                     | 283.25580             | 0.10947             |
| METEOSAT-7 | 99   | 158 | 07/06/1999 | 42164.02457             | 0.00005424   | 0.54895              | 303.12071                     | 155.05874                    | 156.97641             | 0.20405             |
| METEOSAT-7 | 99   | 165 | 14/06/1999 | 42165.74915             | 0.00008944   | 0.53745              | 304.58605                     | 326.21576                    | 351.35817             | 0.30858             |
| METEOSAT-7 | 99   | 172 | 21/06/1999 | 42163.36594             | 0.00003602   | 0.51481              | 305.10453                     | 120.75732                    | 203.34634             | 0.45711             |
| METEOSAT-7 | 99   | 179 | 28/06/1999 | 42164.81867             | 0.00003039   | 0.50347              | 306.51049                     | 250.84671                    | 78.94106              | 0.64748             |
| METEOSAT-7 | 99   | 186 | 05/07/1999 | 42162.66608             | 0.00006150   | 0.48125              | 306.92557                     | 192.49811                    | 143.99880             | 0.87195             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 99   | 193 | 12/07/1999 | 42170.01697             | 0.00009095   | 0.46722              | 308.39692                     | 32.12341                     | 309.59580             | 0.66589             |
| METEOSAT-7 | 99   | 200 | 19/07/1999 | 42167.99025             | 0.00013311   | 0.44454              | 308.45523                     | 92.05116                     | 256.25383             | 0.41026             |
| METEOSAT-7 | 99   | 207 | 26/07/1999 | 42168.88755             | 0.00006477   | 0.43176              | 309.74308                     | 89.26369                     | 264.44479             | 0.20191             |
| METEOSAT-7 | 99   | 214 | 02/08/1999 | 42167.61946             | 0.00007846   | 0.41104              | 309.56926                     | 107.02447                    | 253.57815             | 0.02251             |
| METEOSAT-7 | 99   | 221 | 09/08/1999 | 42168.17015             | 0.00007734   | 0.39709              | 310.98583                     | 0.91277                      | 5.01827               | 359.86780           |
| METEOSAT-7 | 99   | 228 | 16/08/1999 | 42167.10741             | 0.00008823   | 0.37879              | 310.47157                     | 81.22882                     | 291.98373             | 359.73538           |
| METEOSAT-7 | 99   | 235 | 23/08/1999 | 42166.94773             | 0.00001425   | 0.36761              | 311.65214                     | 59.93438                     | 318.91226             | 359.65047           |
| METEOSAT-7 | 99   | 242 | 30/08/1999 | 42167.02756             | 0.00003134   | 0.35193              | 311.08226                     | 53.70886                     | 332.54765             | 359.59082           |
| METEOSAT-7 | 99   | 249 | 06/09/1999 | 42166.28940             | 0.00010879   | 0.34051              | 312.70881                     | 333.82793                    | 57.67151              | 359.56079           |
| METEOSAT-7 | 99   | 256 | 13/09/1999 | 42166.36596             | 0.00006979   | 0.32899              | 312.09083                     | 40.53037                     | 358.47322             | 359.54738           |
| METEOSAT-7 | 99   | 263 | 20/09/1999 | 42165.09167             | 0.00005034   | 0.32105              | 313.73805                     | 312.51871                    | 91.77180              | 359.58200           |
| METEOSAT-7 | 99   | 270 | 27/09/1999 | 42166.47570             | 0.00008042   | 0.31146              | 313.41717                     | 351.45771                    | 60.11275              | 359.64161           |
| METEOSAT-7 | 99   | 277 | 04/10/1999 | 42164.43142             | 0.00016329   | 0.30221              | 315.94114                     | 325.58806                    | 90.45044              | 359.73413           |
| METEOSAT-7 | 99   | 284 | 11/10/1999 | 42165.40620             | 0.00010582   | 0.29686              | 316.08501                     | 5.94867                      | 56.95560              | 359.84426           |
| METEOSAT-7 | 99   | 291 | 18/10/1999 | 42163.49053             | 0.00010770   | 0.29096              | 318.83967                     | 314.89860                    | 112.30844             | 0.00224             |
| METEOSAT-7 | 99   | 298 | 25/10/1999 | 42165.43832             | 0.00015610   | 0.28506              | 319.65507                     | 341.63931                    | 91.83659              | 0.18701             |
| METEOSAT-7 | 99   | 305 | 01/11/1999 | 42162.64544             | 0.00022497   | 0.27640              | 323.63182                     | 321.72547                    | 114.89298             | 0.40685             |
| METEOSAT-7 | 99   | 312 | 08/11/1999 | 42164.01225             | 0.00016494   | 0.27346              | 325.14642                     | 349.55198                    | 92.69443              | 0.64991             |
| METEOSAT-7 | 99   | 319 | 15/11/1999 | 42167.93479             | 0.00008375   | 0.26777              | 329.32610                     | 259.87035                    | 184.94429             | 0.49831             |
| METEOSAT-7 | 99   | 326 | 22/11/1999 | 42169.27884             | 0.00010742   | 0.26283              | 331.51397                     | 314.44891                    | 134.88436             | 0.30534             |
| METEOSAT-7 | 99   | 333 | 29/11/1999 | 42166.82304             | 0.00016506   | 0.25364              | 337.05371                     | 296.17591                    | 154.35579             | 0.14399             |
| METEOSAT-7 | 99   | 340 | 06/12/1999 | 42168.03291             | 0.00008796   | 0.25107              | 339.82217                     | 335.89810                    | 118.63043             | 0.00981             |
| METEOSAT-7 | 99   | 347 | 13/12/1999 | 42166.83514             | 0.00009047   | 0.24457              | 345.22637                     | 284.35671                    | 171.57477             | 359.91741           |
| METEOSAT-7 | 99   | 354 | 20/12/1999 | 42166.97106             | 0.00016814   | 0.23978              | 348.45849                     | 313.58201                    | 145.94969             | 359.85028           |
| METEOSAT-7 | 99   | 361 | 27/12/1999 | 42165.76468             | 0.00018260   | 0.23145              | 355.21628                     | 297.05251                    | 162.58656             | 359.81589           |
| METEOSAT-7 | 00   | 3   | 03/01/2000 | 42166.20736             | 0.00013830   | 0.22926              | 358.67795                     | 330.69824                    | 132.37391             | 359.81110           |
| METEOSAT-7 | 00   | 10  | 10/01/2000 | 42165.94270             | 0.00010075   | 0.22343              | 4.77321                       | 298.25524                    | 165.65299             | 359.84295           |
| METEOSAT-7 | 00   | 17  | 17/01/2000 | 42164.78430             | 0.00021172   | 0.22010              | 8.28265                       | 307.63155                    | 159.72017             | 359.89636           |
| METEOSAT-7 | 00   | 24  | 24/01/2000 | 42165.18615             | 0.00018081   | 0.21456              | 15.35961                      | 296.93161                    | 170.33112             | 359.98476           |
| METEOSAT-7 | 00   | 31  | 31/01/2000 | 42164.33755             | 0.00017989   | 0.21437              | 18.50055                      | 325.24714                    | 145.89433             | 0.10494             |
| METEOSAT-7 | 00   | 38  | 07/02/2000 | 42165.01402             | 0.00011171   | 0.21113              | 24.33688                      | 308.72994                    | 163.62862             | 0.25881             |
| METEOSAT-7 | 00   | 45  | 14/02/2000 | 42162.98152             | 0.00023440   | 0.21130              | 27.05552                      | 303.63051                    | 173.08218             | 0.43209             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 00   | 52  | 21/02/2000 | 42164.62069             | 0.00017143   | 0.20983              | 33.11350                      | 302.42853                    | 175.34057             | 0.64694             |
| METEOSAT-7 | 00   | 59  | 28/02/2000 | 42167.74212             | 0.00011154   | 0.21339              | 34.91199                      | 296.05651                    | 186.66106             | 0.49443             |
| METEOSAT-7 | 00   | 66  | 06/03/2000 | 42169.01649             | 0.00004982   | 0.21266              | 39.38611                      | 246.04204                    | 238.91578             | 0.30928             |
| METEOSAT-7 | 00   | 73  | 13/03/2000 | 42166.74095             | 0.00016146   | 0.21820              | 40.56591                      | 277.17026                    | 213.33848             | 0.14048             |
| METEOSAT-7 | 00   | 80  | 20/03/2000 | 42168.70414             | 0.00007785   | 0.22069              | 44.77475                      | 274.09702                    | 218.98074             | 0.01881             |
| METEOSAT-7 | 00   | 87  | 27/03/2000 | 42166.27538             | 0.00010837   | 0.22945              | 45.11710                      | 314.03558                    | 185.50996             | 359.92939           |
| METEOSAT-7 | 00   | 94  | 03/04/2000 | 42167.46072             | 0.00002108   | 0.23410              | 48.11247                      | 323.89359                    | 179.49962             | 359.87295           |
| METEOSAT-7 | 00   | 101 | 10/04/2000 | 42165.57453             | 0.00013144   | 0.24669              | 48.29042                      | 287.67127                    | 222.40057             | 359.82995           |
| METEOSAT-7 | 00   | 108 | 17/04/2000 | 42166.98717             | 0.00005905   | 0.25350              | 51.05056                      | 322.56767                    | 191.65011             | 359.83651           |
| METEOSAT-7 | 00   | 115 | 24/04/2000 | 42165.13921             | 0.00010177   | 0.26857              | 50.89493                      | 336.03201                    | 185.28166             | 359.87723           |
| METEOSAT-7 | 00   | 122 | 01/05/2000 | 42165.52313             | 0.00005622   | 0.27755              | 53.12548                      | 26.50928                     | 139.54681             | 359.95060           |
| METEOSAT-7 | 00   | 129 | 08/05/2000 | 42164.61294             | 0.00009680   | 0.29723              | 53.39547                      | 300.63028                    | 232.14136             | 0.03655             |
| METEOSAT-7 | 00   | 136 | 15/05/2000 | 42164.84957             | 0.00008089   | 0.30735              | 55.59204                      | 7.25688                      | 170.35374             | 0.17251             |
| METEOSAT-7 | 00   | 143 | 22/05/2000 | 42164.19954             | 0.00009161   | 0.32752              | 55.86594                      | 358.71862                    | 185.69068             | 0.34544             |
| METEOSAT-7 | 00   | 150 | 29/05/2000 | 42163.36101             | 0.00009294   | 0.33880              | 58.00346                      | 42.21658                     | 147.16060             | 0.55122             |
| METEOSAT-7 | 00   | 157 | 05/06/2000 | 42168.81837             | 0.00017177   | 0.36272              | 58.82410                      | 284.18620                    | 271.10104             | 0.38230             |
| METEOSAT-7 | 00   | 164 | 12/06/2000 | 42167.74437             | 0.00011727   | 0.37396              | 60.90681                      | 324.42197                    | 235.49173             | 0.19184             |
| METEOSAT-7 | 00   | 171 | 19/06/2000 | 42168.32394             | 0.00011674   | 0.39579              | 61.78090                      | 308.87925                    | 256.91112             | 0.04288             |
| METEOSAT-7 | 00   | 178 | 26/06/2000 | 42166.49871             | 0.00006716   | 0.40621              | 63.82506                      | 335.85168                    | 234.67518             | 359.92390           |
| METEOSAT-7 | 00   | 185 | 03/07/2000 | 42167.90249             | 0.00013628   | 0.43052              | 65.00482                      | 271.62902                    | 304.51646             | 359.82261           |
| METEOSAT-7 | 00   | 192 | 10/07/2000 | 42166.92999             | 0.00014761   | 0.66460              | 296.07503                     | 103.22625                    | 248.60447             | 359.67985           |
| METEOSAT-7 | 00   | 199 | 17/07/2000 | 42168.30119             | 0.00013014   | 0.64397              | 296.74259                     | 81.55755                     | 276.38887             | 359.56320           |
| METEOSAT-7 | 00   | 206 | 24/07/2000 | 42166.05308             | 0.00008940   | 0.62733              | 296.16872                     | 105.58719                    | 259.74148             | 359.47156           |
| METEOSAT-7 | 00   | 213 | 31/07/2000 | 42167.82885             | 0.00014666   | 0.60419              | 296.82225                     | 46.44071                     | 325.06497             | 359.40232           |
| METEOSAT-7 | 00   | 220 | 07/08/2000 | 42165.52160             | 0.00010599   | 0.58966              | 296.18063                     | 108.17573                    | 270.82324             | 359.35410           |
| METEOSAT-7 | 00   | 227 | 14/08/2000 | 42166.96525             | 0.00008788   | 0.57003              | 296.49780                     | 68.73848                     | 316.84694             | 359.35803           |
| METEOSAT-7 | 00   | 234 | 21/08/2000 | 42165.02979             | 0.00004706   | 0.55891              | 295.69289                     | 82.58737                     | 310.72715             | 359.38258           |
| METEOSAT-7 | 00   | 241 | 28/08/2000 | 42166.33579             | 0.00013802   | 0.53801              | 296.10648                     | 28.84538                     | 11.00834              | 359.43580           |
| METEOSAT-7 | 00   | 248 | 04/09/2000 | 42164.52765             | 0.00006627   | 0.52949              | 295.52713                     | 93.71795                     | 313.68006             | 359.50127           |
| METEOSAT-7 | 00   | 255 | 11/09/2000 | 42165.24499             | 0.00007411   | 0.51291              | 295.74589                     | 32.88900                     | 21.31266              | 359.62425           |
| METEOSAT-7 | 00   | 262 | 18/09/2000 | 42164.31764             | 0.00006330   | 0.50768              | 295.26167                     | 24.85580                     | 36.87116              | 359.76595           |
| METEOSAT-7 | 00   | 269 | 25/09/2000 | 42164.46565             | 0.00015989   | 0.48924              | 295.79289                     | 13.98773                     | 54.28478              | 359.94344           |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 00   | 276 | 02/10/2000 | 42163.71873             | 0.00006764   | 0.48529              | 295.86850                     | 51.96879                     | 23.31413              | 0.13014             |
| METEOSAT-7 | 00   | 283 | 09/10/2000 | 42163.19425             | 0.00010739   | 0.47013              | 296.44458                     | 5.62859                      | 76.22563              | 0.37823             |
| METEOSAT-7 | 00   | 290 | 16/10/2000 | 42163.63894             | 0.00011965   | 0.46703              | 296.83408                     | 14.16917                     | 74.46313              | 0.64645             |
| METEOSAT-7 | 00   | 297 | 23/10/2000 | 42168.14339             | 0.00006760   | 0.44847              | 297.82460                     | 7.67753                      | 86.73212              | 0.51497             |
| METEOSAT-7 | 00   | 304 | 30/10/2000 | 42168.52281             | 0.00005963   | 0.44457              | 298.90182                     | 129.92429                    | 330.11084             | 0.31834             |
| METEOSAT-7 | 00   | 311 | 06/11/2000 | 42166.95867             | 0.00002965   | 0.42770              | 300.02594                     | 333.57433                    | 132.09865             | 0.18085             |
| METEOSAT-7 | 00   | 318 | 13/11/2000 | 42168.47576             | 0.00005470   | 0.42229              | 301.41781                     | 41.28208                     | 69.78219              | 0.06462             |
| METEOSAT-7 | 00   | 325 | 20/11/2000 | 42166.17020             | 0.00012113   | 0.40016              | 302.83189                     | 6.94116                      | 109.53087             | 359.98697           |
| METEOSAT-7 | 00   | 332 | 27/11/2000 | 42167.34102             | 0.00007208   | 0.39278              | 304.83591                     | 74.95561                     | 46.35206              | 359.92714           |
| METEOSAT-7 | 00   | 339 | 04/12/2000 | 42165.36213             | 0.00007740   | 0.37223              | 306.30548                     | 359.79641                    | 126.93245             | 359.91830           |
| METEOSAT-7 | 00   | 346 | 11/12/2000 | 42167.13946             | 0.00011833   | 0.36269              | 308.44315                     | 32.84758                     | 98.65684              | 359.93202           |
| METEOSAT-7 | 00   | 353 | 18/12/2000 | 42164.44649             | 0.00016882   | 0.33678              | 310.03458                     | 11.41982                     | 125.44081             | 359.98003           |
| METEOSAT-7 | 00   | 360 | 25/12/2000 | 42165.90223             | 0.00012259   | 0.32589              | 312.61135                     | 55.25502                     | 86.00210              | 0.05373             |
| METEOSAT-7 | 01   | 1   | 01/01/2001 | 42164.19189             | 0.00011771   | 0.30255              | 314.01062                     | 13.71883                     | 133.15381             | 0.16893             |
| METEOSAT-7 | 01   | 8   | 08/01/2001 | 42165.19635             | 0.00017975   | 0.29062              | 316.56957                     | 30.87270                     | 120.48148             | 0.30982             |
| METEOSAT-7 | 01   | 15  | 15/01/2001 | 42163.12272             | 0.00020375   | 0.26380              | 317.95852                     | 18.53327                     | 138.50337             | 0.48161             |
| METEOSAT-7 | 01   | 22  | 22/01/2001 | 42164.20520             | 0.00017927   | 0.25190              | 320.93421                     | 50.98936                     | 110.17722             | 0.68763             |
| METEOSAT-7 | 01   | 29  | 29/01/2001 | 42163.25865             | 0.00015063   | 0.22985              | 321.82258                     | 26.71674                     | 140.70095             | 0.92755             |
| METEOSAT-7 | 01   | 36  | 05/02/2001 | 42168.64894             | 0.00013241   | 0.21948              | 324.79584                     | 2.55431                      | 168.61956             | 0.75738             |
| METEOSAT-7 | 01   | 43  | 12/02/2001 | 42167.99795             | 0.00012971   | 0.19646              | 325.81908                     | 355.49818                    | 181.33826             | 0.54362             |
| METEOSAT-7 | 01   | 50  | 19/02/2001 | 42168.06522             | 0.00010023   | 0.18773              | 329.49933                     | 45.09406                     | 134.78820             | 0.37017             |
| METEOSAT-7 | 01   | 57  | 26/02/2001 | 42168.05180             | 0.00006530   | 0.17098              | 329.92836                     | 359.30507                    | 186.90037             | 0.22282             |
| METEOSAT-7 | 01   | 64  | 05/03/2001 | 42166.62026             | 0.00014958   | 0.16573              | 333.98895                     | 20.02370                     | 168.90532             | 0.10741             |
| METEOSAT-7 | 01   | 71  | 12/03/2001 | 42167.47517             | 0.00010771   | 0.15014              | 335.27012                     | 23.19893                     | 171.26224             | 0.02124             |
| METEOSAT-7 | 01   | 78  | 19/03/2001 | 42166.20967             | 0.00014792   | 0.14756              | 340.66870                     | 55.87034                     | 140.04764             | 359.97705           |
| METEOSAT-7 | 01   | 85  | 26/03/2001 | 42167.02604             | 0.00006842   | 0.13794              | 341.88337                     | 43.11593                     | 158.46418             | 359.95434           |
| METEOSAT-7 | 01   | 92  | 02/04/2001 | 42164.91346             | 0.00016493   | 0.13973              | 348.26463                     | 29.81001                     | 172.29932             | 359.96530           |
| METEOSAT-7 | 01   | 99  | 09/04/2001 | 42166.73102             | 0.00011549   | 0.13253              | 351.16843                     | 48.73830                     | 157.40874             | 0.00727             |
| METEOSAT-7 | 01   | 106 | 16/04/2001 | 42164.44506             | 0.00019064   | 0.13753              | 358.53711                     | 54.54930                     | 151.21382             | 0.09249             |
| METEOSAT-7 | 01   | 113 | 23/04/2001 | 42165.67301             | 0.00010086   | 0.13503              | 1.51216                       | 61.34161                     | 148.45210             | 0.19860             |
| METEOSAT-7 | 01   | 120 | 30/04/2001 | 42163.45575             | 0.00017911   | 0.14478              | 9.38725                       | 30.90134                     | 178.05778             | 0.33952             |
| METEOSAT-7 | 01   | 127 | 07/05/2001 | 42165.27187             | 0.00015301   | 0.14570              | 13.44900                      | 55.87944                     | 156.09206             | 0.51411             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 01   | 134 | 14/05/2001 | 42162.90771             | 0.00022030   | 0.15814              | 20.69490                      | 47.02174                     | 164.82254             | 0.73324             |
| METEOSAT-7 | 01   | 141 | 21/05/2001 | 42169.18801             | 0.00005434   | 0.16154              | 24.37613                      | 356.08099                    | 218.81314             | 0.56480             |
| METEOSAT-7 | 01   | 148 | 28/05/2001 | 42167.53716             | 0.00014049   | 0.17818              | 31.40670                      | 344.80766                    | 229.75398             | 0.36336             |
| METEOSAT-7 | 01   | 155 | 04/06/2001 | 42168.58601             | 0.00008647   | 0.18506              | 35.10142                      | 21.21988                     | 196.37803             | 0.19475             |
| METEOSAT-7 | 01   | 162 | 11/06/2001 | 42167.05726             | 0.00013024   | 0.20183              | 40.79628                      | 14.07533                     | 204.60448             | 0.07199             |
| METEOSAT-7 | 01   | 169 | 18/06/2001 | 42167.16165             | 0.00004860   | 0.20856              | 43.95155                      | 36.93538                     | 185.38826             | 359.97151           |
| METEOSAT-7 | 01   | 176 | 25/06/2001 | 42166.59812             | 0.00010410   | 0.22865              | 49.49495                      | 341.64787                    | 241.96003             | 359.89960           |
| METEOSAT-7 | 01   | 183 | 02/07/2001 | 42166.50519             | 0.00009547   | 0.23730              | 52.19507                      | 39.35011                     | 188.41539             | 359.85780           |
| METEOSAT-7 | 01   | 190 | 09/07/2001 | 42166.22701             | 0.00010284   | 0.25452              | 56.66037                      | 17.92649                     | 212.27563             | 359.86013           |
| METEOSAT-7 | 01   | 197 | 16/07/2001 | 42165.18804             | 0.00006423   | 0.26158              | 58.98084                      | 66.95298                     | 167.85401             | 359.88592           |
| METEOSAT-7 | 01   | 204 | 23/07/2001 | 42165.87806             | 0.00006397   | 0.28166              | 63.27038                      | 336.07536                    | 261.39346             | 359.93773           |
| METEOSAT-7 | 01   | 211 | 30/07/2001 | 42164.55934             | 0.00010401   | 0.29112              | 65.01601                      | 54.22582                     | 188.47488             | 0.01573             |
| METEOSAT-7 | 01   | 218 | 06/08/2001 | 42164.88440             | 0.00005694   | 0.37950              | 299.36476                     | 162.84846                    | 212.56947             | 0.18220             |
| METEOSAT-7 | 01   | 225 | 13/08/2001 | 42162.91069             | 0.00007683   | 0.36949              | 299.11527                     | 226.94148                    | 155.82481             | 0.38140             |
| METEOSAT-7 | 01   | 232 | 20/08/2001 | 42164.47751             | 0.00002123   | 0.34385              | 299.16764                     | 46.95321                     | 342.88741             | 0.60855             |
| METEOSAT-7 | 01   | 239 | 27/08/2001 | 42162.28740             | 0.00010014   | 0.33435              | 299.49432                     | 210.77672                    | 185.88660             | 0.85841             |
| METEOSAT-7 | 01   | 246 | 03/09/2001 | 42169.87163             | 0.00011318   | 0.31511              | 298.98003                     | 13.71044                     | 30.28098              | 0.77268             |
| METEOSAT-7 | 01   | 253 | 10/09/2001 | 42167.63542             | 0.00011694   | 0.30991              | 299.18331                     | 342.15299                    | 68.31530              | 0.55332             |
| METEOSAT-7 | 01   | 260 | 17/09/2001 | 42169.25245             | 0.00018221   | 0.28901              | 299.06125                     | 11.92144                     | 45.37933              | 0.36429             |
| METEOSAT-7 | 01   | 267 | 24/09/2001 | 42167.00048             | 0.00008401   | 0.28299              | 300.43087                     | 340.65957                    | 82.00037              | 0.19359             |
| METEOSAT-7 | 01   | 274 | 01/10/2001 | 42168.27987             | 0.00015042   | 0.26812              | 300.21063                     | 357.32631                    | 72.33979              | 0.08007             |
| METEOSAT-7 | 01   | 281 | 08/10/2001 | 42166.55471             | 0.00016049   | 0.26538              | 301.95081                     | 340.03497                    | 94.69975              | 359.98937           |
| METEOSAT-7 | 01   | 288 | 15/10/2001 | 42167.46449             | 0.00021507   | 0.24743              | 302.59219                     | 1.65352                      | 79.27981              | 359.92990           |
| METEOSAT-7 | 01   | 295 | 22/10/2001 | 42165.90499             | 0.00012604   | 0.24219              | 305.95957                     | 339.32873                    | 105.09418             | 359.88741           |
| METEOSAT-7 | 01   | 302 | 29/10/2001 | 42166.30198             | 0.00020376   | 0.22843              | 306.94062                     | 346.46670                    | 103.88794             | 359.90071           |
| METEOSAT-7 | 01   | 309 | 05/11/2001 | 42165.66945             | 0.00020300   | 0.22506              | 310.99564                     | 338.21016                    | 115.02606             | 359.93780           |
| METEOSAT-7 | 01   | 316 | 12/11/2001 | 42165.38326             | 0.00025746   | 0.20743              | 313.19754                     | 350.48184                    | 107.52079             | 0.00657             |
| METEOSAT-7 | 01   | 323 | 19/11/2001 | 42164.96981             | 0.00016543   | 0.20167              | 319.18969                     | 337.21455                    | 121.78530             | 0.09644             |
| METEOSAT-7 | 01   | 330 | 26/11/2001 | 42164.13976             | 0.00025755   | 0.18711              | 322.01294                     | 334.20228                    | 129.01455             | 0.23715             |
| METEOSAT-7 | 01   | 337 | 03/12/2001 | 42164.81662             | 0.00023544   | 0.18422              | 328.98344                     | 330.54396                    | 132.77033             | 0.40558             |
| METEOSAT-7 | 01   | 344 | 10/12/2001 | 42163.24019             | 0.00029529   | 0.16705              | 333.55924                     | 335.03306                    | 130.80434             | 0.60492             |
| METEOSAT-7 | 01   | 351 | 17/12/2001 | 42163.94875             | 0.00019690   | 0.16366              | 342.43288                     | 327.31738                    | 136.77450             | 0.83354             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 01   | 358 | 24/12/2001 | 42167.82824             | 0.00019639   | 0.15034              | 347.72345                     | 294.36553                    | 171.17174             | 0.66992             |
| METEOSAT-7 | 01   | 365 | 31/12/2001 | 42169.42004             | 0.00014559   | 0.15095              | 357.22325                     | 292.41737                    | 170.31731             | 0.46759             |
| METEOSAT-7 | 02   | 7   | 07/01/2002 | 42166.97233             | 0.00019710   | 0.13833              | 4.70816                       | 300.55458                    | 161.41920             | 0.29207             |
| METEOSAT-7 | 02   | 14  | 14/01/2002 | 42168.35359             | 0.00009352   | 0.14250              | 15.01327                      | 292.19397                    | 166.23475             | 0.15258             |
| METEOSAT-7 | 02   | 21  | 21/01/2002 | 42166.42239             | 0.00019394   | 0.13463              | 21.98949                      | 276.46322                    | 181.77847             | 0.04227             |
| METEOSAT-7 | 02   | 28  | 28/01/2002 | 42168.03363             | 0.00014278   | 0.14378              | 30.91546                      | 284.39875                    | 171.74307             | 359.96883           |
| METEOSAT-7 | 02   | 35  | 04/02/2002 | 42165.48294             | 0.00019352   | 0.13936              | 38.45386                      | 286.01111                    | 169.43861             | 359.91560           |
| METEOSAT-7 | 02   | 42  | 11/02/2002 | 42166.94725             | 0.00010279   | 0.15114              | 45.95238                      | 298.85688                    | 155.98301             | 359.90476           |
| METEOSAT-7 | 02   | 49  | 18/02/2002 | 42165.44046             | 0.00017198   | 0.14869              | 50.97769                      | 266.98252                    | 189.73966             | 359.91283           |
| METEOSAT-7 | 02   | 56  | 25/02/2002 | 42166.14643             | 0.00015062   | 0.16342              | 56.05052                      | 287.73323                    | 170.86701             | 359.96421           |
| METEOSAT-7 | 02   | 63  | 04/03/2002 | 42164.43318             | 0.00018003   | 0.16453              | 60.19007                      | 287.15074                    | 174.27709             | 0.03183             |
| METEOSAT-7 | 02   | 70  | 11/03/2002 | 42165.28431             | 0.00012919   | 0.17964              | 64.02024                      | 313.65197                    | 150.96144             | 0.14803             |
| METEOSAT-7 | 02   | 77  | 18/03/2002 | 42164.57781             | 0.00014393   | 0.18016              | 65.75000                      | 276.15891                    | 193.75447             | 0.27829             |
| METEOSAT-7 | 02   | 84  | 25/03/2002 | 42163.94013             | 0.00016875   | 0.19730              | 67.85494                      | 301.98330                    | 172.90430             | 0.45792             |
| METEOSAT-7 | 02   | 91  | 01/04/2002 | 42163.71958             | 0.00016325   | 0.20230              | 68.87352                      | 303.98690                    | 176.97806             | 0.65439             |
| METEOSAT-7 | 02   | 98  | 08/04/2002 | 42163.33479             | 0.00016599   | 0.22017              | 70.74468                      | 331.11967                    | 155.12303             | 0.90376             |
| METEOSAT-7 | 02   | 105 | 15/04/2002 | 42169.25078             | 0.00014582   | 0.22515              | 70.38955                      | 241.11551                    | 252.20550             | 0.72744             |
| METEOSAT-7 | 02   | 112 | 22/04/2002 | 42167.51805             | 0.00013839   | 0.24588              | 71.58264                      | 276.69932                    | 222.13193             | 0.53128             |
| METEOSAT-7 | 02   | 119 | 29/04/2002 | 42168.66700             | 0.00009827   | 0.25634              | 71.08216                      | 270.88162                    | 235.17174             | 0.35338             |
| METEOSAT-7 | 02   | 126 | 06/05/2002 | 42167.04870             | 0.00008694   | 0.27760              | 72.58890                      | 318.21144                    | 193.10870             | 0.22739             |
| METEOSAT-7 | 02   | 133 | 13/05/2002 | 42167.98022             | 0.00007928   | 0.28853              | 71.80538                      | 247.24596                    | 271.64623             | 0.11635             |
| METEOSAT-7 | 02   | 140 | 20/05/2002 | 42165.74133             | 0.00010584   | 0.31265              | 73.27581                      | 306.44787                    | 217.81050             | 0.05344             |
| METEOSAT-7 | 02   | 147 | 27/05/2002 | 42167.57495             | 0.00004255   | 0.32871              | 72.78043                      | 310.61891                    | 220.99167             | 0.01061             |
| METEOSAT-7 | 02   | 154 | 03/06/2002 | 42165.25568             | 0.00009314   | 0.35159              | 74.58098                      | 356.61342                    | 180.10079             | 0.01522             |
| METEOSAT-7 | 02   | 161 | 10/06/2002 | 42166.48552             | 0.00001995   | 0.36689              | 74.22517                      | 227.21147                    | 316.78134             | 0.03833             |
| METEOSAT-7 | 02   | 168 | 17/06/2002 | 42164.36009             | 0.00008625   | 0.39150              | 76.15183                      | 339.79478                    | 209.23425             | 0.10153             |
| METEOSAT-7 | 02   | 175 | 24/06/2002 | 42166.46742             | 0.00005937   | 0.42121              | 296.74707                     | 172.67075                    | 162.71041             | 0.15015             |
| METEOSAT-7 | 02   | 182 | 01/07/2002 | 42164.35028             | 0.00011471   | 0.39496              | 296.85267                     | 165.08537                    | 177.17890             | 0.23914             |
| METEOSAT-7 | 02   | 189 | 08/07/2002 | 42165.17558             | 0.00004605   | 0.38162              | 298.09889                     | 230.33738                    | 117.69344             | 0.35225             |
| METEOSAT-7 | 02   | 196 | 15/07/2002 | 42163.82279             | 0.00008823   | 0.35345              | 298.01097                     | 155.66105                    | 199.50200             | 0.49685             |
| METEOSAT-7 | 02   | 203 | 22/07/2002 | 42164.51999             | 0.00009530   | 0.33738              | 299.56715                     | 202.95339                    | 157.72865             | 0.67241             |
| METEOSAT-7 | 02   | 210 | 29/07/2002 | 42168.36347             | 0.00003032   | 0.31346              | 298.79591                     | 284.57319                    | 83.67945              | 0.57214             |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 02   | 217 | 05/08/2002 | 42168.18007             | 0.00012151   | 0.30074              | 300.00090                     | 306.12918                    | 67.61976              | 0.37384             |
| METEOSAT-7 | 02   | 224 | 12/08/2002 | 42168.00607             | 0.00004287   | 0.27585              | 298.93631                     | 334.30693                    | 47.22962              | 0.19725             |
| METEOSAT-7 | 02   | 231 | 19/08/2002 | 42167.52942             | 0.00010328   | 0.26122              | 300.74340                     | 284.24923                    | 102.23915             | 0.05663             |
| METEOSAT-7 | 02   | 238 | 26/08/2002 | 42167.63417             | 0.00008517   | 0.24350              | 299.09012                     | 295.70686                    | 99.23191              | 359.95421           |
| METEOSAT-7 | 02   | 245 | 02/09/2002 | 42166.33377             | 0.00016821   | 0.23355              | 300.77066                     | 298.76808                    | 101.31875             | 359.88332           |
| METEOSAT-7 | 02   | 252 | 09/09/2002 | 42167.30791             | 0.00008396   | 0.21487              | 299.19095                     | 319.78636                    | 88.72292              | 359.82651           |
| METEOSAT-7 | 02   | 259 | 16/09/2002 | 42165.69776             | 0.00015008   | 0.20237              | 302.13030                     | 286.64824                    | 125.80357             | 359.80894           |
| METEOSAT-7 | 02   | 266 | 23/09/2002 | 42166.79981             | 0.00013548   | 0.19124              | 300.64314                     | 306.30667                    | 114.55119             | 359.82833           |
| METEOSAT-7 | 02   | 273 | 30/09/2002 | 42164.71265             | 0.00020970   | 0.18363              | 304.13783                     | 298.50974                    | 125.80638             | 359.88173           |
| METEOSAT-7 | 02   | 280 | 07/10/2002 | 42166.31722             | 0.00012458   | 0.16992              | 303.62152                     | 320.03349                    | 111.76431             | 359.94761           |
| METEOSAT-7 | 02   | 287 | 14/10/2002 | 42164.02076             | 0.00018526   | 0.15854              | 309.48761                     | 287.80999                    | 145.12833             | 0.05474             |
| METEOSAT-7 | 02   | 294 | 21/10/2002 | 42165.48391             | 0.00018127   | 0.15109              | 310.03229                     | 307.91184                    | 131.52664             | 0.20003             |
| METEOSAT-7 | 02   | 301 | 28/10/2002 | 42163.33385             | 0.00024010   | 0.14484              | 317.23159                     | 293.29813                    | 146.02240             | 0.38185             |
| METEOSAT-7 | 02   | 308 | 04/11/2002 | 42164.71325             | 0.00016519   | 0.13391              | 319.88801                     | 311.96403                    | 131.79742             | 0.57969             |
| METEOSAT-7 | 02   | 315 | 11/11/2002 | 42162.55961             | 0.00020674   | 0.12596              | 330.87942                     | 277.82536                    | 162.08420             | 0.81966             |
| METEOSAT-7 | 02   | 322 | 18/11/2002 | 42169.34220             | 0.00010356   | 0.12100              | 335.12041                     | 268.17417                    | 174.22835             | 0.65408             |
| METEOSAT-7 | 02   | 329 | 25/11/2002 | 42167.90047             | 0.00014567   | 0.12045              | 347.17359                     | 248.18420                    | 188.86638             | 0.45577             |
| METEOSAT-7 | 02   | 336 | 02/12/2002 | 42168.40608             | 0.00006223   | 0.11502              | 354.32477                     | 273.57257                    | 163.04608             | 0.27551             |
| METEOSAT-7 | 02   | 343 | 09/12/2002 | 42167.16915             | 0.00010526   | 0.11907              | 9.10149                       | 216.56290                    | 212.03908             | 0.13600             |
| METEOSAT-7 | 02   | 350 | 16/12/2002 | 42167.23857             | 0.00011772   | 0.12023              | 15.76960                      | 254.34394                    | 174.38418             | 0.03075             |
| METEOSAT-7 | 02   | 357 | 23/12/2002 | 42166.98133             | 0.00012090   | 0.13183              | 27.65242                      | 225.82342                    | 197.85489             | 359.96422           |
| METEOSAT-7 | 02   | 364 | 30/12/2002 | 42166.33354             | 0.00007618   | 0.13550              | 34.76901                      | 268.27721                    | 155.13500             | 359.91517           |
| METEOSAT-7 | 03   | 6   | 06/01/2003 | 42166.30353             | 0.00006364   | 0.15167              | 45.32533                      | 200.72770                    | 219.01813             | 359.90553           |
| METEOSAT-7 | 03   | 13  | 13/01/2003 | 42165.26659             | 0.00012451   | 0.15787              | 49.96011                      | 244.71362                    | 177.31482             | 359.92341           |
| METEOSAT-7 | 03   | 20  | 20/01/2003 | 42166.26235             | 0.00008072   | 0.17614              | 57.27849                      | 220.35906                    | 201.30912             | 359.98195           |
| METEOSAT-7 | 03   | 27  | 27/01/2003 | 42164.45160             | 0.00009187   | 0.18386              | 61.25988                      | 277.21028                    | 147.45196             | 0.05786             |
| METEOSAT-7 | 03   | 34  | 03/02/2003 | 42165.41972             | 0.00002010   | 0.20228              | 67.29663                      | 247.93449                    | 177.70683             | 0.17418             |
| METEOSAT-7 | 03   | 41  | 10/02/2003 | 42163.65145             | 0.00011927   | 0.20853              | 69.44162                      | 252.42158                    | 178.11300             | 0.31292             |
| METEOSAT-7 | 03   | 48  | 17/02/2003 | 42165.36268             | 0.00004700   | 0.22684              | 73.68549                      | 265.24758                    | 168.12708             | 0.49733             |
| METEOSAT-7 | 03   | 55  | 24/02/2003 | 42162.79156             | 0.00011800   | 0.23460              | 75.15440                      | 296.94749                    | 142.05939             | 0.69893             |
| METEOSAT-7 | 03   | 62  | 03/03/2003 | 42169.89889             | 0.00007707   | 0.25080              | 78.61412                      | 179.14887                    | 263.10748             | 0.50861             |
| METEOSAT-7 | 03   | 69  | 10/03/2003 | 42168.07144             | 0.00014383   | 0.25610              | 78.71979                      | 214.46282                    | 234.34177             | 0.26304             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 03   | 76  | 17/03/2003 | 42169.51658             | 0.00006332   | 0.27292              | 81.06535                      | 196.04747                    | 257.11495             | 0.06699             |
| METEOSAT-7 | 03   | 83  | 24/03/2003 | 42167.07985             | 0.00007037   | 0.28192              | 80.46275                      | 256.57190                    | 203.91248             | 359.88687           |
| METEOSAT-7 | 03   | 90  | 31/03/2003 | 42168.35782             | 0.00001657   | 0.29653              | 82.32409                      | 129.51614                    | 335.86947             | 359.74998           |
| METEOSAT-7 | 03   | 97  | 07/04/2003 | 42167.03906             | 0.00007710   | 0.30432              | 80.99866                      | 224.71155                    | 248.78164             | 359.63274           |
| METEOSAT-7 | 03   | 104 | 14/04/2003 | 42167.41689             | 0.00002092   | 0.32146              | 82.30953                      | 344.89090                    | 134.12226             | 359.56410           |
| METEOSAT-7 | 03   | 111 | 21/04/2003 | 42166.01633             | 0.00005693   | 0.33596              | 80.78622                      | 324.24628                    | 163.13590             | 359.51036           |
| METEOSAT-7 | 03   | 118 | 28/04/2003 | 42166.57576             | 0.00006727   | 0.35187              | 81.92875                      | 39.33261                     | 93.79525              | 359.49914           |
| METEOSAT-7 | 03   | 125 | 05/05/2003 | 42166.07943             | 0.00000792   | 0.36619              | 80.32149                      | 276.98143                    | 224.66382             | 359.50973           |
| METEOSAT-7 | 03   | 132 | 12/05/2003 | 42165.12568             | 0.00009862   | 0.38530              | 81.42747                      | 18.25832                     | 129.23565             | 359.56493           |
| METEOSAT-7 | 03   | 139 | 19/05/2003 | 42165.23697             | 0.00008831   | 0.40700              | 80.09231                      | 15.63766                     | 140.16383             | 359.63773           |
| METEOSAT-7 | 03   | 146 | 26/05/2003 | 42165.00340             | 0.00014379   | 0.46992              | 290.69619                     | 191.58153                    | 120.60229             | 359.72481           |
| METEOSAT-7 | 03   | 153 | 02/06/2003 | 42165.42398             | 0.00006794   | 0.45617              | 292.61040                     | 199.51440                    | 117.75984             | 359.82983           |
| METEOSAT-7 | 03   | 160 | 09/06/2003 | 42163.48684             | 0.00017389   | 0.43318              | 292.58512                     | 179.91267                    | 144.42919             | 359.97251           |
| METEOSAT-7 | 03   | 167 | 16/06/2003 | 42164.88540             | 0.00013784   | 0.41352              | 294.87131                     | 186.54261                    | 142.57958             | 0.13938             |
| METEOSAT-7 | 03   | 174 | 23/06/2003 | 42163.07015             | 0.00019706   | 0.39196              | 294.58779                     | 197.61394                    | 138.89603             | 0.34396             |
| METEOSAT-7 | 03   | 181 | 30/06/2003 | 42164.16792             | 0.00012182   | 0.37375              | 296.67863                     | 213.19918                    | 128.35730             | 0.58164             |
| METEOSAT-7 | 03   | 188 | 07/07/2003 | 42161.91885             | 0.00021802   | 0.35078              | 296.11814                     | 189.79592                    | 159.48640             | 0.84729             |
| METEOSAT-7 | 03   | 195 | 14/07/2003 | 42169.79049             | 0.00007526   | 0.32815              | 298.47146                     | 146.88755                    | 206.77695             | 0.68317             |
| METEOSAT-7 | 03   | 202 | 21/07/2003 | 42167.46149             | 0.00011088   | 0.30855              | 297.52791                     | 178.32495                    | 182.97584             | 0.47625             |
| METEOSAT-7 | 03   | 209 | 28/07/2003 | 42168.68418             | 0.00002510   | 0.28888              | 299.56479                     | 217.83522                    | 148.16069             | 0.30869             |
| METEOSAT-7 | 03   | 216 | 04/08/2003 | 42166.81736             | 0.00012969   | 0.26958              | 298.19855                     | 171.79468                    | 202.31451             | 0.15609             |
| METEOSAT-7 | 03   | 223 | 11/08/2003 | 42168.24656             | 0.00006580   | 0.24709              | 300.51660                     | 194.32982                    | 184.25306             | 0.04832             |
| METEOSAT-7 | 03   | 230 | 18/08/2003 | 42166.33591             | 0.00010318   | 0.23321              | 298.90722                     | 207.64395                    | 179.36616             | 359.96658           |
| METEOSAT-7 | 03   | 237 | 25/08/2003 | 42166.99182             | 0.00007428   | 0.21517              | 301.05885                     | 262.20145                    | 129.51747             | 359.92754           |
| METEOSAT-7 | 03   | 244 | 01/09/2003 | 42166.01287             | 0.00010976   | 0.20221              | 299.32525                     | 195.64767                    | 204.66899             | 359.89211           |
| METEOSAT-7 | 03   | 251 | 08/09/2003 | 42166.40787             | 0.00008402   | 0.18196              | 302.07749                     | 237.80473                    | 166.67769             | 359.91061           |
| METEOSAT-7 | 03   | 258 | 15/09/2003 | 42165.56389             | 0.00009538   | 0.17496              | 300.88729                     | 239.82830                    | 172.78477             | 359.95158           |
| METEOSAT-7 | 03   | 265 | 22/09/2003 | 42165.10170             | 0.00012265   | 0.15970              | 304.28141                     | 276.05241                    | 140.15278             | 0.03828             |
| METEOSAT-7 | 03   | 272 | 29/09/2003 | 42165.28071             | 0.00008696   | 0.15243              | 304.02770                     | 216.51575                    | 206.92786             | 0.12348             |
| METEOSAT-7 | 03   | 279 | 06/10/2003 | 42164.37163             | 0.00011293   | 0.13453              | 309.07878                     | 258.85990                    | 166.57809             | 0.26946             |
| METEOSAT-7 | 03   | 286 | 13/10/2003 | 42164.74502             | 0.00009611   | 0.13240              | 310.64950                     | 264.16653                    | 166.76935             | 0.43852             |
| METEOSAT-7 | 03   | 293 | 20/10/2003 | 42163.13741             | 0.00015992   | 0.11992              | 317.85685                     | 276.37834                    | 154.46693             | 0.65578             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 03   | 300 | 27/10/2003 | 42164.31989             | 0.00006344   | 0.11677              | 321.79814                     | 232.45992                    | 201.56168             | 0.87383             |
| METEOSAT-7 | 03   | 307 | 03/11/2003 | 42168.50360             | 0.00012594   | 0.10350              | 332.89069                     | 190.45033                    | 239.18110             | 0.67668             |
| METEOSAT-7 | 03   | 314 | 10/11/2003 | 42169.70702             | 0.00008775   | 0.10651              | 338.91002                     | 170.74293                    | 259.52032             | 0.42834             |
| METEOSAT-7 | 03   | 321 | 17/11/2003 | 42167.56162             | 0.00009991   | 0.10219              | 352.11613                     | 202.90802                    | 220.84704             | 0.22668             |
| METEOSAT-7 | 03   | 328 | 24/11/2003 | 42169.14825             | 0.00010984   | 0.10726              | 359.92931                     | 120.00892                    | 302.63578             | 0.02996             |
| METEOSAT-7 | 03   | 335 | 01/12/2003 | 42166.76926             | 0.00008531   | 0.10814              | 15.59612                      | 165.13573                    | 248.59842             | 359.88673           |
| METEOSAT-7 | 03   | 342 | 08/12/2003 | 42168.16590             | 0.00003584   | 0.11989              | 21.53306                      | 125.47214                    | 289.11009             | 359.77216           |
| METEOSAT-7 | 03   | 349 | 15/12/2003 | 42166.22347             | 0.00006225   | 0.12907              | 33.50700                      | 183.46697                    | 225.96765             | 359.69896           |
| METEOSAT-7 | 03   | 356 | 22/12/2003 | 42167.48011             | 0.00008171   | 0.14192              | 39.23735                      | 55.48233                     | 355.05757             | 359.63504           |
| METEOSAT-7 | 03   | 363 | 29/12/2003 | 42165.53050             | 0.00003925   | 0.15553              | 50.00930                      | 140.69031                    | 265.95397             | 359.61182           |
| METEOSAT-7 | 04   | 5   | 05/01/2004 | 42166.41957             | 0.00002724   | 0.17171              | 52.85308                      | 346.99771                    | 63.71150              | 359.62098           |
| METEOSAT-7 | 04   | 12  | 12/01/2004 | 42165.33168             | 0.00001520   | 0.18651              | 60.30477                      | 206.95536                    | 203.24741             | 359.66671           |
| METEOSAT-7 | 04   | 19  | 19/01/2004 | 42165.58998             | 0.00010097   | 0.20293              | 62.51713                      | 2.83383                      | 52.11930              | 359.72988           |
| METEOSAT-7 | 04   | 26  | 26/01/2004 | 42164.71010             | 0.00002074   | 0.21848              | 69.01313                      | 11.30642                     | 44.14443              | 359.82401           |
| METEOSAT-7 | 04   | 33  | 02/02/2004 | 42164.53225             | 0.00007968   | 0.23384              | 70.11403                      | 321.00531                    | 100.37453             | 359.95436           |
| METEOSAT-7 | 04   | 40  | 09/02/2004 | 42164.72029             | 0.00005151   | 0.24725              | 74.84981                      | 334.33434                    | 89.37408              | 0.11921             |
| METEOSAT-7 | 04   | 47  | 16/02/2004 | 42163.67713             | 0.00015431   | 0.26284              | 75.40935                      | 342.20466                    | 88.03349              | 0.30898             |
| METEOSAT-7 | 04   | 54  | 23/02/2004 | 42163.98283             | 0.00007968   | 0.27481              | 79.23374                      | 349.59873                    | 83.92932              | 0.52370             |
| METEOSAT-7 | 04   | 61  | 01/03/2004 | 42162.67478             | 0.00013405   | 0.28827              | 79.07023                      | 323.05147                    | 117.79585             | 0.78001             |
| METEOSAT-7 | 04   | 68  | 08/03/2004 | 42170.26297             | 0.00002799   | 0.29881              | 81.86547                      | 181.58980                    | 263.17485             | 0.59309             |
| METEOSAT-7 | 04   | 75  | 15/03/2004 | 42168.07177             | 0.00007276   | 0.31440              | 81.14024                      | 321.00272                    | 131.14685             | 0.35339             |
| METEOSAT-7 | 04   | 82  | 22/03/2004 | 42169.18292             | 0.00001448   | 0.32337              | 83.12510                      | 110.49573                    | 346.35173             | 0.13664             |
| METEOSAT-7 | 04   | 89  | 29/03/2004 | 42167.32138             | 0.00005687   | 0.33798              | 81.99956                      | 288.37976                    | 176.31957             | 359.96361           |
| METEOSAT-7 | 04   | 96  | 05/04/2004 | 42169.06707             | 0.00005171   | 0.34746              | 83.35690                      | 22.17628                     | 87.92446              | 359.82290           |
| METEOSAT-7 | 04   | 103 | 12/04/2004 | 42166.41925             | 0.00012417   | 0.36750              | 82.04124                      | 346.18180                    | 132.02380             | 359.71271           |
| METEOSAT-7 | 04   | 110 | 19/04/2004 | 42167.80970             | 0.00006610   | 0.37678              | 82.74253                      | 35.12870                     | 89.18624              | 359.62390           |
| METEOSAT-7 | 04   | 117 | 26/04/2004 | 42166.04237             | 0.00007667   | 0.39649              | 81.45315                      | 345.64154                    | 146.81815             | 359.57988           |
| METEOSAT-7 | 04   | 124 | 03/05/2004 | 42167.19609             | 0.00013466   | 0.40812              | 82.12573                      | 26.35988                     | 112.31183             | 359.56495           |
| METEOSAT-7 | 04   | 131 | 10/05/2004 | 42165.00385             | 0.00017363   | 0.43503              | 81.09928                      | 5.39456                      | 141.21818             | 359.58002           |
| METEOSAT-7 | 04   | 138 | 17/05/2004 | 42166.12544             | 0.00012922   | 0.44737              | 81.40698                      | 40.34161                     | 112.90095             | 359.61797           |
| METEOSAT-7 | 04   | 145 | 24/05/2004 | 42164.98254             | 0.00011388   | 0.47254              | 80.71564                      | 19.10521                     | 141.81202             | 359.70169           |
| METEOSAT-7 | 04   | 152 | 31/05/2004 | 42164.86785             | 0.00020796   | 0.48676              | 81.31686                      | 33.84124                     | 133.48248             | 359.80971           |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 04   | 159 | 07/06/2004 | 42163.95478             | 0.00020533   | 0.51833              | 81.05986                      | 21.28640                     | 153.33437             | 359.95000           |
| METEOSAT-7 | 04   | 166 | 14/06/2004 | 42164.22687             | 0.00018238   | 0.53272              | 81.47270                      | 49.49010                     | 131.78339             | 0.11572             |
| METEOSAT-7 | 04   | 173 | 21/06/2004 | 42163.99646             | 0.00014541   | 0.56015              | 81.51919                      | 40.84280                     | 147.49640             | 0.32809             |
| METEOSAT-7 | 04   | 180 | 28/06/2004 | 42162.64719             | 0.00025963   | 0.57420              | 82.23572                      | 42.26879                     | 152.48529             | 0.55964             |
| METEOSAT-7 | 04   | 187 | 05/07/2004 | 42168.81347             | 0.00012916   | 0.60613              | 82.62907                      | 0.49343                      | 200.67979             | 0.47223             |
| METEOSAT-7 | 04   | 194 | 12/07/2004 | 42167.84833             | 0.00009578   | 0.61927              | 83.13580                      | 44.77409                     | 162.59117             | 0.27118             |
| METEOSAT-7 | 04   | 201 | 19/07/2004 | 42168.48883             | 0.00004637   | 0.64566              | 83.69778                      | 23.17069                     | 190.37727             | 0.11602             |
| METEOSAT-7 | 04   | 208 | 26/07/2004 | 42166.51401             | 0.00016297   | 0.65605              | 84.30420                      | 38.14940                     | 181.54912             | 359.97331           |
| METEOSAT-7 | 04   | 215 | 02/08/2004 | 42168.18428             | 0.00009038   | 0.68444              | 85.05746                      | 27.58538                     | 198.16032             | 359.87398           |
| METEOSAT-7 | 04   | 222 | 09/08/2004 | 42166.15921             | 0.00011490   | 0.69454              | 85.33298                      | 74.21074                     | 158.08397             | 359.79900           |
| METEOSAT-7 | 04   | 229 | 16/08/2004 | 42167.33464             | 0.00005705   | 0.71596              | 86.05174                      | 93.90529                     | 144.53918             | 359.76803           |
| METEOSAT-7 | 04   | 236 | 23/08/2004 | 42165.29905             | 0.00015444   | 0.72354              | 86.29213                      | 59.66468                     | 185.41393             | 359.74331           |
| METEOSAT-7 | 04   | 243 | 30/08/2004 | 42167.18918             | 0.00007250   | 0.74666              | 87.01997                      | 79.77173                     | 171.50324             | 359.76823           |
| METEOSAT-7 | 04   | 250 | 06/09/2004 | 42164.79021             | 0.00013548   | 0.75400              | 86.87846                      | 100.07791                    | 158.28499             | 359.81565           |
| METEOSAT-7 | 04   | 257 | 13/09/2004 | 42165.88643             | 0.00010026   | 0.77150              | 87.42968                      | 128.66383                    | 136.13787             | 359.90664           |
| METEOSAT-7 | 04   | 264 | 20/09/2004 | 42164.31338             | 0.00014251   | 0.77825              | 87.11738                      | 83.55158                     | 188.55679             | 0.00216             |
| METEOSAT-7 | 04   | 271 | 27/09/2004 | 42165.48772             | 0.00010496   | 0.79785              | 87.61731                      | 124.06217                    | 154.59547             | 0.15243             |
| METEOSAT-7 | 04   | 278 | 04/10/2004 | 42163.69441             | 0.00015161   | 0.80602              | 86.96737                      | 122.75211                    | 163.62845             | 0.32659             |
| METEOSAT-7 | 04   | 285 | 11/10/2004 | 42163.99675             | 0.00014725   | 0.82284              | 87.24989                      | 147.70711                    | 145.50828             | 0.54500             |
| METEOSAT-7 | 04   | 292 | 18/10/2004 | 42163.31177             | 0.00012932   | 0.83306              | 86.26531                      | 109.62475                    | 191.70360             | 0.77443             |
| METEOSAT-7 | 04   | 299 | 25/10/2004 | 42169.41754             | 0.00008123   | 0.85254              | 86.56744                      | 79.85238                     | 227.88016             | 0.58161             |
| METEOSAT-7 | 04   | 306 | 01/11/2004 | 42168.85553             | 0.00009738   | 0.86661              | 85.64981                      | 81.96518                     | 233.34166             | 0.33895             |
| METEOSAT-7 | 04   | 313 | 08/11/2004 | 42168.04561             | 0.00006411   | 0.88576              | 85.84921                      | 121.78142                    | 200.02493             | 0.13833             |
| METEOSAT-7 | 04   | 320 | 15/11/2004 | 42168.53191             | 0.00010622   | 0.90469              | 84.96082                      | 54.53448                     | 274.87042             | 359.94879           |
| METEOSAT-7 | 04   | 327 | 22/11/2004 | 42167.24295             | 0.00006322   | 0.92652              | 85.30712                      | 133.73434                    | 202.08253             | 359.80720           |
| METEOSAT-7 | 04   | 334 | 29/11/2004 | 42167.86046             | 0.00005111   | 0.94804              | 84.54676                      | 106.27009                    | 237.09809             | 359.69793           |
| METEOSAT-7 | 04   | 341 | 06/12/2004 | 42166.13481             | 0.00006392   | 0.96906              | 84.93019                      | 170.34681                    | 179.46442             | 359.62418           |
| METEOSAT-7 | 04   | 348 | 13/12/2004 | 42167.53537             | 0.00006003   | 0.99471              | 84.32308                      | 36.16948                     | 321.09210             | 359.56688           |
| METEOSAT-7 | 04   | 355 | 20/12/2004 | 42165.39766             | 0.00007087   | 1.01671              | 84.88365                      | 184.16817                    | 179.41054             | 359.54407           |
| METEOSAT-7 | 04   | 362 | 27/12/2004 | 42166.74122             | 0.00001571   | 1.04215              | 84.52260                      | 186.17696                    | 184.68106             | 359.56156           |
| METEOSAT-7 | 05   | 3   | 03/01/2005 | 42164.66156             | 0.00006824   | 1.06082              | 85.13966                      | 213.70167                    | 163.48604             | 359.60780           |
| METEOSAT-7 | 05   | 10  | 10/01/2005 | 42166.29003             | 0.00006230   | 1.08786              | 84.88338                      | 343.59936                    | 40.81642              | 359.67891           |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 05   | 17  | 17/01/2005 | 42164.00009             | 0.00008338   | 1.10560              | 85.56492                      | 220.82952                    | 169.89586             | 359.76975           |
| METEOSAT-7 | 05   | 24  | 24/01/2005 | 42165.34305             | 0.00004869   | 1.12982              | 85.50160                      | 275.60817                    | 122.22258             | 359.91157           |
| METEOSAT-7 | 05   | 31  | 31/01/2005 | 42163.65279             | 0.00007774   | 1.14217              | 86.14790                      | 256.12842                    | 148.12111             | 0.07684             |
| METEOSAT-7 | 05   | 38  | 07/02/2005 | 42164.62894             | 0.00011016   | 1.16635              | 86.04669                      | 324.15808                    | 87.29224              | 0.27676             |
| METEOSAT-7 | 05   | 45  | 14/02/2005 | 42163.00360             | 0.00009061   | 1.17745              | 86.58344                      | 253.32408                    | 164.69726             | 0.48540             |
| METEOSAT-7 | 05   | 52  | 21/02/2005 | 42163.56148             | 0.00009648   | 1.19820              | 86.56831                      | 297.01938                    | 128.18667             | 0.75611             |
| METEOSAT-7 | 05   | 59  | 28/02/2005 | 42168.79928             | 0.00008227   | 1.20435              | 86.96260                      | 192.30035                    | 239.24748             | 0.59363             |
| METEOSAT-7 | 05   | 66  | 07/03/2005 | 42168.56766             | 0.00002603   | 1.22612              | 86.80563                      | 301.99013                    | 136.41582             | 0.39643             |
| METEOSAT-7 | 05   | 73  | 14/03/2005 | 42168.05352             | 0.00009615   | 1.23248              | 86.97958                      | 192.78369                    | 252.15238             | 0.20239             |
| METEOSAT-7 | 05   | 80  | 21/03/2005 | 42167.50332             | 0.00004094   | 1.25193              | 86.84345                      | 231.71986                    | 220.12299             | 0.07515             |
| METEOSAT-7 | 05   | 87  | 28/03/2005 | 42168.01836             | 0.00002068   | 1.25597              | 86.85471                      | 194.55120                    | 264.06802             | 359.96486           |
| METEOSAT-7 | 05   | 94  | 04/04/2005 | 42166.58188             | 0.00007047   | 1.27881              | 86.60149                      | 340.69977                    | 125.00426             | 359.89855           |
| METEOSAT-7 | 05   | 101 | 11/04/2005 | 42167.13423             | 0.00004063   | 1.28568              | 86.39171                      | 184.36304                    | 288.38509             | 359.83476           |
| METEOSAT-7 | 05   | 108 | 18/04/2005 | 42165.59640             | 0.00003913   | 1.30746              | 86.18150                      | 322.24393                    | 157.61409             | 359.83620           |
| METEOSAT-7 | 05   | 115 | 25/04/2005 | 42167.00662             | 0.00004656   | 1.3148               | 85.9005                       | 42.00158                     | 85.05331              | 359.85339           |
| METEOSAT-7 | 05   | 122 | 02/05/2005 | 42164.66248             | 0.00011803   | 1.34190              | 85.69929                      | 2.83014                      | 131.38469             | 359.91315           |
| METEOSAT-7 | 05   | 129 | 09/05/2005 | 42165.92757             | 0.00003685   | 1.35339              | 85.29503                      | 84.98321                     | 56.60355              | 359.98122           |
| METEOSAT-7 | 05   | 136 | 16/05/2005 | 42163.96112             | 0.00007519   | 1.37876              | 85.19264                      | 9.92107                      | 138.79620             | 0.10936             |
| METEOSAT-7 | 05   | 143 | 23/05/2005 | 42165.45222             | 0.00011079   | 1.39149              | 84.84543                      | 49.10538                     | 107.00507             | 0.25469             |
| METEOSAT-7 | 05   | 150 | 30/05/2005 | 42162.93089             | 0.00015655   | 1.42202              | 84.87489                      | 21.87455                     | 141.29274             | 0.44009             |
| METEOSAT-7 | 05   | 157 | 06/06/2005 | 42164.36564             | 0.00009244   | 1.43850              | 84.50230                      | 75.06961                     | 95.57575              | 0.64408             |
| METEOSAT-7 | 05   | 164 | 13/06/2005 | 42162.68313             | 0.00010829   | 1.46500              | 84.64187                      | 37.42477                     | 140.23969             | 0.90108             |
| METEOSAT-7 | 05   | 171 | 20/06/2005 | 42169.36292             | 0.00006870   | 1.48107              | 84.39492                      | 1.11297                      | 183.51708             | 0.71788             |
| METEOSAT-7 | 05   | 178 | 27/06/2005 | 42167.59883             | 0.00011820   | 1.51105              | 84.69255                      | 348.19793                    | 202.81198             | 0.49364             |
| METEOSAT-7 | 05   | 185 | 04/07/2005 | 42168.60126             | 0.00000494   | 1.52957              | 84.44230                      | 115.17942                    | 82.78663              | 0.29771             |
| METEOSAT-7 | 05   | 192 | 11/07/2005 | 42167.68569             | 0.00005117   | 1.55287              | 84.79931                      | 333.76343                    | 230.59371             | 0.14440             |
| METEOSAT-7 | 05   | 199 | 18/07/2005 | 42167.17267             | 0.00007749   | 1.56888              | 84.54924                      | 46.43398                     | 164.94794             | 0.01794             |
| METEOSAT-7 | 05   | 206 | 25/07/2005 | 42166.76826             | 0.00007011   | 1.59405              | 85.00516                      | 17.72796                     | 200.00709             | 359.92624           |
| METEOSAT-7 | 05   | 213 | 01/08/2005 | 42166.76502             | 0.00006583   | 1.61156              | 84.82102                      | 125.20547                    | 99.55657              | 359.86901           |
| METEOSAT-7 | 05   | 220 | 08/08/2005 | 42166.76469             | 0.00001579   | 1.62863              | 85.24706                      | 99.48537                     | 131.72526             | 359.84415           |
| METEOSAT-7 | 05   | 227 | 15/08/2005 | 42165.32712             | 0.00009822   | 1.64240              | 85.07254                      | 86.30475                     | 151.97969             | 359.84468           |
| METEOSAT-7 | 05   | 234 | 22/08/2005 | 42166.37522             | 0.00004578   | 1.66073              | 85.50984                      | 104.91016                    | 139.86748             | 359.87691           |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 05   | 241 | 29/08/2005 | 42165.00906             | 0.00013237   | 1.67656              | 85.27453                      | 137.44718                    | 114.53379             | 359.94748           |
| METEOSAT-7 | 05   | 248 | 05/09/2005 | 42165.77907             | 0.00007620   | 1.68767              | 85.59693                      | 152.35343                    | 106.29883             | 0.04403             |
| METEOSAT-7 | 05   | 255 | 12/09/2005 | 42163.78780             | 0.00013069   | 1.70068              | 85.29499                      | 117.94054                    | 148.03669             | 0.17056             |
| METEOSAT-7 | 05   | 262 | 19/09/2005 | 42165.67671             | 0.00010726   | 1.71384              | 85.56296                      | 156.28455                    | 116.47968             | 0.32904             |
| METEOSAT-7 | 05   | 269 | 26/09/2005 | 42163.28778             | 0.00019344   | 1.73054              | 85.19738                      | 148.99584                    | 131.22929             | 0.52816             |
| METEOSAT-7 | 05   | 276 | 03/10/2005 | 42164.39711             | 0.00013821   | 1.73918              | 85.32469                      | 166.40591                    | 120.81201             | 0.75163             |
| METEOSAT-7 | 05   | 283 | 10/10/2005 | 42168.43562             | 0.00011443   | 1.75566              | 84.87798                      | 84.44766                     | 209.98685             | 0.62460             |
| METEOSAT-7 | 05   | 290 | 17/10/2005 | 42170.12721             | 0.00005234   | 1.76777              | 84.93840                      | 138.61370                    | 162.40870             | 0.37532             |
| METEOSAT-7 | 05   | 297 | 24/10/2005 | 42167.75913             | 0.00012710   | 1.78903              | 84.50195                      | 134.92132                    | 173.22775             | 0.16753             |
| METEOSAT-7 | 05   | 304 | 31/10/2005 | 42168.64156             | 0.00005493   | 1.79907              | 84.53848                      | 160.34466                    | 154.48177             | 359.98243           |
| METEOSAT-7 | 05   | 311 | 07/11/2005 | 42167.26110             | 0.00009010   | 1.82332              | 84.09369                      | 119.06958                    | 202.95153             | 359.83273           |
| METEOSAT-7 | 05   | 318 | 14/11/2005 | 42168.04901             | 0.00010461   | 1.83827              | 84.03901                      | 180.44169                    | 148.41201             | 359.71004           |
| METEOSAT-7 | 05   | 325 | 21/11/2005 | 42166.60167             | 0.00013616   | 1.86533              | 83.71199                      | 160.37915                    | 175.62147             | 359.62868           |
| METEOSAT-7 | 05   | 332 | 28/11/2005 | 42166.68318             | 0.00009918   | 1.87949              | 83.67825                      | 194.64913                    | 148.22801             | 359.56926           |
| METEOSAT-7 | 05   | 339 | 05/12/2005 | 42166.32773             | 0.00007756   | 1.91023              | 83.41060                      | 158.40687                    | 191.61562             | 359.54423           |
| METEOSAT-7 | 05   | 346 | 12/12/2005 | 42165.91691             | 0.00015264   | 1.92735              | 83.38723                      | 199.66992                    | 157.27558             | 359.54058           |
| METEOSAT-7 | 05   | 353 | 19/12/2005 | 42165.76309             | 0.00013641   | 1.95745              | 83.28897                      | 183.71315                    | 180.27580             | 359.58222           |
| METEOSAT-7 | 05   | 360 | 26/12/2005 | 42164.74492             | 0.00013768   | 1.97287              | 83.31757                      | 214.55447                    | 156.37264             | 359.64541           |
| METEOSAT-7 | 06   | 2   | 02/01/2006 | 42165.55145             | 0.00007149   | 2.00426              | 83.30855                      | 197.63095                    | 180.30674             | 359.74353           |
| METEOSAT-7 | 06   | 9   | 09/01/2006 | 42164.01801             | 0.00018174   | 2.01974              | 83.34864                      | 215.15555                    | 169.75897             | 359.85760           |
| METEOSAT-7 | 06   | 16  | 16/01/2006 | 42164.96799             | 0.00012763   | 2.04708              | 83.46133                      | 206.74194                    | 185.12863             | 0.02399             |
| METEOSAT-7 | 06   | 23  | 23/01/2006 | 42163.09042             | 0.00015476   | 2.05772              | 83.54712                      | 231.73430                    | 167.13999             | 0.21232             |
| METEOSAT-7 | 06   | 30  | 30/01/2006 | 42164.62937             | 0.00007397   | 2.08646              | 83.65351                      | 238.13895                    | 167.75582             | 0.43878             |
| METEOSAT-7 | 06   | 37  | 06/02/2006 | 42162.39744             | 0.00019176   | 2.09788              | 83.66121                      | 230.05406                    | 182.97016             | 0.67693             |
| METEOSAT-7 | 06   | 44  | 13/02/2006 | 42170.01471             | 0.00011919   | 2.11907              | 83.83918                      | 156.18134                    | 263.38524             | 0.49907             |
| METEOSAT-7 | 06   | 51  | 20/02/2006 | 42167.95179             | 0.00009210   | 2.12490              | 83.82222                      | 183.63844                    | 242.60930             | 0.26634             |
| METEOSAT-7 | 06   | 58  | 27/02/2006 | 42169.39123             | 0.00006155   | 2.14905              | 83.91743                      | 123.42359                    | 309.43231             | 0.07334             |
| METEOSAT-7 | 06   | 65  | 06/03/2006 | 42167.24512             | 0.00011906   | 2.15748              | 83.77053                      | 191.49838                    | 248.21376             | 359.88736           |
| METEOSAT-7 | 06   | 72  | 13/03/2006 | 42168.47011             | 0.00006444   | 2.17453              | 83.88107                      | 153.81488                    | 292.55789             | 359.76358           |
| METEOSAT-7 | 06   | 79  | 20/03/2006 | 42166.93874             | 0.00004512   | 2.17958              | 83.66549                      | 188.27425                    | 265.10458             | 359.65954           |
| METEOSAT-7 | 06   | 86  | 27/03/2006 | 42167.57305             | 0.00004676   | 2.20025              | 83.70705                      | 75.87110                     | 24.29517              | 359.59392           |
| METEOSAT-7 | 06   | 93  | 03/04/2006 | 42166.21292             | 0.00007313   | 2.21143              | 83.35475                      | 190.22979                    | 277.12358             | 359.53400           |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 06   | 100 | 10/04/2006 | 42166.55728             | 0.00002947   | 2.22824              | 83.38390                      | 93.70050                     | 20.51913              | 359.53397           |
| METEOSAT-7 | 06   | 107 | 17/04/2006 | 42166.06533             | 0.00001957   | 2.23796              | 82.98955                      | 99.23752                     | 22.29219              | 359.55339           |
| METEOSAT-7 | 06   | 114 | 24/04/2006 | 42165.49692             | 0.00008177   | 2.25983              | 82.99763                      | 49.73932                     | 78.73487              | 359.60867           |
| METEOSAT-7 | 06   | 121 | 01/05/2006 | 42165.31360             | 0.00004385   | 2.27721              | 82.56181                      | 146.34281                    | 349.53197             | 359.67480           |
| METEOSAT-7 | 06   | 128 | 08/05/2006 | 42164.45935             | 0.00007344   | 2.29605              | 82.57955                      | 49.14462                     | 93.73146              | 359.79382           |
| METEOSAT-7 | 06   | 135 | 15/05/2006 | 42165.14867             | 0.00006756   | 2.31345              | 82.17460                      | 71.41646                     | 78.90822              | 359.93587           |
| METEOSAT-7 | 06   | 142 | 22/05/2006 | 42163.40037             | 0.00012901   | 2.33701              | 82.24263                      | 52.92240                     | 104.41137             | 0.11026             |
| METEOSAT-7 | 06   | 149 | 29/05/2006 | 42164.31244             | 0.00008010   | 2.36050              | 81.87572                      | 106.08884                    | 58.71223              | 0.30650             |
| METEOSAT-7 | 06   | 156 | 05/06/2006 | 42162.61703             | 0.00012426   | 2.38063              | 82.03692                      | 53.20432                     | 118.57448             | 0.54056             |
| METEOSAT-7 | 06   | 163 | 12/06/2006 | 42164.04882             | 0.00011804   | 2.40320              | 81.72549                      | 79.17771                     | 100.08258             | 0.80477             |
| METEOSAT-7 | 06   | 170 | 19/06/2006 | 42167.09570             | 0.00004367   | 2.42533              | 81.89736                      | 48.62339                     | 137.24084             | 0.67517             |
| METEOSAT-7 | 06   | 177 | 26/06/2006 | 42168.60253             | 0.00007775   | 2.45188              | 81.65877                      | 173.50672                    | 19.33707              | 0.51043             |
| METEOSAT-7 | 06   | 184 | 03/07/2006 | 42166.65804             | 0.00003648   | 2.46857              | 81.84421                      | 55.88093                     | 143.54931             | 0.37752             |
| METEOSAT-7 | 06   | 191 | 10/07/2006 | 42168.00397             | 0.00006373   | 2.49275              | 81.66142                      | 132.67428                    | 73.74982              | 0.28410             |
| METEOSAT-7 | 06   | 198 | 17/07/2006 | 42120.77719             | 0.00016006   | 2.51004              | 81.88423                      | 81.07709                     | 135.19272             | 3.44852             |
| METEOSAT-7 | 06   | 205 | 24/07/2006 | 42121.91752             | 0.00015712   | 2.53576              | 81.77040                      | 118.61538                    | 108.69529             | 7.47426             |
| METEOSAT-7 | 06   | 212 | 31/07/2006 | 42120.56330             | 0.00014197   | 2.54700              | 81.96212                      | 85.84198                     | 152.23929             | 11.53963            |
| METEOSAT-7 | 06   | 219 | 07/08/2006 | 42119.78576             | 0.00018871   | 2.56853              | 81.84643                      | 102.92310                    | 146.31038             | 15.68300            |
| METEOSAT-7 | 06   | 226 | 14/08/2006 | 42119.29369             | 0.00017773   | 2.57991              | 82.00633                      | 104.39093                    | 155.77217             | 19.88226            |
| METEOSAT-7 | 06   | 233 | 21/08/2006 | 42118.00974             | 0.00022961   | 2.60296              | 81.94159                      | 123.91657                    | 147.49436             | 24.17708            |
| METEOSAT-7 | 06   | 240 | 28/08/2006 | 42117.86883             | 0.00017390   | 2.60808              | 82.01937                      | 109.34108                    | 173.23503             | 28.53172            |
| METEOSAT-7 | 06   | 247 | 04/09/2006 | 42115.18171             | 0.00025323   | 2.62816              | 81.89927                      | 113.67163                    | 180.37037             | 32.98773            |
| METEOSAT-7 | 06   | 254 | 11/09/2006 | 42116.35976             | 0.00021347   | 2.63573              | 81.91133                      | 126.74498                    | 178.70099             | 37.51047            |
| METEOSAT-7 | 06   | 261 | 18/09/2006 | 42113.22859             | 0.00030476   | 2.65721              | 81.82440                      | 131.94065                    | 185.11231             | 42.13305            |
| METEOSAT-7 | 06   | 268 | 25/09/2006 | 42113.55922             | 0.00023026   | 2.66107              | 81.73524                      | 128.53327                    | 200.19701             | 46.81831            |
| METEOSAT-7 | 06   | 275 | 02/10/2006 | 42111.72125             | 0.00029727   | 2.68136              | 81.56252                      | 125.43045                    | 215.15340             | 51.59189            |
| METEOSAT-7 | 06   | 282 | 09/10/2006 | 42111.70369             | 0.00029272   | 2.69044              | 81.41795                      | 145.10414                    | 207.35762             | 56.41419            |
| METEOSAT-7 | 06   | 289 | 16/10/2006 | 42169.10632             | 0.00005446   | 2.71327              | 81.28157                      | 306.13712                    | 54.34187              | 57.38679            |
| METEOSAT-7 | 06   | 296 | 23/10/2006 | 42166.39472             | 0.00007209   | 2.72060              | 81.07113                      | 302.14009                    | 65.29384              | 57.22401            |
| METEOSAT-7 | 06   | 303 | 30/10/2006 | 42166.25596             | 0.00003512   | 2.74550              | 80.89514                      | 342.33246                    | 32.11970              | 57.15912            |
| METEOSAT-7 | 06   | 310 | 06/11/2006 | 42164.87631             | 0.00011019   | 2.75891              | 80.65677                      | 243.42275                    | 138.14732             | 57.13228            |
| METEOSAT-7 | 06   | 317 | 13/11/2006 | 42164.91509             | 0.00007459   | 2.78586              | 80.56833                      | 220.82284                    | 167.79115             | 57.18248            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 06   | 324 | 20/11/2006 | 42163.46274             | 0.00011568   | 2.79871              | 80.31422                      | 258.32101                    | 137.55380             | 57.28571            |
| METEOSAT-7 | 06   | 331 | 27/11/2006 | 42164.20863             | 0.00006364   | 2.82806              | 80.24346                      | 256.13761                    | 146.87889             | 57.45473            |
| METEOSAT-7 | 06   | 338 | 04/12/2006 | 42161.93895             | 0.00018657   | 2.84608              | 80.01930                      | 239.01324                    | 171.33390             | 57.66177            |
| METEOSAT-7 | 06   | 345 | 11/12/2006 | 42168.90838             | 0.00001155   | 2.87488              | 80.05556                      | 105.88336                    | 311.16259             | 57.49915            |
| METEOSAT-7 | 06   | 352 | 18/12/2006 | 42166.63276             | 0.00006389   | 2.89116              | 79.86610                      | 290.40085                    | 133.54651             | 57.31570            |
| METEOSAT-7 | 06   | 359 | 25/12/2006 | 42167.80485             | 0.00003789   | 2.92056              | 79.94632                      | 354.96314                    | 75.67589              | 57.19357            |
| METEOSAT-7 | 07   | 1   | 01/01/2007 | 42165.29548             | 0.00010787   | 2.94021              | 79.78641                      | 254.13592                    | 183.47249             | 57.11103            |
| METEOSAT-7 | 07   | 8   | 08/01/2007 | 42166.63349             | 0.00005571   | 2.96464              | 79.94518                      | 283.99314                    | 160.34310             | 57.10639            |
| METEOSAT-7 | 07   | 15  | 15/01/2007 | 42164.27596             | 0.00012604   | 2.98014              | 79.82042                      | 286.04197                    | 165.35641             | 57.15365            |
| METEOSAT-7 | 07   | 22  | 22/01/2007 | 42165.22296             | 0.00008611   | 3.00407              | 80.05509                      | 310.59864                    | 147.55617             | 57.25442            |
| METEOSAT-7 | 07   | 29  | 29/01/2007 | 42163.07888             | 0.00015637   | 3.02189              | 79.91195                      | 270.44983                    | 194.87876             | 57.39480            |
| METEOSAT-7 | 07   | 36  | 05/02/2007 | 42163.77447             | 0.00013302   | 3.03920              | 80.10286                      | 298.56353                    | 173.67915             | 57.60816            |
| METEOSAT-7 | 07   | 43  | 12/02/2007 | 42162.26135             | 0.00018047   | 3.05133              | 79.95481                      | 294.44843                    | 185.09759             | 57.87056            |
| METEOSAT-7 | 07   | 50  | 19/02/2007 | 42167.91117             | 0.00002338   | 3.06880              | 80.12701                      | 285.78670                    | 200.35348             | 57.74165            |
| METEOSAT-7 | 07   | 57  | 26/02/2007 | 42166.71084             | 0.00010469   | 3.08502              | 79.95525                      | 244.40916                    | 248.64095             | 57.58255            |
| METEOSAT-7 | 07   | 64  | 05/03/2007 | 42166.33089             | 0.00007056   | 3.09518              | 80.06200                      | 301.09467                    | 198.65687             | 57.49095            |
| METEOSAT-7 | 07   | 71  | 12/03/2007 | 42166.01260             | 0.00009175   | 3.10751              | 79.80648                      | 286.48748                    | 220.38227             | 57.45146            |
| METEOSAT-7 | 07   | 78  | 19/03/2007 | 42164.60539             | 0.00008323   | 3.12048              | 79.89669                      | 330.34985                    | 183.34393             | 57.46134            |
| METEOSAT-7 | 07   | 85  | 26/03/2007 | 42164.62702             | 0.00009791   | 3.13973              | 79.60598                      | 273.71877                    | 247.23073             | 57.51954            |
| METEOSAT-7 | 07   | 92  | 02/04/2007 | 42163.20637             | 0.00012524   | 3.14750              | 79.61653                      | 330.72516                    | 197.24295             | 57.64024            |
| METEOSAT-7 | 07   | 99  | 09/04/2007 | 42168.25050             | 0.00006305   | 3.16430              | 79.29801                      | 248.99014                    | 286.10878             | 57.54286            |
| METEOSAT-7 | 07   | 106 | 16/04/2007 | 42165.80608             | 0.00003360   | 3.17792              | 79.29147                      | 342.94798                    | 198.90639             | 57.38190            |
| METEOSAT-7 | 07   | 113 | 23/04/2007 | 42166.89379             | 0.00007200   | 3.20267              | 78.98468                      | 230.45471                    | 318.51347             | 57.27847            |
| METEOSAT-7 | 07   | 120 | 30/04/2007 | 42164.80721             | 0.00006831   | 3.21352              | 78.91852                      | 349.64177                    | 206.25480             | 57.23122            |
| METEOSAT-7 | 07   | 127 | 07/05/2007 | 42165.90424             | 0.00002997   | 3.23641              | 78.62942                      | 317.74625                    | 245.37200             | 57.25503            |
| METEOSAT-7 | 07   | 134 | 14/05/2007 | 42163.18080             | 0.00007600   | 3.25159              | 78.59881                      | 26.22876                     | 183.89722             | 57.32556            |
| METEOSAT-7 | 07   | 141 | 21/05/2007 | 42164.63203             | 0.00001412   | 3.28105              | 78.36723                      | 195.57640                    | 21.82303              | 57.46266            |
| METEOSAT-7 | 07   | 148 | 28/05/2007 | 42162.46138             | 0.00010648   | 3.29544              | 78.29919                      | 23.50429                     | 201.04883             | 57.64670            |
| METEOSAT-7 | 07   | 155 | 04/06/2007 | 42168.80707             | 0.00007209   | 3.32338              | 78.11865                      | 237.50688                    | 354.03443             | 57.55530            |
| METEOSAT-7 | 07   | 162 | 11/06/2007 | 42166.66988             | 0.00002005   | 3.33855              | 78.10504                      | 224.45933                    | 13.80099              | 57.36460            |
| METEOSAT-7 | 07   | 169 | 18/06/2007 | 42167.60722             | 0.00009971   | 3.37121              | 78.00339                      | 205.31729                    | 39.81886              | 57.24494            |
| METEOSAT-7 | 07   | 176 | 25/06/2007 | 42165.94422             | 0.00001064   | 3.38398              | 77.96524                      | 2.53218                      | 249.45290             | 57.16463            |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 07   | 183 | 02/07/2007 | 42165.85571             | 0.00005255   | 3.41247              | 77.91232                      | 165.84713                    | 93.08348              | 57.16796            |
| METEOSAT-7 | 07   | 190 | 09/07/2007 | 42164.82488             | 0.00005874   | 3.42542              | 77.91046                      | 140.51049                    | 125.35100             | 57.20925            |
| METEOSAT-7 | 07   | 197 | 16/07/2007 | 42164.64999             | 0.00012046   | 3.45502              | 77.92542                      | 166.86886                    | 105.97828             | 57.32288            |
| METEOSAT-7 | 07   | 204 | 23/07/2007 | 42163.92894             | 0.00005980   | 3.46473              | 77.88981                      | 116.13931                    | 163.77692             | 57.46946            |
| METEOSAT-7 | 07   | 211 | 30/07/2007 | 42162.64346             | 0.00013194   | 3.48984              | 77.92104                      | 140.19600                    | 146.80382             | 57.69673            |
| METEOSAT-7 | 07   | 218 | 06/08/2007 | 42167.69820             | 0.00001609   | 3.49933              | 77.87503                      | 156.44606                    | 137.38286             | 57.59002            |
| METEOSAT-7 | 07   | 225 | 13/08/2007 | 42166.28168             | 0.00009209   | 3.52340              | 77.94086                      | 172.61752                    | 127.94040             | 57.49327            |
| METEOSAT-7 | 07   | 232 | 20/08/2007 | 42166.51431             | 0.00001934   | 3.52968              | 77.84838                      | 103.20248                    | 204.27767             | 57.42851            |
| METEOSAT-7 | 07   | 239 | 27/08/2007 | 42164.31277             | 0.00011300   | 3.54992              | 77.88768                      | 147.78578                    | 166.56237             | 57.43873            |
| METEOSAT-7 | 07   | 246 | 03/09/2007 | 42165.58478             | 0.00009324   | 3.55841              | 77.74011                      | 162.74046                    | 158.69892             | 57.48170            |
| METEOSAT-7 | 07   | 253 | 10/09/2007 | 42163.24192             | 0.00017526   | 3.57753              | 77.78534                      | 168.17120                    | 160.23686             | 57.59208            |
| METEOSAT-7 | 07   | 260 | 17/09/2007 | 42164.07023             | 0.00008896   | 3.58369              | 77.59403                      | 161.03626                    | 174.61899             | 57.74064            |
| METEOSAT-7 | 07   | 267 | 24/09/2007 | 42166.25866             | 0.00008723   | 3.60212              | 77.589                        | 168.34934                    | 174.14368             | 57.66424            |
| METEOSAT-7 | 07   | 274 | 01/10/2007 | 42167.78054             | 0.00007614   | 3.61293              | 77.32677                      | 201.96324                    | 147.54703             | 57.50762            |
| METEOSAT-7 | 07   | 281 | 08/10/2007 | 42165.12843             | 0.00015341   | 3.63089              | 77.33960                      | 190.68584                    | 165.63479             | 57.41826            |
| METEOSAT-7 | 07   | 288 | 15/10/2007 | 42165.99339             | 0.00008014   | 3.64134              | 77.05610                      | 212.23636                    | 151.24251             | 57.37905            |
| METEOSAT-7 | 07   | 295 | 22/10/2007 | 42164.16147             | 0.00015909   | 3.66089              | 77.02156                      | 183.39565                    | 187.05370             | 57.40163            |
| METEOSAT-7 | 07   | 302 | 29/10/2007 | 42165.02696             | 0.00016173   | 3.67940              | 76.69754                      | 205.26096                    | 172.49470             | 57.47094            |
| METEOSAT-7 | 07   | 309 | 05/11/2007 | 42162.86701             | 0.00021913   | 3.69841              | 76.69433                      | 199.67451                    | 185.13099             | 57.60690            |
| METEOSAT-7 | 07   | 316 | 12/11/2007 | 42163.21093             | 0.00016414   | 3.71710              | 76.43835                      | 216.33090                    | 175.83478             | 57.80274            |
| METEOSAT-7 | 07   | 323 | 19/11/2007 | 42168.32293             | 0.00009387   | 3.73876              | 76.42921                      | 169.14244                    | 229.73200             | 57.59755            |
| METEOSAT-7 | 07   | 330 | 26/11/2007 | 42167.91253             | 0.00009855   | 3.76409              | 76.15373                      | 214.38911                    | 191.43753             | 57.37255            |
| METEOSAT-7 | 07   | 337 | 03/12/2007 | 42166.95619             | 0.00012280   | 3.78449              | 76.17930                      | 205.44248                    | 207.09533             | 57.21118            |
| METEOSAT-7 | 07   | 344 | 10/12/2007 | 42166.28689             | 0.00010061   | 3.80840              | 75.95859                      | 243.08210                    | 176.47999             | 57.12031            |
| METEOSAT-7 | 07   | 351 | 17/12/2007 | 42166.43192             | 0.00011846   | 3.82904              | 76.02209                      | 203.42831                    | 222.91687             | 57.07563            |
| METEOSAT-7 | 07   | 358 | 24/12/2007 | 42164.73715             | 0.00016432   | 3.85714              | 75.84048                      | 235.34068                    | 198.09231             | 57.09385            |
| METEOSAT-7 | 07   | 365 | 31/12/2007 | 42165.17142             | 0.00014485   | 3.87488              | 75.92088                      | 230.10295                    | 210.21202             | 57.17048            |
| METEOSAT-7 | 08   | 7   | 07/01/2008 | 42163.39894             | 0.00016869   | 3.89880              | 75.79683                      | 258.67513                    | 188.79540             | 57.31837            |
| METEOSAT-7 | 08   | 14  | 14/01/2008 | 42164.27616             | 0.00014347   | 3.91464              | 75.90070                      | 230.77371                    | 223.66083             | 57.50294            |
| METEOSAT-7 | 08   | 21  | 21/01/2008 | 42161.80354             | 0.00021557   | 3.94088              | 75.79478                      | 252.83550                    | 208.83659             | 57.75161            |
| METEOSAT-7 | 08   | 28  | 28/01/2008 | 42168.71000             | 0.00004856   | 3.95240              | 75.86212                      | 216.17323                    | 252.25826             | 57.69283            |
| METEOSAT-7 | 08   | 35  | 04/02/2008 | 42166.29396             | 0.00009433   | 3.97275              | 75.78592                      | 281.08093                    | 194.17750             | 57.55633            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 08   | 42  | 11/02/2008 | 42167.38996             | 0.00004736   | 3.98216              | 75.85607                      | 216.32229                    | 265.65053             | 57.45030            |
| METEOSAT-7 | 08   | 49  | 18/02/2008 | 42164.85892             | 0.00011582   | 4.00514              | 75.76340                      | 270.29817                    | 218.61950             | 57.40918            |
| METEOSAT-7 | 08   | 56  | 25/02/2008 | 42166.07933             | 0.00006756   | 4.01081              | 75.75964                      | 299.94995                    | 195.87446             | 57.41433            |
| METEOSAT-7 | 08   | 63  | 03/03/2008 | 42163.88718             | 0.00014474   | 4.02918              | 75.64752                      | 304.47009                    | 198.43785             | 57.48415            |
| METEOSAT-7 | 08   | 70  | 10/03/2008 | 42164.52110             | 0.00005810   | 4.03559              | 75.61907                      | 300.14577                    | 209.79779             | 57.58525            |
| METEOSAT-7 | 08   | 77  | 17/03/2008 | 42162.59939             | 0.00014223   | 4.05781              | 75.49225                      | 298.22711                    | 218.91849             | 57.75073            |
| METEOSAT-7 | 08   | 84  | 24/03/2008 | 42167.35689             | 0.00002759   | 4.06299              | 75.37570                      | 310.74213                    | 213.36872             | 57.68637            |
| METEOSAT-7 | 08   | 91  | 31/03/2008 | 42166.19030             | 0.00008356   | 4.08249              | 75.22722                      | 303.23152                    | 227.83394             | 57.57732            |
| METEOSAT-7 | 08   | 98  | 07/04/2008 | 42165.75174             | 0.00000623   | 4.09034              | 75.09756                      | 31.89548                     | 146.14422             | 57.50509            |
| METEOSAT-7 | 08   | 105 | 14/04/2008 | 42164.91602             | 0.00007234   | 4.11626              | 74.96216                      | 297.96458                    | 247.12099             | 57.49795            |
| METEOSAT-7 | 08   | 112 | 21/04/2008 | 42164.27944             | 0.00008935   | 4.12525              | 74.77116                      | 5.45791                      | 186.78098             | 57.54305            |
| METEOSAT-7 | 08   | 119 | 28/04/2008 | 42164.34249             | 0.00009579   | 4.14873              | 74.63456                      | 340.33060                    | 219.07770             | 57.66003            |
| METEOSAT-7 | 08   | 126 | 05/05/2008 | 42166.87033             | 0.00002567   | 4.16123              | 74.46159                      | 178.17605                    | 28.15152              | 57.49385            |
| METEOSAT-7 | 08   | 133 | 12/05/2008 | 42167.26527             | 0.00006785   | 4.19074              | 74.37914                      | 259.34284                    | 313.82132             | 57.33830            |
| METEOSAT-7 | 08   | 140 | 19/05/2008 | 42165.67792             | 0.00004658   | 4.20481              | 74.17764                      | 21.04409                     | 199.12858             | 57.23991            |
| METEOSAT-7 | 08   | 147 | 26/05/2008 | 42166.61462             | 0.00003031   | 4.23114              | 74.11177                      | 311.93045                    | 275.18742             | 57.21788            |
| METEOSAT-7 | 08   | 154 | 02/06/2008 | 42164.01096             | 0.00006171   | 4.24682              | 73.95367                      | 88.84826                     | 145.34906             | 57.24288            |
| METEOSAT-7 | 08   | 161 | 09/06/2008 | 42165.24253             | 0.00001092   | 4.27677              | 73.95730                      | 285.81415                    | 315.35942             | 57.33050            |
| METEOSAT-7 | 08   | 168 | 16/06/2008 | 42163.08073             | 0.00009608   | 4.29352              | 73.79154                      | 56.64239                     | 191.72988             | 57.47625            |
| METEOSAT-7 | 08   | 175 | 23/06/2008 | 42164.24526             | 0.00004565   | 4.31835              | 73.81919                      | 77.08209                     | 178.36727             | 57.69705            |
| METEOSAT-7 | 08   | 182 | 30/06/2008 | 42166.72638             | 0.00001127   | 4.33408              | 73.69343                      | 16.85604                     | 245.46887             | 57.56519            |
| METEOSAT-7 | 08   | 189 | 07/07/2008 | 42168.03898             | 0.00007040   | 4.36051              | 73.76575                      | 274.75040                    | 354.24291             | 57.42520            |
| METEOSAT-7 | 08   | 196 | 14/07/2008 | 42165.90601             | 0.00005000   | 4.37633              | 73.63102                      | 20.80587                     | 255.11591             | 57.33955            |
| METEOSAT-7 | 08   | 203 | 21/07/2008 | 42166.54285             | 0.00001905   | 4.39588              | 73.71281                      | 211.88945                    | 70.81476              | 57.32329            |
| METEOSAT-7 | 08   | 210 | 28/07/2008 | 42164.60083             | 0.00005871   | 4.41051              | 73.58316                      | 121.61256                    | 168.12859             | 57.34882            |
| METEOSAT-7 | 08   | 217 | 04/08/2008 | 42165.20608             | 0.00004442   | 4.42951              | 73.67888                      | 200.68973                    | 95.91778              | 57.42596            |
| METEOSAT-7 | 08   | 224 | 11/08/2008 | 42163.74105             | 0.00005654   | 4.44342              | 73.53557                      | 94.63930                     | 209.12803             | 57.55396            |
| METEOSAT-7 | 08   | 231 | 18/08/2008 | 42163.27723             | 0.00010037   | 4.45723              | 73.60977                      | 157.88906                    | 152.88651             | 57.74296            |
| METEOSAT-7 | 08   | 238 | 25/08/2008 | 42167.16526             | 0.00002872   | 4.47103              | 73.44208                      | 78.85674                     | 238.86409             | 57.62208            |
| METEOSAT-7 | 08   | 245 | 01/09/2008 | 42166.61858             | 0.00003556   | 4.48413              | 73.49515                      | 244.33450                    | 80.10730              | 57.49272            |
| METEOSAT-7 | 08   | 252 | 08/09/2008 | 42166.19323             | 0.00003492   | 4.49771              | 73.31096                      | 36.42128                     | 295.03683             | 57.41634            |
| METEOSAT-7 | 08   | 259 | 15/09/2008 | 42164.56685             | 0.00008442   | 4.50797              | 73.32554                      | 177.14151                    | 161.19388             | 57.39539            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 08   | 266 | 22/09/2008 | 42165.17818             | 0.00006363   | 4.52458              | 73.10583                      | 157.21992                    | 188.27903             | 57.42216            |
| METEOSAT-7 | 08   | 273 | 29/09/2008 | 42163.47243             | 0.00009470   | 4.53507              | 73.08400                      | 202.67632                    | 149.84225             | 57.50027            |
| METEOSAT-7 | 08   | 280 | 06/10/2008 | 42164.00253             | 0.00003380   | 4.55218              | 72.85672                      | 176.74129                    | 183.06530             | 57.63894            |
| METEOSAT-7 | 08   | 287 | 13/10/2008 | 42166.22701             | 0.00006842   | 4.56263              | 72.81199                      | 161.63929                    | 204.97245             | 57.47842            |
| METEOSAT-7 | 08   | 294 | 20/10/2008 | 42167.65333             | 0.00003662   | 4.58532              | 72.53263                      | 119.94223                    | 253.71588             | 57.32459            |
| METEOSAT-7 | 08   | 301 | 27/10/2008 | 42165.14903             | 0.00005880   | 4.59713              | 72.45853                      | 216.74001                    | 163.81266             | 57.22704            |
| METEOSAT-7 | 08   | 308 | 03/11/2008 | 42166.11939             | 0.00001612   | 4.62123              | 72.25846                      | 333.62758                    | 54.01486              | 57.20124            |
| METEOSAT-7 | 08   | 315 | 10/11/2008 | 42163.89160             | 0.00012020   | 4.63418              | 72.17469                      | 195.53782                    | 199.11807             | 57.22028            |
| METEOSAT-7 | 08   | 322 | 17/11/2008 | 42165.38747             | 0.00006173   | 4.66474              | 71.97636                      | 207.59773                    | 194.25448             | 57.31205            |
| METEOSAT-7 | 08   | 329 | 24/11/2008 | 42162.71782             | 0.00012104   | 4.67911              | 71.89592                      | 232.32959                    | 176.65083             | 57.46000            |
| METEOSAT-7 | 08   | 336 | 01/12/2008 | 42163.50270             | 0.00007673   | 4.70732              | 71.75828                      | 259.28983                    | 156.94800             | 57.68548            |
| METEOSAT-7 | 08   | 343 | 08/12/2008 | 42167.57480             | 0.00010258   | 4.72237              | 71.71681                      | 162.53794                    | 260.46669             | 57.52194            |
| METEOSAT-7 | 08   | 350 | 15/12/2008 | 42168.17823             | 0.00003305   | 4.75540              | 71.61696                      | 144.42827                    | 285.40450             | 57.36553            |
| METEOSAT-7 | 08   | 357 | 22/12/2008 | 42166.17850             | 0.00004520   | 4.76927              | 71.56273                      | 223.11626                    | 213.54541             | 57.26001            |
| METEOSAT-7 | 08   | 364 | 29/12/2008 | 42166.22810             | 0.00003477   | 4.79659              | 71.51848                      | 321.31641                    | 122.23829             | 57.23153            |
| METEOSAT-7 | 09   | 5   | 05/01/2009 | 42165.70869             | 0.00007750   | 4.80824              | 71.49336                      | 202.70986                    | 247.74716             | 57.23327            |
| METEOSAT-7 | 09   | 12  | 12/01/2009 | 42164.87279             | 0.00006584   | 4.83859              | 71.48252                      | 282.43813                    | 174.98277             | 57.31138            |
| METEOSAT-7 | 09   | 19  | 19/01/2009 | 42164.24549             | 0.00008319   | 4.84947              | 71.42480                      | 279.18773                    | 185.28735             | 57.43182            |
| METEOSAT-7 | 09   | 26  | 26/01/2009 | 42163.23032             | 0.00011767   | 4.87170              | 71.43553                      | 312.86012                    | 158.67451             | 57.62365            |
| METEOSAT-7 | 09   | 33  | 02/02/2009 | 42163.63287             | 0.00008031   | 4.87912              | 71.38466                      | 260.32728                    | 218.35640             | 57.83906            |
| METEOSAT-7 | 09   | 40  | 09/02/2009 | 42166.66458             | 0.00003445   | 4.90310              | 71.39665                      | 298.91634                    | 186.53149             | 57.72727            |
| METEOSAT-7 | 09   | 47  | 16/02/2009 | 42167.44290             | 0.00001580   | 4.91062              | 71.28743                      | 303.40279                    | 188.90855             | 57.58761            |
| METEOSAT-7 | 09   | 54  | 23/02/2009 | 42165.44125             | 0.00008769   | 4.92808              | 71.28830                      | 343.80054                    | 155.33604             | 57.51426            |
| METEOSAT-7 | 09   | 61  | 02/03/2009 | 42166.43779             | 0.00001397   | 4.93363              | 71.15941                      | 199.90264                    | 306.22181             | 57.46709            |
| METEOSAT-7 | 09   | 68  | 09/03/2009 | 42163.76781             | 0.00011538   | 4.95367              | 71.14345                      | 333.24162                    | 179.82767             | 57.48451            |
| METEOSAT-7 | 09   | 75  | 16/03/2009 | 42165.17058             | 0.00008514   | 4.96197              | 70.95563                      | 350.30558                    | 169.93009             | 57.54542            |
| METEOSAT-7 | 09   | 82  | 23/03/2009 | 42162.75625             | 0.00016249   | 4.97822              | 70.92004                      | 351.56162                    | 175.75642             | 57.67060            |
| METEOSAT-7 | 09   | 89  | 30/03/2009 | 42167.54163             | 0.00002984   | 4.98728              | 70.71012                      | 219.48850                    | 314.84155             | 57.54820            |
| METEOSAT-7 | 09   | 96  | 06/04/2009 | 42165.09455             | 0.00011286   | 5.00730              | 70.66958                      | 329.56706                    | 211.62069             | 57.44000            |
| METEOSAT-7 | 09   | 103 | 13/04/2009 | 42166.21334             | 0.00007443   | 5.02070              | 70.42853                      | 353.25774                    | 195.04625             | 57.38875            |
| METEOSAT-7 | 09   | 110 | 20/04/2009 | 42164.26298             | 0.00013516   | 5.03851              | 70.37554                      | 354.78354                    | 200.51249             | 57.40338            |
| METEOSAT-7 | 09   | 117 | 27/04/2009 | 42164.71827             | 0.00004871   | 5.05468              | 70.13714                      | 27.32292                     | 175.19844             | 57.46823            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 09   | 124 | 04/05/2009 | 42163.09783             | 0.00015509   | 5.07635              | 70.10254                      | 355.80597                    | 213.78767             | 57.58872            |
| METEOSAT-7 | 09   | 131 | 11/05/2009 | 42167.81874             | 0.00003368   | 5.09627              | 69.87625                      | 2.91243                      | 213.72238             | 57.49205            |
| METEOSAT-7 | 09   | 138 | 18/05/2009 | 42167.01785             | 0.00006358   | 5.11530              | 69.84890                      | 355.49986                    | 227.91926             | 57.34398            |
| METEOSAT-7 | 09   | 145 | 25/05/2009 | 42166.25456             | 0.00004575   | 5.13738              | 69.64455                      | 107.79802                    | 122.63546             | 57.25531            |
| METEOSAT-7 | 09   | 152 | 01/06/2009 | 42165.76850             | 0.00008458   | 5.15856              | 69.64350                      | 2.47374                      | 234.81203             | 57.21454            |
| METEOSAT-7 | 09   | 159 | 08/06/2009 | 42164.83250             | 0.00009249   | 5.18242              | 69.47528                      | 50.81492                     | 193.56556             | 57.25568            |
| METEOSAT-7 | 09   | 166 | 15/06/2009 | 42165.22555             | 0.00007722   | 5.19973              | 69.48869                      | 41.85590                     | 209.49302             | 57.35796            |
| METEOSAT-7 | 09   | 173 | 22/06/2009 | 42163.16821             | 0.00011844   | 5.22382              | 69.34009                      | 94.20144                     | 164.33358             | 57.52108            |
| METEOSAT-7 | 09   | 180 | 29/06/2009 | 42167.90747             | 0.00009499   | 5.24166              | 69.37057                      | 339.25761                    | 286.05678             | 57.45836            |
| METEOSAT-7 | 09   | 187 | 06/07/2009 | 42166.03455             | 0.00007014   | 5.26552              | 69.26537                      | 38.46743                     | 233.73812             | 57.37365            |
| METEOSAT-7 | 09   | 194 | 13/07/2009 | 42167.13560             | 0.00003278   | 5.27761              | 69.29935                      | 14.92318                     | 264.08647             | 57.34059            |
| METEOSAT-7 | 09   | 201 | 20/07/2009 | 42164.37778             | 0.00008937   | 5.29994              | 69.19039                      | 109.33822                    | 176.67546             | 57.36362            |
| METEOSAT-7 | 09   | 208 | 27/07/2009 | 42165.68996             | 0.00005793   | 5.31234              | 69.21562                      | 15.49749                     | 277.41821             | 57.41467            |
| METEOSAT-7 | 09   | 215 | 03/08/2009 | 42163.37557             | 0.00009504   | 5.33337              | 69.13964                      | 82.67835                     | 217.32129             | 57.54224            |
| METEOSAT-7 | 09   | 222 | 10/08/2009 | 42164.42750             | 0.00005596   | 5.33999              | 69.14481                      | 120.83987                    | 186.21265             | 57.71289            |
| METEOSAT-7 | 09   | 229 | 17/08/2009 | 42166.20709             | 0.00005495   | 5.36001              | 69.04341                      | 90.75793                     | 223.23404             | 57.65695            |
| METEOSAT-7 | 09   | 236 | 24/08/2009 | 42167.41666             | 0.00008281   | 5.36770              | 69.01684                      | 346.58170                    | 334.19938             | 57.51776            |
| METEOSAT-7 | 09   | 243 | 31/08/2009 | 42165.33692             | 0.00006284   | 5.38663              | 68.92867                      | 55.96576                     | 271.74378             | 57.44965            |
| METEOSAT-7 | 09   | 250 | 07/09/2009 | 42165.67300             | 0.00002108   | 5.39063              | 68.86904                      | 187.89427                    | 146.76470             | 57.42357            |
| METEOSAT-7 | 09   | 257 | 14/09/2009 | 42164.08991             | 0.00007638   | 5.41041              | 68.74679                      | 136.41523                    | 205.31564             | 57.45164            |
| METEOSAT-7 | 09   | 264 | 21/09/2009 | 42164.39877             | 0.00002696   | 5.41655              | 68.61529                      | 304.05267                    | 44.80350              | 57.51838            |
| METEOSAT-7 | 09   | 271 | 28/09/2009 | 42163.17631             | 0.00004421   | 5.43628              | 68.50448                      | 116.19687                    | 239.83811             | 57.65609            |
| METEOSAT-7 | 09   | 278 | 05/10/2009 | 42167.07754             | 0.00001464   | 5.44222              | 68.37431                      | 349.82957                    | 13.15216              | 57.54200            |
| METEOSAT-7 | 09   | 285 | 12/10/2009 | 42166.86289             | 0.00004269   | 5.46540              | 68.24344                      | 80.04382                     | 289.82927             | 57.37234            |
| METEOSAT-7 | 09   | 292 | 19/10/2009 | 42165.99864             | 0.00007053   | 5.47582              | 68.08288                      | 331.81324                    | 45.02629              | 57.25024            |
| METEOSAT-7 | 09   | 299 | 26/10/2009 | 42165.85385             | 0.00005087   | 5.49893              | 67.97504                      | 28.46495                     | 355.35716             | 57.20046            |
| METEOSAT-7 | 09   | 306 | 02/11/2009 | 42164.07496             | 0.00006800   | 5.50993              | 67.81272                      | 234.91123                    | 155.99448             | 57.20295            |
| METEOSAT-7 | 09   | 313 | 09/11/2009 | 42165.09930             | 0.00001991   | 5.53767              | 67.71596                      | 221.48226                    | 176.50744             | 57.27755            |
| METEOSAT-7 | 09   | 320 | 16/11/2009 | 42163.03830             | 0.00009745   | 5.55307              | 67.54560                      | 286.40685                    | 118.79025             | 57.41025            |
| METEOSAT-7 | 09   | 327 | 23/11/2009 | 42163.74984             | 0.00004382   | 5.57889              | 67.48600                      | 306.19447                    | 106.16377             | 57.61541            |
| METEOSAT-7 | 09   | 334 | 30/11/2009 | 42166.64311             | 0.00005317   | 5.59399              | 67.34203                      | 181.54309                    | 237.70566             | 57.47374            |
| METEOSAT-7 | 09   | 341 | 07/12/2009 | 42168.33682             | 0.00004198   | 5.62329              | 67.31608                      | 91.56298                     | 334.46108             | 57.34111            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 09   | 348 | 14/12/2009 | 42165.55063             | 0.00005432   | 5.64131              | 67.17662                      | 310.48364                    | 122.48071             | 57.26709            |
| METEOSAT-7 | 09   | 355 | 21/12/2009 | 42166.50559             | 0.00004586   | 5.66515              | 67.18407                      | 23.09918                     | 56.72067              | 57.25965            |
| METEOSAT-7 | 09   | 362 | 28/12/2009 | 42164.47997             | 0.00007082   | 5.68025              | 67.07231                      | 246.68839                    | 200.14810             | 57.29834            |
| METEOSAT-7 | 10   | 4   | 04/01/2010 | 42165.86249             | 0.00005588   | 5.70593              | 67.10959                      | 330.64766                    | 123.12339             | 57.40496            |
| METEOSAT-7 | 10   | 11  | 11/01/2010 | 42163.15236             | 0.00013024   | 5.72290              | 66.99388                      | 307.85045                    | 153.06004             | 57.56375            |
| METEOSAT-7 | 10   | 18  | 18/01/2010 | 42163.74717             | 0.00010366   | 5.74029              | 67.03771                      | 333.91915                    | 134.03127             | 57.77925            |
| METEOSAT-7 | 10   | 25  | 25/01/2010 | 42167.28690             | 0.00005934   | 5.75249              | 66.93063                      | 214.15357                    | 260.66327             | 57.66480            |
| METEOSAT-7 | 10   | 32  | 01/02/2010 | 42167.43833             | 0.00005589   | 5.77100              | 66.97817                      | 352.30913                    | 129.22343             | 57.54804            |
| METEOSAT-7 | 10   | 39  | 08/02/2010 | 42165.75667             | 0.00009474   | 5.78574              | 66.84964                      | 319.72409                    | 168.75333             | 57.47748            |
| METEOSAT-7 | 10   | 46  | 15/02/2010 | 42165.52668             | 0.00009277   | 5.79659              | 66.87292                      | 356.17350                    | 139.15728             | 57.45880            |
| METEOSAT-7 | 10   | 53  | 22/02/2010 | 42165.27169             | 0.00006211   | 5.80735              | 66.72640                      | 299.88105                    | 202.51911             | 57.47769            |
| METEOSAT-7 | 10   | 60  | 01/03/2010 | 42163.89273             | 0.00016689   | 5.82058              | 66.73341                      | 347.56750                    | 161.80665             | 57.54643            |
| METEOSAT-7 | 10   | 67  | 08/03/2010 | 42163.77273             | 0.00016522   | 5.83603              | 66.56348                      | 336.72202                    | 179.86057             | 57.66409            |
| METEOSAT-7 | 10   | 74  | 15/03/2010 | 42162.47337             | 0.00018121   | 5.84397              | 66.53264                      | 356.76972                    | 166.94154             | 57.83420            |
| METEOSAT-7 | 10   | 81  | 22/03/2010 | 42167.96461             | 0.00004798   | 5.85797              | 66.34123                      | 266.39735                    | 264.28131             | 57.67829            |
| METEOSAT-7 | 10   | 88  | 29/03/2010 | 42165.55085             | 0.00014991   | 5.87009              | 66.29509                      | 350.14846                    | 187.34088             | 57.50862            |
| METEOSAT-7 | 10   | 95  | 05/04/2010 | 42166.68165             | 0.00011583   | 5.88976              | 66.10147                      | 340.19156                    | 204.32120             | 57.40207            |
| METEOSAT-7 | 10   | 102 | 12/04/2010 | 42164.50114             | 0.00014600   | 5.89943              | 66.03012                      | 7.71732                      | 183.75388             | 57.35423            |
| METEOSAT-7 | 10   | 109 | 19/04/2010 | 42165.63080             | 0.00007031   | 5.92015              | 65.82935                      | 351.39168                    | 207.22417             | 57.36524            |
| METEOSAT-7 | 10   | 116 | 26/04/2010 | 42162.98268             | 0.00022162   | 5.93387              | 65.75557                      | 5.86630                      | 199.80848             | 57.42336            |
| METEOSAT-7 | 10   | 123 | 03/05/2010 | 42164.48193             | 0.00016533   | 5.95933              | 65.58408                      | 5.90556                      | 207.00007             | 57.56175            |
| METEOSAT-7 | 10   | 130 | 10/05/2010 | 42166.81578             | 0.00009589   | 5.97131              | 65.50523                      | 15.96023                     | 203.83379             | 57.46005            |
| METEOSAT-7 | 10   | 137 | 17/05/2010 | 42167.81428             | 0.00001456   | 5.99779              | 65.34701                      | 5.97025                      | 220.73034             | 57.30508            |
| METEOSAT-7 | 10   | 144 | 24/05/2010 | 42165.60675             | 0.00015864   | 6.01260              | 65.28013                      | 14.35318                     | 219.19544             | 57.19256            |
| METEOSAT-7 | 10   | 151 | 31/05/2010 | 42166.56380             | 0.00009905   | 6.04088              | 65.17040                      | 25.56748                     | 214.95453             | 57.17100            |
| METEOSAT-7 | 10   | 158 | 07/06/2010 | 42164.80298             | 0.00013387   | 6.05292              | 65.11073                      | 39.88774                     | 207.60652             | 57.20742            |
| METEOSAT-7 | 10   | 165 | 14/06/2010 | 42164.94244             | 0.00007841   | 6.08129              | 65.01838                      | 70.42788                     | 184.13439             | 57.31384            |
| METEOSAT-7 | 10   | 172 | 21/06/2010 | 42163.65015             | 0.00018472   | 6.09474              | 64.96371                      | 34.29699                     | 227.32245             | 57.45304            |
| METEOSAT-7 | 10   | 179 | 28/06/2010 | 42163.50797             | 0.00014667   | 6.12112              | 64.91983                      | 56.92800                     | 211.82459             | 57.68254            |
| METEOSAT-7 | 10   | 186 | 05/07/2010 | 42167.70191             | 0.00006055   | 6.13039              | 64.86934                      | 27.41889                     | 248.21846             | 57.65666            |
| METEOSAT-7 | 10   | 193 | 12/07/2010 | 42166.52198             | 0.00004344   | 6.15610              | 64.83093                      | 125.66443                    | 156.78651             | 57.56998            |
| METEOSAT-7 | 10   | 200 | 19/07/2010 | 42166.40331             | 0.00010749   | 6.16667              | 64.76700                      | 26.35314                     | 262.96144             | 57.50421            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 10   | 207 | 26/07/2010 | 42165.05565             | 0.00007840   | 6.18694              | 64.73648                      | 83.28090                     | 212.95546             | 57.52485            |
| METEOSAT-7 | 10   | 214 | 02/08/2010 | 42165.63345             | 0.00006120   | 6.19284              | 64.66710                      | 82.06043                     | 221.18402             | 57.58497            |
| METEOSAT-7 | 10   | 221 | 09/08/2010 | 42163.28147             | 0.00011215   | 6.21399              | 64.64338                      | 134.00052                    | 176.26712             | 57.69759            |
| METEOSAT-7 | 10   | 228 | 16/08/2010 | 42164.25109             | 0.00008914   | 6.22237              | 64.53976                      | 57.60731                     | 259.79104             | 57.82715            |
| METEOSAT-7 | 10   | 235 | 23/08/2010 | 42166.17073             | 0.00004226   | 6.23868              | 64.52770                      | 74.16400                     | 250.09771             | 57.77149            |
| METEOSAT-7 | 10   | 242 | 30/08/2010 | 42167.29204             | 0.00001623   | 6.24335              | 64.40581                      | 5.90579                      | 325.27446             | 57.65113            |
| METEOSAT-7 | 10   | 249 | 06/09/2010 | 42164.49159             | 0.00007178   | 6.26118              | 64.36793                      | 163.03857                    | 175.03477             | 57.58159            |
| METEOSAT-7 | 10   | 256 | 13/09/2010 | 42165.97976             | 0.00006157   | 6.27072              | 64.20686                      | 5.64899                      | 339.47564             | 57.53884            |
| METEOSAT-7 | 10   | 263 | 20/09/2010 | 42163.61313             | 0.00006141   | 6.28514              | 64.16884                      | 142.14703                    | 209.98013             | 57.56548            |
| METEOSAT-7 | 10   | 270 | 27/09/2010 | 42164.52748             | 0.00004400   | 6.29292              | 63.99251                      | 198.93186                    | 160.39152             | 57.64323            |
| METEOSAT-7 | 10   | 277 | 04/10/2010 | 42162.23204             | 0.00010960   | 6.31067              | 63.92672                      | 181.46326                    | 185.00174             | 57.77663            |
| METEOSAT-7 | 10   | 284 | 11/10/2010 | 42168.32772             | 0.00011505   | 6.32538              | 63.73282                      | 22.98764                     | 350.40902             | 57.57505            |
| METEOSAT-7 | 10   | 291 | 18/10/2010 | 42166.40782             | 0.00007250   | 6.34128              | 63.67466                      | 90.40308                     | 289.79045             | 57.37928            |
| METEOSAT-7 | 10   | 298 | 25/10/2010 | 42166.52075             | 0.00000888   | 6.35574              | 63.47888                      | 54.97566                     | 332.21409             | 57.25055            |
| METEOSAT-7 | 10   | 305 | 01/11/2010 | 42165.38389             | 0.00003566   | 6.37554              | 63.42214                      | 153.22868                    | 240.87284             | 57.18451            |
| METEOSAT-7 | 10   | 312 | 08/11/2010 | 42165.42660             | 0.00007132   | 6.39678              | 63.22699                      | 349.87419                    | 51.33072              | 57.18080            |
| METEOSAT-7 | 10   | 319 | 15/11/2010 | 42164.46363             | 0.00002861   | 6.41475              | 63.18371                      | 138.08372                    | 270.12589             | 57.24111            |
| METEOSAT-7 | 10   | 326 | 22/11/2010 | 42163.45436             | 0.00006448   | 6.43521              | 63.01359                      | 255.40451                    | 160.00260             | 57.37837            |
| METEOSAT-7 | 10   | 333 | 29/11/2010 | 42163.74725             | 0.00004502   | 6.45572              | 62.99186                      | 247.07989                    | 175.42819             | 57.57801            |
| METEOSAT-7 | 10   | 340 | 06/12/2010 | 42167.11993             | 0.00005394   | 6.48067              | 62.84424                      | 27.42961                     | 41.99914              | 57.47996            |
| METEOSAT-7 | 10   | 347 | 13/12/2010 | 42167.25148             | 0.00007445   | 6.49740              | 62.83437                      | 112.40133                    | 323.79647             | 57.37490            |
| METEOSAT-7 | 10   | 354 | 20/12/2010 | 42165.28512             | 0.00003229   | 6.51957              | 62.71567                      | 236.33864                    | 206.80384             | 57.34294            |
| METEOSAT-7 | 10   | 361 | 27/12/2010 | 42166.65574             | 0.00001613   | 6.53661              | 62.72384                      | 59.96382                     | 30.04640              | 57.36355            |
| METEOSAT-7 | 11   | 3   | 03/01/2011 | 42164.19906             | 0.00009452   | 6.56052              | 62.62958                      | 333.46299                    | 123.57986             | 57.44828            |
| METEOSAT-7 | 11   | 10  | 10/01/2011 | 42165.03000             | 0.00002197   | 6.57202              | 62.63612                      | 36.23990                     | 67.77732              | 57.57268            |
| METEOSAT-7 | 11   | 17  | 17/01/2011 | 42162.71950             | 0.00009208   | 6.59147              | 62.54855                      | 293.09370                    | 178.05713             | 57.75830            |
| METEOSAT-7 | 11   | 24  | 24/01/2011 | 42168.31793             | 0.00004414   | 6.60246              | 62.55384                      | 66.20593                     | 51.73273              | 57.68180            |
| METEOSAT-7 | 11   | 31  | 31/01/2011 | 42165.41935             | 0.00009219   | 6.62292              | 62.47568                      | 348.64374                    | 136.18065             | 57.61180            |
| METEOSAT-7 | 11   | 38  | 07/02/2011 | 42166.36075             | 0.00005171   | 6.62852              | 62.45518                      | 56.02464                     | 75.67221              | 57.57510            |
| METEOSAT-7 | 11   | 45  | 14/02/2011 | 42164.45139             | 0.00006587   | 6.64507              | 62.36052                      | 318.27315                    | 180.43353             | 57.59119            |
| METEOSAT-7 | 11   | 52  | 21/02/2011 | 42165.47762             | 0.00011750   | 6.65190              | 62.31688                      | 12.14583                     | 133.56603             | 57.64169            |
| METEOSAT-7 | 11   | 59  | 28/02/2011 | 42163.02700             | 0.00017584   | 6.67079              | 62.22610                      | 352.01345                    | 160.81564             | 57.74647            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 11   | 66  | 07/03/2011 | 42163.48685             | 0.00012272   | 6.67415              | 62.14284                      | 17.65710                     | 142.33035             | 57.88925            |
| METEOSAT-7 | 11   | 73  | 14/03/2011 | 42167.29913             | 0.00006114   | 6.69109              | 62.02249                      | 286.13926                    | 240.79637             | 57.77855            |
| METEOSAT-7 | 11   | 80  | 21/03/2011 | 42166.95039             | 0.00010777   | 6.69800              | 61.91906                      | 10.30276                     | 163.48669             | 57.58549            |
| METEOSAT-7 | 11   | 87  | 28/03/2011 | 42165.77653             | 0.00013762   | 6.71895              | 61.81180                      | 352.14782                    | 188.56628             | 57.45644            |
| METEOSAT-7 | 11   | 94  | 04/04/2011 | 42165.32446             | 0.00010079   | 6.72505              | 61.67960                      | 26.45872                     | 161.25889             | 57.38069            |
| METEOSAT-7 | 11   | 101 | 11/04/2011 | 42165.33934             | 0.00009202   | 6.74585              | 61.55558                      | 347.19705                    | 207.57528             | 57.36650            |
| METEOSAT-7 | 11   | 108 | 18/04/2011 | 42163.60977             | 0.00020701   | 6.75696              | 61.41826                      | 20.13127                     | 181.75098             | 57.39962            |
| METEOSAT-7 | 11   | 115 | 25/04/2011 | 42167.04249             | 0.00012191   | 6.78110              | 61.32256                      | 2.64448                      | 206.18002             | 57.31491            |
| METEOSAT-7 | 11   | 122 | 02/05/2011 | 42165.48021             | 0.00011454   | 6.79203              | 61.17550                      | 40.67735                     | 175.11752             | 57.21816            |
| METEOSAT-7 | 11   | 129 | 09/05/2011 | 42166.28811             | 0.00007507   | 6.81623              | 61.08420                      | 6.70242                      | 216.06581             | 57.18938            |
| METEOSAT-7 | 11   | 136 | 16/05/2011 | 42163.70707             | 0.00020825   | 6.83005              | 60.92615                      | 32.37059                     | 197.48138             | 57.21685            |
| METEOSAT-7 | 11   | 143 | 23/05/2011 | 42165.11157             | 0.00015672   | 6.85543              | 60.87306                      | 28.43666                     | 208.46921             | 57.33103            |
| METEOSAT-7 | 11   | 150 | 30/05/2011 | 42162.72028             | 0.00018496   | 6.86922              | 60.74567                      | 53.31608                     | 190.77393             | 57.51398            |
| METEOSAT-7 | 11   | 157 | 06/06/2011 | 42168.35198             | 0.00006076   | 6.89363              | 60.70682                      | 338.63396                    | 272.26124             | 57.41444            |
| METEOSAT-7 | 11   | 164 | 13/06/2011 | 42165.79053             | 0.00016711   | 6.90975              | 60.59047                      | 30.62106                     | 227.13712             | 57.30362            |
| METEOSAT-7 | 11   | 171 | 20/06/2011 | 42167.29400             | 0.00009775   | 6.93223              | 60.58380                      | 29.68238                     | 234.90456             | 57.27337            |
| METEOSAT-7 | 11   | 178 | 27/06/2011 | 42164.86458             | 0.00013006   | 6.94565              | 60.47812                      | 61.96406                     | 209.60545             | 57.30192            |
| METEOSAT-7 | 11   | 185 | 04/07/2011 | 42165.64612             | 0.00005985   | 6.96626              | 60.48121                      | 50.51568                     | 227.98191             | 57.38419            |
| METEOSAT-7 | 11   | 192 | 11/07/2011 | 42163.64686             | 0.00018270   | 6.98115              | 60.37527                      | 52.51475                     | 233.05783             | 57.50202            |
| METEOSAT-7 | 11   | 199 | 18/07/2011 | 42164.36808             | 0.00012047   | 6.99747              | 60.38894                      | 73.71255                     | 218.89064             | 57.68854            |
| METEOSAT-7 | 11   | 206 | 25/07/2011 | 42162.83287             | 0.00016065   | 7.00862              | 60.28557                      | 83.24401                     | 216.56056             | 57.92029            |
| METEOSAT-7 | 11   | 213 | 01/08/2011 | 42167.59521             | 0.00003499   | 7.02369              | 60.29434                      | 340.62721                    | 325.99928             | 57.87261            |
| METEOSAT-7 | 11   | 220 | 08/08/2011 | 42166.64773             | 0.00012653   | 7.03720              | 60.17682                      | 34.66427                     | 278.82028             | 57.72309            |
| METEOSAT-7 | 11   | 227 | 15/08/2011 | 42166.17591             | 0.00004815   | 7.04756              | 60.17492                      | 81.36354                     | 238.93606             | 57.63376            |
| METEOSAT-7 | 11   | 234 | 22/08/2011 | 42165.92185             | 0.00006661   | 7.05751              | 60.04661                      | 80.44790                     | 246.84978             | 57.58839            |
| METEOSAT-7 | 11   | 241 | 29/08/2011 | 42164.36187             | 0.00003428   | 7.06831              | 60.03035                      | 164.26777                    | 169.96728             | 57.58287            |
| METEOSAT-7 | 11   | 248 | 05/09/2011 | 42164.63016             | 0.00009308   | 7.08308              | 59.88297                      | 59.16052                     | 282.18520             | 57.60856            |
| METEOSAT-7 | 11   | 255 | 12/09/2011 | 42163.05216             | 0.00008568   | 7.09040              | 59.83957                      | 141.70337                    | 206.71709             | 57.69397            |
| METEOSAT-7 | 11   | 262 | 19/09/2011 | 42167.12507             | 0.00005151   | 7.10272              | 59.68258                      | 46.17007                     | 309.29204             | 57.62761            |
| METEOSAT-7 | 11   | 269 | 26/09/2011 | 42164.54047             | 0.00002546   | 7.11273              | 59.62835                      | 227.71370                    | 134.65244             | 57.52503            |
| METEOSAT-7 | 11   | 276 | 03/10/2011 | 42165.81644             | 0.00008754   | 7.13208              | 59.46107                      | 31.47522                     | 337.95470             | 57.46855            |
| METEOSAT-7 | 11   | 283 | 10/10/2011 | 42163.57241             | 0.00005161   | 7.14061              | 59.37926                      | 170.88826                    | 205.58096             | 57.47730            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 11   | 290 | 17/10/2011 | 42167.30940             | 0.00005319   | 7.15855              | 59.21458                      | 40.79878                     | 342.66461             | 57.36486            |
| METEOSAT-7 | 11   | 297 | 24/10/2011 | 42164.55703             | 0.00002180   | 7.17047              | 59.13927                      | 256.33888                    | 134.04365             | 57.27660            |
| METEOSAT-7 | 11   | 304 | 31/10/2011 | 42166.08672             | 0.00009655   | 7.19611              | 58.98563                      | 23.35046                     | 14.08190              | 57.25072            |
| METEOSAT-7 | 11   | 311 | 07/11/2011 | 42163.77874             | 0.00003524   | 7.20772              | 58.89500                      | 191.47784                    | 212.99401             | 57.29130            |
| METEOSAT-7 | 11   | 318 | 14/11/2011 | 42164.57655             | 0.00003214   | 7.23104              | 58.76304                      | 303.09316                    | 108.53456             | 57.42003            |
| METEOSAT-7 | 11   | 325 | 21/11/2011 | 42166.01755             | 0.00001057   | 7.24476              | 58.69666                      | 80.76086                     | 337.73668             | 57.34182            |
| METEOSAT-7 | 11   | 332 | 28/11/2011 | 42166.87327             | 0.00010529   | 7.27371              | 58.58990                      | 33.23548                     | 32.18632              | 57.28919            |
| METEOSAT-7 | 11   | 339 | 05/12/2011 | 42165.19623             | 0.00003007   | 7.28822              | 58.53581                      | 148.23301                    | 284.10168             | 57.28917            |
| METEOSAT-7 | 11   | 346 | 12/12/2011 | 42165.04493             | 0.00004161   | 7.31301              | 58.46059                      | 331.57595                    | 107.77106             | 57.37620            |
| METEOSAT-7 | 11   | 353 | 19/12/2011 | 42164.34228             | 0.00004879   | 7.32526              | 58.41187                      | 312.22856                    | 134.14615             | 57.51122            |
| METEOSAT-7 | 11   | 360 | 26/12/2011 | 42166.75505             | 0.00007114   | 7.35214              | 58.36213                      | 29.06847                     | 64.17609              | 57.48836            |
| METEOSAT-7 | 12   | 2   | 02/01/2012 | 42166.10068             | 0.00004253   | 7.36243              | 58.30541                      | 166.99138                    | 293.13335             | 57.46780            |
| METEOSAT-7 | 12   | 9   | 09/01/2012 | 42164.78107             | 0.00005535   | 7.38367              | 58.26927                      | 309.20603                    | 157.85620             | 57.52149            |
| METEOSAT-7 | 12   | 16  | 16/01/2012 | 42165.39948             | 0.00004611   | 7.39192              | 58.21527                      | 326.47551                    | 147.58385             | 57.60927            |
| METEOSAT-7 | 12   | 23  | 23/01/2012 | 42163.63287             | 0.00012223   | 7.41324              | 58.19285                      | 353.27017                    | 127.81733             | 57.75001            |
| METEOSAT-7 | 12   | 30  | 30/01/2012 | 42164.04975             | 0.00002791   | 7.41911              | 58.11600                      | 316.22269                    | 171.98621             | 57.91629            |
| METEOSAT-7 | 12   | 37  | 06/02/2012 | 42166.13536             | 0.00004313   | 7.43545              | 58.08457                      | 299.27286                    | 195.75492             | 57.81177            |
| METEOSAT-7 | 12   | 44  | 13/02/2012 | 42167.65810             | 0.00002370   | 7.44099              | 57.98518                      | 22.45805                     | 119.44650             | 57.68274            |
| METEOSAT-7 | 12   | 51  | 20/02/2012 | 42164.97844             | 0.00010519   | 7.45637              | 57.95467                      | 10.29435                     | 138.48148             | 57.60421            |
| METEOSAT-7 | 12   | 58  | 27/02/2012 | 42165.99524             | 0.00002307   | 7.46252              | 57.83728                      | 79.71266                     | 76.06531              | 57.55603            |
| METEOSAT-7 | 12   | 65  | 05/03/2012 | 42163.65720             | 0.00010844   | 7.47661              | 57.78219                      | 340.58172                    | 182.20261             | 57.56377            |
| METEOSAT-7 | 12   | 72  | 12/03/2012 | 42165.23507             | 0.00010275   | 7.48463              | 57.63785                      | 16.49287                     | 153.43396             | 57.60869            |
| METEOSAT-7 | 12   | 79  | 19/03/2012 | 42162.38090             | 0.00018016   | 7.49985              | 57.58075                      | 13.36426                     | 163.68071             | 57.71136            |
| METEOSAT-7 | 12   | 86  | 26/03/2012 | 42167.67694             | 0.00001345   | 7.50843              | 57.42066                      | 150.29607                    | 33.68914              | 57.53272            |
| METEOSAT-7 | 12   | 93  | 02/04/2012 | 42165.95226             | 0.00009119   | 7.52377              | 57.34724                      | 330.28928                    | 220.55292             | 57.35970            |
| METEOSAT-7 | 12   | 100 | 09/04/2012 | 42166.66492             | 0.00008947   | 7.53746              | 57.17798                      | 25.08474                     | 172.76081             | 57.24090            |
| METEOSAT-7 | 12   | 107 | 16/04/2012 | 42164.50198             | 0.00014388   | 7.55429              | 57.11425                      | 21.37973                     | 183.42581             | 57.19252            |
| METEOSAT-7 | 12   | 114 | 23/04/2012 | 42164.81939             | 0.00008495   | 7.56882              | 56.94846                      | 54.51083                     | 157.41699             | 57.21457            |
| METEOSAT-7 | 12   | 121 | 30/04/2012 | 42164.08936             | 0.00012598   | 7.58638              | 56.88532                      | 8.36575                      | 210.63199             | 57.30030            |
| METEOSAT-7 | 12   | 128 | 07/05/2012 | 42163.35986             | 0.00017991   | 7.60573              | 56.72711                      | 43.05630                     | 183.15920             | 57.45348            |
| METEOSAT-7 | 12   | 135 | 14/05/2012 | 42167.06873             | 0.00009411   | 7.62331              | 56.68175                      | 25.33887                     | 207.70143             | 57.34169            |
| METEOSAT-7 | 12   | 142 | 21/05/2012 | 42166.31444             | 0.00006906   | 7.64222              | 56.54251                      | 80.65126                     | 159.31579             | 57.25233            |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 12   | 149 | 28/05/2012 | 42166.56800             | 0.00007435   | 7.65940              | 56.50881                      | 8.03375                      | 238.79893             | 57.22040            |
| METEOSAT-7 | 12   | 156 | 04/06/2012 | 42164.55595             | 0.00015304   | 7.68120              | 56.38470                      | 60.54313                     | 193.29992             | 57.25484            |
| METEOSAT-7 | 12   | 163 | 11/06/2012 | 42165.30164             | 0.00012523   | 7.69674              | 56.36258                      | 59.62557                     | 201.18554             | 57.35769            |
| METEOSAT-7 | 12   | 170 | 18/06/2012 | 42163.42316             | 0.00015036   | 7.71611              | 56.26134                      | 91.65025                     | 176.27432             | 57.53348            |
| METEOSAT-7 | 12   | 177 | 25/06/2012 | 42167.24438             | 0.00006641   | 7.72937              | 56.24892                      | 13.64432                     | 261.16076             | 57.56481            |
| METEOSAT-7 | 12   | 184 | 02/07/2012 | 42164.59264             | 0.00015425   | 7.75010              | 56.15514                      | 70.14909                     | 211.59862             | 57.57309            |
| METEOSAT-7 | 12   | 191 | 09/07/2012 | 42166.17479             | 0.00009874   | 7.76079              | 56.13805                      | 77.15129                     | 211.52382             | 57.63912            |
| METEOSAT-7 | 12   | 198 | 16/07/2012 | 42163.64011             | 0.00015137   | 7.77786              | 56.05827                      | 106.48234                    | 189.24623             | 57.76041            |
| METEOSAT-7 | 12   | 205 | 23/07/2012 | 42164.71985             | 0.00007281   | 7.78588              | 56.04321                      | 80.02341                     | 222.73393             | 57.90881            |
| METEOSAT-7 | 12   | 212 | 30/07/2012 | 42165.72479             | 0.00011324   | 7.80397              | 55.95887                      | 101.65696                    | 208.02789             | 57.87272            |
| METEOSAT-7 | 12   | 219 | 06/08/2012 | 42167.13554             | 0.00008267   | 7.80979              | 55.92052                      | 143.72260                    | 172.81189             | 57.78879            |
| METEOSAT-7 | 12   | 226 | 13/08/2012 | 42164.83735             | 0.00015157   | 7.82426              | 55.83778                      | 143.09073                    | 180.40219             | 57.75435            |
| METEOSAT-7 | 12   | 233 | 20/08/2012 | 42165.40112             | 0.00007085   | 7.82873              | 55.78823                      | 167.11771                    | 163.34230             | 57.74605            |
| METEOSAT-7 | 12   | 240 | 27/08/2012 | 42163.64206             | 0.00015712   | 7.84569              | 55.69419                      | 127.28757                    | 210.23608             | 57.77628            |
| METEOSAT-7 | 12   | 247 | 03/09/2012 | 42164.08152             | 0.00016206   | 7.84968              | 55.61245                      | 160.04296                    | 184.59272             | 57.85461            |
| METEOSAT-7 | 12   | 254 | 10/09/2012 | 42166.84795             | 0.00025756   | 7.86419              | 55.51187                      | 174.12191                    | 177.44320             | 57.72489            |
| METEOSAT-7 | 12   | 261 | 17/09/2012 | 42166.28799             | 0.00022175   | 7.86893              | 55.41895                      | 192.89902                    | 165.53908             | 57.54197            |
| METEOSAT-7 | 12   | 268 | 24/09/2012 | 42165.68164             | 0.00023929   | 7.88796              | 55.31312                      | 167.69403                    | 197.68001             | 57.40733            |
| METEOSAT-7 | 12   | 275 | 01/10/2012 | 42164.90787             | 0.00030469   | 7.89418              | 55.19061                      | 185.72816                    | 186.66053             | 57.33668            |
| METEOSAT-7 | 12   | 282 | 08/10/2012 | 42165.01039             | 0.00030186   | 7.91165              | 55.08214                      | 181.91602                    | 197.54026             | 57.33866            |
| METEOSAT-7 | 12   | 289 | 15/10/2012 | 42165.23550             | 0.00024262   | 7.92032              | 54.96252                      | 199.11882                    | 187.32766             | 57.26285            |
| METEOSAT-7 | 12   | 296 | 22/10/2012 | 42165.85288             | 0.00023495   | 7.94322              | 54.86481                      | 174.66588                    | 218.74306             | 57.19302            |
| METEOSAT-7 | 12   | 303 | 29/10/2012 | 42164.06086             | 0.00031584   | 7.95693              | 54.72279                      | 193.87973                    | 206.59742             | 57.19962            |
| METEOSAT-7 | 12   | 310 | 05/11/2012 | 42165.10121             | 0.00028196   | 7.97789              | 54.63655                      | 191.57150                    | 215.98772             | 57.29177            |
| METEOSAT-7 | 12   | 317 | 12/11/2012 | 42165.47141             | 0.00022799   | 7.99071              | 54.51980                      | 202.34872                    | 212.13109             | 57.20892            |
| METEOSAT-7 | 12   | 324 | 19/11/2012 | 42166.90116             | 0.00020659   | 8.01617              | 54.45752                      | 174.57125                    | 246.78260             | 57.14856            |
| METEOSAT-7 | 12   | 331 | 26/11/2012 | 42164.55197             | 0.00028478   | 8.03066              | 54.33909                      | 198.11370                    | 230.23028             | 57.16368            |
| METEOSAT-7 | 12   | 338 | 03/12/2012 | 42165.76105             | 0.00023030   | 8.05183              | 54.29550                      | 197.71042                    | 237.62121             | 57.26287            |
| METEOSAT-7 | 12   | 345 | 10/12/2012 | 42163.11896             | 0.00024763   | 8.06539              | 54.20048                      | 215.28253                    | 227.13375             | 57.41772            |
| METEOSAT-7 | 12   | 352 | 17/12/2012 | 42167.49929             | 0.00017656   | 8.08869              | 54.18124                      | 170.39710                    | 278.88561             | 57.43301            |
| METEOSAT-7 | 12   | 359 | 24/12/2012 | 42165.24649             | 0.00024218   | 8.10288              | 54.08700                      | 198.82085                    | 257.38260             | 57.42919            |
| METEOSAT-7 | 12   | 366 | 31/12/2012 | 42165.87626             | 0.00017117   | 8.11970              | 54.07741                      | 202.14856                    | 260.96422             | 57.49544            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 13   | 7   | 07/01/2013 | 42164.17807             | 0.00018065   | 8.13100              | 53.99295                      | 217.84101                    | 252.30113             | 57.60052            |
| METEOSAT-7 | 13   | 14  | 14/01/2013 | 42164.68167             | 0.00012884   | 8.14806              | 53.99182                      | 188.22645                    | 288.91155             | 57.74450            |
| METEOSAT-7 | 13   | 21  | 21/01/2013 | 42166.18781             | 0.00022688   | 8.15943              | 53.89880                      | 193.76824                    | 290.27956             | 57.69602            |
| METEOSAT-7 | 13   | 28  | 28/01/2013 | 42165.73101             | 0.00013455   | 8.16999              | 53.88893                      | 199.98227                    | 290.92576             | 57.66537            |
| METEOSAT-7 | 13   | 35  | 04/02/2013 | 42165.38517             | 0.00013870   | 8.17914              | 53.78748                      | 206.43756                    | 291.46963             | 57.66531            |
| METEOSAT-7 | 13   | 42  | 11/02/2013 | 42164.53974             | 0.00010133   | 8.19031              | 53.76863                      | 169.61902                    | 335.25659             | 57.70008            |
| METEOSAT-7 | 13   | 49  | 18/02/2013 | 42164.21419             | 0.00017054   | 8.20050              | 53.65142                      | 199.89204                    | 312.10183             | 57.76910            |
| METEOSAT-7 | 13   | 56  | 25/02/2013 | 42162.59268             | 0.00006728   | 8.20780              | 53.61179                      | 230.03837                    | 289.06274             | 57.88963            |
| METEOSAT-7 | 13   | 63  | 04/03/2013 | 42167.78552             | 0.00002804   | 8.21862              | 53.47737                      | 79.65950                     | 86.41452              | 57.77032            |
| METEOSAT-7 | 13   | 70  | 11/03/2013 | 42165.66888             | 0.00010906   | 8.22737              | 53.42394                      | 69.58784                     | 103.32998             | 57.59583            |
| METEOSAT-7 | 13   | 77  | 18/03/2013 | 42166.36627             | 0.00005075   | 8.24028              | 53.28213                      | 129.73507                    | 50.16838              | 57.46898            |
| METEOSAT-7 | 13   | 84  | 25/03/2013 | 42164.06230             | 0.00011188   | 8.24820              | 53.21225                      | 27.92498                     | 158.95131             | 57.40099            |
| METEOSAT-7 | 13   | 91  | 01/04/2013 | 42165.71935             | 0.00009267   | 8.26454              | 53.06199                      | 53.74868                     | 140.23748             | 57.39193            |
| METEOSAT-7 | 13   | 98  | 08/04/2013 | 42162.85755             | 0.00017406   | 8.27458              | 52.98393                      | 59.59012                     | 141.48793             | 57.44545            |
| METEOSAT-7 | 13   | 105 | 15/04/2013 | 42167.31137             | 0.00002950   | 8.29247              | 52.84349                      | 126.88712                    | 81.14780              | 57.31371            |
| METEOSAT-7 | 13   | 112 | 22/04/2013 | 42165.09842             | 0.00011882   | 8.30289              | 52.76435                      | 21.34944                     | 193.58987             | 57.20560            |
| METEOSAT-7 | 13   | 119 | 29/04/2013 | 42166.56911             | 0.00009489   | 8.32519              | 52.63187                      | 56.36258                     | 165.59590             | 57.17407            |
| METEOSAT-7 | 13   | 126 | 06/05/2013 | 42163.75302             | 0.00016613   | 8.33672              | 52.55335                      | 63.84309                     | 165.13436             | 57.21496            |
| METEOSAT-7 | 13   | 133 | 13/05/2013 | 42164.63220             | 0.00010136   | 8.35852              | 52.44428                      | 88.02739                     | 148.06277             | 57.33681            |
| METEOSAT-7 | 13   | 140 | 20/05/2013 | 42166.29836             | 0.00010856   | 8.37005              | 52.37933                      | 25.17380                     | 217.82692             | 57.31775            |
| METEOSAT-7 | 13   | 147 | 27/05/2013 | 42166.68128             | 0.00010628   | 8.39480              | 52.28468                      | 74.15330                     | 175.77211             | 57.29740            |
| METEOSAT-7 | 13   | 154 | 03/06/2013 | 42164.81030             | 0.00015208   | 8.40635              | 52.22000                      | 77.29507                     | 179.57692             | 57.34196            |
| METEOSAT-7 | 13   | 161 | 10/06/2013 | 42164.87055             | 0.00011750   | 8.42772              | 52.15045                      | 106.54251                    | 157.34802             | 57.46276            |
| METEOSAT-7 | 13   | 168 | 17/06/2013 | 42164.42668             | 0.00013583   | 8.43711              | 52.09984                      | 59.89792                     | 211.02978             | 57.62607            |
| METEOSAT-7 | 13   | 175 | 24/06/2013 | 42163.28749             | 0.00019784   | 8.45987              | 52.04327                      | 94.81467                     | 183.21961             | 57.85357            |
| METEOSAT-7 | 13   | 182 | 01/07/2013 | 42167.41532             | 0.00010233   | 8.46879              | 51.98126                      | 87.02836                     | 197.88370             | 57.84077            |
| METEOSAT-7 | 13   | 189 | 08/07/2013 | 42166.34446             | 0.00010222   | 8.48670              | 51.94015                      | 128.55695                    | 163.16861             | 57.77448            |
| METEOSAT-7 | 13   | 196 | 15/07/2013 | 42166.82160             | 0.00007880   | 8.49245              | 51.88456                      | 64.93201                     | 233.65747             | 57.73169            |
| METEOSAT-7 | 13   | 203 | 22/07/2013 | 42164.48541             | 0.00017715   | 8.51092              | 51.84487                      | 113.72482                    | 233.65747             | 57.73596            |
| METEOSAT-7 | 13   | 210 | 29/07/2013 | 42165.56813             | 0.00014893   | 8.51709              | 51.76867                      | 118.13653                    | 191.77394             | 57.77527            |
| METEOSAT-7 | 13   | 217 | 05/08/2013 | 42163.45861             | 0.00018742   | 8.53031              | 51.72882                      | 140.86954                    | 178.65872             | 57.86436            |
| METEOSAT-7 | 13   | 224 | 12/08/2013 | 42164.49681             | 0.00011074   | 8.53382              | 51.64663                      | 114.64414                    | 211.99507             | 57.97149            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 13   | 231 | 19/08/2013 | 42165.66396             | 0.00021910   | 8.54872              | 51.59885                      | 109.64636                    | 223.82267             | 57.81668            |
| METEOSAT-7 | 13   | 238 | 26/08/2013 | 42167.35640             | 0.00016355   | 8.55423              | 52.10816                      | 111.50059                    | 227.41683             | 57.65392            |
| METEOSAT-7 | 13   | 245 | 02/09/2013 | 42164.77905             | 0.00019476   | 8.56537              | 51.43481                      | 134.67199                    | 212.60722             | 57.54621            |
| METEOSAT-7 | 13   | 252 | 09/09/2013 | 42165.81505             | 0.00012301   | 8.57017              | 51.31514                      | 107.46006                    | 246.83792             | 57.47175            |
| METEOSAT-7 | 13   | 259 | 16/09/2013 | 42163.41475             | 0.00024715   | 8.58428              | 51.25103                      | 129.39513                    | 231.91773             | 57.44507            |
| METEOSAT-7 | 13   | 266 | 23/09/2013 | 42164.68316             | 0.00018891   | 8.59293              | 51.11099                      | 140.59043                    | 227.87590             | 57.47999            |
| METEOSAT-7 | 13   | 273 | 30/09/2013 | 42165.74442             | 0.00023576   | 8.60503              | 51.03902                      | 133.52430                    | 241.88789             | 57.38271            |
| METEOSAT-7 | 13   | 280 | 07/10/2013 | 42166.09423             | 0.00016016   | 8.61486              | 50.89656                      | 116.14252                    | 266.25316             | 57.26148            |
| METEOSAT-7 | 13   | 287 | 14/10/2013 | 42164.63673             | 0.00027743   | 8.63074              | 50.82742                      | 131.02015                    | 258.33101             | 57.19847            |
| METEOSAT-7 | 13   | 294 | 21/10/2013 | 42164.83081             | 0.00021203   | 8.64643              | 50.69577                      | 145.16092                    | 251.27343             | 57.21602            |
| METEOSAT-7 | 13   | 301 | 28/10/2013 | 42163.95453             | 0.00023067   | 8.66099              | 50.62730                      | 149.60675                    | 253.90947             | 57.31428            |
| METEOSAT-7 | 13   | 308 | 04/11/2013 | 42163.03930             | 0.00014204   | 8.67646              | 50.49143                      | 147.25261                    | 263.46378             | 57.48344            |
| METEOSAT-7 | 13   | 315 | 11/11/2013 | 42167.51956             | 0.00016737   | 8.69408              | 50.43870                      | 130.70391                    | 286.86832             | 57.41012            |
| METEOSAT-7 | 13   | 322 | 18/11/2013 | 42166.41701             | 0.00009899   | 8.71291              | 50.31645                      | 166.15570                    | 258.29272             | 57.30522            |
| METEOSAT-7 | 13   | 329 | 25/11/2013 | 42166.86036             | 0.00009795   | 8.72810              | 50.27188                      | 157.07950                    | 274.22873             | 57.27709            |
| METEOSAT-7 | 13   | 336 | 02/12/2013 | 42164.66807             | 0.00002486   | 8.74608              | 50.16574                      | 219.78794                    | 218.49454             | 57.31518            |
| METEOSAT-7 | 13   | 343 | 09/12/2013 | 42165.58847             | 0.00012970   | 8.76225              | 50.13974                      | 149.00321                    | 296.20796             | 57.39595            |
| METEOSAT-7 | 13   | 350 | 16/12/2013 | 42163.53746             | 0.00009841   | 8.78124              | 50.05205                      | 208.82523                    | 243.44953             | 57.55550            |
| METEOSAT-7 | 13   | 357 | 23/12/2013 | 42167.33342             | 0.00005311   | 8.79248              | 50.03060                      | 127.23026                    | 331.93817             | 57.60839            |
| METEOSAT-7 | 13   | 364 | 30/12/2013 | 42164.51583             | 0.00003739   | 8.80892              | 49.94972                      | 334.28097                    | 131.82486             | 57.64030            |
| METEOSAT-7 | 14   | 6   | 06/01/2014 | 42166.05051             | 0.00009526   | 8.82014              | 49.93299                      | 126.48028                    | 346.53283             | 57.69546            |
| METEOSAT-7 | 14   | 13  | 13/01/2014 | 42163.59423             | 0.00004327   | 8.83613              | 49.86612                      | 245.53609                    | 234.50514             | 57.80821            |
| METEOSAT-7 | 14   | 20  | 20/01/2014 | 42164.73647             | 0.00002570   | 8.84188              | 49.83830                      | 17.60477                     | 109.48797             | 57.96509            |
| METEOSAT-7 | 14   | 27  | 27/01/2014 | 42162.29323             | 0.00008819   | 8.85483              | 49.75904                      | 334.58978                    | 159.65706             | 58.15381            |
| METEOSAT-7 | 14   | 34  | 03/02/2014 | 42168.18682             | 0.00012921   | 8.86119              | 49.72300                      | 152.56776                    | 348.46786             | 57.99957            |
| METEOSAT-7 | 14   | 41  | 10/02/2014 | 42166.03210             | 0.00008844   | 8.87432              | 49.64571                      | 213.96606                    | 293.90663             | 57.83381            |
| METEOSAT-7 | 14   | 48  | 17/02/2014 | 42166.41912             | 0.00001651   | 8.87685              | 49.58683                      | 153.50780                    | 1.24746               | 57.71339            |
| METEOSAT-7 | 14   | 55  | 24/02/2014 | 42165.08126             | 0.00002592   | 8.88925              | 49.48882                      | 308.86678                    | 212.86322             | 57.63043            |
| METEOSAT-7 | 14   | 62  | 03/03/2014 | 42165.24241             | 0.00008515   | 8.89412              | 49.41460                      | 130.03106                    | 38.69251              | 57.57736            |
| METEOSAT-7 | 14   | 69  | 10/03/2014 | 42164.02320             | 0.00004198   | 8.90784              | 49.31904                      | 235.24525                    | 300.55332             | 57.57566            |
| METEOSAT-7 | 14   | 76  | 17/03/2014 | 42163.25554             | 0.00006328   | 8.91146              | 49.22343                      | 33.02944                     | 149.90787             | 57.63338            |
| METEOSAT-7 | 14   | 83  | 24/03/2014 | 42167.08593             | 0.00003713   | 8.92677              | 49.11433                      | 230.47334                    | 319.38341             | 57.46252            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 14   | 90  | 31/03/2014 | 42165.82587             | 0.00009261   | 8.93413              | 49.00982                      | 144.10697                    | 52.66503              | 57.29859            |
| METEOSAT-7 | 14   | 97  | 07/04/2014 | 42165.81062             | 0.00007266   | 8.95133              | 48.91151                      | 213.35344                    | 350.38442             | 57.20126            |
| METEOSAT-7 | 14   | 104 | 14/04/2014 | 42163.98821             | 0.00005350   | 8.95896              | 48.80064                      | 57.97367                     | 152.80305             | 57.17906            |
| METEOSAT-7 | 14   | 111 | 21/04/2014 | 42165.25013             | 0.00003225   | 8.97851              | 48.70481                      | 101.17098                    | 116.68900             | 57.23349            |
| METEOSAT-7 | 14   | 118 | 28/04/2014 | 42162.78750             | 0.00012474   | 8.98948              | 48.59540                      | 111.51097                    | 113.49605             | 57.35930            |
| METEOSAT-7 | 14   | 125 | 05/05/2014 | 42167.64780             | 0.00007334   | 9.00909              | 48.51868                      | 250.26261                    | 341.60905             | 57.25574            |
| METEOSAT-7 | 14   | 132 | 12/05/2014 | 42165.32571             | 0.00006971   | 9.01969              | 48.41730                      | 23.90451                     | 214.86107             | 57.17765            |
| METEOSAT-7 | 14   | 139 | 19/05/2014 | 42167.08246             | 0.00001333   | 9.04099              | 48.35431                      | 81.37660                     | 164.30678             | 57.18000            |
| METEOSAT-7 | 14   | 146 | 26/05/2014 | 42164.06085             | 0.00010057   | 9.05369              | 48.25888                      | 110.62266                    | 142.06266             | 57.25169            |
| METEOSAT-7 | 14   | 153 | 02/06/2014 | 42165.20675             | 0.00004157   | 9.07216              | 48.21404                      | 175.71627                    | 83.97815              | 57.39379            |
| METEOSAT-7 | 14   | 160 | 09/06/2014 | 42163.14767             | 0.00010482   | 9.08280              | 48.12975                      | 69.22738                     | 197.56363             | 57.59355            |
| METEOSAT-7 | 14   | 167 | 16/06/2014 | 42164.42759             | 0.00010057   | 9.10190              | 48.09863                      | 118.76638                    | 155.13102             | 57.85944            |
| METEOSAT-7 | 14   | 174 | 23/06/2014 | 42166.07931             | 0.00007087   | 9.11367              | 48.01634                      | 121.80961                    | 158.96257             | 57.83730            |
| METEOSAT-7 | 14   | 181 | 30/06/2014 | 42166.80923             | 0.00005224   | 9.12777              | 47.99351                      | 207.22430                    | 80.36837              | 57.81239            |
| METEOSAT-7 | 14   | 188 | 07/07/2014 | 42165.59143             | 0.00006194   | 9.13604              | 47.91541                      | 66.69161                     | 227.82029             | 57.81985            |
| METEOSAT-7 | 14   | 195 | 14/07/2014 | 42165.57553             | 0.00010514   | 9.15026              | 47.89787                      | 146.93869                    | 154.49361             | 57.87330            |
| METEOSAT-7 | 14   | 202 | 21/07/2014 | 42164.07326             | 0.00014399   | 9.16008              | 47.81310                      | 141.09865                    | 167.37350             | 57.96009            |
| METEOSAT-7 | 14   | 209 | 28/07/2014 | 42166.45807             | 0.00015061   | 9.16891              | 47.78699                      | 196.75620                    | 118.65924             | 57.98867            |
| METEOSAT-7 | 14   | 216 | 04/08/2014 | 42166.26850             | 0.00007578   | 9.17513              | 47.69620                      | 164.14921                    | 158.18471             | 57.90482            |
| METEOSAT-7 | 14   | 223 | 11/08/2014 | 42164.71234             | 0.00021601   | 9.18489              | 47.66758                      | 173.14172                    | 156.10590             | 57.85802            |
| METEOSAT-7 | 14   | 230 | 18/08/2014 | 42164.83053             | 0.00021278   | 9.19406              | 47.56346                      | 172.39574                    | 163.89641             | 57.84661            |
| METEOSAT-7 | 14   | 237 | 25/08/2014 | 42163.47377             | 0.00023846   | 9.19967              | 47.51665                      | 189.83502                    | 153.50766             | 57.88191            |
| METEOSAT-7 | 14   | 244 | 01/09/2014 | 42164.15650             | 0.00015735   | 9.20688              | 47.40271                      | 175.38962                    | 175.11433             | 57.94729            |
| METEOSAT-7 | 14   | 251 | 08/09/2014 | 42165.86697             | 0.00030668   | 9.21488              | 47.34943                      | 159.43227                    | 197.8935              | 57.73065            |
| METEOSAT-7 | 14   | 258 | 15/09/2014 | 42167.27738             | 0.00026863   | 9.22655              | 47.22668                      | 160.42101                    | 203.80071             | 57.51547            |
| METEOSAT-7 | 14   | 265 | 22/09/2014 | 42164.95764             | 0.00028618   | 9.23263              | 47.15505                      | 175.61115                    | 195.51868             | 57.36623            |
| METEOSAT-7 | 14   | 272 | 29/09/2014 | 42166.06742             | 0.00021539   | 9.24404              | 47.02533                      | 160.84540                    | 217.29819             | 57.27095            |
| METEOSAT-7 | 14   | 279 | 06/10/2014 | 42163.32719             | 0.00037013   | 9.25338              | 46.95320                      | 171.60132                    | 213.54426             | 57.23428            |
| METEOSAT-7 | 14   | 286 | 13/10/2014 | 42165.11768             | 0.00031374   | 9.27179              | 46.84332                      | 175.92285                    | 216.32615             | 57.27669            |
| METEOSAT-7 | 14   | 293 | 20/10/2014 | 42162.53175             | 0.00034431   | 9.28047              | 46.76373                      | 187.13685                    | 212.24498             | 57.39971            |
| METEOSAT-7 | 14   | 300 | 27/10/2014 | 42167.40466             | 0.00016749   | 9.29746              | 46.64292                      | 185.08245                    | 221.27319             | 57.34436            |
| METEOSAT-7 | 14   | 307 | 03/11/2014 | 42165.27618             | 0.00031844   | 9.30923              | 46.57249                      | 187.08580                    | 226.12968             | 57.24777            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 14   | 314 | 10/11/2014 | 42166.32820             | 0.00026338   | 9.32984              | 46.47141                      | 198.18307                    | 221.99587             | 57.24526            |
| METEOSAT-7 | 14   | 321 | 17/11/2014 | 42164.44185             | 0.00029367   | 9.34027              | 46.40371                      | 206.11355                    | 221.05408             | 57.32218            |
| METEOSAT-7 | 14   | 328 | 24/11/2014 | 42164.49486             | 0.00020628   | 9.36031              | 46.31537                      | 207.98686                    | 226.24436             | 57.47060            |
| METEOSAT-7 | 14   | 335 | 01/12/2014 | 42163.42572             | 0.00033851   | 9.37200              | 46.26125                      | 200.10300                    | 241.19078             | 57.66552            |
| METEOSAT-7 | 14   | 342 | 08/12/2014 | 42167.24545             | 0.00023157   | 9.39241              | 46.19775                      | 200.64663                    | 247.53861             | 57.68519            |
| METEOSAT-7 | 14   | 349 | 15/12/2014 | 42166.72035             | 0.00023649   | 9.40126              | 46.14730                      | 203.66034                    | 251.35631             | 57.65918            |
| METEOSAT-7 | 14   | 356 | 22/12/2014 | 42165.45062             | 0.00015520   | 9.41953              | 46.09081                      | 210.76612                    | 251.14334             | 57.68602            |
| METEOSAT-7 | 14   | 363 | 29/12/2014 | 42165.60311             | 0.00027881   | 9.42810              | 46.04623                      | 197.79884                    | 271.02089             | 57.73335            |
| METEOSAT-7 | 15   | 5   | 05/01/2015 | 42164.16658             | 0.00022891   | 9.44443              | 46.00680                      | 221.72030                    | 254.08294             | 57.84639            |
| METEOSAT-7 | 15   | 12  | 12/01/2015 | 42164.87736             | 0.00021218   | 9.44918              | 45.95435                      | 217.91637                    | 264.94040             | 57.99794            |
| METEOSAT-7 | 15   | 19  | 19/01/2015 | 42162.42955             | 0.00015120   | 9.46315              | 45.90885                      | 238.14681                    | 251.81124             | 58.18340            |
| METEOSAT-7 | 15   | 26  | 26/01/2015 | 42167.92962             | 0.00018375   | 9.46819              | 45.84920                      | 188.06196                    | 308.76648             | 58.09970            |
| METEOSAT-7 | 15   | 33  | 02/02/2015 | 42165.64917             | 0.00011598   | 9.47977              | 45.80651                      | 232.46890                    | 271.17813             | 57.95947            |
| METEOSAT-7 | 15   | 40  | 09/02/2015 | 42166.92314             | 0.00008302   | 9.48176              | 45.72971                      | 212.17409                    | 298.38529             | 57.85636            |
| METEOSAT-7 | 15   | 47  | 16/02/2015 | 42164.10285             | 0.00004467   | 9.49279              | 45.66969                      | 284.78638                    | 232.72275             | 57.78831            |
| METEOSAT-7 | 15   | 54  | 23/02/2015 | 42165.69154             | 0.00013375   | 9.49734              | 45.57709                      | 193.12512                    | 331.39876             | 57.73528            |
| METEOSAT-7 | 15   | 61  | 02/03/2015 | 42163.18736             | 0.00009078   | 9.50757              | 45.51528                      | 262.99269                    | 268.58515             | 57.73986            |
| METEOSAT-7 | 15   | 68  | 09/03/2015 | 42164.20092             | 0.00002760   | 9.51109              | 45.40682                      | 247.42092                    | 291.32137             | 57.79958            |
| METEOSAT-7 | 15   | 75  | 16/03/2015 | 42165.78565             | 0.00005785   | 9.52273              | 45.33055                      | 230.35695                    | 315.28083             | 57.62482            |
| METEOSAT-7 | 15   | 82  | 23/03/2015 | 42166.81799             | 0.00017029   | 9.53077              | 45.21223                      | 190.18898                    | 2.37716               | 57.44449            |
| METEOSAT-7 | 15   | 89  | 30/03/2015 | 42164.82279             | 0.00009839   | 9.54264              | 45.14021                      | 237.90383                    | 321.60593             | 57.33468            |
| METEOSAT-7 | 15   | 96  | 06/04/2015 | 42164.94613             | 0.00004779   | 9.55103              | 45.01661                      | 181.58710                    | 24.98525              | 57.30547            |
| METEOSAT-7 | 15   | 103 | 13/04/2015 | 42164.02972             | 0.00002090   | 9.56521              | 44.94222                      | 179.45194                    | 34.18796              | 57.34877            |
| METEOSAT-7 | 15   | 110 | 20/04/2015 | 42163.77392             | 0.00013326   | 9.57799              | 44.82145                      | 170.44622                    | 50.35244              | 57.45873            |
| METEOSAT-7 | 15   | 117 | 27/04/2015 | 42166.90521             | 0.00010955   | 9.59206              | 44.75835                      | 286.82380                    | 300.82116             | 57.33791            |
| METEOSAT-7 | 15   | 124 | 04/05/2015 | 42165.86525             | 0.00003749   | 9.60482              | 44.64484                      | 357.17282                    | 237.38309             | 57.25464            |
| METEOSAT-7 | 15   | 131 | 11/05/2015 | 42166.35593             | 0.00003446   | 9.62013              | 44.59093                      | 332.00771                    | 269.45458             | 57.24868            |
| METEOSAT-7 | 15   | 138 | 18/05/2015 | 42164.66945             | 0.00006615   | 9.63567              | 44.48867                      | 164.39441                    | 84.07248              | 57.31391            |
| METEOSAT-7 | 15   | 145 | 25/05/2015 | 42164.95058             | 0.00005224   | 9.64933              | 44.44722                      | 294.09957                    | 321.36024             | 57.44554            |
| METEOSAT-7 | 15   | 152 | 01/06/2015 | 42162.95323             | 0.00007541   | 9.66315              | 44.35636                      | 73.97835                     | 188.58877             | 57.65628            |
| METEOSAT-7 | 15   | 159 | 08/06/2015 | 42164.48412             | 0.00003790   | 9.67639              | 44.32526                      | 108.37553                    | 161.29483             | 57.92985            |
| METEOSAT-7 | 15   | 166 | 15/06/2015 | 42166.64276             | 0.00003163   | 9.69161              | 44.24486                      | 208.60510                    | 67.95373              | 57.93722            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 15   | 173 | 22/06/2015 | 42167.71442             | 0.00010138   | 9.70152              | 44.21693                      | 298.38860                    | 344.93000             | 57.86159            |
| METEOSAT-7 | 15   | 180 | 29/06/2015 | 42165.38562             | 0.00005213   | 9.71379              | 44.14343                      | 41.84346                     | 248.33987             | 57.83648            |
| METEOSAT-7 | 15   | 187 | 06/07/2015 | 42167.12441             | 0.00002345   | 9.72257              | 44.11815                      | 235.03908                    | 62.02041              | 57.85311            |
| METEOSAT-7 | 15   | 194 | 13/07/2015 | 42164.06868             | 0.00009424   | 9.73532              | 44.04900                      | 169.00824                    | 135.02281             | 57.90526            |
| METEOSAT-7 | 15   | 201 | 20/07/2015 | 42165.21392             | 0.00006047   | 9.74060              | 44.01655                      | 249.24215                    | 61.77447              | 57.98477            |
| METEOSAT-7 | 15   | 208 | 27/07/2015 | 42163.29854             | 0.00006735   | 9.75012              | 43.94213                      | 120.67284                    | 197.42546             | 58.09419            |
| METEOSAT-7 | 15   | 215 | 03/08/2015 | 42164.27842             | 0.00010975   | 9.75508              | 43.90566                      | 183.67510                    | 141.52286             | 58.23394            |
| METEOSAT-7 | 15   | 222 | 10/08/2015 | 42161.90392             | 0.00017043   | 9.76596              | 43.82991                      | 174.54566                    | 157.84596             | 58.40431            |
| METEOSAT-7 | 15   | 229 | 17/08/2015 | 42167.63475             | 0.00003633   | 9.76821              | 43.77386                      | 291.16841                    | 47.98206              | 58.14240            |
| METEOSAT-7 | 15   | 236 | 24/08/2015 | 42166.66474             | 0.00006648   | 9.77704              | 43.68494                      | 84.29044                     | 261.70296             | 57.91573            |
| METEOSAT-7 | 15   | 243 | 31/08/2015 | 42166.19852             | 0.00009685   | 9.78072              | 43.62127                      | 186.70523                    | 166.15951             | 57.73099            |
| METEOSAT-7 | 15   | 250 | 07/09/2015 | 42165.14749             | 0.00012388   | 9.79245              | 43.53183                      | 180.43015                    | 179.38965             | 57.59709            |
| METEOSAT-7 | 15   | 257 | 14/09/2015 | 42164.66951             | 0.00010120   | 9.79529              | 43.44731                      | 222.56465                    | 144.26412             | 57.52077            |
| METEOSAT-7 | 15   | 264 | 21/09/2015 | 42164.71898             | 0.00007246   | 9.80657              | 43.34596                      | 162.76622                    | 211.13717             | 57.49774            |
| METEOSAT-7 | 15   | 271 | 28/09/2015 | 42162.78337             | 0.00020638   | 9.81237              | 43.25917                      | 201.28600                    | 179.72692             | 57.53530            |
| METEOSAT-7 | 15   | 278 | 05/10/2015 | 42167.21106             | 0.00010065   | 9.82755              | 43.16585                      | 193.32862                    | 194.56730             | 57.35776            |
| METEOSAT-7 | 15   | 285 | 12/10/2015 | 42165.35302             | 0.00010271   | 9.83351              | 43.06485                      | 236.73144                    | 158.10498             | 57.24990            |
| METEOSAT-7 | 15   | 292 | 19/10/2015 | 42166.18157             | 0.00003984   | 9.84885              | 42.96965                      | 176.81375                    | 224.98740             | 57.19413            |
| METEOSAT-7 | 15   | 299 | 26/10/2015 | 42163.47669             | 0.00019703   | 9.85803              | 42.87837                      | 214.26715                    | 194.53952             | 57.20834            |
| METEOSAT-7 | 15   | 306 | 02/11/2015 | 42165.13611             | 0.00014937   | 9.87660              | 42.80229                      | 220.61849                    | 195.24508             | 57.31391            |
| METEOSAT-7 | 15   | 313 | 09/11/2015 | 42162.62513             | 0.00018902   | 9.88614              | 42.71064                      | 244.38281                    | 178.61429             | 57.50637            |
| METEOSAT-7 | 15   | 320 | 16/11/2015 | 42167.70348             | 0.00004491   | 9.90382              | 42.64267                      | 166.05955                    | 263.79331             | 57.46309            |
| METEOSAT-7 | 15   | 327 | 23/11/2015 | 42165.11429             | 0.00018623   | 9.91480              | 42.56557                      | 215.36843                    | 221.33850             | 57.42600            |
| METEOSAT-7 | 15   | 334 | 30/11/2015 | 42166.85745             | 0.00012200   | 9.93428              | 42.53411                      | 229.31260                    | 214.27031             | 57.46832            |
| METEOSAT-7 | 15   | 341 | 07/12/2015 | 42164.30667             | 0.00016347   | 9.94396              | 42.46045                      | 252.53247                    | 198.02646             | 57.57647            |
| METEOSAT-7 | 15   | 348 | 14/12/2015 | 42165.06057             | 0.00007370   | 9.95990              | 42.42308                      | 252.11301                    | 205.43812             | 57.73740            |
| METEOSAT-7 | 15   | 355 | 21/12/2015 | 42163.23221             | 0.00021503   | 9.96927              | 42.35946                      | 237.31734                    | 227.28703             | 57.92740            |
| METEOSAT-7 | 15   | 362 | 28/12/2015 | 42166.91184             | 0.00010343   | 9.98323              | 42.33173                      | 269.79196                    | 201.67240             | 57.94537            |
| METEOSAT-7 | 16   | 4   | 04/01/2016 | 42165.29944             | 0.00014176   | 9.99031              | 42.27120                      | 279.01035                    | 199.38229             | 57.98195            |
| METEOSAT-7 | 16   | 11  | 11/01/2016 | 42165.02954             | 0.00008439   | 10.00153             | 42.24469                      | 311.61113                    | 173.72079             | 58.04248            |
| METEOSAT-7 | 16   | 18  | 18/01/2016 | 42164.33079             | 0.00016404   | 10.00799             | 42.17704                      | 257.98421                    | 234.35956             | 58.10987            |
| METEOSAT-7 | 16   | 25  | 25/01/2016 | 42163.74999             | 0.00017022   | 10.01639             | 42.15067                      | 297.45193                    | 201.93722             | 58.22605            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 16   | 32  | 01/02/2016 | 42166.55960             | 0.00011105   | 10.02083             | 42.07045                      | 285.93714                    | 220.41755             | 58.18260            |
| METEOSAT-7 | 16   | 39  | 08/02/2016 | 42164.92703             | 0.00008701   | 10.02805             | 42.03200                      | 332.75653                    | 180.49908             | 58.09340            |
| METEOSAT-7 | 16   | 46  | 15/02/2016 | 42165.46312             | 0.00012923   | 10.03411             | 41.94183                      | 259.72736                    | 260.51103             | 58.01303            |
| METEOSAT-7 | 16   | 53  | 22/02/2016 | 42163.69235             | 0.00015475   | 10.03967             | 41.89302                      | 313.88586                    | 213.36758             | 57.98940            |
| METEOSAT-7 | 16   | 60  | 29/02/2016 | 42164.64292             | 0.00012692   | 10.04499             | 41.78920                      | 313.28288                    | 221.10112             | 58.01325            |
| METEOSAT-7 | 16   | 67  | 07/03/2016 | 42165.40009             | 0.00012765   | 10.05159             | 41.72929                      | 314.26806                    | 226.95015             | 57.78383            |
| METEOSAT-7 | 16   | 74  | 14/03/2016 | 42166.83640             | 0.00017635   | 10.06085             | 41.61859                      | 262.94655                    | 285.18998             | 57.58716            |
| METEOSAT-7 | 16   | 81  | 21/03/2016 | 42164.38021             | 0.00018833   | 10.06742             | 41.54930                      | 309.20965                    | 245.87143             | 57.46622            |
| METEOSAT-7 | 16   | 88  | 28/03/2016 | 42165.67693             | 0.00013944   | 10.07703             | 41.43296                      | 305.85640                    | 256.28402             | 57.42233            |
| METEOSAT-7 | 16   | 95  | 04/04/2016 | 42162.94630             | 0.00014103   | 10.08572             | 41.36343                      | 336.78476                    | 232.42057             | 57.44890            |
| METEOSAT-7 | 16   | 102 | 11/04/2016 | 42167.44254             | 0.00017178   | 10.10008             | 41.25293                      | 254.95302                    | 321.20672             | 57.34646            |
| METEOSAT-7 | 16   | 109 | 18/04/2016 | 42164.98553             | 0.00015661   | 10.10886             | 41.18368                      | 306.78665                    | 276.27076             | 57.25367            |
| METEOSAT-7 | 16   | 116 | 25/04/2016 | 42165.83850             | 0.00009237   | 10.12290             | 41.07924                      | 299.62066                    | 290.44098             | 57.25774            |
| METEOSAT-7 | 16   | 123 | 02/05/2016 | 42163.96023             | 0.00008142   | 10.13312             | 41.01879                      | 331.58922                    | 265.48385             | 57.33991            |
| METEOSAT-7 | 16   | 130 | 09/05/2016 | 42164.67959             | 0.00011194   | 10.15060             | 40.92797                      | 254.36265                    | 349.79551             | 57.49054            |
| METEOSAT-7 | 16   | 137 | 16/05/2016 | 42166.23289             | 0.00005568   | 10.16024             | 40.87148                      | 355.89542                    | 255.14563             | 57.49369            |
| METEOSAT-7 | 16   | 144 | 23/05/2016 | 42166.08935             | 0.00005710   | 10.17542             | 40.79133                      | 93.46276                     | 164.48100             | 57.50977            |
| METEOSAT-7 | 16   | 151 | 30/05/2016 | 42165.58773             | 0.00006808   | 10.18476             | 40.74612                      | 89.37543                     | 175.48598             | 57.58770            |
| METEOSAT-7 | 16   | 158 | 06/06/2016 | 42164.91718             | 0.00009362   | 10.20198             | 40.68382                      | 168.80066                    | 103.04391             | 57.72041            |
| METEOSAT-7 | 16   | 165 | 13/06/2016 | 42164.33747             | 0.00004915   | 10.20940             | 40.63855                      | 56.87022                     | 221.98581             | 57.89760            |
| METEOSAT-7 | 16   | 172 | 20/06/2016 | 42163.03798             | 0.00012595   | 10.22314             | 40.58141                      | 111.93383                    | 174.01845             | 58.14095            |
| METEOSAT-7 | 16   | 179 | 27/06/2016 | 42167.68727             | 0.00001578   | 10.22889             | 40.54222                      | 125.18285                    | 167.60624             | 58.12474            |
| METEOSAT-7 | 16   | 186 | 04/07/2016 | 42165.62030             | 0.00010132   | 10.24302             | 40.49387                      | 190.75401                    | 108.88470             | 58.09412            |
| METEOSAT-7 | 16   | 193 | 11/07/2016 | 42166.18868             | 0.00002088   | 10.24499             | 40.45594                      | 323.62372                    | 342.89592             | 58.08308            |
| METEOSAT-7 | 16   | 200 | 18/07/2016 | 42164.04511             | 0.00010087   | 10.25713             | 40.39600                      | 136.21698                    | 177.27672             | 58.11604            |
| METEOSAT-7 | 16   | 207 | 25/07/2016 | 42165.70176             | 0.00008009   | 10.25968             | 40.34471                      | 169.82560                    | 150.68457             | 58.17321            |
| METEOSAT-7 | 16   | 214 | 01/08/2016 | 42162.75966             | 0.00016770   | 10.27013             | 40.29487                      | 183.28596                    | 144.29308             | 58.25759            |
| METEOSAT-7 | 16   | 221 | 08/08/2016 | 42166.95602             | 0.00001927   | 10.27190             | 40.22773                      | 349.81775                    | 344.66162             | 58.13204            |
| METEOSAT-7 | 16   | 228 | 15/08/2016 | 42164.64569             | 0.00010809   | 10.28001             | 40.16760                      | 135.99819                    | 205.39934             | 58.01102            |
| METEOSAT-7 | 16   | 235 | 22/08/2016 | 42166.23941             | 0.00008555   | 10.28198             | 40.09182                      | 182.71110                    | 165.67389             | 57.92628            |
| METEOSAT-7 | 16   | 242 | 29/08/2016 | 42163.26260             | 0.00016339   | 10.29127             | 40.03076                      | 189.92216                    | 165.49116             | 57.88597            |
| METEOSAT-7 | 16   | 249 | 05/09/2016 | 42164.35864             | 0.00006141   | 10.29236             | 39.94681                      | 212.92422                    | 149.58863             | 57.88939            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-7 | 16   | 256 | 12/09/2016 | 42166.53657             | 0.00014138   | 10.30268             | 39.86460                      | 127.78348                    | 241.58397             | 57.65303            |
| METEOSAT-7 | 16   | 263 | 19/09/2016 | 42167.14487             | 0.00010460   | 10.30736             | 39.76666                      | 174.85108                    | 201.39045             | 57.42946            |
| METEOSAT-7 | 16   | 270 | 26/09/2016 | 42165.03360             | 0.00015339   | 10.31820             | 39.69773                      | 184.52960                    | 198.61466             | 57.27661            |
| METEOSAT-7 | 16   | 277 | 03/10/2016 | 42165.38440             | 0.00006067   | 10.32465             | 39.59012                      | 200.52184                    | 189.61990             | 57.19814            |
| METEOSAT-7 | 16   | 284 | 10/10/2016 | 42164.64746             | 0.00013825   | 10.33622             | 39.51513                      | 161.42501                    | 235.73317             | 57.19428            |
| METEOSAT-7 | 16   | 291 | 17/10/2016 | 42163.73430             | 0.00017990   | 10.34542             | 39.41247                      | 208.86219                    | 195.39259             | 57.26961            |
| METEOSAT-7 | 16   | 298 | 24/10/2016 | 42163.17880             | 0.00019291   | 10.35902             | 39.35163                      | 208.45289                    | 202.91627             | 57.43282            |
| METEOSAT-7 | 16   | 305 | 31/10/2016 | 42166.30642             | 0.00005343   | 10.36965             | 39.25059                      | 255.15330                    | 163.18065             | 57.43388            |
| METEOSAT-7 | 16   | 312 | 07/11/2016 | 42166.59625             | 0.00007453   | 10.38315             | 39.19245                      | 166.44556                    | 258.75756             | 57.40635            |
| METEOSAT-7 | 16   | 319 | 14/11/2016 | 42164.37677             | 0.00016699   | 10.39546             | 39.10532                      | 235.31962                    | 196.82998             | 57.44965            |
| METEOSAT-7 | 16   | 326 | 21/11/2016 | 42165.38154             | 0.00013609   | 10.40935             | 39.06596                      | 236.22247                    | 202.88807             | 57.57244            |
| METEOSAT-7 | 16   | 333 | 28/11/2016 | 42163.44818             | 0.00014219   | 10.42146             | 38.98597                      | 270.89815                    | 175.27592             | 57.77017            |
| METEOSAT-7 | 16   | 340 | 05/12/2016 | 42164.40778             | 0.00008236   | 10.43351             | 38.95172                      | 233.88089                    | 219.35817             | 58.01968            |
| METEOSAT-7 | 16   | 347 | 12/12/2016 | 42165.74427             | 0.00014790   | 10.44532             | 38.88414                      | 243.40074                    | 216.72023             | 58.04705            |
| METEOSAT-7 | 16   | 354 | 19/12/2016 | 42167.58191             | 0.00008602   | 10.45589             | 38.86312                      | 252.14180                    | 214.77522             | 58.02456            |
| METEOSAT-7 | 16   | 361 | 26/12/2016 | 42164.94870             | 0.00012483   | 10.46599             | 38.79967                      | 292.88162                    | 180.93546             | 58.04727            |
| METEOSAT-7 | 17   | 2   | 02/01/2017 | 42166.03036             | 0.00003495   | 10.47353             | 38.77606                      | 270.22065                    | 210.50819             | 58.10586            |
| METEOSAT-7 | 17   | 9   | 09/01/2017 | 42163.62662             | 0.00018604   | 10.48236             | 38.71181                      | 271.18929                    | 216.52639             | 58.16950            |
| METEOSAT-7 | 17   | 16  | 16/01/2017 | 42165.17526             | 0.00013511   | 10.48770             | 38.68816                      | 296.47260                    | 198.25884             | 58.27716            |
| METEOSAT-7 | 17   | 23  | 23/01/2017 | 42162.76574             | 0.00019017   | 10.49496             | 38.62054                      | 309.99198                    | 191.85847             | 58.41503            |
| METEOSAT-7 | 17   | 30  | 30/01/2017 | 42167.37568             | 0.00003060   | 10.49784             | 38.58308                      | 251.48057                    | 257.24641             | 58.31346            |
| METEOSAT-7 | 17   | 37  | 06/02/2017 | 42165.87230             | 0.00016592   | 10.50547             | 38.51056                      | 268.28601                    | 247.28499             | 58.12073            |
| METEOSAT-7 | 17   | 44  | 13/02/2017 | 42166.28146             | 0.00011374   | 10.50792             | 38.46300                      | 306.30702                    | 216.15231             | 57.97590            |
| METEOSAT-7 | 17   | 51  | 20/02/2017 | 42164.99918             | 0.00014339   | 10.51447             | 38.37866                      | 314.49492                    | 214.94998             | 57.87444            |
| METEOSAT-7 | 17   | 58  | 27/02/2017 | 42164.36185             | 0.00007435   | 10.51700             | 38.31845                      | 340.57099                    | 195.88697             | 57.81382            |
| METEOSAT-7 | 17   | 65  | 06/03/2017 | 42164.04168             | 0.00016605   | 10.52620             | 38.22814                      | 293.33654                    | 250.19980             | 57.78366            |
| METEOSAT-7 | 17   | 72  | 13/03/2017 | 42166.35611             | 0.00010519   | 10.52946             | 38.15617                      | 316.22766                    | 234.18588             | 57.57713            |
| METEOSAT-7 | 17   | 79  | 20/03/2017 | 42166.50635             | 0.00010586   | 10.53927             | 38.06065                      | 313.34275                    | 243.99222             | 57.39978            |
| METEOSAT-7 | 17   | 86  | 27/03/2017 | 42164.54947             | 0.00005829   | 10.54384             | 37.98467                      | 3.66904                      | 200.62032             | 57.29022            |
| METEOSAT-7 | 17   | 93  | 03/04/2017 | 42165.38910             | 0.00013138   | 10.55729             | 37.89381                      | 288.76651                    | 282.52753             | 57.23578            |
| METEOSAT-7 | 17   | 100 | 10/04/2017 | 42725.59138             | 0.00106719   | 10.56220             | 37.82151                      | 312.15656                    | 230.85336             | 22.36141            |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 03   | 230 | 18/08/2003 | 42165.54504             | 0.00029390   | 1.25128              | 308.33723                     | 155.78334                    | 211.18456             | -10.64377           |
| METEOSAT-8 | 03   | 237 | 25/08/2003 | 42166.93443             | 0.00020779   | 1.23510              | 308.74071                     | 151.38510                    | 222.06969             | -10.65436           |
| METEOSAT-8 | 03   | 244 | 01/09/2003 | 42165.69610             | 0.00032920   | 1.22065              | 308.44168                     | 151.27790                    | 229.34410             | -10.68682           |
| METEOSAT-8 | 03   | 251 | 08/09/2003 | 42167.09292             | 0.00025819   | 1.20211              | 308.90507                     | 151.23224                    | 235.81725             | -10.69642           |
| METEOSAT-8 | 03   | 258 | 15/09/2003 | 42165.93535             | 0.00027230   | 1.19408              | 308.65160                     | 156.28670                    | 237.90205             | -10.71060           |
| METEOSAT-8 | 03   | 265 | 22/09/2003 | 42166.43115             | 0.00019850   | 1.18018              | 309.10326                     | 155.68686                    | 244.95193             | -10.70870           |
| METEOSAT-8 | 03   | 272 | 29/09/2003 | 42166.27209             | 0.00031699   | 1.17215              | 308.97237                     | 151.17653                    | 256.46474             | -10.73646           |
| METEOSAT-8 | 03   | 279 | 06/10/2003 | 42166.46941             | 0.00024732   | 1.15481              | 309.52983                     | 154.14673                    | 259.84006             | -10.73265           |
| METEOSAT-8 | 03   | 286 | 13/10/2003 | 42166.48126             | 0.00025255   | 1.15221              | 309.56771                     | 153.31942                    | 267.52499             | -10.73589           |
| METEOSAT-8 | 03   | 293 | 20/10/2003 | 42165.80717             | 0.00018929   | 1.13855              | 310.20199                     | 157.50979                    | 269.61431             | -10.72062           |
| METEOSAT-8 | 03   | 300 | 27/10/2003 | 42166.81866             | 0.00030740   | 1.13368              | 310.43001                     | 148.01607                    | 285.76270             | -10.73628           |
| METEOSAT-8 | 03   | 307 | 03/11/2003 | 42165.73824             | 0.00023202   | 1.11477              | 311.16394                     | 155.00238                    | 284.95837             | -10.71894           |
| METEOSAT-8 | 03   | 314 | 10/11/2003 | 42166.84220             | 0.00023944   | 1.11270              | 311.59120                     | 147.46148                    | 298.98201             | -10.70716           |
| METEOSAT-8 | 03   | 321 | 17/11/2003 | 42165.26739             | 0.00017946   | 1.09594              | 312.39665                     | 155.12482                    | 297.44089             | -10.67799           |
| METEOSAT-8 | 03   | 328 | 24/11/2003 | 42167.06155             | 0.00030251   | 1.08956              | 312.96967                     | 142.67653                    | 316.21582             | -10.67673           |
| METEOSAT-8 | 03   | 335 | 01/12/2003 | 42165.12536             | 0.00021666   | 1.06613              | 313.80679                     | 152.47780                    | 312.50501             | -10.64796           |
| METEOSAT-8 | 03   | 342 | 08/12/2003 | 42166.83555             | 0.00023458   | 1.06067              | 314.50371                     | 140.41830                    | 330.79256             | -10.62167           |
| METEOSAT-8 | 03   | 349 | 15/12/2003 | 42165.00566             | 0.00017730   | 1.03871              | 315.29420                     | 148.29071                    | 329.06965             | -10.58085           |
| METEOSAT-8 | 03   | 356 | 22/12/2003 | 42166.84705             | 0.00030151   | 1.02886              | 316.03090                     | 136.87100                    | 346.67112             | -10.56157           |
| METEOSAT-8 | 03   | 363 | 29/12/2003 | 42164.88615             | 0.00021070   | 1.00137              | 316.74011                     | 147.19360                    | 342.57518             | -10.52536           |
| METEOSAT-8 | 04   | 5   | 05/01/2004 | 42166.45544             | 0.00023566   | 0.99197              | 317.48682                     | 133.69224                    | 2.26840               | -10.48634           |
| METEOSAT-8 | 04   | 12  | 12/01/2004 | 42165.12568             | 0.00019024   | 0.96658              | 318.03726                     | 140.36889                    | 1.98916               | -10.43852           |
| METEOSAT-8 | 04   | 19  | 19/01/2004 | 42124.20290             | 0.00018216   | 0.95528              | 318.74830                     | 116.82432                    | 34.17919              | -7.98215            |
| METEOSAT-8 | 04   | 26  | 26/01/2004 | 42123.17062             | 0.00009396   | 0.92759              | 319.13906                     | 129.65336                    | 31.68788              | -4.15446            |
| METEOSAT-8 | 04   | 33  | 02/02/2004 | 42167.01341             | 0.00011414   | 0.91769              | 319.79871                     | 36.74101                     | 131.58484             | -3.41053            |
| METEOSAT-8 | 04   | 40  | 09/02/2004 | 42167.08054             | 0.00007940   | 0.89389              | 320.00420                     | 24.98027                     | 149.97978             | -3.47123            |
| METEOSAT-8 | 04   | 47  | 16/02/2004 | 42166.39615             | 0.00013385   | 0.88451              | 320.69111                     | 70.35820                     | 110.76868             | -3.51776            |
| METEOSAT-8 | 04   | 54  | 23/02/2004 | 42166.60225             | 0.00006003   | 0.86197              | 320.75311                     | 41.57882                     | 146.35628             | -3.54782            |
| METEOSAT-8 | 04   | 61  | 01/03/2004 | 42165.59897             | 0.00012668   | 0.85575              | 321.42815                     | 43.58028                     | 150.57964             | -3.54807            |
| METEOSAT-8 | 04   | 68  | 08/03/2004 | 42166.88819             | 0.00007423   | 0.83725              | 321.45137                     | 54.58937                     | 146.47075             | -3.52470            |
| METEOSAT-8 | 04   | 75  | 15/03/2004 | 42165.01068             | 0.00015303   | 0.83201              | 322.34600                     | 75.27769                     | 131.82955             | -3.48282            |
| METEOSAT-8 | 04   | 82  | 22/03/2004 | 42166.11402             | 0.00006322   | 0.81668              | 322.38227                     | 66.04126                     | 147.98443             | -3.42783            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 04   | 89  | 29/03/2004 | 42164.40761             | 0.00013153   | 0.81443              | 323.31912                     | 52.14289                     | 167.93430             | -3.33912            |
| METEOSAT-8 | 04   | 96  | 05/04/2004 | 42166.26736             | 0.00008530   | 0.80154              | 323.48567                     | 82.93719                     | 143.98528             | -3.22663            |
| METEOSAT-8 | 04   | 103 | 12/04/2004 | 42166.58693             | 0.00010544   | 0.79829              | 324.84496                     | 71.94631                     | 160.42439             | -3.31863            |
| METEOSAT-8 | 04   | 110 | 19/04/2004 | 42168.06714             | 0.00001275   | 0.78864              | 325.12406                     | 18.12222                     | 220.75938             | -3.42774            |
| METEOSAT-8 | 04   | 117 | 26/04/2004 | 42166.34136             | 0.00008023   | 0.78701              | 326.50319                     | 34.07955                     | 210.24874             | -3.50120            |
| METEOSAT-8 | 04   | 124 | 03/05/2004 | 42167.74568             | 0.00004684   | 0.77679              | 326.98749                     | 108.48333                    | 142.20811             | -3.55271            |
| METEOSAT-8 | 04   | 131 | 10/05/2004 | 42165.50787             | 0.00011395   | 0.77186              | 328.84299                     | 83.12946                     | 172.57954             | -3.57893            |
| METEOSAT-8 | 04   | 138 | 17/05/2004 | 42166.81833             | 0.00001829   | 0.76375              | 329.46583                     | 123.46866                    | 138.50069             | -3.59467            |
| METEOSAT-8 | 04   | 145 | 24/05/2004 | 42165.64006             | 0.00006101   | 0.75943              | 331.20405                     | 45.60884                     | 221.54266             | -3.57354            |
| METEOSAT-8 | 04   | 152 | 31/05/2004 | 42165.84707             | 0.00008460   | 0.74893              | 331.94348                     | 121.15472                    | 152.19411             | -3.53574            |
| METEOSAT-8 | 04   | 159 | 07/06/2004 | 42164.78806             | 0.00011213   | 0.74009              | 334.12841                     | 90.53739                     | 187.58612             | -3.47553            |
| METEOSAT-8 | 04   | 166 | 14/06/2004 | 42165.34830             | 0.00003758   | 0.73144              | 334.95398                     | 145.38999                    | 138.88367             | -3.39880            |
| METEOSAT-8 | 04   | 173 | 21/06/2004 | 42165.06024             | 0.00004062   | 0.72250              | 336.86455                     | 53.98399                     | 235.39185             | -3.28550            |
| METEOSAT-8 | 04   | 180 | 28/06/2004 | 42166.65969             | 0.00004852   | 0.71119              | 337.67397                     | 129.64628                    | 165.74035             | -3.36446            |
| METEOSAT-8 | 04   | 187 | 05/07/2004 | 42167.11826             | 0.00004838   | 0.69833              | 339.94346                     | 58.42613                     | 241.50495             | -3.45022            |
| METEOSAT-8 | 04   | 194 | 12/07/2004 | 42166.50346             | 0.00003737   | 0.68932              | 340.78425                     | 244.27532                    | 61.64534              | -3.51920            |
| METEOSAT-8 | 04   | 201 | 19/07/2004 | 42167.11988             | 0.00005717   | 0.67680              | 342.64497                     | 317.07074                    | 353.85520             | -3.55286            |
| METEOSAT-8 | 04   | 208 | 26/07/2004 | 42165.32830             | 0.00005994   | 0.66641              | 343.33297                     | 146.28698                    | 170.82008             | -3.58323            |
| METEOSAT-8 | 04   | 215 | 02/08/2004 | 42166.97480             | 0.00002101   | 0.65160              | 345.47230                     | 23.00314                     | 298.86654             | -3.58116            |
| METEOSAT-8 | 04   | 222 | 09/08/2004 | 42165.19795             | 0.00005780   | 0.64479              | 346.16131                     | 233.63699                    | 94.46042              | -3.56406            |
| METEOSAT-8 | 04   | 229 | 16/08/2004 | 42166.43215             | 0.00006918   | 0.63167              | 347.81374                     | 294.27867                    | 39.11753              | -3.51270            |
| METEOSAT-8 | 04   | 236 | 23/08/2004 | 42164.45575             | 0.00006088   | 0.62559              | 348.34028                     | 164.96829                    | 174.85039             | -3.46336            |
| METEOSAT-8 | 04   | 243 | 30/08/2004 | 42166.47706             | 0.00003149   | 0.61193              | 350.21998                     | 294.57062                    | 50.35734              | -3.37432            |
| METEOSAT-8 | 04   | 250 | 06/09/2004 | 42164.16897             | 0.00007816   | 0.61073              | 350.77969                     | 236.18093                    | 115.19032             | -3.27104            |
| METEOSAT-8 | 04   | 257 | 13/09/2004 | 42168.12767             | 0.00009391   | 0.60022              | 352.25295                     | 322.21092                    | 34.51662              | -3.34133            |
| METEOSAT-8 | 04   | 264 | 20/09/2004 | 42166.52645             | 0.00002495   | 0.60160              | 352.78360                     | 92.99590                     | 269.99226             | -3.44979            |
| METEOSAT-8 | 04   | 271 | 27/09/2004 | 42167.99382             | 0.00006978   | 0.59163              | 354.50421                     | 330.19116                    | 37.91346              | -3.51259            |
| METEOSAT-8 | 04   | 278 | 04/10/2004 | 42166.14489             | 0.00005562   | 0.59785              | 355.17748                     | 285.69111                    | 88.59071              | -3.56178            |
| METEOSAT-8 | 04   | 285 | 11/10/2004 | 42166.76496             | 0.00010723   | 0.59175              | 356.68660                     | 307.85707                    | 71.79985              | -3.57736            |
| METEOSAT-8 | 04   | 292 | 18/10/2004 | 42166.01753             | 0.00001043   | 0.60069              | 357.56891                     | 30.59801                     | 355.05641             | -3.59725            |
| METEOSAT-8 | 04   | 299 | 25/10/2004 | 42166.34084             | 0.00008905   | 0.59490              | 359.36100                     | 304.58357                    | 86.20391              | -3.57178            |
| METEOSAT-8 | 04   | 306 | 01/11/2004 | 42165.63449             | 0.00007429   | 0.60723              | 0.44460                       | 288.99737                    | 107.64843             | -3.52953            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 04   | 313 | 08/11/2004 | 42165.14261             | 0.00012662   | 0.60420              | 2.17646                       | 297.02802                    | 104.85950             | -3.45560            |
| METEOSAT-8 | 04   | 320 | 15/11/2004 | 42165.00556             | 0.00003851   | 0.62014              | 3.65295                       | 349.24132                    | 58.18288              | -3.34202            |
| METEOSAT-8 | 04   | 327 | 22/11/2004 | 42164.00091             | 0.00012334   | 0.61631              | 5.64373                       | 296.75585                    | 115.74019             | -3.17899            |
| METEOSAT-8 | 04   | 334 | 29/11/2004 | 42168.04197             | 0.00002101   | 0.63072              | 7.19762                       | 353.85685                    | 63.90199              | -3.26186            |
| METEOSAT-8 | 04   | 341 | 06/12/2004 | 42166.50966             | 0.00006816   | 0.62754              | 9.11612                       | 307.12838                    | 115.51334             | -3.35993            |
| METEOSAT-8 | 04   | 348 | 13/12/2004 | 42167.90496             | 0.00007193   | 0.64206              | 10.99107                      | 60.61259                     | 6.96234               | -3.45127            |
| METEOSAT-8 | 04   | 355 | 20/12/2004 | 42165.94364             | 0.00006862   | 0.63743              | 13.07365                      | 298.79616                    | 133.53273             | -3.51410            |
| METEOSAT-8 | 04   | 362 | 27/12/2004 | 42167.31443             | 0.00003857   | 0.64985              | 14.89295                      | 346.50194                    | 90.87523              | -3.54599            |
| METEOSAT-8 | 05   | 3   | 03/01/2005 | 42165.33018             | 0.00007914   | 0.64437              | 16.77739                      | 308.57697                    | 133.80357             | -3.55746            |
| METEOSAT-8 | 05   | 10  | 10/01/2005 | 42167.08058             | 0.00008379   | 0.65704              | 18.74051                      | 40.73144                     | 46.58848              | -3.55435            |
| METEOSAT-8 | 05   | 17  | 17/01/2005 | 42164.84617             | 0.00008532   | 0.65060              | 20.62216                      | 298.04637                    | 154.30745             | -3.53805            |
| METEOSAT-8 | 05   | 24  | 24/01/2005 | 42166.35372             | 0.00005578   | 0.66035              | 22.41423                      | 344.23430                    | 113.28312             | -3.48166            |
| METEOSAT-8 | 05   | 31  | 31/01/2005 | 42164.63524             | 0.00008118   | 0.65290              | 23.89931                      | 317.23389                    | 145.76892             | -3.41039            |
| METEOSAT-8 | 05   | 38  | 07/02/2005 | 42165.88446             | 0.00009961   | 0.66410              | 25.62810                      | 26.72211                     | 81.54567              | -3.31592            |
| METEOSAT-8 | 05   | 45  | 14/02/2005 | 42166.55621             | 0.00007866   | 0.65807              | 26.97562                      | 262.56674                    | 211.16613             | -3.40254            |
| METEOSAT-8 | 05   | 52  | 21/02/2005 | 42167.43713             | 0.00002512   | 0.66701              | 28.47852                      | 303.76521                    | 175.29700             | -3.46967            |
| METEOSAT-8 | 05   | 59  | 28/02/2005 | 42166.62969             | 0.00003844   | 0.66109              | 29.35887                      | 286.12491                    | 198.89890             | -3.52694            |
| METEOSAT-8 | 05   | 66  | 07/03/2005 | 42166.79439             | 0.00006635   | 0.67346              | 30.75845                      | 36.63536                     | 93.86123              | -3.55406            |
| METEOSAT-8 | 05   | 73  | 14/03/2005 | 42166.17165             | 0.00006137   | 0.67151              | 31.45598                      | 261.24911                    | 235.41506             | -3.58833            |
| METEOSAT-8 | 05   | 80  | 21/03/2005 | 42165.94880             | 0.00003399   | 0.68286              | 32.65474                      | 330.70951                    | 171.67632             | -3.56748            |
| METEOSAT-8 | 05   | 87  | 28/03/2005 | 42166.36443             | 0.00001278   | 0.68246              | 33.01596                      | 316.57541                    | 192.37716             | -3.53900            |
| METEOSAT-8 | 05   | 94  | 04/04/2005 | 42165.24853             | 0.00008096   | 0.69839              | 34.26346                      | 33.96078                     | 120.70603             | -3.47704            |
| METEOSAT-8 | 05   | 101 | 11/04/2005 | 42165.73598             | 0.00004158   | 0.70343              | 34.53858                      | 250.89273                    | 270.45408             | -3.42166            |
| METEOSAT-8 | 05   | 108 | 18/04/2005 | 42164.41962             | 0.00004331   | 0.71857              | 35.66338                      | 351.70171                    | 175.53190             | -3.30999            |
| METEOSAT-8 | 05   | 115 | 25/04/2005 | 42165.84943             | 0.00002020   | 0.72547              | 35.84860                      | 80.69359                     | 93.37411              | -3.19054            |
| METEOSAT-8 | 05   | 122 | 02/05/2005 | 42166.78184             | 0.00003531   | 0.74445              | 37.22094                      | 356.69545                    | 182.81571             | -3.27486            |
| METEOSAT-8 | 05   | 129 | 09/05/2005 | 42168.05909             | 0.00009922   | 0.75631              | 37.44566                      | 232.61563                    | 313.44727             | -3.39840            |
| METEOSAT-8 | 05   | 136 | 16/05/2005 | 42166.21743             | 0.00005166   | 0.77325              | 38.71419                      | 276.30120                    | 275.32165             | -3.47011            |
| METEOSAT-8 | 05   | 143 | 23/05/2005 | 42167.89520             | 0.00004625   | 0.78539              | 39.01101                      | 197.70897                    | 0.45378               | -3.53341            |
| METEOSAT-8 | 05   | 150 | 30/05/2005 | 42165.43412             | 0.00003256   | 0.80447              | 40.61030                      | 28.61935                     | 174.81147             | -3.56627            |
| METEOSAT-8 | 05   | 157 | 06/06/2005 | 42167.01066             | 0.00009383   | 0.82006              | 40.98060                      | 217.85318                    | 352.08174             | -3.59189            |
| METEOSAT-8 | 05   | 164 | 13/06/2005 | 42165.34537             | 0.00003761   | 0.83526              | 42.41812                      | 259.56183                    | 315.85318             | -3.57432            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 05   | 171 | 20/06/2005 | 42165.54221             | 0.00006735   | 0.79035              | 38.89487                      | 185.20721                    | 40.70534              | -3.49934            |
| METEOSAT-8 | 05   | 178 | 27/06/2005 | 42163.91774             | 0.00001530   | 0.58437              | 338.20062                     | 156.88645                    | 136.72488             | -3.39081            |
| METEOSAT-8 | 05   | 185 | 04/07/2005 | 42165.16240             | 0.00011292   | 0.58251              | 339.86938                     | 270.81130                    | 28.15380              | -3.26767            |
| METEOSAT-8 | 05   | 192 | 11/07/2005 | 42167.12826             | 0.00005629   | 0.56506              | 341.76075                     | 5.18342                      | 298.72757             | -3.33000            |
| METEOSAT-8 | 05   | 199 | 18/07/2005 | 42166.97051             | 0.00001760   | 0.56230              | 343.22100                     | 181.84078                    | 127.41618             | -3.42322            |
| METEOSAT-8 | 05   | 206 | 25/07/2005 | 42166.42423             | 0.00003619   | 0.54229              | 345.43131                     | 61.27551                     | 252.60114             | -3.49301            |
| METEOSAT-8 | 05   | 213 | 01/08/2005 | 42166.73282             | 0.00007524   | 0.54109              | 347.14072                     | 279.48503                    | 39.53498              | -3.53984            |
| METEOSAT-8 | 05   | 220 | 08/08/2005 | 42166.69106             | 0.00005437   | 0.52374              | 348.71552                     | 330.91771                    | 353.40510             | -3.56190            |
| METEOSAT-8 | 05   | 227 | 15/08/2005 | 42165.49261             | 0.00003739   | 0.52322              | 350.10008                     | 208.38561                    | 121.44387             | -3.57023            |
| METEOSAT-8 | 05   | 234 | 22/08/2005 | 42166.43518             | 0.00002852   | 0.50550              | 351.96693                     | 324.27113                    | 10.60550              | -3.55605            |
| METEOSAT-8 | 05   | 241 | 29/08/2005 | 42165.39068             | 0.00010124   | 0.50762              | 353.62517                     | 264.16366                    | 75.99554              | -3.51489            |
| METEOSAT-8 | 05   | 248 | 05/09/2005 | 42166.17067             | 0.00007356   | 0.49392              | 354.81045                     | 304.56920                    | 41.36364              | -3.45567            |
| METEOSAT-8 | 05   | 255 | 12/09/2005 | 42164.33596             | 0.00005994   | 0.49841              | 356.17430                     | 227.16396                    | 124.38170             | -3.37860            |
| METEOSAT-8 | 05   | 262 | 19/09/2005 | 42166.26510             | 0.00007454   | 0.48642              | 357.68432                     | 293.78772                    | 63.24806              | -3.27822            |
| METEOSAT-8 | 05   | 269 | 26/09/2005 | 42166.73379             | 0.00006957   | 0.49396              | 359.40180                     | 262.63366                    | 99.51139              | -3.35115            |
| METEOSAT-8 | 05   | 276 | 03/10/2005 | 42167.95796             | 0.00006659   | 0.48648              | 0.39822                       | 329.50873                    | 38.44835              | -3.44235            |
| METEOSAT-8 | 05   | 283 | 10/10/2005 | 42166.05181             | 0.00002432   | 0.49736              | 2.01959                       | 213.72459                    | 159.44114             | -3.51203            |
| METEOSAT-8 | 05   | 290 | 17/10/2005 | 42167.97898             | 0.00007835   | 0.49245              | 3.40758                       | 310.74998                    | 67.88120              | -3.55819            |
| METEOSAT-8 | 05   | 297 | 24/10/2005 | 42165.64673             | 0.00009855   | 0.50529              | 5.42424                       | 260.48315                    | 123.01480             | -3.57457            |
| METEOSAT-8 | 05   | 304 | 31/10/2005 | 42166.72992             | 0.00008901   | 0.50388              | 6.56952                       | 308.58698                    | 80.66361              | -3.57622            |
| METEOSAT-8 | 05   | 311 | 07/11/2005 | 42165.31845             | 0.00004286   | 0.51934              | 8.70547                       | 252.48897                    | 141.54748             | -3.55414            |
| METEOSAT-8 | 05   | 318 | 14/11/2005 | 42166.39076             | 0.00011755   | 0.52016              | 10.23255                      | 292.21354                    | 107.23846             | -3.51107            |
| METEOSAT-8 | 05   | 325 | 21/11/2005 | 42164.86642             | 0.00011912   | 0.53533              | 12.61317                      | 261.31225                    | 142.73417             | -3.43585            |
| METEOSAT-8 | 05   | 332 | 28/11/2005 | 42165.16554             | 0.00011627   | 0.53702              | 14.03659                      | 295.88366                    | 113.72911             | -3.34556            |
| METEOSAT-8 | 05   | 339 | 05/12/2005 | 42164.74879             | 0.00005908   | 0.55368              | 16.61372                      | 265.54238                    | 148.50870             | -3.22985            |
| METEOSAT-8 | 05   | 346 | 12/12/2005 | 42167.50549             | 0.00008402   | 0.55679              | 18.27187                      | 282.97770                    | 136.22173             | -3.32284            |
| METEOSAT-8 | 05   | 353 | 19/12/2005 | 42167.26336             | 0.00006427   | 0.57050              | 20.85214                      | 244.54115                    | 178.88487             | -3.41565            |
| METEOSAT-8 | 05   | 360 | 26/12/2005 | 42166.47513             | 0.00007273   | 0.57190              | 22.34982                      | 298.56547                    | 130.18327             | -3.49458            |
| METEOSAT-8 | 06   | 2   | 02/01/2006 | 42167.22940             | 0.00000386   | 0.58646              | 25.07267                      | 134.27291                    | 298.59921             | -3.54806            |
| METEOSAT-8 | 06   | 9   | 09/01/2006 | 42165.94353             | 0.00010865   | 0.58940              | 26.59775                      | 279.76477                    | 158.43641             | -3.59316            |
| METEOSAT-8 | 06   | 16  | 16/01/2006 | 42166.84333             | 0.00005807   | 0.59932              | 29.06180                      | 255.32203                    | 187.31098             | -3.59685            |
| METEOSAT-8 | 06   | 23  | 23/01/2006 | 42165.17615             | 0.00008692   | 0.59921              | 30.27212                      | 296.76443                    | 151.56453             | -3.58968            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 06   | 30  | 30/01/2006 | 42166.76852             | 0.00001517   | 0.61093              | 32.75545                      | 10.34514                     | 82.43354              | -3.55614            |
| METEOSAT-8 | 06   | 37  | 06/02/2006 | 42164.71831             | 0.00012045   | 0.61385              | 33.83191                      | 279.55664                    | 179.07904             | -3.52185            |
| METEOSAT-8 | 06   | 44  | 13/02/2006 | 42166.24996             | 0.00005071   | 0.62052              | 35.89918                      | 269.34828                    | 194.20124             | -3.44010            |
| METEOSAT-8 | 06   | 51  | 20/02/2006 | 42164.27818             | 0.00008872   | 0.62098              | 36.50860                      | 299.49769                    | 170.43338             | -3.34819            |
| METEOSAT-8 | 06   | 58  | 27/02/2006 | 42165.90345             | 0.00003092   | 0.63117              | 38.50075                      | 6.93631                      | 108.02327             | -3.22694            |
| METEOSAT-8 | 06   | 65  | 06/03/2006 | 42166.70562             | 0.00011310   | 0.63735              | 38.95377                      | 245.56853                    | 235.72945             | -3.33465            |
| METEOSAT-8 | 06   | 72  | 13/03/2006 | 42168.11821             | 0.00006033   | 0.64366              | 40.50309                      | 208.20729                    | 278.35012             | -3.42531            |
| METEOSAT-8 | 06   | 79  | 20/03/2006 | 42166.56325             | 0.00005619   | 0.64884              | 40.51776                      | 245.03690                    | 248.32435             | -3.50604            |
| METEOSAT-8 | 06   | 86  | 27/03/2006 | 42167.45820             | 0.00003346   | 0.66032              | 42.04829                      | 140.94936                    | 357.73046             | -3.55651            |
| METEOSAT-8 | 06   | 93  | 03/04/2006 | 42166.04860             | 0.00010308   | 0.67279              | 42.05078                      | 240.11139                    | 265.41068             | -3.61122            |
| METEOSAT-8 | 06   | 100 | 10/04/2006 | 42166.64923             | 0.00004167   | 0.68177              | 43.24441                      | 206.57908                    | 304.64759             | -3.61268            |
| METEOSAT-8 | 06   | 107 | 17/04/2006 | 42166.08332             | 0.00004613   | 0.69453              | 43.01492                      | 228.36967                    | 289.99542             | -3.60340            |
| METEOSAT-8 | 06   | 114 | 24/04/2006 | 42165.80424             | 0.00003388   | 0.70838              | 44.34742                      | 125.93140                    | 38.03966              | -3.56487            |
| METEOSAT-8 | 06   | 121 | 01/05/2006 | 42165.53749             | 0.00009547   | 0.72823              | 44.30776                      | 228.15724                    | 302.79323             | -3.52506            |
| METEOSAT-8 | 06   | 128 | 08/05/2006 | 42164.94313             | 0.00002260   | 0.73990              | 45.44801                      | 188.16195                    | 348.63637             | -3.43697            |
| METEOSAT-8 | 06   | 135 | 15/05/2006 | 42165.58077             | 0.00004847   | 0.75941              | 45.37738                      | 202.54445                    | 341.32689             | -3.33468            |
| METEOSAT-8 | 06   | 142 | 22/05/2006 | 42166.86743             | 0.00003299   | 0.77411              | 46.74672                      | 234.51074                    | 314.91427             | -3.31182            |
| METEOSAT-8 | 06   | 149 | 29/05/2006 | 42167.72226             | 0.00014321   | 0.79858              | 46.95702                      | 235.80310                    | 320.20254             | -3.42116            |
| METEOSAT-8 | 06   | 156 | 05/06/2006 | 42166.17269             | 0.00005366   | 0.81028              | 48.16378                      | 251.45805                    | 310.16929             | -3.49277            |
| METEOSAT-8 | 06   | 163 | 12/06/2006 | 42167.66280             | 0.00009507   | 0.83296              | 48.40200                      | 228.72921                    | 339.50779             | -3.54504            |
| METEOSAT-8 | 06   | 170 | 19/06/2006 | 42165.40759             | 0.00004068   | 0.84566              | 49.82106                      | 203.12219                    | 10.56335              | -3.57749            |
| METEOSAT-8 | 06   | 177 | 26/06/2006 | 42166.96251             | 0.00014898   | 0.87057              | 50.29476                      | 223.60963                    | 356.49127             | -3.58843            |
| METEOSAT-8 | 06   | 184 | 03/07/2006 | 42165.11893             | 0.00004977   | 0.87914              | 51.49701                      | 229.88163                    | 355.92942             | -3.57576            |
| METEOSAT-8 | 06   | 191 | 10/07/2006 | 42166.67121             | 0.00010671   | 0.90124              | 51.95095                      | 213.97186                    | 18.32387              | -3.53683            |
| METEOSAT-8 | 06   | 198 | 17/07/2006 | 42164.36361             | 0.00006919   | 0.90982              | 53.25439                      | 190.18398                    | 47.75899              | -3.48557            |
| METEOSAT-8 | 06   | 205 | 24/07/2006 | 42165.98644             | 0.00016559   | 0.93240              | 53.86094                      | 213.06521                    | 31.25348              | -3.40264            |
| METEOSAT-8 | 06   | 212 | 31/07/2006 | 42164.51430             | 0.00006991   | 0.93637              | 54.85173                      | 210.98385                    | 39.33756              | -3.30812            |
| METEOSAT-8 | 06   | 219 | 07/08/2006 | 42165.26470             | 0.00012716   | 0.95619              | 55.32775                      | 201.81304                    | 55.05953              | -3.17986            |
| METEOSAT-8 | 06   | 226 | 14/08/2006 | 42166.81440             | 0.00004567   | 0.96079              | 56.30690                      | 220.37409                    | 42.32237              | -3.27558            |
| METEOSAT-8 | 06   | 233 | 21/08/2006 | 42167.80618             | 0.00013692   | 0.98069              | 56.86005                      | 221.81687                    | 47.12760              | -3.37320            |
| METEOSAT-8 | 06   | 240 | 28/08/2006 | 42167.11084             | 0.00005778   | 0.98160              | 57.45526                      | 248.04198                    | 27.11076              | -3.46820            |
| METEOSAT-8 | 06   | 247 | 04/09/2006 | 42165.97751             | 0.00011239   | 0.52421              | 324.99442                     | 312.62702                    | 61.88400              | -3.47168            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 06   | 254 | 11/09/2006 | 42165.92013             | 0.00011075   | 0.51198              | 325.18944                     | 320.43325                    | 60.79240              | -3.46163            |
| METEOSAT-8 | 06   | 261 | 18/09/2006 | 42165.73527             | 0.00018703   | 0.50194              | 327.21693                     | 311.53724                    | 74.61280              | -3.40949            |
| METEOSAT-8 | 06   | 268 | 25/09/2006 | 42165.92944             | 0.00011344   | 0.49652              | 327.25675                     | 331.05365                    | 62.00800              | -3.35748            |
| METEOSAT-8 | 06   | 275 | 02/10/2006 | 42164.45206             | 0.00014509   | 0.49074              | 329.40817                     | 302.43647                    | 95.46832              | -3.26256            |
| METEOSAT-8 | 06   | 282 | 09/10/2006 | 42168.33416             | 0.00010346   | 0.48647              | 330.04236                     | 331.63967                    | 72.49656              | -3.29635            |
| METEOSAT-8 | 06   | 289 | 16/10/2006 | 42166.83250             | 0.00016323   | 0.47918              | 332.54686                     | 308.39598                    | 100.04513             | -3.38653            |
| METEOSAT-8 | 06   | 296 | 23/10/2006 | 42167.74741             | 0.00009947   | 0.48000              | 333.20876                     | 340.04676                    | 74.54335              | -3.47498            |
| METEOSAT-8 | 06   | 303 | 30/10/2006 | 42165.77123             | 0.00012305   | 0.47597              | 335.97204                     | 300.13463                    | 118.54620             | -3.52052            |
| METEOSAT-8 | 06   | 310 | 06/11/2006 | 42167.71245             | 0.00014728   | 0.47724              | 337.34597                     | 323.85870                    | 100.30647             | -3.56159            |
| METEOSAT-8 | 06   | 317 | 13/11/2006 | 42165.44748             | 0.00019897   | 0.47087              | 340.42489                     | 301.35524                    | 126.62948             | -3.56271            |
| METEOSAT-8 | 06   | 324 | 20/11/2006 | 42166.70072             | 0.00013241   | 0.47454              | 341.82878                     | 327.71033                    | 105.77484             | -3.55771            |
| METEOSAT-8 | 06   | 331 | 27/11/2006 | 42164.83413             | 0.00015667   | 0.46981              | 345.16600                     | 295.50288                    | 141.58800             | -3.51437            |
| METEOSAT-8 | 06   | 338 | 04/12/2006 | 42166.47815             | 0.00018518   | 0.47350              | 347.16752                     | 314.75079                    | 127.28851             | -3.46383            |
| METEOSAT-8 | 06   | 345 | 11/12/2006 | 42164.39349             | 0.00022186   | 0.46613              | 350.58612                     | 295.43152                    | 150.17599             | -3.37661            |
| METEOSAT-8 | 06   | 352 | 18/12/2006 | 42167.57616             | 0.00011342   | 0.46991              | 352.41748                     | 325.68264                    | 124.92234             | -3.44715            |
| METEOSAT-8 | 06   | 359 | 25/12/2006 | 42166.41164             | 0.00012537   | 0.46300              | 356.03026                     | 287.20861                    | 166.61557             | -3.51480            |
| METEOSAT-8 | 07   | 1   | 01/01/2007 | 42167.11660             | 0.00016231   | 0.46740              | 358.25502                     | 308.89184                    | 149.54990             | -3.57189            |
| METEOSAT-8 | 07   | 8   | 08/01/2007 | 42166.02420             | 0.00017291   | 0.45830              | 1.58122                       | 289.64931                    | 172.34236             | -3.59538            |
| METEOSAT-8 | 07   | 15  | 15/01/2007 | 42166.12279             | 0.00013840   | 0.46162              | 3.36917                       | 318.15758                    | 148.93854             | -3.60238            |
| METEOSAT-8 | 07   | 22  | 22/01/2007 | 42166.06953             | 0.00012932   | 0.45331              | 6.82076                       | 284.07159                    | 186.48623             | -3.58871            |
| METEOSAT-8 | 07   | 29  | 29/01/2007 | 42165.58533             | 0.00017938   | 0.45895              | 8.82533                       | 302.61400                    | 172.86707             | -3.56033            |
| METEOSAT-8 | 07   | 36  | 05/02/2007 | 42165.77988             | 0.00015911   | 0.44956              | 11.60987                      | 287.79012                    | 191.86551             | -3.50077            |
| METEOSAT-8 | 07   | 43  | 12/02/2007 | 42164.72411             | 0.00015429   | 0.45438              | 12.93720                      | 313.72840                    | 171.57959             | -3.42046            |
| METEOSAT-8 | 07   | 50  | 19/02/2007 | 42165.78465             | 0.00012087   | 0.44727              | 15.81554                      | 280.58290                    | 208.84101             | -3.32579            |
| METEOSAT-8 | 07   | 57  | 26/02/2007 | 42166.77182             | 0.00012430   | 0.45668              | 17.35155                      | 295.73953                    | 198.99605             | -3.37759            |
| METEOSAT-8 | 07   | 64  | 05/03/2007 | 42167.98940             | 0.00008176   | 0.44999              | 19.32913                      | 275.15500                    | 224.41661             | -3.46349            |
| METEOSAT-8 | 07   | 71  | 12/03/2007 | 42166.11503             | 0.00009812   | 0.45946              | 20.13097                      | 316.41609                    | 189.19075             | -3.52589            |
| METEOSAT-8 | 07   | 78  | 19/03/2007 | 42167.74887             | 0.00005924   | 0.45651              | 22.29385                      | 252.03214                    | 258.26007             | -3.57722            |
| METEOSAT-8 | 07   | 85  | 26/03/2007 | 42165.55379             | 0.00012118   | 0.47221              | 23.48945                      | 294.42020                    | 221.54575             | -3.60745            |
| METEOSAT-8 | 07   | 92  | 02/04/2007 | 42167.16314             | 0.00006137   | 0.47085              | 24.80426                      | 276.97042                    | 244.58198             | -3.60581            |
| METEOSAT-8 | 07   | 99  | 09/04/2007 | 42165.18396             | 0.00009298   | 0.48680              | 25.44112                      | 315.38767                    | 212.45483             | -3.57846            |
| METEOSAT-8 | 07   | 106 | 16/04/2007 | 42166.58145             | 0.00004928   | 0.48929              | 27.11556                      | 245.40584                    | 287.69967             | -3.54070            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 07   | 113 | 23/04/2007 | 42164.56501             | 0.00011114   | 0.51131              | 28.36479                      | 290.87294                    | 247.94438             | -3.47946            |
| METEOSAT-8 | 07   | 120 | 30/04/2007 | 42165.79686             | 0.00004111   | 0.51554              | 29.42958                      | 282.54432                    | 262.20017             | -3.38714            |
| METEOSAT-8 | 07   | 127 | 07/05/2007 | 42164.46109             | 0.00007940   | 0.53663              | 30.34001                      | 311.14808                    | 239.70630             | -3.26667            |
| METEOSAT-8 | 07   | 134 | 14/05/2007 | 42167.86277             | 0.00009220   | 0.54328              | 31.82714                      | 188.97521                    | 7.23656               | -3.32193            |
| METEOSAT-8 | 07   | 141 | 21/05/2007 | 42166.78012             | 0.00009066   | 0.56859              | 33.36793                      | 237.78689                    | 323.67944             | -3.42657            |
| METEOSAT-8 | 07   | 148 | 28/05/2007 | 42167.18233             | 0.00006236   | 0.57590              | 34.43193                      | 179.25828                    | 27.95549              | -3.51483            |
| METEOSAT-8 | 07   | 155 | 04/06/2007 | 42166.96622             | 0.00005322   | 0.59862              | 35.72881                      | 221.93953                    | 350.81761             | -3.57450            |
| METEOSAT-8 | 07   | 162 | 11/06/2007 | 42166.29325             | 0.00010328   | 0.60645              | 37.14389                      | 179.32438                    | 38.86730              | -3.62452            |
| METEOSAT-8 | 07   | 169 | 18/06/2007 | 42166.45224             | 0.00010473   | 0.63096              | 38.89541                      | 220.09294                    | 3.22475               | -3.64696            |
| METEOSAT-8 | 07   | 176 | 25/06/2007 | 42165.61334             | 0.00007317   | 0.63818              | 39.95266                      | 160.91080                    | 68.24461              | -3.65148            |
| METEOSAT-8 | 07   | 183 | 02/07/2007 | 42166.78994             | 0.00007000   | 0.65915              | 41.47088                      | 207.33398                    | 27.21436              | -3.64009            |
| METEOSAT-8 | 07   | 190 | 09/07/2007 | 42165.06112             | 0.00011686   | 0.66588              | 42.68250                      | 173.24555                    | 67.00586              | -3.62477            |
| METEOSAT-8 | 07   | 197 | 16/07/2007 | 42166.23682             | 0.00012349   | 0.68650              | 44.45978                      | 209.87080                    | 35.54932              | -3.57844            |
| METEOSAT-8 | 07   | 204 | 23/07/2007 | 42164.62002             | 0.00008785   | 0.69189              | 45.29637                      | 155.76006                    | 95.77965              | -3.52142            |
| METEOSAT-8 | 07   | 211 | 30/07/2007 | 42166.26396             | 0.00010108   | 0.70927              | 46.79943                      | 198.40276                    | 58.62834              | -3.42640            |
| METEOSAT-8 | 07   | 218 | 06/08/2007 | 42163.91294             | 0.00014360   | 0.71461              | 47.61940                      | 172.69780                    | 90.51243              | -3.32632            |
| METEOSAT-8 | 07   | 225 | 13/08/2007 | 42168.10713             | 0.00010202   | 0.73064              | 49.18823                      | 219.01558                    | 49.46312              | -3.38827            |
| METEOSAT-8 | 07   | 232 | 20/08/2007 | 42166.35568             | 0.00005167   | 0.73462              | 49.60389                      | 146.84902                    | 128.02261             | -3.47859            |
| METEOSAT-8 | 07   | 239 | 27/08/2007 | 42167.83051             | 0.00008432   | 0.74906              | 50.86403                      | 207.88890                    | 72.57347              | -3.52687            |
| METEOSAT-8 | 07   | 246 | 03/09/2007 | 42165.64548             | 0.00011213   | 0.75521              | 51.14839                      | 178.32651                    | 108.70445             | -3.57275            |
| METEOSAT-8 | 07   | 253 | 10/09/2007 | 42167.07720             | 0.00013108   | 0.76843              | 52.36100                      | 212.46754                    | 80.23933              | -3.58345            |
| METEOSAT-8 | 07   | 260 | 17/09/2007 | 42165.79434             | 0.00006898   | 0.77426              | 52.26347                      | 172.29877                    | 127.39864             | -3.58937            |
| METEOSAT-8 | 07   | 267 | 24/09/2007 | 42166.26837             | 0.00012574   | 0.78818              | 53.19567                      | 200.68602                    | 105.01575             | -3.55204            |
| METEOSAT-8 | 07   | 274 | 01/10/2007 | 42165.08989             | 0.00013761   | 0.79910              | 52.99813                      | 187.68767                    | 125.14958             | -3.51328            |
| METEOSAT-8 | 07   | 281 | 08/10/2007 | 42165.72183             | 0.00016175   | 0.81274              | 53.88296                      | 210.98799                    | 107.93865             | -3.43857            |
| METEOSAT-8 | 07   | 288 | 15/10/2007 | 42164.79506             | 0.00010079   | 0.78414              | 51.47816                      | 195.86753                    | 132.47633             | -3.32598            |
| METEOSAT-8 | 07   | 295 | 22/10/2007 | 42166.73413             | 0.00011876   | 0.50779              | 322.79954                     | 282.86940                    | 141.05697             | -3.32498            |
| METEOSAT-8 | 07   | 302 | 29/10/2007 | 42167.05283             | 0.00010685   | 0.51119              | 324.69193                     | 277.34639                    | 151.50838             | -3.40356            |
| METEOSAT-8 | 07   | 309 | 05/11/2007 | 42166.47098             | 0.00014057   | 0.49780              | 326.45234                     | 299.61596                    | 134.33486             | -3.44649            |
| METEOSAT-8 | 07   | 316 | 12/11/2007 | 42166.90693             | 0.00006006   | 0.50288              | 328.42405                     | 281.15905                    | 157.69073             | -3.47514            |
| METEOSAT-8 | 07   | 323 | 19/11/2007 | 42165.14476             | 0.00015656   | 0.49016              | 330.53994                     | 284.03777                    | 159.60207             | -3.46867            |
| METEOSAT-8 | 07   | 330 | 26/11/2007 | 42166.68303             | 0.00011632   | 0.49442              | 333.25123                     | 285.43473                    | 162.40936             | -3.45253            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 07   | 337 | 03/12/2007 | 42164.93198             | 0.00016577   | 0.48058              | 335.45373                     | 297.68297                    | 154.90477             | -3.40588            |
| METEOSAT-8 | 07   | 344 | 10/12/2007 | 42166.05879             | 0.00007478   | 0.48447              | 338.04148                     | 295.61148                    | 161.35643             | -3.33738            |
| METEOSAT-8 | 07   | 351 | 17/12/2007 | 42164.02847             | 0.00017779   | 0.47027              | 340.43762                     | 283.37315                    | 178.19098             | -3.24457            |
| METEOSAT-8 | 07   | 358 | 24/12/2007 | 42168.47129             | 0.00006297   | 0.47358              | 343.58627                     | 288.28842                    | 176.94507             | -3.32608            |
| METEOSAT-8 | 07   | 365 | 31/12/2007 | 42166.18103             | 0.00011606   | 0.45872              | 345.88381                     | 298.83018                    | 170.91648             | -3.41489            |
| METEOSAT-8 | 08   | 7   | 07/01/2008 | 42167.50966             | 0.00003431   | 0.46094              | 348.68358                     | 336.18239                    | 137.60373             | -3.47518            |
| METEOSAT-8 | 08   | 14  | 14/01/2008 | 42165.85595             | 0.00012165   | 0.44590              | 350.95747                     | 280.22838                    | 198.13426             | -3.52439            |
| METEOSAT-8 | 08   | 21  | 21/01/2008 | 42167.29346             | 0.00006930   | 0.44868              | 354.14934                     | 300.73502                    | 181.31358             | -3.54615            |
| METEOSAT-8 | 08   | 28  | 28/01/2008 | 42165.43217             | 0.00010779   | 0.43476              | 356.03989                     | 300.96479                    | 186.08821             | -3.55074            |
| METEOSAT-8 | 08   | 35  | 04/02/2008 | 42166.39157             | 0.00005277   | 0.43732              | 358.63274                     | 345.01276                    | 146.37136             | -3.52633            |
| METEOSAT-8 | 08   | 42  | 11/02/2008 | 42165.62432             | 0.00011336   | 0.42471              | 0.40995                       | 277.90922                    | 218.61274             | -3.51078            |
| METEOSAT-8 | 08   | 49  | 18/02/2008 | 42165.96902             | 0.00007564   | 0.42909              | 3.33544                       | 308.03893                    | 192.50963             | -3.45837            |
| METEOSAT-8 | 08   | 56  | 25/02/2008 | 42165.23958             | 0.00008590   | 0.41980              | 4.52740                       | 302.15468                    | 204.16764             | -3.39213            |
| METEOSAT-8 | 08   | 63  | 03/03/2008 | 42166.72242             | 0.00009174   | 0.42549              | 6.74669                       | 327.53333                    | 183.44344             | -3.41799            |
| METEOSAT-8 | 08   | 70  | 10/03/2008 | 42167.05317             | 0.00013633   | 0.41879              | 7.90602                       | 275.63927                    | 241.01782             | -3.47782            |
| METEOSAT-8 | 08   | 77  | 17/03/2008 | 42166.13056             | 0.00011274   | 0.42757              | 10.54809                      | 304.23128                    | 216.66779             | -3.49345            |
| METEOSAT-8 | 08   | 84  | 24/03/2008 | 42166.64329             | 0.00009744   | 0.42604              | 11.12870                      | 293.67293                    | 233.54285             | -3.49567            |
| METEOSAT-8 | 08   | 91  | 31/03/2008 | 42165.27190             | 0.00009524   | 0.43661              | 13.13505                      | 332.65233                    | 199.49294             | -3.45947            |
| METEOSAT-8 | 08   | 98  | 07/04/2008 | 42128.30512             | 0.00013411   | 0.43801              | 13.94518                      | 227.67176                    | 312.79804             | -1.22446            |
| METEOSAT-8 | 08   | 105 | 14/04/2008 | 42126.09870             | 0.00006385   | 0.45144              | 16.55637                      | 257.25668                    | 291.02594             | 2.29970             |
| METEOSAT-8 | 08   | 112 | 21/04/2008 | 42127.38566             | 0.00007509   | 0.45816              | 16.99807                      | 215.53958                    | 342.75654             | 5.85524             |
| METEOSAT-8 | 08   | 119 | 28/04/2008 | 42125.06135             | 0.00001844   | 0.47243              | 19.07642                      | 275.33454                    | 291.40075             | 9.47291             |
| METEOSAT-8 | 08   | 126 | 05/05/2008 | 42169.02641             | 0.00010077   | 0.48071              | 19.91501                      | 26.19099                     | 186.72169             | 9.58929             |
| METEOSAT-8 | 08   | 133 | 12/05/2008 | 42166.58812             | 0.00019076   | 0.49687              | 22.64720                      | 17.89231                     | 199.04044             | 9.44170             |
| METEOSAT-8 | 08   | 140 | 19/05/2008 | 42167.49039             | 0.00015925   | 0.50890              | 23.29297                      | 34.35243                     | 188.73955             | 9.34720             |
| METEOSAT-8 | 08   | 147 | 26/05/2008 | 42165.79925             | 0.00020886   | 0.52387              | 25.54526                      | 25.30185                     | 202.41209             | 9.32169             |
| METEOSAT-8 | 08   | 154 | 02/06/2008 | 42165.96437             | 0.00010639   | 0.53564              | 26.51501                      | 31.30811                     | 202.34709             | 9.33322             |
| METEOSAT-8 | 08   | 161 | 09/06/2008 | 42164.46559             | 0.00018530   | 0.55125              | 29.30002                      | 16.20102                     | 221.64461             | 9.40889             |
| METEOSAT-8 | 08   | 168 | 16/06/2008 | 42167.77113             | 0.00009376   | 0.56498              | 30.11328                      | 20.23064                     | 223.57986             | 9.28758             |
| METEOSAT-8 | 08   | 175 | 23/06/2008 | 42167.19792             | 0.00012803   | 0.57758              | 32.40861                      | 4.01878                      | 244.29952             | 9.19110             |
| METEOSAT-8 | 08   | 182 | 30/06/2008 | 42166.16700             | 0.00003730   | 0.58978              | 33.36233                      | 1.41054                      | 252.79830             | 9.13605             |
| METEOSAT-8 | 08   | 189 | 07/07/2008 | 42165.93435             | 0.00011705   | 0.60206              | 35.96346                      | 348.47568                    | 270.03224             | 9.13672             |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 08   | 196 | 14/07/2008 | 42164.84520             | 0.00008589   | 0.61488              | 36.73375                      | 25.92670                     | 238.76803             | 9.19462             |
| METEOSAT-8 | 08   | 203 | 21/07/2008 | 42165.43347             | 0.00010179   | 0.62350              | 38.86310                      | 353.79599                    | 275.79116             | 9.31696             |
| METEOSAT-8 | 08   | 210 | 28/07/2008 | 42163.27893             | 0.00002052   | 0.63491              | 39.58421                      | 16.52057                     | 259.41200             | 9.48436             |
| METEOSAT-8 | 08   | 217 | 04/08/2008 | 42164.10189             | 0.00010043   | 0.64299              | 41.76560                      | 337.08871                    | 303.78104             | 9.70360             |
| METEOSAT-8 | 08   | 224 | 11/08/2008 | 42167.88427             | 0.00006877   | 0.65479              | 42.26463                      | 188.83667                    | 98.33932              | 9.60982             |
| METEOSAT-8 | 08   | 231 | 18/08/2008 | 42169.16901             | 0.00009567   | 0.65992              | 43.99219                      | 230.35753                    | 61.81394              | 9.43355             |
| METEOSAT-8 | 08   | 238 | 25/08/2008 | 42166.41085             | 0.00014017   | 0.67199              | 44.32253                      | 196.69567                    | 101.91512             | 9.30408             |
| METEOSAT-8 | 08   | 245 | 01/09/2008 | 42167.67059             | 0.00011092   | 0.67718              | 45.89622                      | 235.31249                    | 68.54361              | 9.22371             |
| METEOSAT-8 | 08   | 252 | 08/09/2008 | 42165.46097             | 0.00008985   | 0.68990              | 46.00075                      | 189.59520                    | 121.03424             | 9.20231             |
| METEOSAT-8 | 08   | 259 | 15/09/2008 | 42166.59100             | 0.00013196   | 0.69431              | 47.18947                      | 220.86097                    | 95.51996              | 9.24308             |
| METEOSAT-8 | 08   | 266 | 22/09/2008 | 42164.01447             | 0.00016561   | 0.71028              | 47.15459                      | 196.96400                    | 126.43980             | 9.33160             |
| METEOSAT-8 | 08   | 273 | 29/09/2008 | 42165.02993             | 0.00013326   | 0.71593              | 48.10619                      | 229.04279                    | 100.44743             | 9.47003             |
| METEOSAT-8 | 08   | 280 | 06/10/2008 | 42166.80405             | 0.00003772   | 0.49667              | 326.82266                     | 234.13374                    | 183.51467             | 9.44225             |
| METEOSAT-8 | 08   | 287 | 13/10/2008 | 42166.89921             | 0.00009089   | 0.48638              | 327.69965                     | 300.54508                    | 123.07048             | 9.38711             |
| METEOSAT-8 | 08   | 294 | 20/10/2008 | 42165.35804             | 0.00010629   | 0.49031              | 330.15165                     | 270.32201                    | 157.73564             | 9.38175             |
| METEOSAT-8 | 08   | 301 | 27/10/2008 | 42165.58205             | 0.00008335   | 0.48266              | 331.29608                     | 319.91334                    | 113.94660             | 9.42915             |
| METEOSAT-8 | 08   | 308 | 03/11/2008 | 42164.71923             | 0.00004182   | 0.48743              | 333.79043                     | 269.81793                    | 168.55893             | 9.54100             |
| METEOSAT-8 | 08   | 315 | 10/11/2008 | 42163.48517             | 0.00013759   | 0.48030              | 335.20528                     | 295.03377                    | 148.99479             | 9.70827             |
| METEOSAT-8 | 08   | 322 | 17/11/2008 | 42168.44202             | 0.00017766   | 0.48512              | 338.47742                     | 234.48754                    | 213.01124             | 9.55106             |
| METEOSAT-8 | 08   | 329 | 24/11/2008 | 42167.52824             | 0.00011346   | 0.47995              | 340.11986                     | 250.55933                    | 202.02098             | 9.37571             |
| METEOSAT-8 | 08   | 336 | 01/12/2008 | 42167.60988             | 0.00011726   | 0.48370              | 343.17304                     | 215.94658                    | 240.37247             | 9.26811             |
| METEOSAT-8 | 08   | 343 | 08/12/2008 | 42165.51773             | 0.00018018   | 0.47710              | 344.95160                     | 253.09386                    | 208.28472             | 9.20684             |
| METEOSAT-8 | 08   | 350 | 15/12/2008 | 42166.71613             | 0.00015426   | 0.48049              | 348.68208                     | 230.60548                    | 233.94080             | 9.20536             |
| METEOSAT-8 | 08   | 357 | 22/12/2008 | 42164.64227             | 0.00010804   | 0.47563              | 350.52366                     | 254.51492                    | 215.13831             | 9.25449             |
| METEOSAT-8 | 08   | 364 | 29/12/2008 | 42165.40310             | 0.00009140   | 0.47670              | 353.76093                     | 212.22425                    | 261.21023             | 9.37339             |
| METEOSAT-8 | 09   | 5   | 05/01/2009 | 42163.10981             | 0.00016965   | 0.46975              | 355.49087                     | 251.63859                    | 227.12156             | 9.52954             |
| METEOSAT-8 | 09   | 12  | 12/01/2009 | 42164.78163             | 0.00011942   | 0.47138              | 359.19756                     | 224.17797                    | 257.99925             | 9.75363             |
| METEOSAT-8 | 09   | 19  | 19/01/2009 | 42167.80149             | 0.00004961   | 0.46690              | 0.80494                       | 55.04666                     | 72.32493              | 9.65593             |
| METEOSAT-8 | 09   | 26  | 26/01/2009 | 42168.74105             | 0.00010061   | 0.46694              | 4.00559                       | 88.86253                     | 42.03039              | 9.47824             |
| METEOSAT-8 | 09   | 33  | 02/02/2009 | 42166.83958             | 0.00000980   | 0.46060              | 5.05525                       | 296.93014                    | 199.66805             | 9.33369             |
| METEOSAT-8 | 09   | 40  | 09/02/2009 | 42167.98356             | 0.00007218   | 0.46160              | 8.33762                       | 87.33967                     | 52.80364              | 9.26150             |
| METEOSAT-8 | 09   | 47  | 16/02/2009 | 42165.55562             | 0.00008060   | 0.46033              | 9.32628                       | 47.01911                     | 99.00600              | 9.23249             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 09   | 54  | 23/02/2009 | 42166.03453             | 0.00012651   | 0.46038              | 11.82875                      | 71.96150                     | 78.50311              | 9.27476             |
| METEOSAT-8 | 09   | 61  | 02/03/2009 | 42164.92502             | 0.00002732   | 0.46002              | 12.44675                      | 35.29895                     | 121.51623             | 9.34385             |
| METEOSAT-8 | 09   | 68  | 09/03/2009 | 42164.82618             | 0.00010577   | 0.46309              | 15.14157                      | 61.28799                     | 99.87936              | 9.49111             |
| METEOSAT-8 | 09   | 75  | 16/03/2009 | 42167.72466             | 0.00019548   | 0.46829              | 15.52514                      | 31.38909                     | 136.20142             | 9.39830             |
| METEOSAT-8 | 09   | 82  | 23/03/2009 | 42167.17868             | 0.00023143   | 0.47197              | 17.57831                      | 42.11278                     | 130.21237             | 9.28646             |
| METEOSAT-8 | 09   | 89  | 30/03/2009 | 42167.08268             | 0.00014119   | 0.47958              | 17.79601                      | 23.35378                     | 155.56963             | 9.20284             |
| METEOSAT-8 | 09   | 96  | 06/04/2009 | 42165.68186             | 0.00022840   | 0.48642              | 20.10070                      | 34.41794                     | 149.09418             | 9.19646             |
| METEOSAT-8 | 09   | 103 | 13/04/2009 | 42165.79803             | 0.00021046   | 0.49951              | 20.30274                      | 33.53230                     | 156.71792             | 9.23693             |
| METEOSAT-8 | 09   | 110 | 20/04/2009 | 42164.12306             | 0.00026035   | 0.50723              | 22.17337                      | 39.96959                     | 155.41910             | 9.34630             |
| METEOSAT-8 | 09   | 117 | 27/04/2009 | 42164.96528             | 0.00015215   | 0.52275              | 22.48674                      | 27.73221                     | 174.38520             | 9.48871             |
| METEOSAT-8 | 09   | 124 | 04/05/2009 | 42166.92213             | 0.00027927   | 0.53265              | 24.68312                      | 12.72046                     | 193.98415             | 9.37245             |
| METEOSAT-8 | 09   | 131 | 11/05/2009 | 42167.97567             | 0.00023788   | 0.55149              | 25.13946                      | 9.88585                      | 203.14167             | 9.25205             |
| METEOSAT-8 | 09   | 138 | 18/05/2009 | 42165.63752             | 0.00027913   | 0.56082              | 27.00617                      | 17.93900                     | 200.06540             | 9.19590             |
| METEOSAT-8 | 09   | 145 | 25/05/2009 | 42166.91694             | 0.00018527   | 0.58091              | 27.64946                      | 358.08688                    | 226.15826             | 9.18028             |
| METEOSAT-8 | 09   | 152 | 01/06/2009 | 42164.23960             | 0.00028937   | 0.59072              | 29.80972                      | 14.02959                     | 214.99853             | 9.22377             |
| METEOSAT-8 | 09   | 159 | 08/06/2009 | 42165.50860             | 0.00023453   | 0.61182              | 30.62070                      | 10.49652                     | 224.72813             | 9.33169             |
| METEOSAT-8 | 09   | 166 | 15/06/2009 | 42163.29818             | 0.00027122   | 0.61945              | 32.47008                      | 16.20888                     | 224.23275             | 9.49855             |
| METEOSAT-8 | 09   | 173 | 22/06/2009 | 42167.80242             | 0.00009947   | 0.64026              | 33.35325                      | 342.48998                    | 263.95463             | 9.48519             |
| METEOSAT-8 | 09   | 180 | 29/06/2009 | 42165.60293             | 0.00020149   | 0.64780              | 35.36558                      | 10.64505                     | 240.62584             | 9.42435             |
| METEOSAT-8 | 09   | 187 | 06/07/2009 | 42166.33892             | 0.00014370   | 0.66739              | 36.35297                      | 6.19634                      | 250.99978             | 9.43766             |
| METEOSAT-8 | 09   | 194 | 13/07/2009 | 42164.97196             | 0.00016672   | 0.67150              | 38.00651                      | 9.85465                      | 252.65388             | 9.50433             |
| METEOSAT-8 | 09   | 201 | 20/07/2009 | 42164.81862             | 0.00008186   | 0.69016              | 38.89826                      | 347.02418                    | 281.61381             | 9.62635             |
| METEOSAT-8 | 09   | 208 | 27/07/2009 | 42163.71643             | 0.00019032   | 0.69451              | 40.53060                      | 7.59055                      | 266.47086             | 9.78296             |
| METEOSAT-8 | 09   | 215 | 03/08/2009 | 42168.83782             | 0.00002518   | 0.71148              | 41.47249                      | 287.88818                    | 352.01875             | 9.67123             |
| METEOSAT-8 | 09   | 222 | 10/08/2009 | 42168.65258             | 0.00004281   | 0.71218              | 42.70315                      | 301.64663                    | 343.72755             | 9.46999             |
| METEOSAT-8 | 09   | 229 | 17/08/2009 | 42167.22405             | 0.00008049   | 0.72902              | 43.40568                      | 220.24561                    | 71.18246              | 9.32733             |
| METEOSAT-8 | 09   | 236 | 24/08/2009 | 42167.33702             | 0.00006203   | 0.73124              | 44.48142                      | 330.90845                    | 326.22678             | 9.21103             |
| METEOSAT-8 | 09   | 243 | 31/08/2009 | 42165.90356             | 0.00002136   | 0.74685              | 45.16921                      | 234.09384                    | 69.22220              | 9.18041             |
| METEOSAT-8 | 09   | 250 | 07/09/2009 | 42166.74478             | 0.00005589   | 0.74688              | 45.82233                      | 272.66260                    | 36.91486              | 9.19573             |
| METEOSAT-8 | 09   | 257 | 14/09/2009 | 42164.30882             | 0.00009529   | 0.76445              | 46.27742                      | 211.97916                    | 104.11883             | 9.27195             |
| METEOSAT-8 | 09   | 264 | 21/09/2009 | 42167.14227             | 0.00009108   | 0.39415              | 337.71602                     | 48.39801                     | 343.15591             | 9.26398             |
| METEOSAT-8 | 09   | 271 | 28/09/2009 | 42164.93686             | 0.00001418   | 0.39348              | 340.31521                     | 38.41444                     | 357.46518             | 9.28926             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 09   | 278 | 05/10/2009 | 42166.20715             | 0.00007078   | 0.39104              | 340.87446                     | 0.56054                      | 41.73179              | 9.36185             |
| METEOSAT-8 | 09   | 285 | 12/10/2009 | 42163.40987             | 0.00007214   | 0.39395              | 343.93572                     | 288.48769                    | 117.77713             | 9.49599             |
| METEOSAT-8 | 09   | 292 | 19/10/2009 | 42164.69572             | 0.00009115   | 0.39551              | 345.03096                     | 28.52388                     | 23.71414              | 9.66503             |
| METEOSAT-8 | 09   | 299 | 26/10/2009 | 42167.78207             | 0.00010331   | 0.39893              | 348.07964                     | 146.62345                    | 269.37641             | 9.57597             |
| METEOSAT-8 | 09   | 306 | 02/11/2009 | 42168.60790             | 0.00003574   | 0.40261              | 349.21289                     | 123.19960                    | 298.38507             | 9.39473             |
| METEOSAT-8 | 09   | 313 | 09/11/2009 | 42166.31309             | 0.00006983   | 0.40817              | 352.84555                     | 189.85620                    | 234.87544             | 9.27466             |
| METEOSAT-8 | 09   | 320 | 16/11/2009 | 42167.22962             | 0.00008854   | 0.41510              | 354.45013                     | 88.17046                     | 341.77848             | 9.19721             |
| METEOSAT-8 | 09   | 327 | 23/11/2009 | 42165.64671             | 0.00008054   | 0.41990              | 357.87016                     | 132.67313                    | 300.75099             | 9.19280             |
| METEOSAT-8 | 09   | 334 | 30/11/2009 | 42165.38611             | 0.00000847   | 0.42640              | 359.47720                     | 33.74411                     | 45.01570              | 9.23619             |
| METEOSAT-8 | 09   | 341 | 07/12/2009 | 42164.31772             | 0.00004004   | 0.43209              | 3.41647                       | 183.03082                    | 258.79263             | 9.33939             |
| METEOSAT-8 | 09   | 348 | 14/12/2009 | 42164.29192             | 0.00008374   | 0.44096              | 5.27574                       | 60.20348                     | 26.81260              | 9.49194             |
| METEOSAT-8 | 09   | 355 | 21/12/2009 | 42167.99466             | 0.00013061   | 0.44433              | 8.71753                       | 153.93913                    | 296.42651             | 9.38366             |
| METEOSAT-8 | 09   | 362 | 28/12/2009 | 42166.56130             | 0.00007046   | 0.45073              | 10.38694                      | 196.83957                    | 258.63525             | 9.26287             |
| METEOSAT-8 | 10   | 4   | 04/01/2010 | 42167.00586             | 0.00010797   | 0.45462              | 14.20357                      | 169.25363                    | 289.24326             | 9.20188             |
| METEOSAT-8 | 10   | 11  | 11/01/2010 | 42165.70678             | 0.00006561   | 0.46333              | 15.90710                      | 105.43629                    | 358.24833             | 9.19380             |
| METEOSAT-8 | 10   | 18  | 18/01/2010 | 42166.00047             | 0.00011344   | 0.46373              | 18.95850                      | 131.47682                    | 336.10836             | 9.24624             |
| METEOSAT-8 | 10   | 25  | 25/01/2010 | 42163.88063             | 0.00003815   | 0.46931              | 20.24130                      | 189.39378                    | 283.90519             | 9.34351             |
| METEOSAT-8 | 10   | 32  | 01/02/2010 | 42165.45937             | 0.00009086   | 0.47128              | 23.47980                      | 132.61600                    | 344.50241             | 9.50180             |
| METEOSAT-8 | 10   | 39  | 08/02/2010 | 42162.91501             | 0.00007889   | 0.48036              | 24.65729                      | 69.41124                     | 53.64157              | 9.71438             |
| METEOSAT-8 | 10   | 46  | 15/02/2010 | 42169.44745             | 0.00013632   | 0.47931              | 26.98311                      | 170.16171                    | 317.37382             | 9.62340             |
| METEOSAT-8 | 10   | 53  | 22/02/2010 | 42167.25264             | 0.00012879   | 0.48648              | 27.61331                      | 211.83503                    | 281.77338             | 9.42711             |
| METEOSAT-8 | 10   | 60  | 01/03/2010 | 42168.95806             | 0.00011935   | 0.48841              | 29.98723                      | 167.93754                    | 330.06345             | 9.29405             |
| METEOSAT-8 | 10   | 67  | 08/03/2010 | 42166.02163             | 0.00004090   | 0.50069              | 30.55140                      | 165.49483                    | 338.76207             | 9.21469             |
| METEOSAT-8 | 10   | 74  | 15/03/2010 | 42166.86311             | 0.00011627   | 0.50117              | 32.05898                      | 151.23232                    | 358.39408             | 9.19218             |
| METEOSAT-8 | 10   | 81  | 22/03/2010 | 42165.13062             | 0.00009372   | 0.51346              | 32.18301                      | 199.49793                    | 316.92850             | 9.21677             |
| METEOSAT-8 | 10   | 88  | 29/03/2010 | 42165.92674             | 0.00009357   | 0.51829              | 33.76896                      | 137.67555                    | 24.15128              | 9.30344             |
| METEOSAT-8 | 10   | 95  | 05/04/2010 | 42163.70637             | 0.00004224   | 0.53609              | 34.02189                      | 114.33987                    | 54.27598              | 9.44567             |
| METEOSAT-8 | 10   | 102 | 12/04/2010 | 42168.17105             | 0.00009842   | 0.54093              | 35.02609                      | 187.16234                    | 347.27762             | 9.37433             |
| METEOSAT-8 | 10   | 109 | 19/04/2010 | 42167.31869             | 0.00013742   | 0.56014              | 35.11939                      | 223.83853                    | 317.27585             | 9.24225             |
| METEOSAT-8 | 10   | 116 | 26/04/2010 | 42166.75009             | 0.00005439   | 0.56884              | 36.29617                      | 176.10336                    | 10.66118              | 9.16943             |
| METEOSAT-8 | 10   | 123 | 03/05/2010 | 42165.92443             | 0.00004612   | 0.59201              | 36.71675                      | 218.78300                    | 334.44776             | 9.15632             |
| METEOSAT-8 | 10   | 130 | 10/05/2010 | 42165.08993             | 0.00008200   | 0.60051              | 37.61782                      | 165.19000                    | 34.08256              | 9.19941             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 10   | 137 | 17/05/2010 | 42165.29183             | 0.00011700   | 0.62481              | 38.08386                      | 212.89881                    | 352.90298             | 9.29470             |
| METEOSAT-8 | 10   | 144 | 24/05/2010 | 42163.49643             | 0.00005300   | 0.63568              | 39.17888                      | 126.08376                    | 85.67006              | 9.44200             |
| METEOSAT-8 | 10   | 151 | 31/05/2010 | 42164.02902             | 0.00004300   | 0.66073              | 39.97900                      | 183.70932                    | 34.35898              | 9.65663             |
| METEOSAT-8 | 10   | 158 | 07/06/2010 | 42167.57381             | 0.00005600   | 0.66974              | 40.94238                      | 272.41943                    | 311.43506             | 9.50663             |
| METEOSAT-8 | 10   | 165 | 14/06/2010 | 42168.63598             | 0.00014900   | 0.69500              | 41.80675                      | 256.97247                    | 332.75116             | 9.34033             |
| METEOSAT-8 | 10   | 172 | 21/06/2010 | 42166.13297             | 0.00005600   | 0.70517              | 42.86245                      | 323.32969                    | 272.11393             | 9.21650             |
| METEOSAT-8 | 10   | 179 | 28/06/2010 | 42167.41522             | 0.00009200   | 0.72806              | 43.95399                      | 278.23556                    | 322.96752             | 9.16789             |
| METEOSAT-8 | 10   | 186 | 05/07/2010 | 42165.02626             | 0.00004000   | 0.73474              | 44.85991                      | 260.02781                    | 347.16936             | 9.16869             |
| METEOSAT-8 | 10   | 193 | 12/07/2010 | 42166.30925             | 0.00013600   | 0.75743              | 45.92108                      | 247.85150                    | 5.24242               | 9.22720             |
| METEOSAT-8 | 10   | 200 | 19/07/2010 | 42163.74661             | 0.00003900   | 0.76504              | 46.78657                      | 334.08853                    | 285.12963             | 9.31785             |
| METEOSAT-8 | 10   | 207 | 26/07/2010 | 42164.99448             | 0.00007500   | 0.78346              | 47.94088                      | 264.22047                    | 0.91613               | 9.49145             |
| METEOSAT-8 | 10   | 214 | 02/08/2010 | 42167.53363             | 0.00009000   | 0.78679              | 48.58428                      | 345.99737                    | 285.32212             | 9.41889             |
| METEOSAT-8 | 10   | 221 | 09/08/2010 | 42168.19672             | 0.00010300   | 0.80555              | 49.59140                      | 291.82175                    | 345.25524             | 9.28440             |
| METEOSAT-8 | 10   | 228 | 16/08/2010 | 42166.27542             | 0.00013200   | 0.81133              | 50.07746                      | 359.32218                    | 284.05785             | 9.17465             |
| METEOSAT-8 | 10   | 235 | 23/08/2010 | 42166.80329             | 0.00009300   | 0.82561              | 51.06424                      | 327.29974                    | 321.97106             | 9.15318             |
| METEOSAT-8 | 10   | 242 | 30/08/2010 | 42165.66654             | 0.00008200   | 0.82780              | 51.26178                      | 334.77513                    | 321.21964             | 9.17584             |
| METEOSAT-8 | 10   | 249 | 06/09/2010 | 42165.13482             | 0.00009000   | 0.84401              | 52.04442                      | 283.03680                    | 19.15872              | 9.26007             |
| METEOSAT-8 | 10   | 256 | 13/09/2010 | 42164.37193             | 0.00012600   | 0.85094              | 52.04296                      | 354.41196                    | 314.79144             | 9.36738             |
| METEOSAT-8 | 10   | 263 | 20/09/2010 | 42163.71443             | 0.00007200   | 0.86389              | 52.74880                      | 320.69133                    | 354.90209             | 9.56388             |
| METEOSAT-8 | 10   | 270 | 27/09/2010 | 42168.70341             | 0.00015200   | 0.86925              | 52.49862                      | 273.12674                    | 49.54126              | 9.48885             |
| METEOSAT-8 | 10   | 277 | 04/10/2010 | 42166.89219             | 0.00019500   | 0.88590              | 53.05228                      | 253.91737                    | 74.95677              | 9.34892             |
| METEOSAT-8 | 10   | 284 | 11/10/2010 | 42167.36443             | 0.00014200   | 0.89808              | 52.69165                      | 296.84183                    | 39.18117              | 9.23734             |
| METEOSAT-8 | 10   | 291 | 18/10/2010 | 42165.61237             | 0.00015300   | 0.91294              | 53.20865                      | 260.06879                    | 82.30872              | 9.20878             |
| METEOSAT-8 | 10   | 298 | 25/10/2010 | 42166.19351             | 0.00018200   | 0.37318              | 338.81837                     | 344.76248                    | 78.98384              | 9.28536             |
| METEOSAT-8 | 10   | 305 | 01/11/2010 | 42163.56033             | 0.00022200   | 0.36892              | 342.00174                     | 324.46455                    | 103.11327             | 9.40068             |
| METEOSAT-8 | 10   | 312 | 08/11/2010 | 42164.84195             | 0.00017000   | 0.37941              | 344.35555                     | 359.73179                    | 72.54420              | 9.55328             |
| METEOSAT-8 | 10   | 319 | 15/11/2010 | 42162.48114             | 0.00018400   | 0.37555              | 347.35593                     | 323.01219                    | 113.39000             | 9.78030             |
| METEOSAT-8 | 10   | 326 | 22/11/2010 | 42169.07580             | 0.00008700   | 0.38663              | 349.55298                     | 354.26035                    | 86.71112              | 9.64724             |
| METEOSAT-8 | 10   | 333 | 29/11/2010 | 42166.37048             | 0.00011200   | 0.38339              | 353.10334                     | 317.17421                    | 127.00115             | 9.50189             |
| METEOSAT-8 | 10   | 340 | 06/12/2010 | 42167.72743             | 0.00011036   | 0.39569              | 355.93041                     | 26.44393                     | 61.70684              | 9.40488             |
| METEOSAT-8 | 10   | 347 | 13/12/2010 | 42165.59049             | 0.00007417   | 0.39203              | 359.12657                     | 319.77768                    | 132.04077             | 9.36917             |
| METEOSAT-8 | 10   | 354 | 20/12/2010 | 42166.18700             | 0.00011694   | 0.40298              | 1.64185                       | 343.25282                    | 112.97511             | 9.39453             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 10   | 361 | 27/12/2010 | 42164.24927             | 0.00012456   | 0.39907              | 5.16246                       | 321.85050                    | 137.83209             | 9.47020             |
| METEOSAT-8 | 11   | 3   | 03/01/2011 | 42164.95943             | 0.00013849   | 0.41076              | 7.97187                       | 11.00404                     | 92.90175              | 9.60330             |
| METEOSAT-8 | 11   | 10  | 10/01/2011 | 42163.64167             | 0.00008788   | 0.40580              | 10.86002                      | 327.21268                    | 140.88784             | 9.78662             |
| METEOSAT-8 | 11   | 17  | 17/01/2011 | 42168.44887             | 0.00002600   | 0.41560              | 13.13357                      | 5.73742                      | 106.82106             | 9.61868             |
| METEOSAT-8 | 11   | 24  | 24/01/2011 | 42167.91231             | 0.00000763   | 0.41090              | 16.12478                      | 21.12303                     | 95.15496              | 9.42984             |
| METEOSAT-8 | 11   | 31  | 31/01/2011 | 42167.46666             | 0.00010471   | 0.42172              | 18.51210                      | 50.86057                     | 69.80426              | 9.30453             |
| METEOSAT-8 | 11   | 38  | 07/02/2011 | 42167.12262             | 0.00003807   | 0.41632              | 20.60709                      | 103.32750                    | 22.05932              | 9.22202             |
| METEOSAT-8 | 11   | 45  | 14/02/2011 | 42165.46349             | 0.00006461   | 0.42583              | 22.28051                      | 7.63164                      | 122.96472             | 9.20557             |
| METEOSAT-8 | 11   | 52  | 21/02/2011 | 42166.37750             | 0.00005930   | 0.42242              | 24.34786                      | 49.43651                     | 86.01972              | 9.23329             |
| METEOSAT-8 | 11   | 59  | 28/02/2011 | 42164.55660             | 0.00014539   | 0.43454              | 26.09764                      | 39.55053                     | 101.14887             | 9.32672             |
| METEOSAT-8 | 11   | 66  | 07/03/2011 | 42165.02457             | 0.00007078   | 0.43162              | 27.19698                      | 70.46041                     | 76.17359              | 9.46121             |
| METEOSAT-8 | 11   | 73  | 14/03/2011 | 42167.02672             | 0.00002889   | 0.44405              | 28.25690                      | 294.41149                    | 217.99028             | 9.38934             |
| METEOSAT-8 | 11   | 80  | 21/03/2011 | 42168.76235             | 0.00004342   | 0.44495              | 29.36359                      | 116.22392                    | 41.83527              | 9.25393             |
| METEOSAT-8 | 11   | 87  | 28/03/2011 | 42165.94789             | 0.00008835   | 0.46093              | 30.68199                      | 46.55232                     | 117.01936             | 9.18517             |
| METEOSAT-8 | 11   | 94  | 04/04/2011 | 42166.84694             | 0.00006135   | 0.46353              | 31.05866                      | 128.37597                    | 41.69309              | 9.15969             |
| METEOSAT-8 | 11   | 101 | 11/04/2011 | 42164.66410             | 0.00003438   | 0.48064              | 31.92994                      | 11.21452                     | 164.92380             | 9.20052             |
| METEOSAT-8 | 11   | 108 | 18/04/2011 | 42166.13507             | 0.00008761   | 0.48778              | 32.49539                      | 84.61088                     | 97.94872              | 9.28765             |
| METEOSAT-8 | 11   | 115 | 25/04/2011 | 42163.31609             | 0.00012635   | 0.50793              | 33.81120                      | 49.53701                     | 138.75922             | 9.44020             |
| METEOSAT-8 | 11   | 122 | 02/05/2011 | 42164.07512             | 0.00008744   | 0.51653              | 34.02799                      | 102.18702                    | 92.99379              | 9.64193             |
| METEOSAT-8 | 11   | 129 | 09/05/2011 | 42167.99534             | 0.00008310   | 0.53742              | 35.16605                      | 273.87244                    | 286.98353             | 9.55528             |
| METEOSAT-8 | 11   | 136 | 16/05/2011 | 42168.34147             | 0.00001207   | 0.54943              | 35.67917                      | 121.91226                    | 85.15232              | 9.37796             |
| METEOSAT-8 | 11   | 143 | 23/05/2011 | 42166.53620             | 0.00004296   | 0.57097              | 37.22858                      | 1.94695                      | 210.35649             | 9.26632             |
| METEOSAT-8 | 11   | 150 | 30/05/2011 | 42166.58302             | 0.00005029   | 0.58284              | 37.61407                      | 179.93860                    | 38.81976              | 9.20714             |
| METEOSAT-8 | 11   | 157 | 06/06/2011 | 42166.01107             | 0.00005369   | 0.60387              | 39.08725                      | 270.02586                    | 314.15797             | 9.20646             |
| METEOSAT-8 | 11   | 164 | 13/06/2011 | 42165.06439             | 0.00005110   | 0.61756              | 39.70901                      | 87.43150                     | 143.07562             | 9.25197             |
| METEOSAT-8 | 11   | 171 | 20/06/2011 | 42164.71434             | 0.00003217   | 0.63666              | 41.43061                      | 36.05840                     | 199.74088             | 9.36601             |
| METEOSAT-8 | 11   | 178 | 27/06/2011 | 42163.59790             | 0.00006247   | 0.64819              | 41.95283                      | 146.53008                    | 95.81301              | 9.53270             |
| METEOSAT-8 | 11   | 185 | 04/07/2011 | 42168.82542             | 0.00012400   | 0.66595              | 43.60797                      | 315.54709                    | 291.95909             | 9.45137             |
| METEOSAT-8 | 11   | 192 | 11/07/2011 | 42166.80983             | 0.00010274   | 0.67869              | 44.19916                      | 15.64598                     | 238.00741             | 9.29055             |
| METEOSAT-8 | 11   | 199 | 18/07/2011 | 42167.69679             | 0.00010407   | 0.69269              | 45.86769                      | 343.93495                    | 274.85832             | 9.19956             |
| METEOSAT-8 | 11   | 206 | 25/07/2011 | 42165.57500             | 0.00003668   | 0.70189              | 46.29891                      | 4.08381                      | 261.14052             | 9.16283             |
| METEOSAT-8 | 11   | 213 | 01/08/2011 | 42166.75612             | 0.00010839   | 0.71511              | 47.84347                      | 310.42199                    | 320.17025             | 9.17605             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 11   | 220 | 08/08/2011 | 42164.18021             | 0.00009237   | 0.72638              | 48.21468                      | 24.05289                     | 253.12275             | 9.23172             |
| METEOSAT-8 | 11   | 227 | 15/08/2011 | 42165.61372             | 0.00007671   | 0.73506              | 49.57231                      | 336.49326                    | 306.35204             | 9.35987             |
| METEOSAT-8 | 11   | 235 | 22/08/2011 | 42163.13881             | 0.00002321   | 0.74280              | 49.71047                      | 17.88892                     | 271.89920             | 9.54197             |
| METEOSAT-8 | 11   | 241 | 29/08/2011 | 42169.10530             | 0.00020812   | 0.75243              | 50.91275                      | 293.23138                    | 2.11570               | 9.40402             |
| METEOSAT-8 | 11   | 248 | 05/09/2011 | 42166.62419             | 0.00012390   | 0.76440              | 50.92327                      | 324.20071                    | 337.87618             | 9.24530             |
| METEOSAT-8 | 11   | 255 | 12/09/2011 | 42167.78958             | 0.00015967   | 0.77048              | 51.80864                      | 296.81126                    | 11.19542              | 9.16120             |
| METEOSAT-8 | 11   | 262 | 19/09/2011 | 42165.82343             | 0.00011800   | 0.77997              | 51.57391                      | 291.46950                    | 23.64144              | 9.13149             |
| METEOSAT-8 | 11   | 269 | 26/09/2011 | 42166.16440             | 0.00020100   | 0.78900              | 52.33745                      | 288.49551                    | 32.77078              | 9.15087             |
| METEOSAT-8 | 11   | 276 | 03/10/2011 | 42164.49999             | 0.00012118   | 0.80541              | 52.04607                      | 319.15707                    | 9.35974               | 9.21043             |
| METEOSAT-8 | 11   | 283 | 10/10/2011 | 42164.74807             | 0.00015349   | 0.81263              | 52.51131                      | 287.43474                    | 47.64994              | 9.34377             |
| METEOSAT-8 | 11   | 290 | 17/10/2011 | 42163.87177             | 0.00013018   | 0.82795              | 52.10402                      | 289.20902                    | 53.37512              | 9.53603             |
| METEOSAT-8 | 11   | 297 | 24/10/2011 | 42167.84467             | 0.00009334   | 0.83952              | 52.58496                      | 303.32603                    | 45.60676              | 9.46556             |
| METEOSAT-8 | 11   | 304 | 31/10/2011 | 42167.48509             | 0.00009719   | 0.86250              | 52.30594                      | 15.05544                     | 340.89699             | 9.30594             |
| METEOSAT-8 | 11   | 311 | 07/11/2011 | 42166.51931             | 0.00005299   | 0.87362              | 52.63267                      | 301.44805                    | 60.98917              | 9.21725             |
| METEOSAT-8 | 11   | 318 | 14/11/2011 | 42166.83733             | 0.00005630   | 0.89529              | 52.39882                      | 335.29497                    | 34.24941              | 9.19018             |
| METEOSAT-8 | 11   | 325 | 21/11/2011 | 42164.72485             | 0.00010411   | 0.90942              | 52.90721                      | 297.80274                    | 78.15581              | 9.21243             |
| METEOSAT-8 | 11   | 332 | 28/11/2011 | 42165.57039             | 0.00010551   | 0.93721              | 52.94365                      | 4.55011                      | 18.34183              | 9.28177             |
| METEOSAT-8 | 11   | 339 | 05/12/2011 | 42163.33769             | 0.00007928   | 0.95265              | 53.40247                      | 291.12251                    | 98.36241              | 9.43340             |
| METEOSAT-8 | 11   | 346 | 12/12/2011 | 42164.45995             | 0.00008886   | 0.97725              | 53.56015                      | 326.76014                    | 69.68996              | 9.65605             |
| METEOSAT-8 | 11   | 353 | 19/12/2011 | 42167.12556             | 0.00001476   | 0.99044              | 54.18964                      | 8.76050                      | 33.81460              | 9.51068             |
| METEOSAT-8 | 11   | 360 | 26/12/2011 | 42168.57024             | 0.00012650   | 1.01773              | 54.58494                      | 52.48676                     | 356.43205             | 9.34978             |
| METEOSAT-8 | 12   | 2   | 02/01/2012 | 42166.21501             | 0.00002830   | 1.02816              | 55.12630                      | 120.35435                    | 294.81286             | 9.24052             |
| METEOSAT-8 | 12   | 9   | 09/01/2012 | 42167.40008             | 0.00006607   | 1.05053              | 55.58060                      | 47.24100                     | 14.33318              | 9.20243             |
| METEOSAT-8 | 12   | 16  | 16/01/2012 | 42164.83601             | 0.00004664   | 1.05938              | 56.20711                      | 355.41644                    | 72.43504              | 9.20733             |
| METEOSAT-8 | 12   | 23  | 23/01/2012 | 42166.08980             | 0.00013586   | 1.08197              | 56.76876                      | 39.34457                     | 34.90797              | 9.27110             |
| METEOSAT-8 | 12   | 30  | 30/01/2012 | 42164.11695             | 0.00002465   | 1.08758              | 57.20865                      | 56.70228                     | 24.11516              | 9.37749             |
| METEOSAT-8 | 12   | 37  | 06/02/2012 | 42164.48476             | 0.00008596   | 1.10530              | 57.69604                      | 20.64976                     | 66.76064              | 9.55938             |
| METEOSAT-8 | 12   | 44  | 13/02/2012 | 42167.64899             | 0.00003868   | 1.11012              | 58.06341                      | 132.29918                    | 321.55861             | 9.47592             |
| METEOSAT-8 | 12   | 51  | 20/02/2012 | 42168.03056             | 0.00010796   | 1.12782              | 58.55653                      | 75.12581                     | 24.99403              | 9.33267             |
| METEOSAT-8 | 12   | 58  | 27/02/2012 | 42166.93838             | 0.00008493   | 1.13065              | 58.66851                      | 138.73726                    | 328.06505             | 9.22893             |
| METEOSAT-8 | 12   | 65  | 05/03/2012 | 42166.07247             | 0.00004758   | 1.14558              | 58.99300                      | 74.43568                     | 38.91276              | 9.20110             |
| METEOSAT-8 | 12   | 72  | 12/03/2012 | 42165.91044             | 0.00005389   | 1.15020              | 58.97066                      | 80.77936                     | 39.50036              | 9.21153             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 12   | 79  | 19/03/2012 | 42165.02936             | 0.00012706   | 1.16646              | 59.28360                      | 61.33081                     | 65.61150              | 9.28818             |
| METEOSAT-8 | 12   | 86  | 26/03/2012 | 42164.92099             | 0.00008461   | 1.17146              | 59.03623                      | 114.59760                    | 19.60849              | 9.40555             |
| METEOSAT-8 | 12   | 93  | 02/04/2012 | 42162.96995             | 0.00007503   | 1.18725              | 59.19451                      | 44.21614                     | 96.92188              | 9.59624             |
| METEOSAT-8 | 12   | 100 | 09/04/2012 | 42169.23783             | 0.00003653   | 1.19673              | 58.88276                      | 298.95810                    | 209.30648             | 9.51126             |
| METEOSAT-8 | 12   | 107 | 16/04/2012 | 42167.05739             | 0.00007628   | 1.21486              | 59.10795                      | 9.70922                      | 145.07082             | 9.35171             |
| METEOSAT-8 | 12   | 114 | 23/04/2012 | 42167.73194             | 0.00002940   | 1.22589              | 58.70209                      | 209.97789                    | 311.99562             | 9.23886             |
| METEOSAT-8 | 12   | 121 | 30/04/2012 | 42165.37562             | 0.00008285   | 1.24453              | 58.87366                      | 330.38858                    | 198.26844             | 9.19311             |
| METEOSAT-8 | 12   | 128 | 07/05/2012 | 42167.10213             | 0.00003563   | 1.26051              | 58.50803                      | 14.47092                     | 161.45257             | 9.19288             |
| METEOSAT-8 | 12   | 135 | 14/05/2012 | 42164.20508             | 0.00010322   | 1.28052              | 58.82662                      | 26.46113                     | 156.10803             | 9.25589             |
| METEOSAT-8 | 12   | 142 | 21/05/2012 | 42165.21609             | 0.00002162   | 1.29745              | 58.51000                      | 120.87269                    | 69.03042              | 9.37192             |
| METEOSAT-8 | 12   | 149 | 28/05/2012 | 42163.12661             | 0.00008573   | 1.31709              | 58.84511                      | 355.46048                    | 201.18410             | 9.54720             |
| METEOSAT-8 | 12   | 156 | 04/06/2012 | 42169.21883             | 0.00013587   | 1.33734              | 58.63991                      | 350.88812                    | 212.78630             | 9.47074             |
| METEOSAT-8 | 12   | 163 | 11/06/2012 | 42166.60745             | 0.00017807   | 1.35633              | 59.11358                      | 1.39864                      | 208.55124             | 9.31901             |
| METEOSAT-8 | 12   | 170 | 18/06/2012 | 42167.34255             | 0.00008255   | 1.37522              | 59.00161                      | 345.89543                    | 230.97500             | 9.22709             |
| METEOSAT-8 | 12   | 177 | 25/06/2012 | 42166.02554             | 0.00017754   | 1.39211              | 59.50515                      | 343.43858                    | 239.78651             | 9.18513             |
| METEOSAT-8 | 12   | 184 | 02/07/2012 | 42166.08703             | 0.00013436   | 1.41261              | 59.47931                      | 7.79971                      | 222.36459             | 9.19560             |
| METEOSAT-8 | 12   | 191 | 09/07/2012 | 42164.64463             | 0.00015669   | 1.42692              | 60.03379                      | 8.39170                      | 228.19130             | 9.26955             |
| METEOSAT-8 | 12   | 198 | 16/07/2012 | 42164.45403             | 0.00006935   | 1.44422              | 60.06210                      | 8.32140                      | 235.26658             | 9.40421             |
| METEOSAT-8 | 12   | 205 | 23/07/2012 | 42164.17962             | 0.00015782   | 1.45573              | 60.60314                      | 347.65594                    | 262.46547             | 9.58045             |
| METEOSAT-8 | 12   | 212 | 30/07/2012 | 42168.07037             | 0.00018682   | 1.47386              | 60.64726                      | 63.89953                     | 193.02674             | 9.53162             |
| METEOSAT-8 | 12   | 219 | 06/08/2012 | 42168.12367             | 0.00016749   | 1.48205              | 61.12776                      | 58.91270                     | 204.25652             | 9.35745             |
| METEOSAT-8 | 12   | 226 | 13/08/2012 | 42166.70823             | 0.00015041   | 1.49647              | 61.15678                      | 85.76376                     | 184.16529             | 9.24904             |
| METEOSAT-8 | 12   | 233 | 20/08/2012 | 42167.39597             | 0.00013466   | 1.50291              | 61.56792                      | 42.83704                     | 233.50561             | 9.17649             |
| METEOSAT-8 | 12   | 240 | 27/08/2012 | 42165.13748             | 0.00019573   | 1.51919              | 61.55974                      | 73.27581                     | 209.96093             | 9.16521             |
| METEOSAT-8 | 12   | 247 | 03/09/2012 | 42166.28217             | 0.00014697   | 1.52334              | 61.81255                      | 68.87423                     | 221.05218             | 9.21027             |
| METEOSAT-8 | 12   | 254 | 10/09/2012 | 42163.94181             | 0.00016017   | 1.53683              | 61.73702                      | 94.79413                     | 202.21531             | 9.32015             |
| METEOSAT-8 | 12   | 261 | 17/09/2012 | 42165.15237             | 0.00012101   | 1.54139              | 61.90461                      | 49.41502                     | 254.47014             | 9.46533             |
| METEOSAT-8 | 12   | 268 | 24/09/2012 | 42166.82738             | 0.00009395   | 1.55919              | 61.79476                      | 91.29911                     | 219.52119             | 9.39200             |
| METEOSAT-8 | 12   | 275 | 01/10/2012 | 42168.29608             | 0.00002967   | 1.56363              | 61.78061                      | 103.81579                    | 213.79125             | 9.26535             |
| METEOSAT-8 | 12   | 282 | 08/10/2012 | 42165.84035             | 0.00008346   | 1.57983              | 61.60785                      | 138.33749                    | 186.27992             | 9.20314             |
| METEOSAT-8 | 12   | 289 | 15/10/2012 | 42166.83150             | 0.00003102   | 1.58706              | 61.56781                      | 336.89970                    | 354.63339             | 9.17846             |
| METEOSAT-8 | 12   | 296 | 22/10/2012 | 42164.45915             | 0.00009022   | 1.60947              | 61.43450                      | 105.95398                    | 232.64500             | 9.20993             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 12   | 303 | 29/10/2012 | 42165.45188             | 0.00003740   | 1.61840              | 61.26209                      | 157.28016                    | 188.48756             | 9.30464             |
| METEOSAT-8 | 12   | 310 | 05/11/2012 | 42163.73322             | 0.00007907   | 1.63949              | 61.13630                      | 150.84853                    | 202.10623             | 9.46373             |
| METEOSAT-8 | 12   | 317 | 12/11/2012 | 42163.70893             | 0.00002628   | 1.65135              | 61.04728                      | 288.51026                    | 71.63805              | 9.66591             |
| METEOSAT-8 | 12   | 324 | 19/11/2012 | 42167.84392             | 0.00019953   | 1.67847              | 61.04903                      | 137.79389                    | 229.11008             | 9.52078             |
| METEOSAT-8 | 12   | 331 | 26/11/2012 | 42167.80156             | 0.00017563   | 1.69208              | 60.91652                      | 162.01423                    | 211.75418             | 9.35042             |
| METEOSAT-8 | 12   | 338 | 03/12/2012 | 42167.27607             | 0.00019160   | 1.71585              | 60.98541                      | 155.03858                    | 225.45880             | 9.24596             |
| METEOSAT-8 | 12   | 345 | 10/12/2012 | 42165.99178             | 0.00011565   | 1.72995              | 60.98821                      | 170.73509                    | 216.60247             | 9.18723             |
| METEOSAT-8 | 12   | 352 | 17/12/2012 | 42166.02272             | 0.00018595   | 1.75731              | 61.21527                      | 139.63226                    | 254.36855             | 9.17596             |
| METEOSAT-8 | 12   | 359 | 24/12/2012 | 42164.79721             | 0.00017447   | 1.77165              | 61.20612                      | 169.92149                    | 231.04255             | 9.22949             |
| METEOSAT-8 | 12   | 366 | 31/12/2012 | 42165.42482             | 0.00016675   | 1.79312              | 61.48370                      | 155.94208                    | 251.76520             | 9.35021             |
| METEOSAT-8 | 13   | 7   | 07/01/2013 | 42163.07151             | 0.00010695   | 1.80522              | 61.56924                      | 177.44476                    | 237.24367             | 9.51796             |
| METEOSAT-8 | 13   | 14  | 14/01/2013 | 42169.29246             | 0.00014029   | 1.82735              | 61.94184                      | 92.02481                     | 329.14447             | 9.47278             |
| METEOSAT-8 | 13   | 21  | 21/01/2013 | 42167.13636             | 0.00005861   | 1.83862              | 61.97903                      | 137.17080                    | 290.67532             | 9.28982             |
| METEOSAT-8 | 13   | 28  | 28/01/2013 | 42168.41648             | 0.00008677   | 1.85424              | 62.33233                      | 92.94510                     | 341.33117             | 9.17612             |
| METEOSAT-8 | 13   | 35  | 04/02/2013 | 42198.33636             | 0.00004656   | 1.86240              | 62.36506                      | 40.97730                     | 38.65915              | 7.67207             |
| METEOSAT-8 | 13   | 42  | 11/02/2013 | 42199.87490             | 0.00014422   | 1.87785              | 62.72063                      | 83.10581                     | 0.10998               | 4.70911             |
| METEOSAT-8 | 13   | 49  | 18/02/2013 | 42167.19579             | 0.00004644   | 1.88613              | 62.65639                      | 112.02061                    | 337.63263             | 4.18634             |
| METEOSAT-8 | 13   | 56  | 25/02/2013 | 42168.57691             | 0.00009807   | 1.89676              | 62.92157                      | 71.36237                     | 24.79498              | 4.05964             |
| METEOSAT-8 | 13   | 63  | 04/03/2013 | 42166.10778             | 0.00007453   | 1.90831              | 62.81414                      | 24.75924                     | 78.30654              | 3.96492             |
| METEOSAT-8 | 13   | 70  | 11/03/2013 | 42167.48279             | 0.00014554   | 1.91958              | 63.01758                      | 73.40781                     | 36.29166              | 3.90573             |
| METEOSAT-8 | 13   | 77  | 18/03/2013 | 42165.59186             | 0.00004440   | 1.92883              | 62.79640                      | 84.98442                     | 31.81383              | 3.88681             |
| METEOSAT-8 | 13   | 84  | 25/03/2013 | 42166.15133             | 0.00011044   | 1.93841              | 62.90954                      | 51.56577                     | 72.05341              | 3.92347             |
| METEOSAT-8 | 13   | 91  | 01/04/2013 | 42167.14389             | 0.00004593   | 1.95028              | 62.62406                      | 49.66170                     | 81.01433              | 3.79673             |
| METEOSAT-8 | 13   | 98  | 08/04/2013 | 42167.70238             | 0.00013211   | 1.96198              | 62.69880                      | 89.09533                     | 48.28522              | 3.67683             |
| METEOSAT-8 | 13   | 105 | 15/04/2013 | 42166.69731             | 0.00006274   | 1.97633              | 62.38994                      | 128.47226                    | 16.03718              | 3.59682             |
| METEOSAT-8 | 13   | 112 | 22/04/2013 | 42166.00277             | 0.00009591   | 1.98823              | 62.42769                      | 60.33240                     | 91.01196              | 3.56841             |
| METEOSAT-8 | 13   | 119 | 29/04/2013 | 42165.92574             | 0.00007881   | 2.00695              | 62.11878                      | 62.11178                     | 96.44829              | 3.57368             |
| METEOSAT-8 | 13   | 126 | 06/05/2013 | 42165.25788             | 0.00015629   | 2.02101              | 62.16746                      | 84.61594                     | 80.84359              | 3.61901             |
| METEOSAT-8 | 13   | 133 | 13/05/2013 | 42165.27691             | 0.00008850   | 2.04105              | 61.92265                      | 113.18645                    | 59.50982              | 3.70736             |
| METEOSAT-8 | 13   | 140 | 20/05/2013 | 42163.51417             | 0.00013316   | 2.05521              | 61.99899                      | 58.52429                     | 121.13345             | 3.84128             |
| METEOSAT-8 | 13   | 147 | 27/05/2013 | 42168.53595             | 0.00012132   | 2.07911              | 61.80950                      | 32.41498                     | 154.23708             | 3.74197             |
| METEOSAT-8 | 13   | 154 | 03/06/2013 | 42166.55984             | 0.00016979   | 2.09396              | 61.92411                      | 57.63018                     | 135.69077             | 3.62167             |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 13   | 161 | 10/06/2013 | 42167.40652             | 0.00007876   | 2.11642              | 61.83987                      | 64.45760                     | 135.77743             | 3.54781             |
| METEOSAT-8 | 13   | 168 | 17/06/2013 | 42165.24615             | 0.00017972   | 2.12950              | 62.00304                      | 36.30582                     | 170.63289             | 3.51199             |
| METEOSAT-8 | 13   | 175 | 24/06/2013 | 42167.18647             | 0.00012878   | 2.15425              | 61.97768                      | 52.38613                     | 161.48814             | 3.51980             |
| METEOSAT-8 | 13   | 182 | 01/07/2013 | 42164.42540             | 0.00018838   | 2.16656              | 62.15501                      | 66.94446                     | 153.70035             | 3.56662             |
| METEOSAT-8 | 13   | 189 | 08/07/2013 | 42165.63522             | 0.00010035   | 2.18728              | 62.21455                      | 81.71438                     | 145.86795             | 3.66352             |
| METEOSAT-8 | 13   | 196 | 15/07/2013 | 42163.72001             | 0.00018193   | 2.19621              | 62.41185                      | 47.45239                     | 186.95879             | 3.79103             |
| METEOSAT-8 | 13   | 203 | 22/07/2013 | 42168.93723             | 0.00006140   | 2.21802              | 62.49777                      | 88.88742                     | 152.22817             | 3.68348             |
| METEOSAT-8 | 13   | 210 | 29/07/2013 | 42166.37708             | 0.00011618   | 2.22566              | 62.65236                      | 92.12510                     | 155.61353             | 3.56464             |
| METEOSAT-8 | 13   | 217 | 05/08/2013 | 42167.32327             | 0.00007600   | 2.24241              | 62.76532                      | 143.20882                    | 111.24641             | 3.49844             |
| METEOSAT-8 | 13   | 224 | 12/08/2013 | 42166.13680             | 0.00008575   | 2.24672              | 62.89087                      | 58.75901                     | 202.42236             | 3.45538             |
| METEOSAT-8 | 13   | 231 | 19/08/2013 | 42166.46021             | 0.00009921   | 2.26455              | 62.98510                      | 112.44380                    | 155.54824             | 3.46580             |
| METEOSAT-8 | 13   | 238 | 26/08/2013 | 42165.04118             | 0.00012325   | 2.26877              | 63.01714                      | 110.34216                    | 164.55576             | 3.50972             |
| METEOSAT-8 | 13   | 245 | 02/09/2013 | 42165.07387             | 0.00011272   | 2.28249              | 63.08506                      | 148.84673                    | 132.97443             | 3.60685             |
| METEOSAT-8 | 13   | 252 | 09/09/2013 | 42164.89220             | 0.00007485   | 2.28520              | 63.05358                      | 80.72951                     | 208.13353             | 3.72292             |
| METEOSAT-8 | 13   | 259 | 16/09/2013 | 42167.19169             | 0.00012661   | 2.30135              | 63.08671                      | 162.19323                    | 133.48638             | 3.67718             |
| METEOSAT-8 | 13   | 266 | 23/09/2013 | 42167.29132             | 0.00011674   | 2.30619              | 62.94957                      | 166.12535                    | 136.48932             | 3.57879             |
| METEOSAT-8 | 13   | 273 | 30/09/2013 | 42166.08948             | 0.00016944   | 2.32027              | 62.94109                      | 183.84995                    | 125.62480             | 3.53287             |
| METEOSAT-8 | 13   | 280 | 07/10/2013 | 42166.89120             | 0.00005178   | 2.32609              | 62.75278                      | 186.55889                    | 129.97515             | 3.50504             |
| METEOSAT-8 | 13   | 287 | 14/10/2013 | 42164.75068             | 0.00016747   | 2.34415              | 62.74093                      | 167.32775                    | 156.14171             | 3.52860             |
| METEOSAT-8 | 13   | 294 | 21/10/2013 | 42166.01172             | 0.00013793   | 2.35403              | 62.48536                      | 179.13729                    | 151.55266             | 3.59186             |
| METEOSAT-8 | 13   | 301 | 28/10/2013 | 42163.85636             | 0.00019826   | 2.37117              | 62.46145                      | 187.10643                    | 150.62455             | 3.70600             |
| METEOSAT-8 | 13   | 308 | 04/11/2013 | 42165.23299             | 0.00007544   | 2.38331              | 62.21895                      | 198.42634                    | 146.58782             | 3.84246             |
| METEOSAT-8 | 13   | 315 | 11/11/2013 | 42166.45464             | 0.00012158   | 2.40471              | 62.25262                      | 156.71347                    | 195.05959             | 3.73035             |
| METEOSAT-8 | 13   | 322 | 18/11/2013 | 42168.10801             | 0.00007021   | 2.42085              | 62.01608                      | 176.38213                    | 182.42178             | 3.61914             |
| METEOSAT-8 | 13   | 329 | 25/11/2013 | 42165.81084             | 0.00012228   | 2.44042              | 62.08040                      | 187.12534                    | 178.45801             | 3.55718             |
| METEOSAT-8 | 13   | 336 | 02/12/2013 | 42167.00620             | 0.00001524   | 2.45772              | 61.90418                      | 270.39785                    | 102.23406             | 3.52382             |
| METEOSAT-8 | 13   | 343 | 09/12/2013 | 42164.75658             | 0.00012921   | 2.47984              | 62.06534                      | 168.91991                    | 210.45821             | 3.52612             |
| METEOSAT-8 | 13   | 350 | 16/12/2013 | 42165.99832             | 0.00008280   | 2.49902              | 61.94608                      | 195.73918                    | 190.72137             | 3.58481             |
| METEOSAT-8 | 13   | 357 | 23/12/2013 | 42166.72716             | 0.00010515   | 2.51642              | 62.13224                      | 167.42630                    | 225.70711             | 3.54063             |
| METEOSAT-8 | 13   | 364 | 30/12/2013 | 42166.96850             | 0.00001807   | 2.53363              | 62.07836                      | 78.79495                     | 321.22547             | 3.47194             |
| METEOSAT-8 | 14   | 6   | 06/01/2014 | 42165.77083             | 0.00013295   | 2.55155              | 62.33165                      | 150.46793                    | 256.15685             | 3.42929             |
| METEOSAT-8 | 14   | 13  | 13/01/2014 | 42166.00854             | 0.00007177   | 2.56895              | 62.30406                      | 173.11777                    | 240.45227             | 3.44826             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 14   | 20  | 20/01/2014 | 42165.57890             | 0.00008261   | 2.58018              | 62.54734                      | 166.86626                    | 253.42193             | 3.51261             |
| METEOSAT-8 | 14   | 27  | 27/01/2014 | 42164.51469             | 0.00000710   | 2.59396              | 62.52615                      | 15.33412                     | 51.97343              | 3.61539             |
| METEOSAT-8 | 14   | 34  | 03/02/2014 | 42164.68288             | 0.00012276   | 2.60498              | 62.77357                      | 147.19983                    | 286.87687             | 3.73765             |
| METEOSAT-8 | 14   | 41  | 10/02/2014 | 42167.25531             | 0.00003009   | 2.61868              | 62.75204                      | 323.75032                    | 117.19286             | 3.68958             |
| METEOSAT-8 | 14   | 48  | 17/02/2014 | 42168.01167             | 0.00003458   | 2.62416              | 62.91256                      | 29.45817                     | 58.12096              | 3.59336             |
| METEOSAT-8 | 14   | 55  | 24/02/2014 | 42165.84698             | 0.00010541   | 2.63557              | 62.83455                      | 354.08636                    | 100.40659             | 3.53700             |
| METEOSAT-8 | 14   | 62  | 03/03/2014 | 42167.07594             | 0.00006668   | 2.64221              | 62.94624                      | 94.22460                     | 7.01015               | 3.49794             |
| METEOSAT-8 | 14   | 69  | 10/03/2014 | 42165.04665             | 0.00004427   | 2.65532              | 62.84667                      | 329.41816                    | 138.82913             | 3.51830             |
| METEOSAT-8 | 14   | 76  | 17/03/2014 | 42166.47724             | 0.00006100   | 2.65916              | 62.86797                      | 32.51628                     | 82.66824              | 3.58292             |
| METEOSAT-8 | 14   | 83  | 24/03/2014 | 42163.81196             | 0.00011668   | 2.67269              | 62.70855                      | 0.43293                      | 121.90992             | 3.68679             |
| METEOSAT-8 | 14   | 90  | 31/03/2014 | 42168.28988             | 0.00014744   | 2.67956              | 62.68351                      | 81.25830                     | 47.94787              | 3.62817             |
| METEOSAT-8 | 14   | 97  | 07/04/2014 | 42165.99797             | 0.00008539   | 2.69601              | 62.52722                      | 38.32342                     | 97.85878              | 3.54962             |
| METEOSAT-8 | 14   | 104 | 14/04/2014 | 42167.25819             | 0.00014950   | 2.70255              | 62.44450                      | 53.15977                     | 89.97186              | 3.51584             |
| METEOSAT-8 | 14   | 111 | 21/04/2014 | 42164.93586             | 0.00016758   | 2.72153              | 62.26630                      | 33.50641                     | 116.71049             | 3.52066             |
| METEOSAT-8 | 14   | 118 | 28/04/2014 | 42166.18752             | 0.00016584   | 2.73192              | 62.17270                      | 79.87316                     | 77.37236              | 3.55161             |
| METEOSAT-8 | 14   | 125 | 05/05/2014 | 42164.43131             | 0.00010251   | 2.75295              | 62.04955                      | 48.12103                     | 116.23421             | 3.63257             |
| METEOSAT-8 | 14   | 132 | 12/05/2014 | 42164.70176             | 0.00018322   | 2.76361              | 61.96311                      | 53.97077                     | 117.50379             | 3.75879             |
| METEOSAT-8 | 14   | 139 | 19/05/2014 | 42167.11712             | 0.00012670   | 2.78760              | 61.87779                      | 18.51675                     | 159.88852             | 3.69667             |
| METEOSAT-8 | 14   | 146 | 26/05/2014 | 42167.40752             | 0.00010291   | 2.80091              | 61.81147                      | 79.01636                     | 106.24041             | 3.57425             |
| METEOSAT-8 | 14   | 153 | 02/06/2014 | 42166.64701             | 0.00005066   | 2.82376              | 61.80408                      | 21.48517                     | 170.61220             | 3.49983             |
| METEOSAT-8 | 14   | 160 | 09/06/2014 | 42165.69421             | 0.00014295   | 2.83567              | 61.77674                      | 43.21980                     | 155.78086             | 3.46903             |
| METEOSAT-8 | 14   | 167 | 16/06/2014 | 42166.05007             | 0.00011504   | 2.86008              | 61.82270                      | 37.20382                     | 168.66817             | 3.48018             |
| METEOSAT-8 | 14   | 174 | 23/06/2014 | 42165.03429             | 0.00012702   | 2.87309              | 61.81294                      | 86.86927                     | 125.96594             | 3.52937             |
| METEOSAT-8 | 14   | 181 | 30/06/2014 | 42165.29755             | 0.00004785   | 2.89333              | 61.91868                      | 61.34248                     | 158.38593             | 3.62554             |
| METEOSAT-8 | 14   | 188 | 07/07/2014 | 42163.43167             | 0.00015753   | 2.90301              | 61.93559                      | 55.52252                     | 171.22621             | 3.76253             |
| METEOSAT-8 | 14   | 195 | 14/07/2014 | 42168.70933             | 0.00007345   | 2.92385              | 62.07123                      | 120.17923                    | 113.23666             | 3.66665             |
| METEOSAT-8 | 14   | 202 | 21/07/2014 | 42166.40451             | 0.00016215   | 2.93417              | 62.07341                      | 130.46029                    | 109.74572             | 3.56278             |
| METEOSAT-8 | 14   | 209 | 28/07/2014 | 42167.39365             | 0.00009895   | 2.94915              | 62.23058                      | 161.01546                    | 85.87022              | 3.50501             |
| METEOSAT-8 | 14   | 216 | 04/08/2014 | 42165.28129             | 0.00012662   | 2.95537              | 62.22815                      | 102.96373                    | 150.79457             | 3.48274             |
| METEOSAT-8 | 14   | 223 | 11/08/2014 | 42167.29863             | 0.00011900   | 2.97106              | 62.37820                      | 140.58554                    | 119.93943             | 3.50780             |
| METEOSAT-8 | 14   | 230 | 18/08/2014 | 42164.38501             | 0.00019832   | 2.97872              | 62.32660                      | 137.79757                    | 129.73163             | 3.57021             |
| METEOSAT-8 | 14   | 237 | 25/08/2014 | 42165.58170             | 0.00013961   | 2.98891              | 62.44337                      | 163.93097                    | 110.47952             | 3.67806             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 14   | 244 | 01/09/2014 | 42163.82360             | 0.00014404   | 2.99382              | 62.35176                      | 120.04342                    | 161.48734             | 3.81672             |
| METEOSAT-8 | 14   | 251 | 08/09/2014 | 42168.78165             | 0.00020304   | 3.00563              | 62.44598                      | 176.54690                    | 111.73287             | 3.76858             |
| METEOSAT-8 | 14   | 258 | 15/09/2014 | 42166.36529             | 0.00024625   | 3.01417              | 62.29454                      | 167.54450                    | 127.67016             | 3.65973             |
| METEOSAT-8 | 14   | 265 | 22/09/2014 | 42167.13217             | 0.00022883   | 3.02280              | 62.33227                      | 189.21388                    | 112.79393             | 3.59643             |
| METEOSAT-8 | 14   | 272 | 29/09/2014 | 42166.17208             | 0.00016693   | 3.03053              | 62.14087                      | 165.95812                    | 143.10118             | 3.56055             |
| METEOSAT-8 | 14   | 279 | 06/10/2014 | 42166.06322             | 0.00026126   | 3.04260              | 62.15851                      | 178.16374                    | 137.78759             | 3.57186             |
| METEOSAT-8 | 14   | 286 | 13/10/2014 | 42165.01624             | 0.00027327   | 3.05572              | 61.93844                      | 174.55627                    | 148.56364             | 3.61985             |
| METEOSAT-8 | 14   | 293 | 20/10/2014 | 42164.75915             | 0.00027000   | 3.06654              | 61.91917                      | 191.40067                    | 138.73479             | 3.71301             |
| METEOSAT-8 | 14   | 300 | 27/10/2014 | 42164.83490             | 0.00019208   | 3.08069              | 61.68983                      | 175.22658                    | 162.16460             | 3.83399             |
| METEOSAT-8 | 14   | 307 | 03/11/2014 | 42166.94580             | 0.00027101   | 3.09581              | 61.69105                      | 168.10865                    | 176.07806             | 3.72377             |
| METEOSAT-8 | 14   | 314 | 10/11/2014 | 42167.44846             | 0.00024883   | 3.11488              | 61.48706                      | 166.16363                    | 185.02211             | 3.61025             |
| METEOSAT-8 | 14   | 321 | 17/11/2014 | 42165.96595             | 0.00024689   | 3.12878              | 61.48965                      | 182.26682                    | 175.75919             | 3.54375             |
| METEOSAT-8 | 14   | 328 | 24/11/2014 | 42166.97713             | 0.00017144   | 3.14891              | 61.32352                      | 159.86069                    | 205.20530             | 3.50758             |
| METEOSAT-8 | 14   | 335 | 01/12/2014 | 42164.63018             | 0.00029632   | 3.16516              | 61.38153                      | 175.95619                    | 195.96523             | 3.51142             |
| METEOSAT-8 | 14   | 342 | 08/12/2014 | 42166.13565             | 0.00024412   | 3.18800              | 61.28358                      | 174.60130                    | 204.38322             | 3.56740             |
| METEOSAT-8 | 14   | 349 | 15/12/2014 | 42163.85301             | 0.00025816   | 3.20165              | 61.36169                      | 188.38806                    | 197.52810             | 3.66970             |
| METEOSAT-8 | 14   | 356 | 22/12/2014 | 42165.27533             | 0.00016685   | 3.22319              | 61.30384                      | 168.72378                    | 224.29417             | 3.80782             |
| METEOSAT-8 | 14   | 363 | 29/12/2014 | 42166.36755             | 0.00035576   | 3.23689              | 61.42813                      | 170.15993                    | 229.48138             | 3.65240             |
| METEOSAT-8 | 15   | 5   | 05/01/2015 | 42168.04233             | 0.00029063   | 3.25804              | 61.43969                      | 167.00981                    | 239.42621             | 3.55773             |
| METEOSAT-8 | 15   | 12  | 12/01/2015 | 42165.82203             | 0.00029284   | 3.26688              | 61.55933                      | 176.35879                    | 236.80494             | 3.50712             |
| METEOSAT-8 | 15   | 19  | 19/01/2015 | 42166.84656             | 0.00022096   | 3.28525              | 61.57425                      | 157.91871                    | 262.11483             | 3.49622             |
| METEOSAT-8 | 15   | 26  | 26/01/2015 | 42164.84964             | 0.00034622   | 3.29351              | 61.69840                      | 173.09358                    | 253.71936             | 3.50679             |
| METEOSAT-8 | 15   | 33  | 02/02/2015 | 42165.90715             | 0.00027422   | 3.31009              | 61.74432                      | 171.31997                    | 262.41765             | 3.58639             |
| METEOSAT-8 | 15   | 40  | 09/02/2015 | 42164.53266             | 0.00027458   | 3.31333              | 61.81393                      | 176.03119                    | 264.64668             | 3.70724             |
| METEOSAT-8 | 15   | 47  | 16/02/2015 | 42167.74458             | 0.00013235   | 3.32760              | 61.81809                      | 151.95091                    | 295.60222             | 3.69837             |
| METEOSAT-8 | 15   | 54  | 23/02/2015 | 42166.92751             | 0.00025850   | 3.33209              | 61.84648                      | 172.27864                    | 282.01107             | 3.57533             |
| METEOSAT-8 | 15   | 61  | 02/03/2015 | 42166.81672             | 0.00017815   | 3.34560              | 61.85687                      | 173.50399                    | 287.61152             | 3.52331             |
| METEOSAT-8 | 15   | 68  | 09/03/2015 | 42166.65984             | 0.00018364   | 3.34712              | 61.81040                      | 171.45542                    | 296.58195             | 3.50972             |
| METEOSAT-8 | 15   | 75  | 16/03/2015 | 42165.26117             | 0.00012228   | 3.36098              | 61.75798                      | 153.16524                    | 321.84336             | 3.53806             |
| METEOSAT-8 | 15   | 82  | 23/03/2015 | 42165.76789             | 0.00025713   | 3.36613              | 61.66817                      | 170.36317                    | 311.66529             | 3.57549             |
| METEOSAT-8 | 15   | 89  | 30/03/2015 | 42164.37315             | 0.00016217   | 3.38077              | 61.62674                      | 175.98706                    | 313.08228             | 3.67981             |
| METEOSAT-8 | 15   | 96  | 06/04/2015 | 42165.31725             | 0.00018217   | 3.38553              | 61.47767                      | 165.69691                    | 330.56371             | 3.82390             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 15   | 103 | 13/04/2015 | 42166.73487             | 0.00003181   | 3.40221              | 61.40151                      | 159.19428                    | 344.05997             | 3.84033             |
| METEOSAT-8 | 15   | 110 | 20/04/2015 | 42168.16917             | 0.00017851   | 3.41211              | 61.24317                      | 177.89645                    | 332.27666             | 3.69693             |
| METEOSAT-8 | 15   | 117 | 27/04/2015 | 42165.92727             | 0.00008071   | 3.43009              | 61.20306                      | 203.88277                    | 313.15417             | 3.61417             |
| METEOSAT-8 | 15   | 124 | 04/05/2015 | 42167.36734             | 0.00009980   | 3.44040              | 61.03459                      | 169.76865                    | 354.30652             | 3.57497             |
| METEOSAT-8 | 15   | 131 | 11/05/2015 | 42164.73318             | 0.00004515   | 3.46066              | 61.00769                      | 138.98359                    | 32.03055              | 3.57634             |
| METEOSAT-8 | 15   | 138 | 18/05/2015 | 42166.35802             | 0.00018230   | 3.47521              | 60.86117                      | 173.18348                    | 4.91315               | 3.60028             |
| METEOSAT-8 | 15   | 145 | 25/05/2015 | 42164.09422             | 0.00007636   | 3.49487              | 60.88979                      | 193.59254                    | 351.46489             | 3.67725             |
| METEOSAT-8 | 15   | 152 | 01/06/2015 | 42165.16181             | 0.00010867   | 3.50878              | 60.76791                      | 156.57640                    | 35.64093              | 3.80299             |
| METEOSAT-8 | 15   | 159 | 08/06/2015 | 42166.86402             | 0.00003993   | 3.52901              | 60.83209                      | 40.92883                     | 158.07627             | 3.74405             |
| METEOSAT-8 | 15   | 166 | 15/06/2015 | 42167.93749             | 0.00010508   | 3.54545              | 60.74707                      | 172.46519                    | 33.39721              | 3.60725             |
| METEOSAT-8 | 15   | 173 | 22/06/2015 | 42166.38163             | 0.00002759   | 3.56263              | 60.85326                      | 255.70023                    | 316.87282             | 3.51728             |
| METEOSAT-8 | 15   | 180 | 29/06/2015 | 42166.41298             | 0.00005383   | 3.57636              | 60.79349                      | 117.34743                    | 102.15131             | 3.47917             |
| METEOSAT-8 | 15   | 187 | 06/07/2015 | 42165.65312             | 0.00004022   | 3.59300              | 60.92929                      | 101.44911                    | 124.82135             | 3.48135             |
| METEOSAT-8 | 15   | 194 | 13/07/2015 | 42165.62540             | 0.00012807   | 3.60785              | 60.88950                      | 166.60148                    | 66.64936              | 3.52427             |
| METEOSAT-8 | 15   | 201 | 20/07/2015 | 42165.12580             | 0.00004270   | 3.61936              | 61.02639                      | 205.13648                    | 34.95582              | 3.60807             |
| METEOSAT-8 | 15   | 208 | 27/07/2015 | 42166.48465             | 0.00005031   | 3.63050              | 60.99065                      | 82.94651                     | 164.01447             | 3.54954             |
| METEOSAT-8 | 15   | 215 | 03/08/2015 | 42167.26706             | 0.00001449   | 3.64148              | 61.13226                      | 100.79406                    | 152.86098             | 3.49580             |
| METEOSAT-8 | 15   | 222 | 10/08/2015 | 42165.84146             | 0.00010384   | 3.65393              | 61.08857                      | 170.87871                    | 89.69663              | 3.48547             |
| METEOSAT-8 | 15   | 229 | 17/08/2015 | 42166.31837             | 0.00004694   | 3.65992              | 61.18686                      | 242.98627                    | 24.40219              | 3.51093             |
| METEOSAT-8 | 15   | 236 | 24/08/2015 | 42164.35002             | 0.00006716   | 3.66886              | 61.11583                      | 119.10997                    | 155.30731             | 3.58370             |
| METEOSAT-8 | 15   | 243 | 31/08/2015 | 42166.22251             | 0.00005740   | 3.67571              | 61.19592                      | 184.14923                    | 97.18406              | 3.69406             |
| METEOSAT-8 | 15   | 250 | 07/09/2015 | 42163.59512             | 0.00014420   | 3.68792              | 61.10628                      | 175.32737                    | 113.13440             | 3.84643             |
| METEOSAT-8 | 15   | 257 | 14/09/2015 | 42168.30821             | 0.00009212   | 3.69134              | 61.11767                      | 281.25912                    | 13.98705              | 3.75307             |
| METEOSAT-8 | 15   | 264 | 21/09/2015 | 42166.21028             | 0.00001131   | 3.70169              | 60.98612                      | 67.42430                     | 234.74874             | 3.65705             |
| METEOSAT-8 | 15   | 271 | 28/09/2015 | 42168.12203             | 0.00007396   | 3.70815              | 60.98156                      | 244.31205                    | 64.70162              | 3.59850             |
| METEOSAT-8 | 15   | 278 | 05/10/2015 | 42165.18951             | 0.00011378   | 3.72373              | 60.84631                      | 203.91963                    | 112.10807             | 3.57962             |
| METEOSAT-8 | 15   | 285 | 12/10/2015 | 42166.35408             | 0.00011096   | 3.72942              | 60.78042                      | 261.49341                    | 61.51793              | 3.59591             |
| METEOSAT-8 | 15   | 292 | 19/10/2015 | 42164.73864             | 0.00003357   | 3.74471              | 60.62204                      | 208.07344                    | 122.05619             | 3.65092             |
| METEOSAT-8 | 15   | 299 | 26/10/2015 | 42165.61764             | 0.00012906   | 3.75447              | 60.56671                      | 229.49760                    | 107.68900             | 3.74425             |
| METEOSAT-8 | 15   | 306 | 02/11/2015 | 42166.44430             | 0.00008263   | 3.77536              | 60.44415                      | 210.78589                    | 133.34266             | 3.65291             |
| METEOSAT-8 | 15   | 313 | 09/11/2015 | 42167.03642             | 0.00010130   | 3.78527              | 60.36564                      | 277.03234                    | 74.00003              | 3.56538             |
| METEOSAT-8 | 15   | 320 | 16/11/2015 | 42166.14478             | 0.00002105   | 3.80841              | 60.24042                      | 292.52132                    | 65.51701              | 3.53171             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 15   | 327 | 23/11/2015 | 42165.59582             | 0.00012576   | 3.82134              | 60.20346                      | 239.25589                    | 125.73931             | 3.53680             |
| METEOSAT-8 | 15   | 334 | 30/11/2015 | 42165.02149             | 0.00011447   | 3.84539              | 60.16266                      | 231.37138                    | 140.63002             | 3.58742             |
| METEOSAT-8 | 15   | 341 | 07/12/2015 | 42164.48899             | 0.00014418   | 3.85734              | 60.13256                      | 269.01644                    | 110.02422             | 3.68336             |
| METEOSAT-8 | 15   | 348 | 14/12/2015 | 42167.69684             | 0.00003050   | 3.87982              | 60.12161                      | 164.40011                    | 221.44137             | 3.56210             |
| METEOSAT-8 | 15   | 355 | 21/12/2015 | 42165.93433             | 0.00014595   | 3.89233              | 60.13648                      | 219.25192                    | 173.39770             | 3.47711             |
| METEOSAT-8 | 15   | 362 | 28/12/2015 | 42166.82335             | 0.00010641   | 3.91439              | 60.19081                      | 215.50903                    | 183.95941             | 3.44503             |
| METEOSAT-8 | 16   | 4   | 04/01/2016 | 42165.09201             | 0.00012278   | 3.92404              | 60.20758                      | 253.21068                    | 153.15656             | 3.45963             |
| METEOSAT-8 | 16   | 11  | 11/01/2016 | 42166.26178             | 0.00002467   | 3.94301              | 60.27593                      | 218.46105                    | 194.78854             | 3.51276             |
| METEOSAT-8 | 16   | 18  | 18/01/2016 | 42163.81451             | 0.00016575   | 3.95180              | 60.30575                      | 230.50159                    | 189.69809             | 3.59949             |
| METEOSAT-8 | 16   | 25  | 25/01/2016 | 42165.51405             | 0.00010217   | 3.96806              | 60.40249                      | 235.07381                    | 192.06592             | 3.74626             |
| METEOSAT-8 | 16   | 32  | 01/02/2016 | 42166.49112             | 0.00015094   | 3.97313              | 60.40419                      | 229.72314                    | 204.19218             | 3.63670             |
| METEOSAT-8 | 16   | 39  | 08/02/2016 | 42167.86975             | 0.00007964   | 3.98701              | 60.47673                      | 187.11898                    | 253.53499             | 3.56280             |
| METEOSAT-8 | 16   | 46  | 15/02/2016 | 42165.41917             | 0.00020729   | 3.99254              | 60.45095                      | 217.71507                    | 229.79790             | 3.51294             |
| METEOSAT-8 | 16   | 53  | 22/02/2016 | 42167.05089             | 0.00013201   | 4.00361              | 60.51661                      | 215.89370                    | 238.45076             | 3.52724             |
| METEOSAT-8 | 16   | 60  | 29/02/2016 | 42164.91251             | 0.00014126   | 4.00683              | 60.43955                      | 235.51450                    | 225.84405             | 3.58149             |
| METEOSAT-8 | 16   | 67  | 07/03/2016 | 42165.66651             | 0.00006528   | 4.01805              | 60.46181                      | 198.74606                    | 269.56645             | 3.67324             |
| METEOSAT-8 | 16   | 74  | 14/03/2016 | 42163.95360             | 0.00019921   | 4.02468              | 60.34850                      | 221.49302                    | 253.92587             | 3.77982             |
| METEOSAT-8 | 16   | 81  | 21/03/2016 | 42168.01853             | 0.00004262   | 4.03454              | 60.35373                      | 215.73425                    | 266.53179             | 3.74208             |
| METEOSAT-8 | 16   | 88  | 28/03/2016 | 42166.87805             | 0.00004923   | 4.04088              | 60.19887                      | 240.05497                    | 249.17510             | 3.65764             |
| METEOSAT-8 | 16   | 95  | 04/04/2016 | 42166.41531             | 0.00003521   | 4.05338              | 60.17483                      | 92.71787                     | 43.38658              | 3.61033             |
| METEOSAT-8 | 16   | 102 | 11/04/2016 | 42165.96792             | 0.00011740   | 4.06532              | 60.00160                      | 213.31298                    | 289.83015             | 3.57402             |
| METEOSAT-8 | 16   | 109 | 18/04/2016 | 42165.49896             | 0.00002763   | 4.07760              | 59.98596                      | 247.21729                    | 262.87494             | 3.60149             |
| METEOSAT-8 | 16   | 116 | 25/04/2016 | 42165.60893             | 0.00003595   | 4.08989              | 59.80800                      | 224.41630                    | 292.83144             | 3.66905             |
| METEOSAT-8 | 16   | 123 | 02/05/2016 | 42166.85277             | 0.00006446   | 4.10518              | 59.79568                      | 252.25977                    | 2.09323               | 3.52575             |
| METEOSAT-8 | 16   | 130 | 09/05/2016 | 42166.99980             | 0.00016836   | 4.12278              | 59.64173                      | 206.36455                    | 324.72909             | 3.52036             |
| METEOSAT-8 | 16   | 137 | 16/05/2016 | 42165.31127             | 0.00005696   | 4.13718              | 59.65045                      | 220.30440                    | 317.67670             | 3.49959             |
| METEOSAT-8 | 16   | 144 | 23/05/2016 | 42166.42453             | 0.00008892   | 4.15424              | 59.51883                      | 199.07330                    | 345.98333             | 3.52560             |
| METEOSAT-8 | 16   | 151 | 30/05/2016 | 42163.93570             | 0.00005679   | 4.16968              | 59.55890                      | 150.59362                    | 41.40674              | 3.59221             |
| METEOSAT-8 | 16   | 158 | 06/06/2016 | 42165.53729             | 0.00017436   | 4.19041              | 59.46784                      | 201.83484                    | 357.26414             | 3.68373             |
| METEOSAT-8 | 16   | 165 | 13/06/2016 | 42165.77358             | 0.00001763   | 4.20346              | 59.52942                      | 338.59246                    | 227.31999             | 3.64598             |
| METEOSAT-8 | 16   | 172 | 20/06/2016 | 42167.20763             | 0.00004071   | 4.22143              | 59.46926                      | 173.26882                    | 39.58301              | 3.61540             |
| METEOSAT-8 | 16   | 179 | 27/06/2016 | 42164.67965             | 0.00005533   | 4.23364              | 59.55733                      | 104.31133                    | 115.36821             | 3.62559             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 16   | 186 | 04/07/2016 | 42166.26207             | 0.00012406   | 4.25308              | 59.53190                      | 197.78041                    | 28.87152              | 3.67102             |
| METEOSAT-8 | 16   | 193 | 11/07/2016 | 42131.72090             | 0.00000426   | 4.26222              | 59.61307                      | 61.19734                     | 175.05577             | 6.45938             |
| METEOSAT-8 | 16   | 200 | 18/07/2016 | 42132.24166             | 0.00006547   | 4.27760              | 59.59914                      | 152.69641                    | 93.53794              | 9.54149             |
| METEOSAT-8 | 16   | 207 | 25/07/2016 | 42130.84340             | 0.00006533   | 4.28454              | 59.68725                      | 135.09752                    | 121.06342             | 12.67839            |
| METEOSAT-8 | 16   | 214 | 01/08/2016 | 42130.65170             | 0.00013704   | 4.30061              | 59.68414                      | 187.60001                    | 78.64057              | 15.88208            |
| METEOSAT-8 | 16   | 221 | 08/08/2016 | 42129.75068             | 0.00002347   | 4.30447              | 59.73626                      | 196.59524                    | 79.72702              | 19.14476            |
| METEOSAT-8 | 16   | 228 | 15/08/2016 | 42128.03214             | 0.00010268   | 4.31683              | 59.71959                      | 145.86403                    | 140.69978             | 22.49694            |
| METEOSAT-8 | 16   | 235 | 22/08/2016 | 42128.76474             | 0.00008481   | 4.32006              | 59.75016                      | 168.92759                    | 127.90200             | 25.91505            |
| METEOSAT-8 | 16   | 242 | 29/08/2016 | 42126.03071             | 0.00016721   | 4.33379              | 59.73125                      | 181.22752                    | 126.00406             | 29.41198            |
| METEOSAT-8 | 16   | 249 | 05/09/2016 | 42126.48879             | 0.00005706   | 4.33559              | 59.70317                      | 198.84287                    | 118.87423             | 32.97274            |
| METEOSAT-8 | 16   | 256 | 12/09/2016 | 42123.79149             | 0.00013602   | 4.34727              | 59.64749                      | 151.39362                    | 176.93459             | 36.62071            |
| METEOSAT-8 | 16   | 263 | 19/09/2016 | 42124.96537             | 0.00013209   | 4.35079              | 59.59714                      | 185.41473                    | 153.60148             | 40.34055            |
| METEOSAT-8 | 16   | 270 | 26/09/2016 | 42166.64164             | 0.00020142   | 4.36509              | 59.54207                      | 184.69396                    | 162.44389             | 41.48849            |
| METEOSAT-8 | 16   | 277 | 03/10/2016 | 42167.26927             | 0.00010224   | 4.36931              | 59.43896                      | 203.24370                    | 150.75878             | 41.33195            |
| METEOSAT-8 | 16   | 284 | 10/10/2016 | 42165.37646             | 0.00015366   | 4.38391              | 59.35514                      | 165.93260                    | 195.00417             | 41.26295            |
| METEOSAT-8 | 16   | 291 | 17/10/2016 | 42165.40610             | 0.00019094   | 4.39176              | 59.24906                      | 198.32960                    | 169.64433             | 41.27431            |
| METEOSAT-8 | 16   | 298 | 24/10/2016 | 42163.16999             | 0.00023205   | 4.41030              | 59.19836                      | 194.08418                    | 180.96141             | 41.37633            |
| METEOSAT-8 | 16   | 305 | 31/10/2016 | 42163.04129             | 0.00015283   | 4.41972              | 59.06741                      | 211.09214                    | 171.19099             | 41.56634            |
| METEOSAT-8 | 16   | 312 | 07/11/2016 | 42168.00895             | 0.00006812   | 4.43819              | 59.00926                      | 131.81585                    | 257.26864             | 41.39673            |
| METEOSAT-8 | 16   | 319 | 14/11/2016 | 42166.51525             | 0.00011380   | 4.45078              | 58.90808                      | 215.18127                    | 180.75107             | 41.23488            |
| METEOSAT-8 | 16   | 326 | 21/11/2016 | 42165.65179             | 0.00011515   | 4.47472              | 58.89193                      | 209.52177                    | 193.28429             | 41.18782            |
| METEOSAT-8 | 16   | 333 | 28/11/2016 | 42164.41428             | 0.00008634   | 4.48832              | 58.79555                      | 256.58806                    | 153.26316             | 41.23763            |
| METEOSAT-8 | 16   | 340 | 05/12/2016 | 42164.47263             | 0.00005275   | 4.50828              | 58.81131                      | 184.38357                    | 232.48313             | 41.37469            |
| METEOSAT-8 | 16   | 347 | 12/12/2016 | 42161.84164             | 0.00017128   | 4.52277              | 58.75899                      | 233.10025                    | 190.92463             | 41.59197            |
| METEOSAT-8 | 16   | 354 | 19/12/2016 | 42168.97940             | 0.00002667   | 4.54255              | 58.83458                      | 78.66667                     | 352.08067             | 41.50461            |
| METEOSAT-8 | 16   | 361 | 26/12/2016 | 42166.58983             | 0.00007390   | 4.55590              | 58.79253                      | 351.40706                    | 86.10767              | 41.34834            |
| METEOSAT-8 | 17   | 2   | 02/01/2017 | 42167.26947             | 0.00008795   | 4.57239              | 58.87672                      | 60.12013                     | 24.11996              | 41.27411            |
| METEOSAT-8 | 17   | 9   | 09/01/2017 | 42164.28807             | 0.00006078   | 4.58407              | 58.85830                      | 272.09887                    | 179.03602             | 41.27293            |
| METEOSAT-8 | 17   | 16  | 16/01/2017 | 42165.72607             | 0.00004141   | 4.59818              | 58.97494                      | 356.07958                    | 101.91208             | 41.36855            |
| METEOSAT-8 | 17   | 23  | 23/01/2017 | 42162.74555             | 0.00010796   | 4.60833              | 58.94114                      | 335.38884                    | 129.69736             | 41.55108            |
| METEOSAT-8 | 17   | 30  | 30/01/2017 | 42163.45594             | 0.00008240   | 4.61863              | 59.03603                      | 32.80088                     | 79.33111              | 41.81061            |
| METEOSAT-8 | 17   | 37  | 06/02/2017 | 42167.33305             | 0.00011252   | 4.62775              | 58.99566                      | 195.58397                    | 283.29431             | 41.63120            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 17   | 44  | 13/02/2017 | 42168.33867             | 0.00006411   | 4.63588              | 59.07993                      | 150.01057                    | 335.50853             | 41.46641            |
| METEOSAT-8 | 17   | 51  | 20/02/2017 | 42165.76806             | 0.00001484   | 4.64357              | 59.00930                      | 184.23381                    | 308.16745             | 41.38357            |
| METEOSAT-8 | 17   | 58  | 27/02/2017 | 42165.79874             | 0.00009200   | 4.64987              | 59.05468                      | 115.41731                    | 23.83191              | 41.37700            |
| METEOSAT-8 | 17   | 65  | 06/03/2017 | 42164.03538             | 0.00008580   | 4.65949              | 58.96002                      | 208.54525                    | 297.75758             | 41.43072            |
| METEOSAT-8 | 17   | 72  | 13/03/2017 | 42163.89452             | 0.00002200   | 4.66498              | 58.97394                      | 107.77061                    | 45.58032              | 41.58197            |
| METEOSAT-8 | 17   | 79  | 20/03/2017 | 42167.68148             | 0.00011590   | 4.67472              | 58.84841                      | 181.08328                    | 339.21280             | 41.48663            |
| METEOSAT-8 | 17   | 86  | 27/03/2017 | 42166.46688             | 0.00014580   | 4.68143              | 58.83467                      | 150.02365                    | 17.05871              | 41.34089            |
| METEOSAT-8 | 17   | 93  | 03/04/2017 | 42165.93037             | 0.00017890   | 4.69577              | 58.70246                      | 195.10038                    | 338.95231             | 41.25776            |
| METEOSAT-8 | 17   | 100 | 10/04/2017 | 42164.51904             | 0.00008860   | 4.70328              | 58.66279                      | 166.56033                    | 14.47226              | 41.27530            |
| METEOSAT-8 | 17   | 107 | 17/04/2017 | 42164.47679             | 0.00010430   | 4.71809              | 58.52067                      | 175.85472                    | 12.35225              | 41.38420            |
| METEOSAT-8 | 17   | 114 | 24/04/2017 | 42162.01545             | 0.00012490   | 4.72776              | 58.48620                      | 141.66856                    | 53.68771              | 41.57725            |
| METEOSAT-8 | 17   | 121 | 01/05/2017 | 42168.57705             | 0.00014860   | 4.74795              | 58.37424                      | 248.57093                    | 313.63451             | 41.39594            |
| METEOSAT-8 | 17   | 128 | 08/05/2017 | 42166.15975             | 0.00007390   | 4.75835              | 58.33328                      | 307.45769                    | 261.53550             | 41.22834            |
| METEOSAT-8 | 17   | 135 | 15/05/2017 | 42166.94497             | 0.00007170   | 4.77765              | 58.23580                      | 273.65991                    | 302.27489             | 41.16206            |
| METEOSAT-8 | 17   | 142 | 22/05/2017 | 42163.89459             | 0.00001650   | 4.78888              | 58.22576                      | 341.69917                    | 241.17044             | 41.18217            |
| METEOSAT-8 | 17   | 149 | 29/05/2017 | 42165.13375             | 0.00013470   | 4.81242              | 58.17301                      | 250.13265                    | 339.78564             | 41.27869            |
| METEOSAT-8 | 17   | 156 | 05/06/2017 | 42162.27663             | 0.00006690   | 4.82326              | 58.16349                      | 327.45193                    | 269.55985             | 41.47006            |
| METEOSAT-8 | 17   | 163 | 12/06/2017 | 42168.79010             | 0.00014220   | 4.84350              | 58.13729                      | 202.69682                    | 41.16593              | 41.40699            |
| METEOSAT-8 | 17   | 170 | 19/06/2017 | 42166.04846             | 0.00012600   | 4.85318              | 58.15890                      | 181.13254                    | 69.46384              | 41.27929            |
| METEOSAT-8 | 17   | 177 | 26/06/2017 | 42166.99434             | 0.00021610   | 4.87541              | 58.17412                      | 212.57846                    | 44.83389              | 41.23115            |
| METEOSAT-8 | 17   | 184 | 03/07/2017 | 42164.42850             | 0.00008680   | 4.88383              | 58.18719                      | 197.20865                    | 67.09970              | 41.26439            |
| METEOSAT-8 | 17   | 191 | 10/07/2017 | 42164.61451             | 0.00014880   | 4.90088              | 58.21889                      | 191.76690                    | 79.52520              | 41.40557            |
| METEOSAT-8 | 17   | 198 | 17/07/2017 | 42162.92007             | 0.00014590   | 4.90690              | 58.24064                      | 182.08438                    | 96.27628              | 41.62197            |
| METEOSAT-8 | 17   | 205 | 24/07/2017 | 42168.20763             | 0.00012290   | 4.92435              | 58.29162                      | 235.99490                    | 49.06790              | 41.49838            |
| METEOSAT-8 | 17   | 212 | 31/07/2017 | 42166.59269             | 0.00003800   | 4.92935              | 58.28742                      | 321.47674                    | 330.34300             | 41.37180            |
| METEOSAT-8 | 17   | 219 | 07/08/2017 | 42165.66029             | 0.00005060   | 4.94197              | 58.32596                      | 197.08121                    | 101.56089             | 41.34961            |
| METEOSAT-8 | 17   | 226 | 14/08/2017 | 42165.31890             | 0.00004760   | 4.94439              | 58.30790                      | 206.54893                    | 99.04646              | 41.39675            |
| METEOSAT-8 | 17   | 233 | 21/08/2017 | 42163.75859             | 0.00013250   | 4.95841              | 58.34930                      | 223.66807                    | 88.90628              | 41.52341            |
| METEOSAT-8 | 17   | 240 | 28/08/2017 | 42163.34439             | 0.00002990   | 4.96175              | 58.29077                      | 286.04844                    | 33.67305              | 41.71170            |
| METEOSAT-8 | 17   | 247 | 04/09/2017 | 42167.16556             | 0.00009340   | 4.97165              | 58.30080                      | 286.76725                    | 39.76176              | 41.62296            |
| METEOSAT-8 | 17   | 254 | 11/09/2017 | 42168.02220             | 0.00013250   | 4.97521              | 58.21604                      | 292.00958                    | 41.34717              | 41.45393            |
| METEOSAT-8 | 17   | 261 | 18/09/2017 | 42165.26211             | 0.00017750   | 4.98731              | 58.22139                      | 267.17005                    | 73.01207              | 41.36775            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 17   | 268 | 25/09/2017 | 42165.78274             | 0.00015940   | 4.99313              | 58.09884                      | 309.43083                    | 37.77600              | 41.34837            |
| METEOSAT-8 | 17   | 275 | 02/10/2017 | 42162.66054             | 0.00011900   | 5.00701              | 58.04422                      | 267.53609                    | 86.76477              | 41.46295            |
| METEOSAT-8 | 17   | 282 | 09/10/2017 | 42164.01671             | 0.00017230   | 5.01557              | 57.90773                      | 280.25909                    | 81.30225              | 41.66001            |
| METEOSAT-8 | 17   | 289 | 16/10/2017 | 42166.81786             | 0.00007900   | 5.02929              | 57.89263                      | 279.28403                    | 89.03301              | 41.47549            |
| METEOSAT-8 | 17   | 296 | 23/10/2017 | 42167.68856             | 0.00012330   | 5.04093              | 57.74435                      | 347.22400                    | 27.98143              | 41.29173            |
| METEOSAT-8 | 17   | 303 | 30/10/2017 | 42165.23842             | 0.00001700   | 5.05507              | 57.71768                      | 319.94178                    | 62.12271              | 41.20306            |
| METEOSAT-8 | 17   | 310 | 06/11/2017 | 42166.14758             | 0.00009340   | 5.07019              | 57.58650                      | 304.52333                    | 84.58624              | 41.19984            |
| METEOSAT-8 | 17   | 317 | 13/11/2017 | 42163.13598             | 0.00011670   | 5.08636              | 57.59567                      | 274.43455                    | 121.66760             | 41.28983            |
| METEOSAT-8 | 17   | 324 | 20/11/2017 | 42163.66483             | 0.00012710   | 5.10338              | 57.47838                      | 326.94891                    | 76.35734              | 41.47118            |
| METEOSAT-8 | 17   | 331 | 27/11/2017 | 42167.69304             | 0.00010400   | 5.11898              | 57.49386                      | 166.99167                    | 243.11103             | 41.38439            |
| METEOSAT-8 | 17   | 338 | 04/12/2017 | 42167.32580             | 0.00009050   | 5.13780              | 57.41290                      | 225.42270                    | 191.50404             | 41.23515            |
| METEOSAT-8 | 17   | 345 | 11/12/2017 | 42165.52300             | 0.00011690   | 5.15326              | 57.47275                      | 223.55599                    | 200.14059             | 41.17849            |
| METEOSAT-8 | 17   | 352 | 18/12/2017 | 42166.30325             | 0.00006170   | 5.17134              | 57.41786                      | 293.82148                    | 136.79190             | 41.15989            |
| METEOSAT-8 | 17   | 359 | 25/12/2017 | 42165.65111             | 0.00006780   | 5.18399              | 57.48329                      | 205.45465                    | 231.99035             | 41.18070            |
| METEOSAT-8 | 18   | 1   | 01/01/2018 | 42163.82202             | 0.00014000   | 5.20169              | 57.45533                      | 261.54948                    | 182.90236             | 41.28717            |
| METEOSAT-8 | 18   | 8   | 08/01/2018 | 42163.66140             | 0.00012030   | 5.21234              | 57.54359                      | 258.46880                    | 192.95945             | 41.48096            |
| METEOSAT-8 | 18   | 15  | 15/01/2018 | 42162.08508             | 0.00011330   | 5.22759              | 57.52881                      | 299.08374                    | 159.51726             | 41.76886            |
| METEOSAT-8 | 18   | 22  | 22/01/2018 | 42168.76025             | 0.00010200   | 5.23414              | 57.59886                      | 11.14915                     | 94.11897              | 41.63203            |
| METEOSAT-8 | 18   | 29  | 29/01/2018 | 42165.97868             | 0.00017950   | 5.24809              | 57.57796                      | 326.42678                    | 145.59667             | 41.48982            |
| METEOSAT-8 | 18   | 36  | 05/02/2018 | 42167.34629             | 0.00016290   | 5.25287              | 57.65233                      | 341.82406                    | 136.92776             | 41.41107            |
| METEOSAT-8 | 18   | 43  | 12/02/2018 | 42164.69508             | 0.00023610   | 5.26473              | 57.62633                      | 348.34424                    | 137.32556             | 41.41657            |
| METEOSAT-8 | 18   | 50  | 19/02/2018 | 42165.39854             | 0.00014210   | 5.26711              | 57.64831                      | 358.80245                    | 133.80979             | 41.48757            |
| METEOSAT-8 | 18   | 57  | 26/02/2018 | 42162.44370             | 0.00023200   | 5.27950              | 57.60056                      | 329.43981                    | 170.26446             | 41.63168            |
| METEOSAT-8 | 18   | 64  | 05/03/2018 | 42168.77412             | 0.00022650   | 5.28242              | 57.59279                      | 317.33479                    | 189.20133             | 41.54836            |
| METEOSAT-8 | 18   | 71  | 12/03/2018 | 42165.77211             | 0.00028430   | 5.29441              | 57.52934                      | 325.85578                    | 187.52942             | 41.42046            |
| METEOSAT-8 | 18   | 78  | 19/03/2018 | 42166.34538             | 0.00018540   | 5.29687              | 57.48565                      | 321.98388                    | 198.30535             | 41.36113            |
| METEOSAT-8 | 18   | 85  | 26/03/2018 | 42163.89207             | 0.00030080   | 5.31186              | 57.40775                      | 312.99079                    | 214.31547             | 41.37584            |
| METEOSAT-8 | 18   | 92  | 02/04/2018 | 42164.62212             | 0.00025780   | 5.31721              | 57.33642                      | 328.24809                    | 206.16070             | 41.47885            |
| METEOSAT-8 | 18   | 99  | 09/04/2018 | 42162.30813             | 0.00030380   | 5.33268              | 57.25473                      | 331.47044                    | 210.14574             | 41.67418            |
| METEOSAT-8 | 18   | 106 | 16/04/2018 | 42168.33325             | 0.00011810   | 5.33911              | 57.17284                      | 14.42362                     | 174.07520             | 41.54625            |
| METEOSAT-8 | 18   | 113 | 23/04/2018 | 42166.90945             | 0.00018090   | 5.35882              | 57.10776                      | 336.52404                    | 218.75435             | 41.33387            |
| METEOSAT-8 | 18   | 120 | 30/04/2018 | 42166.42930             | 0.00019110   | 5.36833              | 57.01854                      | 7.15801                      | 195.01710             | 41.21778            |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 18   | 127 | 07/05/2018 | 42165.41463             | 0.00020740   | 5.38730              | 56.96631                      | 1.79823                      | 207.33247             | 41.20174            |
| METEOSAT-8 | 18   | 134 | 14/05/2018 | 42163.89891             | 0.00015500   | 5.39743              | 56.89490                      | 21.00517                     | 195.17869             | 41.27059            |
| METEOSAT-8 | 18   | 141 | 21/05/2018 | 42163.71823             | 0.00019300   | 5.41974              | 56.88408                      | 344.83239                    | 238.41801             | 41.41978            |
| METEOSAT-8 | 18   | 148 | 28/05/2018 | 42167.30509             | 0.00010780   | 5.43223              | 56.81600                      | 33.99351                     | 196.13433             | 41.33087            |
| METEOSAT-8 | 18   | 155 | 04/06/2018 | 42167.54979             | 0.00008580   | 5.45130              | 56.82160                      | 19.56785                     | 217.32434             | 41.20918            |
| METEOSAT-8 | 18   | 162 | 11/06/2018 | 42164.91976             | 0.00008960   | 5.46220              | 56.78113                      | 69.39943                     | 174.38106             | 41.17299            |
| METEOSAT-8 | 18   | 169 | 18/06/2018 | 42165.77457             | 0.00007500   | 5.48309              | 56.83185                      | 335.12630                    | 275.52362             | 41.21461            |
| METEOSAT-8 | 18   | 176 | 25/06/2018 | 42163.19309             | 0.00013210   | 5.49488              | 56.79343                      | 44.52848                     | 213.16787             | 41.35038            |
| METEOSAT-8 | 18   | 183 | 02/07/2018 | 42164.08851             | 0.00008430   | 5.51040              | 56.84618                      | 35.34817                     | 229.40463             | 41.59075            |
| METEOSAT-8 | 18   | 190 | 09/07/2018 | 42166.85439             | 0.00006360   | 5.51922              | 56.82076                      | 181.32449                    | 90.26985              | 41.53904            |
| METEOSAT-8 | 18   | 197 | 16/07/2018 | 42168.07727             | 0.00012170   | 5.53514              | 56.90654                      | 257.30060                    | 20.94671              | 41.40876            |
| METEOSAT-8 | 18   | 204 | 23/07/2018 | 42165.22373             | 0.00001210   | 5.54464              | 56.87169                      | 120.92090                    | 164.18224             | 41.35990            |
| METEOSAT-8 | 18   | 211 | 30/07/2018 | 42165.98865             | 0.00005810   | 5.55452              | 56.93318                      | 220.34549                    | 71.62137              | 41.41152            |
| METEOSAT-8 | 18   | 218 | 06/08/2018 | 42163.45552             | 0.00007660   | 5.56066              | 56.88928                      | 179.44134                    | 119.56966             | 41.53342            |
| METEOSAT-8 | 18   | 225 | 13/08/2018 | 42164.12572             | 0.00011410   | 5.57146              | 56.96141                      | 247.98865                    | 58.02657              | 41.72451            |
| METEOSAT-8 | 18   | 232 | 20/08/2018 | 42167.04437             | 0.00011810   | 5.57944              | 56.89704                      | 42.18471                     | 270.64146             | 41.57822            |
| METEOSAT-8 | 18   | 239 | 27/08/2018 | 42166.98584             | 0.00004580   | 5.58543              | 56.92823                      | 45.31379                     | 274.26457             | 41.46095            |
| METEOSAT-8 | 18   | 246 | 03/09/2018 | 42165.60446             | 0.00005480   | 5.59186              | 56.83930                      | 68.50638                     | 258.02026             | 41.41202            |
| METEOSAT-8 | 18   | 253 | 10/09/2018 | 42165.05995             | 0.00005790   | 5.59985              | 56.86840                      | 317.75029                    | 15.68646              | 41.43554            |
| METEOSAT-8 | 18   | 260 | 17/09/2018 | 42163.74291             | 0.00010410   | 5.60998              | 56.76209                      | 45.11400                     | 295.44350             | 41.52732            |
| METEOSAT-8 | 18   | 267 | 24/09/2018 | 42162.49605             | 0.00002700   | 5.61564              | 56.74884                      | 99.41642                     | 248.27321             | 41.71787            |
| METEOSAT-8 | 18   | 274 | 01/10/2018 | 42168.51976             | 0.00011010   | 5.62652              | 56.62102                      | 262.05658                    | 92.56787              | 41.59397            |
| METEOSAT-8 | 18   | 281 | 08/10/2018 | 42166.58078             | 0.00018840   | 5.63540              | 56.61143                      | 267.56381                    | 93.80737              | 41.39926            |
| METEOSAT-8 | 18   | 288 | 15/10/2018 | 42166.48670             | 0.00009140   | 5.65067              | 56.48605                      | 293.11167                    | 75.19876              | 41.28053            |
| METEOSAT-8 | 18   | 295 | 22/10/2018 | 42164.48078             | 0.00015910   | 5.66107              | 56.45686                      | 246.30110                    | 128.93539             | 41.24691            |
| METEOSAT-8 | 18   | 302 | 29/10/2018 | 42165.48724             | 0.00014640   | 5.67866              | 56.33307                      | 261.80349                    | 120.53050             | 41.29314            |
| METEOSAT-8 | 18   | 309 | 05/11/2018 | 42162.51892             | 0.00022160   | 5.69012              | 56.31742                      | 264.16043                    | 125.24565             | 41.42809            |
| METEOSAT-8 | 18   | 316 | 12/11/2018 | 42168.03336             | 0.00006600   | 5.71062              | 56.21859                      | 348.53313                    | 47.74156              | 41.28340            |
| METEOSAT-8 | 18   | 323 | 19/11/2018 | 42165.40201             | 0.00008340   | 5.72157              | 56.20352                      | 243.62010                    | 159.46896             | 41.17633            |
| METEOSAT-8 | 18   | 330 | 26/11/2018 | 42166.70140             | 0.00007950   | 5.74381              | 56.13305                      | 287.95483                    | 122.09109             | 41.16391            |
| METEOSAT-8 | 18   | 337 | 03/12/2018 | 42163.40469             | 0.00014710   | 5.75594              | 56.14279                      | 279.79946                    | 137.20449             | 41.24176            |
| METEOSAT-8 | 18   | 344 | 10/12/2018 | 42164.28611             | 0.00008970   | 5.77765              | 56.11077                      | 326.35150                    | 97.73977              | 41.41500            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 18   | 351 | 17/12/2018 | 42166.71642             | 0.00021400   | 5.78780              | 56.12756                      | 242.39611                    | 188.47294             | 41.33407            |
| METEOSAT-8 | 18   | 358 | 24/12/2018 | 42167.33888             | 0.00020320   | 5.80962              | 56.12274                      | 262.89542                    | 174.78047             | 41.26563            |
| METEOSAT-8 | 18   | 365 | 31/12/2018 | 42164.60132             | 0.00025120   | 5.81879              | 56.15458                      | 265.97158                    | 178.55283             | 41.27993            |
| METEOSAT-8 | 19   | 7   | 07/01/2019 | 42164.96047             | 0.00016950   | 5.83711              | 56.17331                      | 279.33848                    | 172.14055             | 41.38953            |
| METEOSAT-8 | 19   | 14  | 14/01/2019 | 42163.56903             | 0.00022370   | 5.84262              | 56.19735                      | 253.51393                    | 204.98588             | 41.57091            |
| METEOSAT-8 | 19   | 21  | 21/01/2019 | 42162.76511             | 0.00024740   | 5.86014              | 56.22271                      | 275.68822                    | 189.92286             | 41.84214            |
| METEOSAT-8 | 19   | 28  | 28/01/2019 | 42168.01714             | 0.00013150   | 5.86481              | 56.23358                      | 304.06656                    | 168.32809             | 41.76526            |
| METEOSAT-8 | 19   | 35  | 04/02/2019 | 42167.33822             | 0.00012620   | 5.87829              | 56.25929                      | 340.51196                    | 138.57807             | 41.60916            |
| METEOSAT-8 | 19   | 42  | 11/02/2019 | 42166.92894             | 0.00008010   | 5.87994              | 56.24306                      | 289.22275                    | 196.67209             | 41.51351            |
| METEOSAT-8 | 19   | 49  | 18/02/2019 | 42164.74718             | 0.00017760   | 5.89365              | 56.25275                      | 317.52640                    | 175.23959             | 41.50250            |
| METEOSAT-8 | 19   | 56  | 25/02/2019 | 42164.99833             | 0.00015460   | 5.89699              | 56.20918                      | 321.31319                    | 178.45418             | 41.55940            |
| METEOSAT-8 | 19   | 63  | 04/03/2019 | 42163.09108             | 0.00017790   | 5.90803              | 56.20436                      | 345.00465                    | 161.82475             | 41.70685            |
| METEOSAT-8 | 19   | 70  | 11/03/2019 | 42163.46434             | 0.00010210   | 5.91021              | 56.12500                      | 315.14251                    | 198.89129             | 41.91299            |
| METEOSAT-8 | 19   | 77  | 18/03/2019 | 42167.14388             | 0.00023520   | 5.92361              | 56.10413                      | 8.49352                      | 152.43548             | 41.86232            |
| METEOSAT-8 | 19   | 84  | 25/03/2019 | 42168.44082             | 0.00021790   | 5.93025              | 56.00238                      | 21.68813                     | 146.04301             | 41.63257            |
| METEOSAT-8 | 19   | 91  | 01/04/2019 | 42165.61692             | 0.00028710   | 5.94278              | 55.97391                      | 24.82088                     | 149.73842             | 41.49811            |
| METEOSAT-8 | 19   | 98  | 08/04/2019 | 42166.33052             | 0.00018380   | 5.94968              | 55.85364                      | 31.52620                     | 150.02387             | 41.43192            |
| METEOSAT-8 | 19   | 105 | 15/04/2019 | 42163.44523             | 0.00028370   | 5.96590              | 55.82848                      | 12.40649                     | 176.12625             | 41.45267            |
| METEOSAT-8 | 19   | 112 | 22/04/2019 | 42164.74351             | 0.00026530   | 5.97803              | 55.70827                      | 26.50694                     | 169.18734             | 41.55902            |
| METEOSAT-8 | 19   | 119 | 29/04/2019 | 42167.06041             | 0.00025880   | 5.99308              | 55.69187                      | 7.09085                      | 195.42369             | 41.43365            |
| METEOSAT-8 | 19   | 126 | 06/05/2019 | 42167.48917             | 0.00015630   | 6.00563              | 55.57508                      | 3.47042                      | 205.90804             | 41.25766            |
| METEOSAT-8 | 19   | 133 | 13/05/2019 | 42165.29000             | 0.00027220   | 6.02362              | 55.58226                      | 355.70984                    | 220.48953             | 41.16966            |
| METEOSAT-8 | 19   | 140 | 20/05/2019 | 42165.73522             | 0.00023500   | 6.04024              | 55.48651                      | 11.51359                     | 211.69835             | 41.17895            |
| METEOSAT-8 | 19   | 147 | 27/05/2019 | 42163.71833             | 0.00027330   | 6.05554              | 55.50410                      | 13.32312                     | 216.88315             | 41.29265            |
| METEOSAT-8 | 19   | 154 | 03/06/2019 | 42163.19363             | 0.00018250   | 6.07083              | 55.42471                      | 16.05823                     | 221.31837             | 41.49538            |
| METEOSAT-8 | 19   | 161 | 10/06/2019 | 42167.64484             | 0.00016900   | 6.08717              | 55.47663                      | 346.93148                    | 257.13489             | 41.35624            |
| METEOSAT-8 | 19   | 168 | 17/06/2019 | 42166.82917             | 0.00012870   | 6.10463              | 55.42109                      | 19.00729                     | 231.87630             | 41.24497            |
| METEOSAT-8 | 19   | 175 | 24/06/2019 | 42166.16538             | 0.00014150   | 6.11660              | 55.47074                      | 13.03905                     | 244.64988             | 41.23304            |
| METEOSAT-8 | 19   | 182 | 01/07/2019 | 42164.37723             | 0.00006760   | 6.13098              | 55.42494                      | 32.57899                     | 232.09182             | 41.30746            |
| METEOSAT-8 | 19   | 189 | 08/07/2019 | 42164.50242             | 0.00016510   | 6.14264              | 55.50007                      | 356.34238                    | 275.25680             | 41.45098            |
| METEOSAT-8 | 19   | 196 | 15/07/2019 | 42162.49956             | 0.00014050   | 6.15816              | 55.47039                      | 35.61084                     | 243.11610             | 41.69015            |
| METEOSAT-8 | 19   | 203 | 22/07/2019 | 42168.77603             | 0.00001420   | 6.16476              | 55.52090                      | 247.51841                    | 37.97809              | 41.64654            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 19   | 210 | 29/07/2019 | 42165.98611             | 0.00008030   | 6.17638              | 55.48016                      | 174.96465                    | 117.32614             | 41.53212            |
| METEOSAT-8 | 19   | 217 | 05/08/2019 | 42166.98847             | 0.00005970   | 6.18317              | 55.53994                      | 303.13262                    | 355.91610             | 41.47505            |
| METEOSAT-8 | 19   | 224 | 12/08/2019 | 42164.24286             | 0.00005540   | 6.19642              | 55.50542                      | 121.83383                    | 184.16182             | 41.50559            |
| METEOSAT-8 | 19   | 231 | 19/08/2019 | 42165.17780             | 0.00003170   | 6.19872              | 55.52016                      | 193.54822                    | 119.43932             | 41.62057            |
| METEOSAT-8 | 19   | 238 | 26/08/2019 | 42162.20964             | 0.00009660   | 6.20952              | 55.45758                      | 170.16843                    | 149.96998             | 41.80758            |
| METEOSAT-8 | 19   | 245 | 02/09/2019 | 42168.63666             | 0.00014110   | 6.21345              | 55.47146                      | 356.30857                    | 330.62793             | 41.70845            |
| METEOSAT-8 | 19   | 252 | 09/09/2019 | 42165.80730             | 0.00011350   | 6.22699              | 55.41441                      | 49.40303                     | 284.36082             | 41.55929            |
| METEOSAT-8 | 19   | 259 | 16/09/2019 | 42166.40433             | 0.00006680   | 6.22884              | 55.37456                      | 18.52293                     | 322.14640             | 41.49707            |
| METEOSAT-8 | 19   | 266 | 23/09/2019 | 42164.14171             | 0.00004660   | 6.24202              | 55.28762                      | 66.21305                     | 281.49236             | 41.51172            |
| METEOSAT-8 | 19   | 273 | 30/09/2019 | 42164.50435             | 0.00012130   | 6.24729              | 55.24959                      | 355.93447                    | 358.82707             | 41.59067            |
| METEOSAT-8 | 19   | 280 | 07/10/2019 | 42166.71177             | 0.00003710   | 6.26438              | 55.18048                      | 137.16200                    | 224.42413             | 41.40623            |
| METEOSAT-8 | 19   | 287 | 14/10/2019 | 42166.37599             | 0.00007290   | 6.26951              | 55.10227                      | 224.22549                    | 144.24846             | 41.27601            |
| METEOSAT-8 | 19   | 294 | 21/10/2019 | 42165.35494             | 0.00007520   | 6.28777              | 55.01772                      | 203.26117                    | 172.19282             | 41.23340            |
| METEOSAT-8 | 19   | 301 | 28/10/2019 | 42164.28681             | 0.00008860   | 6.29905              | 54.95027                      | 279.18730                    | 103.31354             | 41.27956            |
| METEOSAT-8 | 19   | 308 | 04/11/2019 | 42163.31710             | 0.00003110   | 6.32036              | 54.90293                      | 178.61555                    | 211.00015             | 41.42006            |
| METEOSAT-8 | 19   | 315 | 11/11/2019 | 42166.83641             | 0.00015390   | 6.32993              | 54.82799                      | 183.13622                    | 213.33366             | 41.28219            |
| METEOSAT-8 | 19   | 322 | 18/11/2019 | 42167.12585             | 0.00014379   | 6.35201              | 54.78778                      | 171.07653                    | 232.23189             | 41.17214            |
| METEOSAT-8 | 19   | 329 | 25/11/2019 | 42164.87368             | 0.00008254   | 6.36401              | 54.74202                      | 203.27094                    | 206.95662             | 41.14788            |
| METEOSAT-8 | 19   | 336 | 02/12/2019 | 42165.07573             | 0.00012260   | 6.38626              | 54.74495                      | 150.71056                    | 266.47393             | 41.21963            |
| METEOSAT-8 | 19   | 343 | 09/12/2019 | 42162.72830             | 0.00015740   | 6.39717              | 54.69914                      | 197.21530                    | 227.06065             | 41.38825            |
| METEOSAT-8 | 19   | 350 | 16/12/2019 | 42168.62463             | 0.00002140   | 6.41859              | 54.72107                      | 253.09522                    | 177.99314             | 41.35233            |
| METEOSAT-8 | 19   | 354 | 20/12/2019 | 42166.21390             | 0.00007900   | 6.42258              | 54.72965                      | 264.95558                    | 169.99244             | 41.29804            |
| METEOSAT-8 | 19   | 364 | 30/12/2019 | 42166.35419             | 0.00003300   | 6.44839              | 54.74835                      | 33.41794                     | 51.30701              | 41.29432            |
| METEOSAT-8 | 20   | 6   | 06/01/2020 | 42163.80304             | 0.00009220   | 6.45682              | 54.72093                      | 261.36043                    | 190.34604             | 41.39323            |
| METEOSAT-8 | 20   | 13  | 13/01/2020 | 42165.01031             | 0.00005520   | 6.47347              | 54.78097                      | 312.66184                    | 146.03320             | 41.58616            |
| METEOSAT-8 | 20   | 20  | 20/01/2020 | 42166.26525             | 0.00008770   | 6.48208              | 54.75416                      | 259.45088                    | 206.04829             | 41.50397            |
| METEOSAT-8 | 20   | 27  | 27/01/2020 | 42167.05435             | 0.00003990   | 6.49392              | 54.81182                      | 173.67477                    | 298.57604             | 41.44827            |
| METEOSAT-8 | 20   | 34  | 03/02/2020 | 42164.99883             | 0.00012480   | 6.49934              | 54.76381                      | 230.01566                    | 249.16561             | 41.45935            |
| METEOSAT-8 | 20   | 41  | 10/02/2020 | 42165.26699             | 0.00004970   | 6.51061              | 54.81483                      | 261.36169                    | 224.74727             | 41.55756            |
| METEOSAT-8 | 20   | 48  | 17/02/2020 | 42162.84053             | 0.00008510   | 6.51821              | 54.75323                      | 290.59574                    | 202.62755             | 41.71968            |
| METEOSAT-8 | 20   | 55  | 24/02/2020 | 42167.68393             | 0.00011780   | 6.52568              | 54.77509                      | 48.91164                     | 91.12967              | 41.65778            |
| METEOSAT-8 | 20   | 62  | 02/03/2020 | 42166.54279             | 0.00003140   | 6.53136              | 54.68224                      | 5.28583                      | 141.63880             | 41.53607            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 20   | 69  | 09/03/2020 | 42165.30190             | 0.00013750   | 6.54066              | 54.69855                      | 18.33978                     | 135.45411             | 41.49964            |
| METEOSAT-8 | 20   | 76  | 16/03/2020 | 42164.39565             | 0.00013980   | 6.55139              | 54.59242                      | 13.34142                     | 147.51971             | 41.52940            |
| METEOSAT-8 | 20   | 83  | 23/03/2020 | 42166.37441             | 0.00010440   | 6.55850              | 54.57900                      | 57.99322                     | 109.70906             | 41.41974            |
| METEOSAT-8 | 20   | 90  | 30/03/2020 | 42166.17210             | 0.00001100   | 6.56891              | 54.45146                      | 88.20144                     | 86.49247              | 41.34107            |
| METEOSAT-8 | 20   | 97  | 06/04/2020 | 42163.67246             | 0.00013380   | 6.57958              | 54.44197                      | 24.19130                     | 157.46688             | 41.35077            |
| METEOSAT-8 | 20   | 104 | 13/04/2020 | 42164.27592             | 0.00010660   | 6.59642              | 54.32462                      | 29.38628                     | 159.42380             | 41.43938            |
| METEOSAT-8 | 20   | 111 | 20/04/2020 | 42166.58557             | 0.00011550   | 6.60594              | 54.30037                      | 7.29630                      | 188.38328             | 41.34353            |
| METEOSAT-8 | 20   | 118 | 27/04/2020 | 42167.09003             | 0.00007970   | 6.62237              | 54.18065                      | 311.17452                    | 251.43018             | 41.21275            |
| METEOSAT-8 | 20   | 125 | 04/05/2020 | 42164.09689             | 0.00018160   | 6.63477              | 54.17704                      | 357.92533                    | 211.57211             | 41.17340            |
| METEOSAT-8 | 20   | 132 | 11/05/2020 | 42165.47566             | 0.00012820   | 6.65668              | 54.08977                      | 355.75476                    | 220.80505             | 41.22842            |
| METEOSAT-8 | 20   | 139 | 18/05/2020 | 42162.57635             | 0.00014660   | 6.66744              | 54.07968                      | 21.94504                     | 201.69254             | 41.38766            |
| METEOSAT-8 | 20   | 146 | 25/05/2020 | 42168.11910             | 0.00018550   | 6.68715              | 54.00208                      | 333.58515                    | 256.91176             | 41.27191            |
| METEOSAT-8 | 20   | 153 | 01/06/2020 | 42165.41346             | 0.00029110   | 6.69880              | 54.02168                      | 355.36814                    | 241.89844             | 41.17490            |
| METEOSAT-8 | 20   | 160 | 08/06/2020 | 42166.56448             | 0.00022550   | 6.72184              | 53.98325                      | 353.71322                    | 250.47444             | 41.18144            |
| METEOSAT-8 | 20   | 167 | 15/06/2020 | 42163.81683             | 0.00023110   | 6.73075              | 53.99345                      | 6.84728                      | 244.30107             | 41.28650            |
| METEOSAT-8 | 20   | 174 | 22/06/2020 | 42164.06669             | 0.00017080   | 6.75036              | 53.96180                      | 347.13983                    | 271.09720             | 41.48560            |
| METEOSAT-8 | 20   | 181 | 29/06/2020 | 42166.99620             | 0.00026050   | 6.75871              | 53.99191                      | 26.83601                     | 238.16787             | 41.42799            |
| METEOSAT-8 | 20   | 188 | 06/07/2020 | 42167.12120             | 0.00020170   | 6.77895              | 53.99292                      | 38.40184                     | 233.39128             | 41.36594            |
| METEOSAT-8 | 20   | 195 | 13/07/2020 | 42165.40773             | 0.00021960   | 6.78378              | 54.00276                      | 43.18906                     | 235.46887             | 41.38855            |
| METEOSAT-8 | 20   | 202 | 20/07/2020 | 42164.59426             | 0.00014040   | 6.80028              | 53.99565                      | 46.64861                     | 238.97988             | 41.49751            |
| METEOSAT-8 | 20   | 209 | 27/07/2020 | 42163.86808             | 0.00025980   | 6.80457              | 54.00870                      | 34.11895                     | 258.51816             | 41.65863            |
| METEOSAT-8 | 20   | 216 | 03/08/2020 | 42167.15313             | 0.00014910   | 6.82071              | 54.01886                      | 81.06864                     | 218.39225             | 41.62323            |
| METEOSAT-8 | 20   | 223 | 10/08/2020 | 42166.81059             | 0.00014300   | 6.82232              | 53.99553                      | 77.45652                     | 228.83379             | 41.54974            |
| METEOSAT-8 | 20   | 230 | 17/08/2020 | 42164.73176             | 0.00011760   | 6.83599              | 53.98217                      | 109.11235                    | 204.08783             | 41.55624            |
| METEOSAT-8 | 20   | 237 | 24/08/2020 | 42165.12815             | 0.00017040   | 6.83882              | 53.95148                      | 58.06209                     | 262.12022             | 41.60531            |
| METEOSAT-8 | 20   | 244 | 31/08/2020 | 42162.82386             | 0.00016690   | 6.85243              | 53.94823                      | 94.15171                     | 233.09272             | 41.75009            |
| METEOSAT-8 | 20   | 251 | 07/09/2020 | 42168.25841             | 0.00012180   | 6.85442              | 53.87364                      | 138.72225                    | 195.42233             | 41.65063            |
| METEOSAT-8 | 20   | 258 | 14/09/2020 | 42165.36584             | 0.00017710   | 6.86778              | 53.84131                      | 158.51500                    | 182.46403             | 41.51903            |
| METEOSAT-8 | 20   | 265 | 21/09/2020 | 42166.45944             | 0.00009840   | 6.87317              | 53.76151                      | 106.40813                    | 241.50937             | 41.43588            |
| METEOSAT-8 | 20   | 272 | 28/09/2020 | 42163.58178             | 0.00018080   | 6.88741              | 53.74187                      | 141.84013                    | 213.06079             | 41.45237            |
| METEOSAT-8 | 20   | 279 | 05/10/2020 | 42164.46629             | 0.00013230   | 6.89363              | 53.62787                      | 149.69153                    | 212.37389             | 41.55204            |
| METEOSAT-8 | 20   | 286 | 12/10/2020 | 42166.33682             | 0.00016750   | 6.90933              | 53.58852                      | 198.28978                    | 170.65365             | 41.44214            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-8 | 20   | 293 | 19/10/2020 | 42167.33704             | 0.00003530   | 6.92059              | 53.48537                      | 224.95941                    | 150.86794             | 41.27771            |
| METEOSAT-8 | 20   | 300 | 26/10/2020 | 42164.88740             | 0.00014650   | 6.93955              | 53.47845                      | 188.34955                    | 194.34511             | 41.19852            |
| METEOSAT-8 | 20   | 307 | 02/11/2020 | 42165.28029             | 0.00013790   | 6.95182              | 53.36294                      | 213.58588                    | 176.16795             | 41.21055            |
| METEOSAT-8 | 20   | 314 | 09/11/2020 | 42163.36644             | 0.00017740   | 6.97004              | 53.34879                      | 206.11865                    | 190.68179             | 41.32153            |
| METEOSAT-8 | 20   | 321 | 16/11/2020 | 42167.61465             | 0.00011170   | 6.98627              | 53.25780                      | 174.19059                    | 229.48181             | 41.19346            |
| METEOSAT-8 | 20   | 328 | 23/11/2020 | 42165.74183             | 0.00021890   | 7.00417              | 53.28040                      | 173.02304                    | 237.44011             | 41.10949            |
| METEOSAT-8 | 20   | 335 | 30/11/2020 | 42165.14680             | 0.00019340   | 7.02001              | 53.19492                      | 192.72224                    | 224.73292             | 41.13162            |
| METEOSAT-8 | 20   | 342 | 07/12/2020 | 42164.53598             | 0.00021060   | 7.03724              | 53.22286                      | 187.06031                    | 237.36166             | 41.25335            |
| METEOSAT-8 | 20   | 349 | 14/12/2020 | 42163.20319             | 0.00010930   | 7.05484              | 53.16754                      | 192.03629                    | 239.50927             | 41.46007            |
| METEOSAT-8 | 20   | 356 | 21/12/2020 | 42167.72303             | 0.00014620   | 7.06923              | 53.22128                      | 141.77805                    | 296.53660             | 41.42730            |
| METEOSAT-8 | 20   | 363 | 28/12/2020 | 42166.02613             | 0.00008390   | 7.08438              | 53.17181                      | 175.90248                    | 269.24443             | 41.36041            |
| METEOSAT-8 | 21   | 4   | 04/01/2021 | 42166.64715             | 0.00009860   | 7.09668              | 53.22810                      | 150.80725                    | 301.15373             | 41.38335            |
| METEOSAT-8 | 21   | 11  | 11/01/2021 | 42164.05761             | 0.00003660   | 7.11176              | 53.19198                      | 81.73190                     | 17.21288              | 41.48456            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 06   | 16  | 16/01/2006 | 42167.09478             | 0.00003417   | 1.78711              | 245.30303                     | 192.76200                    | 30.71747              | -6.52265            |
| METEOSAT-9 | 06   | 23  | 23/01/2006 | 42165.62209             | 0.00007581   | 1.77914              | 244.78878                     | 148.77309                    | 82.09242              | -6.54991            |
| METEOSAT-9 | 06   | 30  | 30/01/2006 | 42167.22127             | 0.00010019   | 1.75379              | 244.12361                     | 202.83102                    | 35.59158              | -6.55623            |
| METEOSAT-9 | 06   | 37  | 06/02/2006 | 42165.34793             | 0.00007855   | 1.74501              | 243.64667                     | 119.98855                    | 125.79388             | -6.57077            |
| METEOSAT-9 | 06   | 44  | 13/02/2006 | 42166.90135             | 0.00005126   | 1.72747              | 242.93561                     | 184.49802                    | 68.91726              | -6.54577            |
| METEOSAT-9 | 06   | 51  | 20/02/2006 | 42165.05308             | 0.00008844   | 1.72405              | 242.54625                     | 154.12848                    | 106.59808             | -6.52026            |
| METEOSAT-9 | 06   | 58  | 27/02/2006 | 42166.81415             | 0.00011319   | 1.70481              | 241.84980                     | 200.50710                    | 67.86024              | -6.47215            |
| METEOSAT-9 | 06   | 65  | 06/03/2006 | 42164.78687             | 0.00008640   | 1.69792              | 241.57175                     | 128.07896                    | 147.49599             | -6.43887            |
| METEOSAT-9 | 06   | 72  | 13/03/2006 | 42166.33161             | 0.00006970   | 1.68490              | 240.92341                     | 184.91625                    | 98.28157              | -6.36084            |
| METEOSAT-9 | 06   | 79  | 20/03/2006 | 42164.79987             | 0.00009437   | 1.68075              | 240.78834                     | 164.55809                    | 125.74941             | -6.28306            |
| METEOSAT-9 | 06   | 86  | 27/03/2006 | 42168.10637             | 0.00007584   | 1.66370              | 240.16906                     | 213.08947                    | 84.72302              | -6.29498            |
| METEOSAT-9 | 06   | 93  | 03/04/2006 | 42166.68631             | 0.00005722   | 1.65281              | 240.11908                     | 97.70693                     | 206.94188             | -6.40687            |
| METEOSAT-9 | 06   | 100 | 10/04/2006 | 42167.49530             | 0.00003655   | 1.63959              | 239.55652                     | 195.04300                    | 117.00203             | -6.47225            |
| METEOSAT-9 | 06   | 107 | 17/04/2006 | 42166.87380             | 0.00004104   | 1.62910              | 239.61026                     | 168.88854                    | 149.93694             | -6.53764            |
| METEOSAT-9 | 06   | 114 | 24/04/2006 | 42166.86728             | 0.00008403   | 1.61090              | 239.00556                     | 213.97797                    | 112.31022             | -6.58028            |
| METEOSAT-9 | 06   | 121 | 01/05/2006 | 42166.52614             | 0.00003833   | 1.59257              | 239.04818                     | 98.08246                     | 235.01117             | -6.63328            |
| METEOSAT-9 | 06   | 128 | 08/05/2006 | 42166.19554             | 0.00005721   | 1.57723              | 238.45570                     | 201.09697                    | 139.47902             | -6.64507            |
| METEOSAT-9 | 06   | 135 | 15/05/2006 | 42166.75377             | 0.00003403   | 1.55890              | 238.50206                     | 197.79314                    | 149.62978             | -6.65356            |
| METEOSAT-9 | 06   | 142 | 22/05/2006 | 42165.55855             | 0.00009045   | 1.54002              | 237.76876                     | 220.97018                    | 134.09887             | -6.64314            |
| METEOSAT-9 | 06   | 149 | 29/05/2006 | 42166.34141             | 0.00002010   | 1.51560              | 237.68908                     | 71.86049                     | 290.20084             | -6.63265            |
| METEOSAT-9 | 06   | 156 | 05/06/2006 | 42164.99397             | 0.00007172   | 1.50053              | 236.94084                     | 211.81426                    | 157.93946             | -6.59067            |
| METEOSAT-9 | 06   | 163 | 12/06/2006 | 42166.47346             | 0.00002891   | 1.47753              | 236.78737                     | 235.83242                    | 141.02746             | -6.53955            |
| METEOSAT-9 | 06   | 170 | 19/06/2006 | 42164.70833             | 0.00009325   | 1.46279              | 235.79813                     | 229.47341                    | 155.31926             | -6.49748            |
| METEOSAT-9 | 06   | 177 | 26/06/2006 | 42166.26454             | 0.00001869   | 1.43703              | 235.44427                     | 26.79132                     | 5.30526               | -6.44809            |
| METEOSAT-9 | 06   | 184 | 03/07/2006 | 42164.52041             | 0.00007746   | 1.42664              | 234.52081                     | 221.27885                    | 178.70927             | -6.38026            |
| METEOSAT-9 | 06   | 191 | 10/07/2006 | 42122.63379             | 0.00004909   | 1.40399              | 234.09986                     | 2.51775                      | 46.85298              | -4.31799            |
| METEOSAT-9 | 06   | 198 | 17/07/2006 | 42120.37123             | 0.00004190   | 1.39476              | 233.00968                     | 295.82958                    | 125.54307             | -0.30445            |
| METEOSAT-9 | 06   | 205 | 24/07/2006 | 42168.08901             | 0.00010344   | 1.37209              | 232.40943                     | 24.81688                     | 44.79526              | 0.43690             |
| METEOSAT-9 | 06   | 212 | 31/07/2006 | 42166.65534             | 0.00002132   | 1.36878              | 231.47679                     | 338.18191                    | 99.16788              | 0.34428             |
| METEOSAT-9 | 06   | 219 | 07/08/2006 | 42167.03772             | 0.00007411   | 1.34958              | 230.88850                     | 2.35416                      | 82.43211              | 0.29488             |
| METEOSAT-9 | 06   | 226 | 14/08/2006 | 42165.74043             | 0.00005837   | 1.34706              | 229.90162                     | 347.73386                    | 104.90464             | 0.26289             |
| METEOSAT-9 | 06   | 233 | 21/08/2006 | 42166.40775             | 0.00013068   | 1.32870              | 229.19495                     | 23.31868                     | 76.94113              | 0.27987             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 06   | 240 | 28/08/2006 | 42165.80163             | 0.00004823   | 1.33011              | 228.48899                     | 11.10814                     | 96.78436              | 0.30902             |
| METEOSAT-9 | 06   | 247 | 04/09/2006 | 42165.00515             | 0.00010445   | 1.31355              | 227.89837                     | 5.82913                      | 109.63004             | 0.38685             |
| METEOSAT-9 | 06   | 254 | 11/09/2006 | 42165.15685             | 0.00008927   | 1.31305              | 227.21034                     | 17.52156                     | 105.61559             | 0.47843             |
| METEOSAT-9 | 06   | 261 | 18/09/2006 | 42164.55543             | 0.00016483   | 1.29608              | 226.52881                     | 25.43847                     | 105.42393             | 0.62286             |
| METEOSAT-9 | 06   | 268 | 25/09/2006 | 42164.79864             | 0.00007811   | 1.29639              | 226.14541                     | 27.19636                     | 111.10275             | 0.77688             |
| METEOSAT-9 | 06   | 275 | 02/10/2006 | 42168.57808             | 0.00003826   | 1.27876              | 225.60202                     | 299.50671                    | 206.15990             | 0.70080             |
| METEOSAT-9 | 06   | 282 | 09/10/2006 | 42169.96019             | 0.00001489   | 1.27409              | 225.21102                     | 153.99713                    | 358.68654             | 0.42657             |
| METEOSAT-9 | 06   | 289 | 16/10/2006 | 42168.14603             | 0.00006945   | 1.25485              | 224.51280                     | 28.50322                     | 131.55906             | 0.20598             |
| METEOSAT-9 | 06   | 296 | 23/10/2006 | 42169.02847             | 0.00002720   | 1.24884              | 224.32713                     | 181.27236                    | 345.66676             | -0.00361            |
| METEOSAT-9 | 06   | 303 | 30/10/2006 | 42166.96087             | 0.00004314   | 1.22749              | 223.67131                     | 355.46527                    | 178.87427             | -0.16040            |
| METEOSAT-9 | 06   | 310 | 06/11/2006 | 42168.79249             | 0.00004562   | 1.21590              | 223.37553                     | 91.45257                     | 89.94040              | -0.30379            |
| METEOSAT-9 | 06   | 317 | 13/11/2006 | 42166.40417             | 0.00010028   | 1.19455              | 222.44564                     | 40.61729                     | 148.51325             | -0.39746            |
| METEOSAT-9 | 06   | 324 | 20/11/2006 | 42167.53379             | 0.00003333   | 1.18196              | 222.19891                     | 121.18771                    | 75.01165              | -0.47608            |
| METEOSAT-9 | 06   | 331 | 27/11/2006 | 42165.68185             | 0.00005992   | 1.15965              | 221.15977                     | 29.85498                     | 174.25424             | -0.50624            |
| METEOSAT-9 | 06   | 338 | 04/12/2006 | 42167.07662             | 0.00008014   | 1.14334              | 220.69073                     | 87.08591                     | 124.37701             | -0.52176            |
| METEOSAT-9 | 06   | 345 | 11/12/2006 | 42165.03590             | 0.00011689   | 1.12488              | 219.35600                     | 53.21847                     | 166.50990             | -0.49119            |
| METEOSAT-9 | 06   | 352 | 18/12/2006 | 42165.79911             | 0.00005874   | 1.11055              | 218.83238                     | 109.23497                    | 117.96755             | -0.44010            |
| METEOSAT-9 | 06   | 359 | 25/12/2006 | 42164.72739             | 0.00007116   | 1.09400              | 217.30971                     | 51.03853                     | 184.67797             | -0.34806            |
| METEOSAT-9 | 07   | 1   | 01/01/2007 | 42165.08894             | 0.00010692   | 1.07851              | 216.56077                     | 91.78995                     | 151.68397             | -0.23829            |
| METEOSAT-9 | 07   | 8   | 08/01/2007 | 42164.14329             | 0.00011453   | 1.06935              | 214.92674                     | 67.05863                     | 185.10149             | -0.08474            |
| METEOSAT-9 | 07   | 15  | 15/01/2007 | 42163.92035             | 0.00008261   | 1.05850              | 214.20010                     | 114.31047                    | 145.65399             | 0.09472             |
| METEOSAT-9 | 07   | 22  | 22/01/2007 | 42163.99497             | 0.00007109   | 1.05241              | 212.46593                     | 66.57423                     | 202.23514             | 0.30722             |
| METEOSAT-9 | 07   | 29  | 29/01/2007 | 42163.11756             | 0.00012324   | 1.04048              | 211.62148                     | 101.05893                    | 175.72803             | 0.54213             |
| METEOSAT-9 | 07   | 36  | 05/02/2007 | 42163.46963             | 0.00009769   | 1.04148              | 210.09870                     | 81.27503                     | 204.21205             | 0.82114             |
| METEOSAT-9 | 07   | 43  | 12/02/2007 | 42168.48428             | 0.00007907   | 1.03368              | 209.45946                     | 7.47129                      | 285.36839             | 0.63595             |
| METEOSAT-9 | 07   | 50  | 19/02/2007 | 42169.58768             | 0.00014994   | 1.03530              | 207.94359                     | 357.57025                    | 303.44656             | 0.39839             |
| METEOSAT-9 | 07   | 57  | 26/02/2007 | 42167.72663             | 0.00010532   | 1.02382              | 207.20941                     | 30.62600                     | 277.81275             | 0.18697             |
| METEOSAT-9 | 07   | 64  | 05/03/2007 | 42168.96489             | 0.00013292   | 1.02867              | 206.09855                     | 6.53831                      | 309.74218             | 0.01854             |
| METEOSAT-9 | 07   | 71  | 12/03/2007 | 42166.92449             | 0.00006834   | 1.01873              | 205.64741                     | 11.57241                     | 311.92200             | -0.11841            |
| METEOSAT-9 | 07   | 78  | 19/03/2007 | 42168.45881             | 0.00014609   | 1.02105              | 204.47728                     | 358.18552                    | 333.26452             | -0.23291            |
| METEOSAT-9 | 07   | 85  | 26/03/2007 | 42166.16049             | 0.00009761   | 1.00520              | 203.78699                     | 33.58357                     | 305.37074             | -0.31932            |
| METEOSAT-9 | 07   | 92  | 02/04/2007 | 42167.64101             | 0.00012373   | 1.00727              | 202.99671                     | 2.35354                      | 344.24636             | -0.36444            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 07   | 99  | 09/04/2007 | 42165.64489             | 0.00006677   | 0.99154              | 202.51015                     | 10.20099                     | 343.77455             | -0.37592            |
| METEOSAT-9 | 07   | 106 | 16/04/2007 | 42166.81034             | 0.00014378   | 0.99053              | 201.49444                     | 358.70516                    | 3.19608               | -0.36661            |
| METEOSAT-9 | 07   | 113 | 23/04/2007 | 42164.83185             | 0.00009667   | 0.96982              | 200.54893                     | 32.25397                     | 337.53426             | -0.32583            |
| METEOSAT-9 | 07   | 120 | 30/04/2007 | 42165.81182             | 0.00011903   | 0.96750              | 199.78181                     | 356.73863                    | 20.79717              | -0.24580            |
| METEOSAT-9 | 07   | 127 | 07/05/2007 | 42164.56095             | 0.00007445   | 0.94804              | 198.89865                     | 8.11514                      | 17.32109              | -0.12880            |
| METEOSAT-9 | 07   | 134 | 14/05/2007 | 42164.71198             | 0.00014377   | 0.94517              | 197.78770                     | 359.33918                    | 34.24585              | 0.00898             |
| METEOSAT-9 | 07   | 141 | 21/05/2007 | 42163.75686             | 0.00010679   | 0.92448              | 196.31556                     | 30.81303                     | 11.31824              | 0.18325             |
| METEOSAT-9 | 07   | 148 | 28/05/2007 | 42163.66894             | 0.00012282   | 0.92135              | 195.35395                     | 352.12744                    | 58.07381              | 0.39224             |
| METEOSAT-9 | 07   | 155 | 04/06/2007 | 42163.59272             | 0.00009027   | 0.90441              | 193.88802                     | 12.60708                     | 46.21035              | 0.64327             |
| METEOSAT-9 | 07   | 162 | 11/06/2007 | 42162.49174             | 0.00015142   | 0.90390              | 192.62092                     | 2.91525                      | 64.33994              | 0.91505             |
| METEOSAT-9 | 07   | 169 | 18/06/2007 | 42169.45352             | 0.00008279   | 0.89041              | 190.63290                     | 129.61492                    | 306.33794             | 0.72584             |
| METEOSAT-9 | 07   | 176 | 25/06/2007 | 42168.26511             | 0.00003327   | 0.89076              | 189.54759                     | 229.19548                    | 214.48414             | 0.46863             |
| METEOSAT-9 | 07   | 183 | 02/07/2007 | 42169.26534             | 0.00006038   | 0.88240              | 187.67677                     | 154.36014                    | 297.87841             | 0.25808             |
| METEOSAT-9 | 07   | 190 | 09/07/2007 | 42167.25647             | 0.00001646   | 0.88631              | 186.47621                     | 56.96152                     | 43.18222              | 0.06408             |
| METEOSAT-9 | 07   | 197 | 16/07/2007 | 42168.46666             | 0.00008390   | 0.88361              | 184.39945                     | 119.41573                    | 349.55394             | -0.08561            |
| METEOSAT-9 | 07   | 204 | 23/07/2007 | 42166.68531             | 0.00002032   | 0.88774              | 183.45347                     | 264.44934                    | 212.23112             | -0.21955            |
| METEOSAT-9 | 07   | 211 | 30/07/2007 | 42168.23008             | 0.00005926   | 0.88860              | 181.59985                     | 134.30167                    | 351.04694             | -0.30427            |
| METEOSAT-9 | 07   | 218 | 06/08/2007 | 42165.79267             | 0.00004305   | 0.89425              | 180.71715                     | 60.75457                     | 72.30327              | -0.37692            |
| METEOSAT-9 | 07   | 225 | 13/08/2007 | 42167.33886             | 0.00009791   | 0.89972              | 178.89869                     | 111.98030                    | 29.76773              | -0.40497            |
| METEOSAT-9 | 07   | 232 | 20/08/2007 | 42165.55270             | 0.00000948   | 0.90306              | 178.33691                     | 22.70630                     | 126.48597             | -0.42220            |
| METEOSAT-9 | 07   | 239 | 27/08/2007 | 42166.38386             | 0.00008524   | 0.90792              | 176.95593                     | 116.98001                    | 40.55680              | -0.35887            |
| METEOSAT-9 | 07   | 246 | 03/09/2007 | 42164.26482             | 0.00007935   | 0.90929              | 176.35802                     | 81.37971                     | 83.73544              | -0.27854            |
| METEOSAT-9 | 07   | 253 | 10/09/2007 | 42165.46861             | 0.00012957   | 0.91706              | 174.90903                     | 110.81786                    | 62.77361              | -0.15181            |
| METEOSAT-9 | 07   | 260 | 17/09/2007 | 42164.22818             | 0.00004183   | 0.91442              | 174.51291                     | 98.16927                     | 82.85691              | -0.01349            |
| METEOSAT-9 | 07   | 267 | 24/09/2007 | 42164.33481             | 0.00011365   | 0.91981              | 173.17238                     | 104.39986                    | 85.06058              | 0.17953             |
| METEOSAT-9 | 07   | 274 | 01/10/2007 | 42163.34329             | 0.00010915   | 0.91352              | 172.54093                     | 91.64434                     | 105.55145             | 0.38318             |
| METEOSAT-9 | 07   | 281 | 08/10/2007 | 42163.59596             | 0.00015600   | 0.91980              | 171.23454                     | 109.96765                    | 95.68707              | 0.63536             |
| METEOSAT-9 | 07   | 288 | 15/10/2007 | 42169.22835             | 0.00006990   | 0.91022              | 170.63754                     | 282.85513                    | 290.10451             | 0.44345             |
| METEOSAT-9 | 07   | 295 | 22/10/2007 | 42168.05766             | 0.00001849   | 0.91454              | 169.26021                     | 51.44055                     | 169.57991             | 0.22707             |
| METEOSAT-9 | 07   | 302 | 29/10/2007 | 42168.50886             | 0.00001417   | 0.90285              | 168.20557                     | 343.21486                    | 245.55735             | 0.02479             |
| METEOSAT-9 | 07   | 309 | 05/11/2007 | 42167.60982             | 0.00004553   | 0.90931              | 166.78888                     | 127.38244                    | 109.54899             | -0.13207            |
| METEOSAT-9 | 07   | 316 | 12/11/2007 | 42168.07542             | 0.00004433   | 0.89780              | 165.66320                     | 269.43180                    | 335.39181             | -0.26447            |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 07   | 323 | 19/11/2007 | 42166.13414             | 0.00005177   | 0.90517              | 164.12922                     | 94.76661                     | 158.40132             | -0.35301            |
| METEOSAT-9 | 07   | 330 | 26/11/2007 | 42167.67140             | 0.00001282   | 0.89541              | 162.51242                     | 146.16292                    | 115.45026             | -0.42321            |
| METEOSAT-9 | 07   | 337 | 03/12/2007 | 42165.72299             | 0.00007147   | 0.90697              | 161.02704                     | 136.09474                    | 133.87107             | -0.45456            |
| METEOSAT-9 | 07   | 344 | 10/12/2007 | 42166.81430             | 0.00004102   | 0.90129              | 159.44991                     | 240.64536                    | 37.79601              | -0.45472            |
| METEOSAT-9 | 07   | 351 | 17/12/2007 | 42164.73076             | 0.00007410   | 0.91616              | 158.01752                     | 117.44882                    | 169.35458             | -0.42374            |
| METEOSAT-9 | 07   | 358 | 24/12/2007 | 42166.52599             | 0.00003453   | 0.91506              | 156.15848                     | 172.94206                    | 122.67670             | -0.36623            |
| METEOSAT-9 | 07   | 365 | 31/12/2007 | 42164.17808             | 0.00008494   | 0.93323              | 154.99804                     | 151.97408                    | 151.79288             | -0.27747            |
| METEOSAT-9 | 08   | 7   | 07/01/2008 | 42165.36208             | 0.00005755   | 0.93639              | 153.43046                     | 228.56367                    | 83.79745              | -0.15019            |
| METEOSAT-9 | 08   | 14  | 14/01/2008 | 42163.75385             | 0.00008151   | 0.95678              | 152.49468                     | 136.55511                    | 183.78679             | -0.00472            |
| METEOSAT-9 | 08   | 21  | 21/01/2008 | 42164.87928             | 0.00005472   | 0.96341              | 150.86356                     | 187.82063                    | 141.23539             | 0.17826             |
| METEOSAT-9 | 08   | 28  | 28/01/2008 | 42163.10745             | 0.00008296   | 0.98283              | 150.27254                     | 171.12740                    | 165.62867             | 0.38727             |
| METEOSAT-9 | 08   | 35  | 04/02/2008 | 42163.63506             | 0.00008009   | 0.99032              | 149.01765                     | 230.20882                    | 114.95676             | 0.64134             |
| METEOSAT-9 | 08   | 42  | 11/02/2008 | 42168.17658             | 0.00004892   | 0.79571              | 245.90414                     | 215.03557                    | 40.12791              | 0.62277             |
| METEOSAT-9 | 08   | 49  | 18/02/2008 | 42168.08840             | 0.00010154   | 0.77343              | 245.34118                     | 188.87618                    | 73.59567              | 0.46924             |
| METEOSAT-9 | 08   | 56  | 25/02/2008 | 42167.53271             | 0.00008924   | 0.76959              | 244.21692                     | 191.88219                    | 78.48388              | 0.34048             |
| METEOSAT-9 | 08   | 63  | 03/03/2008 | 42166.93070             | 0.00015898   | 0.75220              | 243.78008                     | 189.37006                    | 88.25008              | 0.25874             |
| METEOSAT-9 | 08   | 70  | 10/03/2008 | 42167.36274             | 0.00006345   | 0.74826              | 242.77462                     | 213.65411                    | 71.79216              | 0.18065             |
| METEOSAT-9 | 08   | 77  | 17/03/2008 | 42166.08572             | 0.00011945   | 0.72695              | 242.26263                     | 186.76007                    | 106.07238             | 0.15562             |
| METEOSAT-9 | 08   | 84  | 24/03/2008 | 42166.72394             | 0.00011311   | 0.72406              | 241.74005                     | 201.49877                    | 98.75321              | 0.15353             |
| METEOSAT-9 | 08   | 91  | 31/03/2008 | 42165.07034             | 0.00017534   | 0.70532              | 241.45331                     | 190.18823                    | 117.29560             | 0.19918             |
| METEOSAT-9 | 08   | 98  | 07/04/2008 | 42166.33762             | 0.00007723   | 0.69939              | 240.98073                     | 219.19693                    | 95.70733              | 0.24774             |
| METEOSAT-9 | 08   | 105 | 14/04/2008 | 42164.15502             | 0.00013896   | 0.67493              | 240.44754                     | 188.41338                    | 134.02728             | 0.35108             |
| METEOSAT-9 | 08   | 112 | 21/04/2008 | 42165.51251             | 0.00013299   | 0.66749              | 240.41010                     | 208.91422                    | 120.59246             | 0.48006             |
| METEOSAT-9 | 08   | 119 | 28/04/2008 | 42163.37644             | 0.00018942   | 0.64556              | 239.96969                     | 194.35740                    | 142.66629             | 0.65666             |
| METEOSAT-9 | 08   | 126 | 05/05/2008 | 42164.80844             | 0.00009324   | 0.63357              | 239.79847                     | 224.83505                    | 119.44502             | 0.84197             |
| METEOSAT-9 | 08   | 133 | 12/05/2008 | 42168.16060             | 0.00009122   | 0.60580              | 238.85838                     | 133.36693                    | 218.54859             | 0.63717             |
| METEOSAT-9 | 08   | 140 | 19/05/2008 | 42169.53474             | 0.00003841   | 0.59234              | 238.89471                     | 154.53204                    | 203.99998             | 0.39015             |
| METEOSAT-9 | 08   | 147 | 26/05/2008 | 42167.72886             | 0.00009951   | 0.56765              | 237.88307                     | 157.86861                    | 208.37381             | 0.18885             |
| METEOSAT-9 | 08   | 154 | 02/06/2008 | 42168.63394             | 0.00002745   | 0.55261              | 237.52172                     | 48.83440                     | 324.48051             | 0.00024             |
| METEOSAT-9 | 08   | 161 | 09/06/2008 | 42166.87841             | 0.00008139   | 0.52521              | 235.62943                     | 144.06851                    | 237.89298             | -0.14552            |
| METEOSAT-9 | 08   | 168 | 16/06/2008 | 42167.66603             | 0.00003666   | 0.50901              | 235.27841                     | 186.63626                    | 202.46073             | -0.26062            |
| METEOSAT-9 | 08   | 175 | 23/06/2008 | 42166.76646             | 0.00008023   | 0.48759              | 233.16280                     | 165.93866                    | 232.10039             | -0.33397            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 08   | 182 | 30/06/2008 | 42166.64382             | 0.00002061   | 0.47248              | 232.30628                     | 19.31181                     | 26.42552              | -0.39168            |
| METEOSAT-9 | 08   | 189 | 07/07/2008 | 42166.04921             | 0.00006658   | 0.45250              | 229.18956                     | 149.42574                    | 266.30460             | -0.41498            |
| METEOSAT-9 | 08   | 196 | 14/07/2008 | 42165.78007             | 0.00003579   | 0.43793              | 228.24160                     | 221.02649                    | 202.55972             | -0.40644            |
| METEOSAT-9 | 08   | 203 | 21/07/2008 | 42166.09185             | 0.00005531   | 0.42553              | 225.06479                     | 166.72163                    | 266.98837             | -0.35890            |
| METEOSAT-9 | 08   | 210 | 28/07/2008 | 42164.78050             | 0.00003209   | 0.41334              | 223.80115                     | 2.24831                      | 79.69207              | -0.29143            |
| METEOSAT-9 | 08   | 217 | 04/08/2008 | 42165.38491             | 0.00005405   | 0.40485              | 220.02649                     | 144.17387                    | 308.53579             | -0.19617            |
| METEOSAT-9 | 08   | 224 | 11/08/2008 | 42164.04220             | 0.00003192   | 0.39354              | 218.81147                     | 258.58880                    | 202.36442             | -0.06695            |
| METEOSAT-9 | 08   | 231 | 18/08/2008 | 42165.36989             | 0.00003817   | 0.39081              | 215.48018                     | 141.40681                    | 329.94476             | 0.10073             |
| METEOSAT-9 | 08   | 238 | 25/08/2008 | 42163.09336             | 0.00005248   | 0.37996              | 214.26532                     | 13.69542                     | 105.96186             | 0.29224             |
| METEOSAT-9 | 08   | 245 | 01/09/2008 | 42164.44326             | 0.00005283   | 0.37969              | 210.97441                     | 129.15839                    | 0.90676               | 0.50969             |
| METEOSAT-9 | 08   | 252 | 08/09/2008 | 42162.51037             | 0.00002412   | 0.36837              | 209.92983                     | 303.61468                    | 194.64967             | 0.76487             |
| METEOSAT-9 | 08   | 259 | 15/09/2008 | 42170.35414             | 0.00019765   | 0.36950              | 207.22375                     | 110.29303                    | 37.47238              | 0.66030             |
| METEOSAT-9 | 08   | 266 | 22/09/2008 | 42167.81466             | 0.00017453   | 0.35521              | 206.04995                     | 88.84618                     | 66.75262              | 0.42026             |
| METEOSAT-9 | 08   | 273 | 29/09/2008 | 42169.25664             | 0.00021047   | 0.35573              | 203.58045                     | 116.85837                    | 47.89541              | 0.20616             |
| METEOSAT-9 | 08   | 280 | 06/10/2008 | 42167.49151             | 0.00014333   | 0.34017              | 202.37309                     | 110.01721                    | 62.66906              | 0.03168             |
| METEOSAT-9 | 08   | 287 | 13/10/2008 | 42168.42504             | 0.00022154   | 0.33938              | 200.05600                     | 109.32895                    | 72.43530              | -0.10710            |
| METEOSAT-9 | 08   | 294 | 20/10/2008 | 42166.52264             | 0.00019953   | 0.31977              | 197.97751                     | 95.45147                     | 95.17869              | -0.21935            |
| METEOSAT-9 | 08   | 301 | 27/10/2008 | 42167.50418             | 0.00022792   | 0.31727              | 195.58361                     | 121.26370                    | 78.57322              | -0.30604            |
| METEOSAT-9 | 08   | 308 | 03/11/2008 | 42166.43995             | 0.00016897   | 0.29871              | 192.95936                     | 118.91499                    | 90.40069              | -0.35117            |
| METEOSAT-9 | 08   | 315 | 10/11/2008 | 42166.13383             | 0.00025601   | 0.29644              | 190.04616                     | 113.81618                    | 105.29711             | -0.36631            |
| METEOSAT-9 | 08   | 322 | 17/11/2008 | 42165.55823             | 0.00022267   | 0.27754              | 185.48058                     | 110.48854                    | 120.10341             | -0.35282            |
| METEOSAT-9 | 08   | 329 | 24/11/2008 | 42165.58692             | 0.00025072   | 0.27591              | 182.12338                     | 133.54212                    | 107.34611             | -0.31320            |
| METEOSAT-9 | 08   | 336 | 01/12/2008 | 42165.46341             | 0.00019319   | 0.26401              | 176.81022                     | 138.16032                    | 115.02433             | -0.22950            |
| METEOSAT-9 | 08   | 343 | 08/12/2008 | 42164.01249             | 0.00028903   | 0.26740              | 173.03599                     | 130.24537                    | 133.71936             | -0.12310            |
| METEOSAT-9 | 08   | 350 | 15/12/2008 | 42164.91853             | 0.00023323   | 0.26248              | 165.93973                     | 136.20326                    | 141.89765             | 0.01723             |
| METEOSAT-9 | 08   | 357 | 22/12/2008 | 42163.66621             | 0.00027180   | 0.26898              | 162.38100                     | 155.28603                    | 133.43959             | 0.18375             |
| METEOSAT-9 | 08   | 364 | 29/12/2008 | 42164.39474             | 0.00021025   | 0.27411              | 156.42928                     | 164.10799                    | 137.68199             | 0.39678             |
| METEOSAT-9 | 09   | 5   | 05/01/2009 | 42162.38827             | 0.00030720   | 0.28588              | 153.83684                     | 152.97491                    | 158.53565             | 0.62550             |
| METEOSAT-9 | 09   | 12  | 12/01/2009 | 42164.21390             | 0.00023322   | 0.29868              | 148.01169                     | 162.91910                    | 161.58781             | 0.89689             |
| METEOSAT-9 | 09   | 19  | 19/01/2009 | 42168.37549             | 0.00019944   | 0.31022              | 146.14846                     | 144.97390                    | 188.09337             | 0.69452             |
| METEOSAT-9 | 09   | 26  | 26/01/2009 | 42169.55630             | 0.00013399   | 0.32672              | 142.48905                     | 141.76696                    | 201.62300             | 0.45803             |
| METEOSAT-9 | 09   | 33  | 02/02/2009 | 42167.65834             | 0.00024595   | 0.33844              | 141.62572                     | 141.28663                    | 209.63881             | 0.23064             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 09   | 40  | 09/02/2009 | 42169.42527             | 0.00016268   | 0.35780              | 138.27983                     | 141.60868                    | 219.38510             | 0.05325             |
| METEOSAT-9 | 09   | 47  | 16/02/2009 | 42166.98654             | 0.00018429   | 0.36557              | 137.48564                     | 161.47902                    | 207.05057             | -0.10469            |
| METEOSAT-9 | 09   | 54  | 23/02/2009 | 42168.03972             | 0.00011727   | 0.38274              | 135.45351                     | 160.75299                    | 216.59800             | -0.21527            |
| METEOSAT-9 | 09   | 61  | 02/03/2009 | 42166.72791             | 0.00022097   | 0.38781              | 134.95422                     | 152.84205                    | 231.80091             | -0.32206            |
| METEOSAT-9 | 09   | 68  | 09/03/2009 | 42167.60572             | 0.00013979   | 0.40596              | 132.78508                     | 160.04638                    | 233.61207             | -0.37549            |
| METEOSAT-9 | 09   | 75  | 16/03/2009 | 42165.97428             | 0.00016093   | 0.40701              | 131.77315                     | 173.03373                    | 228.50126             | -0.41032            |
| METEOSAT-9 | 09   | 82  | 23/03/2009 | 42166.24934             | 0.00010166   | 0.42155              | 130.17935                     | 178.94639                    | 231.09398             | -0.39835            |
| METEOSAT-9 | 09   | 89  | 30/03/2009 | 42165.80936             | 0.00019948   | 0.42147              | 129.09563                     | 160.33456                    | 257.70896             | -0.37816            |
| METEOSAT-9 | 09   | 96  | 06/04/2009 | 42165.37541             | 0.00012363   | 0.43840              | 127.21773                     | 179.45020                    | 247.44675             | -0.30219            |
| METEOSAT-9 | 09   | 103 | 13/04/2009 | 42165.06756             | 0.00013868   | 0.43729              | 125.33641                     | 180.78942                    | 254.98636             | -0.20382            |
| METEOSAT-9 | 09   | 110 | 20/04/2009 | 42164.18422             | 0.00008998   | 0.45244              | 123.71142                     | 197.00779                    | 247.43546             | -0.06072            |
| METEOSAT-9 | 09   | 117 | 27/04/2009 | 42164.87284             | 0.00017708   | 0.45333              | 121.55208                     | 166.84902                    | 286.80510             | 0.09168             |
| METEOSAT-9 | 09   | 124 | 04/05/2009 | 42163.18359             | 0.00010317   | 0.47323              | 119.89170                     | 202.38029                    | 260.03610             | 0.29423             |
| METEOSAT-9 | 09   | 131 | 11/05/2009 | 42168.48711             | 0.00004435   | 0.56806              | 266.96377                     | 104.80661                    | 217.43586             | 0.29389             |
| METEOSAT-9 | 09   | 138 | 18/05/2009 | 42166.63369             | 0.00007944   | 0.54640              | 266.74330                     | 152.01896                    | 177.22290             | 0.17293             |
| METEOSAT-9 | 09   | 145 | 25/05/2009 | 42168.06843             | 0.00005428   | 0.53017              | 268.06671                     | 21.80185                     | 312.91047             | 0.06712             |
| METEOSAT-9 | 09   | 152 | 01/06/2009 | 42165.70514             | 0.00008550   | 0.50467              | 267.57100                     | 145.23273                    | 196.80903             | 0.00085             |
| METEOSAT-9 | 09   | 159 | 08/06/2009 | 42167.21066             | 0.00003395   | 0.48572              | 268.93138                     | 128.55090                    | 219.00210             | -0.02728            |
| METEOSAT-9 | 09   | 166 | 15/06/2009 | 42165.12102             | 0.00007908   | 0.46327              | 268.21436                     | 162.45488                    | 192.72237             | -0.01999            |
| METEOSAT-9 | 09   | 173 | 22/06/2009 | 42166.57956             | 0.00004134   | 0.44288              | 269.50377                     | 1.99923                      | 358.81834             | 0.00997             |
| METEOSAT-9 | 09   | 180 | 29/06/2009 | 42164.31762             | 0.00008977   | 0.41832              | 268.34421                     | 157.45162                    | 211.48038             | 0.06499             |
| METEOSAT-9 | 09   | 187 | 06/07/2009 | 42165.65585             | 0.00002966   | 0.39661              | 269.37579                     | 159.00741                    | 215.89570             | 0.16798             |
| METEOSAT-9 | 09   | 194 | 13/07/2009 | 42164.08532             | 0.00006514   | 0.37743              | 267.78138                     | 172.03975                    | 211.49017             | 0.30068             |
| METEOSAT-9 | 09   | 201 | 20/07/2009 | 42164.75654             | 0.00003909   | 0.35618              | 268.70650                     | 335.81676                    | 53.85120              | 0.46421             |
| METEOSAT-9 | 09   | 208 | 27/07/2009 | 42163.35422             | 0.00008351   | 0.33690              | 266.64663                     | 165.70814                    | 233.09597             | 0.64087             |
| METEOSAT-9 | 09   | 215 | 03/08/2009 | 42163.80789             | 0.00003013   | 0.31584              | 267.12929                     | 194.52498                    | 210.93040             | 0.87525             |
| METEOSAT-9 | 09   | 222 | 10/08/2009 | 42169.37212             | 0.00010806   | 0.30359              | 264.68486                     | 37.99595                     | 16.67815              | 0.75011             |
| METEOSAT-9 | 09   | 229 | 17/08/2009 | 42168.78676             | 0.00017114   | 0.28386              | 265.32044                     | 11.40918                     | 49.28533              | 0.50661             |
| METEOSAT-9 | 09   | 236 | 24/08/2009 | 42168.60066             | 0.00010052   | 0.27212              | 262.89498                     | 56.16380                     | 13.61690              | 0.26797             |
| METEOSAT-9 | 09   | 243 | 31/08/2009 | 42167.93133             | 0.00011419   | 0.25334              | 263.10367                     | 23.16947                     | 53.12491              | 0.09086             |
| METEOSAT-9 | 09   | 250 | 07/09/2009 | 42168.59156             | 0.00013210   | 0.24739              | 260.95663                     | 37.16669                     | 48.01885              | -0.06430            |
| METEOSAT-9 | 09   | 257 | 14/09/2009 | 42166.88507             | 0.00018066   | 0.22860              | 261.77823                     | 11.93763                     | 79.20861              | -0.18150            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 09   | 264 | 21/09/2009 | 42167.76278             | 0.00011520   | 0.22165              | 260.35260                     | 55.19251                     | 44.16397              | -0.29621            |
| METEOSAT-9 | 09   | 271 | 28/09/2009 | 42166.12451             | 0.00012394   | 0.20298              | 261.11396                     | 20.06845                     | 85.37190              | -0.35056            |
| METEOSAT-9 | 09   | 278 | 05/10/2009 | 42167.57296             | 0.00015802   | 0.19831              | 260.52451                     | 37.14956                     | 75.74631              | -0.38379            |
| METEOSAT-9 | 09   | 285 | 12/10/2009 | 42165.13830             | 0.00019682   | 0.17703              | 262.33059                     | 11.77631                     | 106.21735             | -0.37951            |
| METEOSAT-9 | 09   | 292 | 19/10/2009 | 42166.62309             | 0.00013403   | 0.16930              | 263.13191                     | 50.92373                     | 73.17915              | -0.36834            |
| METEOSAT-9 | 09   | 299 | 26/10/2009 | 42164.58945             | 0.00014054   | 0.14772              | 265.29189                     | 16.32309                     | 112.58773             | -0.30009            |
| METEOSAT-9 | 09   | 306 | 02/11/2009 | 42166.02368             | 0.00018755   | 0.13980              | 267.10866                     | 30.88041                     | 103.20354             | -0.20958            |
| METEOSAT-9 | 09   | 313 | 09/11/2009 | 42163.61743             | 0.00021504   | 0.11404              | 271.16505                     | 7.07340                      | 129.98141             | -0.08202            |
| METEOSAT-9 | 09   | 320 | 16/11/2009 | 42165.06300             | 0.00015640   | 0.10323              | 275.85619                     | 38.38498                     | 101.02124             | 0.06105             |
| METEOSAT-9 | 09   | 327 | 23/11/2009 | 42163.38354             | 0.00015502   | 0.07897              | 282.33764                     | 5.24248                      | 134.77728             | 0.25633             |
| METEOSAT-9 | 09   | 334 | 30/11/2009 | 42163.90757             | 0.00021862   | 0.06888              | 290.09833                     | 9.48800                      | 129.89014             | 0.47593             |
| METEOSAT-9 | 09   | 341 | 07/12/2009 | 42162.43469             | 0.00022227   | 0.04431              | 309.90260                     | 335.46401                    | 151.26610             | 0.73243             |
| METEOSAT-9 | 09   | 348 | 14/12/2009 | 42169.32138             | 0.00003896   | 0.04065              | 333.07656                     | 14.28149                     | 95.98290              | 0.54111             |
| METEOSAT-9 | 09   | 355 | 21/12/2009 | 42168.50525             | 0.00003815   | 0.03731              | 14.57734                      | 222.07143                    | 213.36978             | 0.31902             |
| METEOSAT-9 | 09   | 362 | 28/12/2009 | 42167.83802             | 0.00009834   | 0.04691              | 31.04840                      | 263.69922                    | 161.97260             | 0.12115             |
| METEOSAT-9 | 10   | 4   | 04/01/2010 | 42167.81722             | 0.00008126   | 0.06689              | 56.03000                      | 210.74382                    | 196.68301             | -0.04203            |
| METEOSAT-9 | 10   | 11  | 11/01/2010 | 42167.47145             | 0.00006431   | 0.08322              | 59.61502                      | 298.58483                    | 112.02206             | -0.17644            |
| METEOSAT-9 | 10   | 18  | 18/01/2010 | 42167.60065             | 0.00001334   | 0.10262              | 70.12904                      | 212.11396                    | 194.78110             | -0.27393            |
| METEOSAT-9 | 10   | 25  | 25/01/2010 | 42166.03737             | 0.00010353   | 0.11503              | 71.50953                      | 239.87695                    | 172.46176             | -0.34932            |
| METEOSAT-9 | 10   | 32  | 01/02/2010 | 42167.42564             | 0.00004091   | 0.13835              | 78.25850                      | 217.39653                    | 195.05122             | -0.39099            |
| METEOSAT-9 | 10   | 39  | 08/02/2010 | 42165.72382             | 0.00009229   | 0.15235              | 77.77552                      | 294.89397                    | 124.92467             | -0.40257            |
| METEOSAT-9 | 10   | 46  | 15/02/2010 | 42166.60314             | 0.00002636   | 0.16838              | 82.31517                      | 318.11595                    | 104.08256             | -0.38266            |
| METEOSAT-9 | 10   | 53  | 22/02/2010 | 42164.65056             | 0.00009932   | 0.17759              | 81.51745                      | 250.55112                    | 179.38715             | -0.34002            |
| METEOSAT-9 | 10   | 60  | 01/03/2010 | 42166.70715             | 0.00003701   | 0.19608              | 84.72379                      | 302.36625                    | 131.34319             | -0.26209            |
| METEOSAT-9 | 10   | 67  | 08/03/2010 | 42164.10124             | 0.00012012   | 0.20785              | 82.82499                      | 303.44572                    | 139.17089             | -0.15313            |
| METEOSAT-9 | 10   | 74  | 15/03/2010 | 42165.28006             | 0.00005912   | 0.21965              | 84.96390                      | 334.72705                    | 112.78981             | -0.01338            |
| METEOSAT-9 | 10   | 81  | 22/03/2010 | 42163.49780             | 0.00009437   | 0.22876              | 82.70530                      | 271.51929                    | 185.32076             | 0.15184             |
| METEOSAT-9 | 10   | 88  | 29/03/2010 | 42165.06987             | 0.00008283   | 0.24363              | 84.08985                      | 331.26169                    | 131.29636             | 0.35498             |
| METEOSAT-9 | 10   | 95  | 05/04/2010 | 42162.66533             | 0.00014109   | 0.25783              | 81.37961                      | 316.29474                    | 156.10991             | 0.59192             |
| METEOSAT-9 | 10   | 102 | 12/04/2010 | 42163.47709             | 0.00009110   | 0.26891              | 82.08322                      | 345.96690                    | 132.90358             | 0.86198             |
| METEOSAT-9 | 10   | 109 | 19/04/2010 | 42168.99083             | 0.00013547   | 0.28371              | 79.36610                      | 210.49795                    | 277.77983             | 0.65278             |
| METEOSAT-9 | 10   | 116 | 26/04/2010 | 42169.33536             | 0.00003609   | 0.29883              | 79.89229                      | 212.83137                    | 281.56545             | 0.39855             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 10   | 123 | 03/05/2010 | 42168.08711             | 0.00006981   | 0.31968              | 77.59351                      | 250.18959                    | 253.18872             | 0.18170             |
| METEOSAT-9 | 10   | 130 | 10/05/2010 | 42168.03803             | 0.00003700   | 0.33307              | 77.93220                      | 173.63301                    | 336.12118             | -0.00318            |
| METEOSAT-9 | 10   | 137 | 17/05/2010 | 42167.97093             | 0.00010900   | 0.35585              | 76.03615                      | 211.86842                    | 306.52620             | -0.15847            |
| METEOSAT-9 | 10   | 144 | 24/05/2010 | 42167.07574             | 0.00001200   | 0.37272              | 76.53825                      | 320.40800                    | 204.25824             | -0.28433            |
| METEOSAT-9 | 10   | 151 | 31/05/2010 | 42167.21534             | 0.00004600   | 0.39912              | 75.43728                      | 254.70432                    | 277.87795             | -0.36909            |
| METEOSAT-9 | 10   | 158 | 07/06/2010 | 42166.08007             | 0.00002500   | 0.41387              | 76.01941                      | 133.31544                    | 45.52799              | -0.42546            |
| METEOSAT-9 | 10   | 165 | 14/06/2010 | 42167.04988             | 0.00009500   | 0.44136              | 75.28341                      | 205.94982                    | 340.50330             | -0.45163            |
| METEOSAT-9 | 10   | 172 | 21/06/2010 | 42165.16205             | 0.00003400   | 0.45793              | 75.98238                      | 21.55405                     | 171.09334             | -0.45817            |
| METEOSAT-9 | 10   | 179 | 28/06/2010 | 42166.25073             | 0.00003200   | 0.48455              | 76.02022                      | 231.75094                    | 327.80941             | -0.40733            |
| METEOSAT-9 | 10   | 186 | 05/07/2010 | 42164.30376             | 0.00003600   | 0.49732              | 76.79909                      | 115.11629                    | 90.64325              | -0.32896            |
| METEOSAT-9 | 10   | 193 | 12/07/2010 | 42165.86157             | 0.00009600   | 0.52471              | 76.82563                      | 195.28829                    | 17.45550              | -0.21808            |
| METEOSAT-9 | 10   | 200 | 19/07/2010 | 42163.51524             | 0.00004500   | 0.53824              | 77.50593                      | 42.05697                     | 177.02749             | -0.09675            |
| METEOSAT-9 | 10   | 207 | 26/07/2010 | 42165.12835             | 0.00002800   | 0.56270              | 77.97338                      | 195.11236                    | 30.58221              | 0.08099             |
| METEOSAT-9 | 10   | 214 | 02/08/2010 | 42163.07525             | 0.00004600   | 0.57101              | 78.61526                      | 118.07910                    | 114.07401             | 0.28195             |
| METEOSAT-9 | 10   | 221 | 09/08/2010 | 42168.29145             | 0.00002200   | 0.45468              | 297.50526                     | 258.45082                    | 121.65947             | 0.23029             |
| METEOSAT-9 | 10   | 228 | 16/08/2010 | 42166.23288             | 0.00013500   | 0.44369              | 297.57646                     | 171.55896                    | 215.26788             | 0.11846             |
| METEOSAT-9 | 10   | 235 | 23/08/2010 | 42167.44886             | 0.00006400   | 0.42361              | 298.40308                     | 178.45768                    | 214.39358             | 0.06987             |
| METEOSAT-9 | 10   | 242 | 30/08/2010 | 42166.06113             | 0.00008600   | 0.41783              | 298.24333                     | 192.50099                    | 207.38248             | 0.04296             |
| METEOSAT-9 | 10   | 249 | 06/09/2010 | 42166.40767             | 0.00003500   | 0.39944              | 299.50800                     | 259.27706                    | 146.25187             | 0.05353             |
| METEOSAT-9 | 10   | 256 | 13/09/2010 | 42165.31185             | 0.00012500   | 0.39444              | 300.10074                     | 170.12397                    | 241.72258             | 0.06455             |
| METEOSAT-9 | 10   | 263 | 20/09/2010 | 42165.51772             | 0.00006400   | 0.37818              | 301.06777                     | 193.83839                    | 224.01713             | 0.14111             |
| METEOSAT-9 | 10   | 270 | 27/09/2010 | 42165.24991             | 0.00006800   | 0.37769              | 301.69415                     | 189.40910                    | 234.81851             | 0.24035             |
| METEOSAT-9 | 10   | 277 | 04/10/2010 | 42164.28152             | 0.00004400   | 0.36233              | 303.43575                     | 262.30473                    | 167.21862             | 0.37819             |
| METEOSAT-9 | 10   | 284 | 11/10/2010 | 42164.45919             | 0.00011400   | 0.36160              | 305.19613                     | 160.31988                    | 274.48478             | 0.52062             |
| METEOSAT-9 | 10   | 291 | 18/10/2010 | 42163.39482             | 0.00006000   | 0.34770              | 306.89508                     | 206.14736                    | 234.06382             | 0.72660             |
| METEOSAT-9 | 10   | 298 | 25/10/2010 | 42164.25292             | 0.00004800   | 0.34963              | 308.83558                     | 173.83286                    | 271.57083             | 0.96038             |
| METEOSAT-9 | 10   | 305 | 01/11/2010 | 42168.35282             | 0.00018500   | 0.33511              | 311.48200                     | 294.13716                    | 155.29272             | 0.73341             |
| METEOSAT-9 | 10   | 312 | 08/11/2010 | 42169.57130             | 0.00006700   | 0.33608              | 314.61746                     | 260.12017                    | 192.80243             | 0.46218             |
| METEOSAT-9 | 10   | 319 | 15/11/2010 | 42167.65032             | 0.00016000   | 0.32252              | 317.28466                     | 277.97315                    | 178.96473             | 0.24514             |
| METEOSAT-9 | 10   | 326 | 22/11/2010 | 42169.12284             | 0.00011700   | 0.32450              | 320.48234                     | 285.48288                    | 174.97094             | 0.05935             |
| METEOSAT-9 | 10   | 333 | 29/11/2010 | 42166.60616             | 0.00018000   | 0.30971              | 324.02036                     | 289.21843                    | 174.44397             | -0.09373            |
| METEOSAT-9 | 10   | 340 | 06/12/2010 | 42168.27389             | 0.00005131   | 0.31104              | 328.20880                     | 266.21798                    | 200.02416             | -0.22504            |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 10   | 347 | 13/12/2010 | 42166.22967             | 0.00015406   | 0.29714              | 331.59668                     | 271.27234                    | 198.39037             | -0.31625            |
| METEOSAT-9 | 10   | 354 | 20/12/2010 | 42167.51369             | 0.00011029   | 0.29881              | 335.54953                     | 284.33954                    | 188.21364             | -0.37243            |
| METEOSAT-9 | 10   | 361 | 27/12/2010 | 42165.32286             | 0.00015870   | 0.28401              | 339.64541                     | 282.73939                    | 192.58745             | -0.40261            |
| METEOSAT-9 | 11   | 3   | 03/01/2011 | 42166.74923             | 0.00003603   | 0.28614              | 344.28297                     | 280.20601                    | 197.38315             | -0.40232            |
| METEOSAT-9 | 11   | 10  | 10/01/2011 | 42165.26122             | 0.00013096   | 0.27291              | 347.81268                     | 261.57175                    | 219.41527             | -0.37436            |
| METEOSAT-9 | 11   | 17  | 17/01/2011 | 42165.57752             | 0.00010281   | 0.27548              | 351.79498                     | 284.89769                    | 199.07353             | -0.30740            |
| METEOSAT-9 | 11   | 24  | 24/01/2011 | 42164.52271             | 0.00012102   | 0.26282              | 355.81557                     | 275.95495                    | 210.98367             | -0.21899            |
| METEOSAT-9 | 11   | 31  | 31/01/2011 | 42165.02798             | 0.00002773   | 0.26720              | 0.18469                       | 322.52591                    | 167.06944             | -0.09276            |
| METEOSAT-9 | 11   | 38  | 07/02/2011 | 42164.46577             | 0.00009543   | 0.25679              | 3.07832                       | 249.89766                    | 243.85003             | 0.05373             |
| METEOSAT-9 | 11   | 45  | 14/02/2011 | 42163.53581             | 0.00009139   | 0.26224              | 6.37009                       | 290.61895                    | 206.92617             | 0.24340             |
| METEOSAT-9 | 11   | 52  | 21/02/2011 | 42164.05815             | 0.00006982   | 0.25432              | 9.51484                       | 270.45616                    | 231.05399             | 0.45365             |
| METEOSAT-9 | 11   | 59  | 28/02/2011 | 42163.12400             | 0.00004525   | 0.26286              | 13.07220                      | 6.62646                      | 138.47991             | 0.70770             |
| METEOSAT-9 | 11   | 66  | 07/03/2011 | 42169.56638             | 0.00019655   | 0.25775              | 14.77855                      | 215.47928                    | 294.62421             | 0.51175             |
| METEOSAT-9 | 11   | 73  | 14/03/2011 | 42167.76181             | 0.00015256   | 0.26807              | 17.15814                      | 235.31014                    | 279.08670             | 0.28521             |
| METEOSAT-9 | 11   | 80  | 21/03/2011 | 42169.48440             | 0.00015129   | 0.26696              | 19.05319                      | 209.93939                    | 309.25677             | 0.08014             |
| METEOSAT-9 | 11   | 87  | 28/03/2011 | 42167.31076             | 0.00007011   | 0.28093              | 21.86615                      | 198.57362                    | 324.54799             | -0.08106            |
| METEOSAT-9 | 11   | 94  | 04/04/2011 | 42168.31703             | 0.00017089   | 0.28270              | 22.59597                      | 200.17822                    | 328.97036             | -0.22363            |
| METEOSAT-9 | 11   | 101 | 11/04/2011 | 42166.28274             | 0.00011557   | 0.29853              | 24.55169                      | 223.90257                    | 310.09155             | -0.32199            |
| METEOSAT-9 | 11   | 108 | 18/04/2011 | 42168.27962             | 0.00012706   | 0.30469              | 25.67083                      | 185.48215                    | 354.21519             | -0.39911            |
| METEOSAT-9 | 11   | 115 | 25/04/2011 | 42165.61155             | 0.00005726   | 0.32348              | 28.22187                      | 160.89635                    | 23.11446              | -0.43425            |
| METEOSAT-9 | 11   | 122 | 02/05/2011 | 42166.81397             | 0.00015632   | 0.33172              | 28.74223                      | 183.25928                    | 7.11692               | -0.44799            |
| METEOSAT-9 | 11   | 129 | 09/05/2011 | 42165.11595             | 0.00009027   | 0.35149              | 30.84337                      | 203.72922                    | 351.47269             | -0.42089            |
| METEOSAT-9 | 11   | 136 | 16/05/2011 | 42166.38844             | 0.00012171   | 0.36307              | 31.80702                      | 158.58453                    | 42.60178              | -0.37178            |
| METEOSAT-9 | 11   | 143 | 23/05/2011 | 42164.27452             | 0.00007485   | 0.38365              | 34.39418                      | 133.81441                    | 71.77448              | -0.28184            |
| METEOSAT-9 | 11   | 150 | 30/05/2011 | 42165.02934             | 0.00015606   | 0.39529              | 35.08825                      | 165.54427                    | 46.36597              | -0.16598            |
| METEOSAT-9 | 11   | 157 | 06/06/2011 | 42164.18486             | 0.00008827   | 0.41636              | 37.39042                      | 181.43602                    | 35.22309              | -0.01422            |
| METEOSAT-9 | 11   | 164 | 13/06/2011 | 42164.17381             | 0.00013591   | 0.42983              | 38.36585                      | 137.56074                    | 85.19742              | 0.16069             |
| METEOSAT-9 | 11   | 171 | 20/06/2011 | 42163.37536             | 0.00009808   | 0.44864              | 40.91926                      | 129.22566                    | 98.09607              | 0.37788             |
| METEOSAT-9 | 11   | 178 | 27/06/2011 | 42163.05677             | 0.00016825   | 0.46019              | 41.70660                      | 151.30711                    | 82.37441              | 0.62552             |
| METEOSAT-9 | 11   | 185 | 04/07/2011 | 42163.32398             | 0.00009846   | 0.47813              | 44.07732                      | 166.44206                    | 72.04804              | 0.90511             |
| METEOSAT-9 | 11   | 192 | 11/07/2011 | 42167.90696             | 0.00023048   | 0.54903              | 307.12803                     | 185.88771                    | 156.32825             | 0.78384             |
| METEOSAT-9 | 11   | 199 | 18/07/2011 | 42168.52326             | 0.00018735   | 0.52598              | 308.23512                     | 181.23814                    | 166.58934             | 0.60250             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 11   | 206 | 25/07/2011 | 42167.03694             | 0.00021421   | 0.51776              | 309.00601                     | 200.32193                    | 153.48473             | 0.45287             |
| METEOSAT-9 | 11   | 213 | 01/08/2011 | 42168.24155             | 0.00013009   | 0.49547              | 310.10462                     | 188.97364                    | 170.51230             | 0.33087             |
| METEOSAT-9 | 11   | 220 | 08/08/2011 | 42166.12274             | 0.00024685   | 0.48748              | 311.15482                     | 185.89700                    | 179.33755             | 0.23001             |
| METEOSAT-9 | 11   | 227 | 15/08/2011 | 42167.62776             | 0.00018492   | 0.46734              | 311.81505                     | 186.35722                    | 185.06406             | 0.17720             |
| METEOSAT-9 | 11   | 234 | 22/08/2011 | 42165.47726             | 0.00022415   | 0.46268              | 312.54001                     | 200.41913                    | 177.15469             | 0.15515             |
| METEOSAT-9 | 11   | 241 | 29/08/2011 | 42167.02593             | 0.00013122   | 0.44403              | 313.37169                     | 192.02123                    | 191.62383             | 0.15839             |
| METEOSAT-9 | 11   | 248 | 05/09/2011 | 42164.64523             | 0.00025044   | 0.44053              | 314.69475                     | 186.47200                    | 202.77159             | 0.18047             |
| METEOSAT-9 | 11   | 255 | 12/09/2011 | 42166.28183             | 0.00018154   | 0.42590              | 315.16909                     | 191.25255                    | 204.48948             | 0.25374             |
| METEOSAT-9 | 11   | 262 | 19/09/2011 | 42164.24924             | 0.00022043   | 0.42624              | 316.27724                     | 199.84095                    | 201.79747             | 0.35887             |
| METEOSAT-9 | 11   | 269 | 26/09/2011 | 42165.28893             | 0.00013157   | 0.41291              | 317.23287                     | 194.08182                    | 213.63213             | 0.49056             |
| METEOSAT-9 | 11   | 276 | 03/10/2011 | 42163.40853             | 0.00024450   | 0.41393              | 319.31601                     | 184.11226                    | 228.56856             | 0.64113             |
| METEOSAT-9 | 11   | 283 | 10/10/2011 | 42164.36783             | 0.00017851   | 0.40497              | 320.15173                     | 194.14619                    | 224.80280             | 0.84567             |
| METEOSAT-9 | 11   | 290 | 17/10/2011 | 42169.09801             | 0.00009898   | 0.40853              | 322.10211                     | 159.16490                    | 264.59761             | 0.71020             |
| METEOSAT-9 | 11   | 297 | 24/10/2011 | 42168.99252             | 0.00005927   | 0.39961              | 323.61003                     | 105.97090                    | 322.92360             | 0.45072             |
| METEOSAT-9 | 11   | 304 | 31/10/2011 | 42168.25766             | 0.00015015   | 0.40312              | 326.69890                     | 141.32273                    | 291.14292             | 0.21126             |
| METEOSAT-9 | 11   | 311 | 07/11/2011 | 42168.13584             | 0.00006227   | 0.39723              | 328.21805                     | 141.60710                    | 296.04944             | 0.02196             |
| METEOSAT-9 | 11   | 318 | 14/11/2011 | 42168.15391             | 0.00008708   | 0.40169              | 331.10203                     | 141.09991                    | 300.42013             | -0.13002            |
| METEOSAT-9 | 11   | 325 | 21/11/2011 | 42166.85517             | 0.00005490   | 0.39414              | 333.22258                     | 86.06929                     | 0.10314               | -0.25651            |
| METEOSAT-9 | 11   | 332 | 28/11/2011 | 42167.41304             | 0.00014638   | 0.39784              | 337.06642                     | 123.81764                    | 325.30616             | -0.36087            |
| METEOSAT-9 | 11   | 339 | 05/12/2011 | 42166.15251             | 0.00004247   | 0.39207              | 339.10391                     | 124.19311                    | 329.72879             | -0.42469            |
| METEOSAT-9 | 11   | 346 | 12/12/2011 | 42167.23843             | 0.00008728   | 0.39536              | 342.55854                     | 114.46476                    | 342.87869             | -0.44806            |
| METEOSAT-9 | 11   | 353 | 19/12/2011 | 42165.03033             | 0.00006814   | 0.38747              | 344.95007                     | 63.72279                     | 38.12731              | -0.44935            |
| METEOSAT-9 | 11   | 360 | 26/12/2011 | 42166.51814             | 0.00015438   | 0.38985              | 349.03531                     | 103.62407                    | 1.06604               | -0.42375            |
| METEOSAT-9 | 12   | 2   | 02/01/2012 | 42164.53845             | 0.00004021   | 0.38347              | 351.13591                     | 86.73664                     | 22.80713              | -0.36857            |
| METEOSAT-9 | 12   | 9   | 09/01/2012 | 42166.09794             | 0.00010207   | 0.38485              | 354.65645                     | 88.02013                     | 25.00269              | -0.26858            |
| METEOSAT-9 | 12   | 16  | 16/01/2012 | 42163.59602             | 0.00009649   | 0.37703              | 356.78357                     | 51.53357                     | 66.38027              | -0.14992            |
| METEOSAT-9 | 12   | 23  | 23/01/2012 | 42165.28970             | 0.00017200   | 0.37822              | 0.61203                       | 85.62888                     | 35.50823              | 0.00217             |
| METEOSAT-9 | 12   | 30  | 30/01/2012 | 42163.33865             | 0.00006259   | 0.37233              | 2.19371                       | 64.99343                     | 61.63433              | 0.17509             |
| METEOSAT-9 | 12   | 37  | 06/02/2012 | 42164.43152             | 0.00012904   | 0.37357              | 5.32011                       | 67.06503                     | 63.55992              | 0.39908             |
| METEOSAT-9 | 12   | 44  | 13/02/2012 | 42162.50885             | 0.00013209   | 0.36847              | 6.76909                       | 48.33557                     | 87.98009              | 0.63935             |
| METEOSAT-9 | 12   | 51  | 20/02/2012 | 42163.60908             | 0.00019748   | 0.37058              | 9.94680                       | 72.57909                     | 67.73963              | 0.92049             |
| METEOSAT-9 | 12   | 58  | 27/02/2012 | 42168.93996             | 0.00006130   | 0.36848              | 10.70581                      | 242.92407                    | 263.33187             | 0.71732             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 12   | 65  | 05/03/2012 | 42168.87708             | 0.00001769   | 0.37212              | 13.19339                      | 0.28017                      | 150.14802             | 0.47758             |
| METEOSAT-9 | 12   | 72  | 12/03/2012 | 42168.24978             | 0.00002500   | 0.37316              | 13.88108                      | 350.12688                    | 166.28954             | 0.25407             |
| METEOSAT-9 | 12   | 79  | 19/03/2012 | 42168.29596             | 0.00007843   | 0.37869              | 16.43089                      | 84.50481                     | 76.08076              | 0.07342             |
| METEOSAT-9 | 12   | 86  | 26/03/2012 | 42167.97690             | 0.00003193   | 0.38332              | 16.57648                      | 209.78204                    | 317.39419             | -0.08977            |
| METEOSAT-9 | 12   | 93  | 02/04/2012 | 42166.75236             | 0.00005232   | 0.39131              | 18.62047                      | 33.77159                     | 138.14817             | -0.20188            |
| METEOSAT-9 | 12   | 100 | 09/04/2012 | 42167.60486             | 0.00004032   | 0.40029              | 18.95591                      | 63.33483                     | 115.05290             | -0.29797            |
| METEOSAT-9 | 12   | 107 | 16/04/2012 | 42166.33492             | 0.00011192   | 0.40991              | 21.23555                      | 78.56068                     | 104.39273             | -0.35236            |
| METEOSAT-9 | 12   | 114 | 23/04/2012 | 42166.91680             | 0.00003828   | 0.42167              | 21.37575                      | 143.34614                    | 46.33303              | -0.38595            |
| METEOSAT-9 | 12   | 121 | 30/04/2012 | 42164.95779             | 0.00008647   | 0.43308              | 23.38388                      | 47.40048                     | 147.18205             | -0.37417            |
| METEOSAT-9 | 12   | 128 | 07/05/2012 | 42166.81541             | 0.00007601   | 0.44855              | 23.88931                      | 85.13311                     | 115.87487             | -0.34292            |
| METEOSAT-9 | 12   | 135 | 14/05/2012 | 42164.44308             | 0.00014530   | 0.46028              | 26.19179                      | 78.22706                     | 127.44865             | -0.27247            |
| METEOSAT-9 | 12   | 142 | 21/05/2012 | 42165.62448             | 0.00006938   | 0.47644              | 26.69035                      | 121.97608                    | 90.19821              | -0.17495            |
| METEOSAT-9 | 12   | 149 | 28/05/2012 | 42163.58543             | 0.00011062   | 0.48791              | 28.83944                      | 56.92947                     | 160.13060             | -0.03982            |
| METEOSAT-9 | 12   | 156 | 04/06/2012 | 42165.43459             | 0.00011123   | 0.50619              | 29.64263                      | 91.49304                     | 131.82443             | 0.12114             |
| METEOSAT-9 | 12   | 163 | 11/06/2012 | 42162.82298             | 0.00016668   | 0.51679              | 31.94207                      | 80.31499                     | 147.80004             | 0.31844             |
| METEOSAT-9 | 12   | 170 | 18/06/2012 | 42164.02493             | 0.00009996   | 0.53340              | 32.74133                      | 116.86909                    | 117.57818             | 0.55039             |
| METEOSAT-9 | 12   | 177 | 25/06/2012 | 42162.53811             | 0.00012335   | 0.54259              | 34.85883                      | 63.84023                     | 175.65073             | 0.81199             |
| METEOSAT-9 | 12   | 184 | 02/07/2012 | 42168.93391             | 0.00025475   | 0.53558              | 311.05550                     | 155.95840                    | 174.05940             | 0.63494             |
| METEOSAT-9 | 12   | 191 | 09/07/2012 | 42167.15256             | 0.00028805   | 0.51447              | 311.91429                     | 153.14605                    | 182.74746             | 0.46959             |
| METEOSAT-9 | 12   | 198 | 16/07/2012 | 42167.69721             | 0.00021011   | 0.50590              | 313.49997                     | 164.59387                    | 176.48409             | 0.34001             |
| METEOSAT-9 | 12   | 205 | 23/07/2012 | 42167.16506             | 0.00024946   | 0.48595              | 314.17546                     | 142.13786                    | 205.05549             | 0.23107             |
| METEOSAT-9 | 12   | 212 | 30/07/2012 | 42166.80506             | 0.00027036   | 0.47682              | 315.96366                     | 158.17757                    | 194.05401             | 0.15777             |
| METEOSAT-9 | 12   | 219 | 06/08/2012 | 42166.40760             | 0.00026958   | 0.45867              | 316.38335                     | 154.75275                    | 203.91802             | 0.11690             |
| METEOSAT-9 | 12   | 226 | 13/08/2012 | 42165.97619             | 0.00021581   | 0.45122              | 317.82896                     | 168.39113                    | 195.73330             | 0.11651             |
| METEOSAT-9 | 12   | 233 | 20/08/2012 | 42166.50670             | 0.00023367   | 0.43508              | 318.17590                     | 142.30710                    | 228.36920             | 0.11565             |
| METEOSAT-9 | 12   | 240 | 27/08/2012 | 42164.95349             | 0.00027008   | 0.42837              | 320.02800                     | 161.13359                    | 214.62775             | 0.15316             |
| METEOSAT-9 | 12   | 247 | 03/09/2012 | 42165.89190             | 0.00023785   | 0.41647              | 320.16618                     | 155.94137                    | 226.65228             | 0.22411             |
| METEOSAT-9 | 12   | 254 | 10/09/2012 | 42164.14566             | 0.00021556   | 0.41267              | 321.78297                     | 171.42315                    | 216.56614             | 0.33700             |
| METEOSAT-9 | 12   | 261 | 17/09/2012 | 42165.47853             | 0.00021804   | 0.40296              | 322.07399                     | 140.96537                    | 253.75789             | 0.46253             |
| METEOSAT-9 | 12   | 268 | 24/09/2012 | 42163.26571             | 0.00026241   | 0.39987              | 324.35610                     | 162.09192                    | 237.40862             | 0.62239             |
| METEOSAT-9 | 12   | 275 | 01/10/2012 | 42170.06574             | 0.00033182   | 0.39530              | 324.74706                     | 153.83301                    | 251.97797             | 0.42443             |
| METEOSAT-9 | 12   | 282 | 08/10/2012 | 42167.81222             | 0.00032242   | 0.39525              | 326.90761                     | 162.92394                    | 247.39695             | 0.19542             |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 12   | 289 | 15/10/2012 | 42169.27984             | 0.00032039   | 0.39144              | 327.73849                     | 141.20293                    | 274.97186             | -0.01900            |
| METEOSAT-9 | 12   | 296 | 22/10/2012 | 42166.90082             | 0.00036815   | 0.39111              | 330.81896                     | 155.51439                    | 264.30023             | -0.19823            |
| METEOSAT-9 | 12   | 303 | 29/10/2012 | 42168.48374             | 0.00030661   | 0.39166              | 331.91861                     | 148.81307                    | 276.66224             | -0.33720            |
| METEOSAT-9 | 12   | 310 | 05/11/2012 | 42166.59670             | 0.00030624   | 0.39313              | 334.81843                     | 155.44508                    | 273.93174             | -0.43537            |
| METEOSAT-9 | 12   | 317 | 12/11/2012 | 42167.42723             | 0.00030182   | 0.39252              | 336.37503                     | 133.44456                    | 301.19359             | -0.51678            |
| METEOSAT-9 | 12   | 324 | 19/11/2012 | 42165.77249             | 0.00035247   | 0.39280              | 340.20555                     | 146.86407                    | 290.79049             | -0.56947            |
| METEOSAT-9 | 12   | 331 | 26/11/2012 | 42166.60582             | 0.00028269   | 0.39509              | 341.96258                     | 139.92365                    | 302.86202             | -0.58066            |
| METEOSAT-9 | 12   | 338 | 03/12/2012 | 42165.71714             | 0.00029486   | 0.39560              | 345.38054                     | 142.51803                    | 303.77818             | -0.55173            |
| METEOSAT-9 | 12   | 345 | 10/12/2012 | 42165.36128             | 0.00028683   | 0.39530              | 347.36779                     | 122.36302                    | 328.89362             | -0.50342            |
| METEOSAT-9 | 12   | 352 | 17/12/2012 | 42164.99345             | 0.00034641   | 0.39445              | 351.52903                     | 134.19875                    | 319.86844             | -0.43132            |
| METEOSAT-9 | 12   | 359 | 24/12/2012 | 42164.62647             | 0.00026318   | 0.39608              | 353.52578                     | 127.87094                    | 331.21138             | -0.31880            |
| METEOSAT-9 | 12   | 366 | 31/12/2012 | 42164.98741             | 0.00029579   | 0.39422              | 357.02378                     | 126.85819                    | 335.77944             | -0.16510            |
| METEOSAT-9 | 13   | 7   | 07/01/2013 | 42163.38524             | 0.00028214   | 0.39320              | 358.94679                     | 109.22219                    | 358.56691             | 0.01000             |
| METEOSAT-9 | 13   | 14  | 14/01/2013 | 42164.30876             | 0.00035280   | 0.39075              | 2.88150                       | 120.54301                    | 350.40893             | 0.20786             |
| METEOSAT-9 | 13   | 21  | 21/01/2013 | 42126.49764             | 0.00025846   | 0.39169              | 4.57893                       | 109.20334                    | 8.69968               | 1.95747             |
| METEOSAT-9 | 13   | 28  | 28/01/2013 | 42127.81365             | 0.00031461   | 0.38826              | 7.69910                       | 107.34951                    | 17.87961              | 5.50419             |
| METEOSAT-9 | 13   | 35  | 04/02/2013 | 42125.10963             | 0.00029855   | 0.38806              | 9.07593                       | 93.35033                     | 40.98341              | 9.08625             |
| METEOSAT-9 | 13   | 42  | 11/02/2013 | 42169.18435             | 0.00020230   | 0.38526              | 12.34805                      | 306.89847                    | 191.60307             | 9.62653             |
| METEOSAT-9 | 13   | 49  | 18/02/2013 | 42166.81264             | 0.00031208   | 0.38799              | 13.38406                      | 302.80575                    | 201.39716             | 9.46449             |
| METEOSAT-9 | 13   | 56  | 25/02/2013 | 42167.89163             | 0.00025511   | 0.38554              | 15.78845                      | 308.72381                    | 199.88388             | 9.37409             |
| METEOSAT-9 | 13   | 63  | 04/03/2013 | 42165.48922             | 0.00029627   | 0.38978              | 16.49364                      | 315.12119                    | 199.63418             | 9.32752             |
| METEOSAT-9 | 13   | 70  | 11/03/2013 | 42166.51383             | 0.00019403   | 0.38960              | 18.84037                      | 307.47759                    | 211.83724             | 9.33411             |
| METEOSAT-9 | 13   | 77  | 18/03/2013 | 42164.69266             | 0.00029308   | 0.39747              | 19.26910                      | 300.57330                    | 225.26988             | 9.39171             |
| METEOSAT-9 | 13   | 84  | 25/03/2013 | 42164.74094             | 0.00024882   | 0.39885              | 21.01562                      | 312.93120                    | 218.19457             | 9.52121             |
| METEOSAT-9 | 13   | 91  | 01/04/2013 | 42163.49820             | 0.00027158   | 0.41020              | 21.36971                      | 314.75790                    | 223.08919             | 9.69708             |
| METEOSAT-9 | 13   | 98  | 08/04/2013 | 42168.68667             | 0.00006148   | 0.41432              | 23.10436                      | 327.78908                    | 215.12404             | 9.59815             |
| METEOSAT-9 | 13   | 105 | 15/04/2013 | 42167.86099             | 0.00014164   | 0.42868              | 23.46082                      | 296.70618                    | 252.56914             | 9.41722             |
| METEOSAT-9 | 13   | 112 | 22/04/2013 | 42166.62885             | 0.00012579   | 0.43446              | 24.94551                      | 337.33814                    | 217.23956             | 9.30465             |
| METEOSAT-9 | 13   | 119 | 29/04/2013 | 42166.87585             | 0.00012268   | 0.45257              | 25.51931                      | 327.76652                    | 233.07296             | 9.24107             |
| METEOSAT-9 | 13   | 126 | 06/05/2013 | 42165.59773             | 0.00004982   | 0.46019              | 27.11807                      | 351.69312                    | 214.44025             | 9.23407             |
| METEOSAT-9 | 13   | 133 | 13/05/2013 | 42165.76064             | 0.00010901   | 0.47895              | 27.83550                      | 292.79657                    | 279.56885             | 9.28388             |
| METEOSAT-9 | 13   | 140 | 20/05/2013 | 42163.63379             | 0.00011664   | 0.48688              | 29.37871                      | 350.80335                    | 227.02873             | 9.39411             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 13   | 147 | 27/05/2013 | 42165.07974             | 0.00008590   | 0.50830              | 30.39086                      | 327.35973                    | 256.52293             | 9.55713             |
| METEOSAT-9 | 13   | 154 | 03/06/2013 | 42166.98966             | 0.00014178   | 0.43457              | 310.33378                     | 121.44053                    | 189.30615             | 9.46648             |
| METEOSAT-9 | 13   | 161 | 10/06/2013 | 42167.86394             | 0.00008921   | 0.42649              | 312.97769                     | 76.63642                     | 238.25008             | 9.35059             |
| METEOSAT-9 | 13   | 168 | 17/06/2013 | 42165.54437             | 0.00018723   | 0.41176              | 314.15887                     | 103.07763                    | 217.46358             | 9.28704             |
| METEOSAT-9 | 13   | 175 | 24/06/2013 | 42167.28268             | 0.00012010   | 0.40204              | 317.25962                     | 99.11081                     | 225.22316             | 9.28084             |
| METEOSAT-9 | 13   | 182 | 01/07/2013 | 42164.31913             | 0.00013475   | 0.38702              | 318.48190                     | 127.12140                    | 202.93676             | 9.32768             |
| METEOSAT-9 | 13   | 189 | 08/07/2013 | 42165.35588             | 0.00006230   | 0.37653              | 321.26456                     | 83.80899                     | 250.47702             | 9.43847             |
| METEOSAT-9 | 13   | 196 | 15/07/2013 | 42163.48453             | 0.00016711   | 0.36186              | 322.21464                     | 104.03728                    | 236.35252             | 9.59274             |
| METEOSAT-9 | 13   | 203 | 22/07/2013 | 42164.45435             | 0.00009626   | 0.35097              | 325.42031                     | 112.25061                    | 232.05109             | 9.81058             |
| METEOSAT-9 | 13   | 210 | 29/07/2013 | 42167.85031             | 0.00005771   | 0.33780              | 326.36163                     | 33.65847                     | 316.49907             | 9.70815             |
| METEOSAT-9 | 13   | 217 | 05/08/2013 | 42168.38908             | 0.00012060   | 0.32740              | 329.06537                     | 347.41589                    | 6.75388               | 9.52447             |
| METEOSAT-9 | 13   | 224 | 12/08/2013 | 42167.37264             | 0.00011870   | 0.31591              | 329.62500                     | 39.99452                     | 320.36822             | 9.37756             |
| METEOSAT-9 | 13   | 231 | 19/08/2013 | 42167.03939             | 0.00006526   | 0.30665              | 332.77887                     | 351.82718                    | 12.20148              | 9.29769             |
| METEOSAT-9 | 13   | 238 | 26/08/2013 | 42165.96475             | 0.00005424   | 0.29872              | 333.39934                     | 349.11094                    | 21.16503              | 9.26602             |
| METEOSAT-9 | 13   | 245 | 02/09/2013 | 42165.46597             | 0.00012236   | 0.29135              | 336.03256                     | 323.30633                    | 51.27257              | 9.30278             |
| METEOSAT-9 | 13   | 252 | 09/09/2013 | 42165.46180             | 0.00010182   | 0.28610              | 336.40960                     | 20.91273                     | 0.25810               | 9.37255             |
| METEOSAT-9 | 13   | 259 | 16/09/2013 | 42163.79185             | 0.00006968   | 0.28089              | 339.64465                     | 306.11760                    | 78.85551              | 9.51030             |
| METEOSAT-9 | 13   | 266 | 23/09/2013 | 42168.45334             | 0.00009781   | 0.28047              | 340.32012                     | 31.07771                     | 0.03481               | 9.42580             |
| METEOSAT-9 | 13   | 273 | 30/09/2013 | 42166.72809             | 0.00010611   | 0.27787              | 343.18905                     | 349.88476                    | 45.13486              | 9.30232             |
| METEOSAT-9 | 13   | 280 | 07/10/2013 | 42167.60081             | 0.00015932   | 0.28005              | 343.97922                     | 37.56019                     | 3.47886               | 9.21256             |
| METEOSAT-9 | 13   | 287 | 14/10/2013 | 42165.08005             | 0.00005628   | 0.27955              | 347.64900                     | 355.86403                    | 48.38093              | 9.18888             |
| METEOSAT-9 | 13   | 294 | 21/10/2013 | 42166.42620             | 0.00010433   | 0.28652              | 348.96767                     | 4.63310                      | 45.22463              | 9.22096             |
| METEOSAT-9 | 13   | 301 | 28/10/2013 | 42163.96015             | 0.00011822   | 0.28805              | 352.31500                     | 328.35618                    | 85.15247              | 9.31967             |
| METEOSAT-9 | 13   | 308 | 04/11/2013 | 42165.18774             | 0.00015453   | 0.29599              | 353.91697                     | 18.94187                     | 40.00062              | 9.45608             |
| METEOSAT-9 | 13   | 315 | 11/11/2013 | 42162.47419             | 0.00007357   | 0.29894              | 358.09340                     | 319.14206                    | 102.71961             | 9.65227             |
| METEOSAT-9 | 13   | 322 | 18/11/2013 | 42169.23906             | 0.00009206   | 0.31000              | 0.10741                       | 51.73866                     | 14.92505              | 9.56890             |
| METEOSAT-9 | 13   | 329 | 25/11/2013 | 42166.91526             | 0.00004847   | 0.31373              | 3.82101                       | 22.60799                     | 47.08752              | 9.41470             |
| METEOSAT-9 | 13   | 336 | 02/12/2013 | 42167.70202             | 0.00015987   | 0.32413              | 5.98326                       | 44.68692                     | 29.63521              | 9.30413             |
| METEOSAT-9 | 13   | 343 | 09/12/2013 | 42165.58213             | 0.00004019   | 0.32844              | 10.34581                      | 71.07896                     | 5.71933               | 9.24334             |
| METEOSAT-9 | 13   | 350 | 16/12/2013 | 42166.37268             | 0.00008874   | 0.33984              | 12.67875                      | 21.92333                     | 59.44880              | 9.25065             |
| METEOSAT-9 | 13   | 357 | 23/12/2013 | 42164.96183             | 0.00006428   | 0.34269              | 16.31586                      | 5.55344                      | 79.15017              | 9.31965             |
| METEOSAT-9 | 13   | 364 | 30/12/2013 | 42164.61970             | 0.00015756   | 0.35262              | 18.50147                      | 24.13309                     | 65.40092              | 9.43624             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 14   | 6   | 06/01/2014 | 42163.71196             | 0.00003989   | 0.35534              | 22.52286                      | 43.09496                     | 49.47355              | 9.59265             |
| METEOSAT-9 | 14   | 13  | 13/01/2014 | 42168.16197             | 0.00004544   | 0.36548              | 24.61043                      | 260.85257                    | 196.45336             | 9.51820             |
| METEOSAT-9 | 14   | 20  | 20/01/2014 | 42167.99698             | 0.00004151   | 0.36618              | 27.80846                      | 232.25613                    | 228.60779             | 9.37471             |
| METEOSAT-9 | 14   | 27  | 27/01/2014 | 42166.36480             | 0.00005611   | 0.37459              | 29.51292                      | 352.50716                    | 113.45835             | 9.28136             |
| METEOSAT-9 | 14   | 34  | 03/02/2014 | 42166.77951             | 0.00006769   | 0.37563              | 32.72340                      | 179.61946                    | 289.97559             | 9.22186             |
| METEOSAT-9 | 14   | 41  | 10/02/2014 | 42165.22739             | 0.00005451   | 0.38508              | 34.23164                      | 273.57023                    | 201.42972             | 9.23576             |
| METEOSAT-9 | 14   | 48  | 17/02/2014 | 42166.10853             | 0.00001649   | 0.38387              | 36.43729                      | 229.97349                    | 249.79388             | 9.30942             |
| METEOSAT-9 | 14   | 55  | 24/02/2014 | 42163.54165             | 0.00006805   | 0.39240              | 37.33168                      | 350.20886                    | 135.68893             | 9.43488             |
| METEOSAT-9 | 14   | 62  | 03/03/2014 | 42164.83610             | 0.00006190   | 0.39343              | 39.37995                      | 160.19707                    | 330.71268             | 9.59566             |
| METEOSAT-9 | 14   | 69  | 10/03/2014 | 42162.46033             | 0.00005429   | 0.40443              | 40.14532                      | 284.08261                    | 213.19273             | 9.82740             |
| METEOSAT-9 | 14   | 76  | 17/03/2014 | 42169.71792             | 0.00013113   | 0.40441              | 41.32769                      | 271.22203                    | 231.62031             | 9.67736             |
| METEOSAT-9 | 14   | 83  | 24/03/2014 | 42166.92753             | 0.00015835   | 0.41726              | 41.62708                      | 296.30626                    | 212.94845             | 9.48966             |
| METEOSAT-9 | 14   | 90  | 31/03/2014 | 42168.33019             | 0.00011656   | 0.42105              | 42.65497                      | 241.61584                    | 273.36284             | 9.34204             |
| METEOSAT-9 | 14   | 97  | 07/04/2014 | 42165.96811             | 0.00018048   | 0.43649              | 42.99359                      | 273.49817                    | 247.96064             | 9.26139             |
| METEOSAT-9 | 14   | 104 | 14/04/2014 | 42167.02714             | 0.00011073   | 0.44058              | 43.52840                      | 279.88199                    | 247.90942             | 9.22928             |
| METEOSAT-9 | 14   | 111 | 21/04/2014 | 42164.86922             | 0.00013962   | 0.45884              | 43.86522                      | 299.47469                    | 234.89824             | 9.24793             |
| METEOSAT-9 | 14   | 118 | 28/04/2014 | 42165.66883             | 0.00009690   | 0.46717              | 44.45001                      | 240.95984                    | 299.79147             | 9.31147             |
| METEOSAT-9 | 14   | 125 | 05/05/2014 | 42164.03912             | 0.00016038   | 0.48709              | 44.95348                      | 272.24873                    | 275.02627             | 9.43883             |
| METEOSAT-9 | 14   | 132 | 12/05/2014 | 42167.78648             | 0.00009655   | 0.37268              | 342.71501                     | 59.53749                     | 196.79130             | 9.35486             |
| METEOSAT-9 | 14   | 139 | 19/05/2014 | 42166.95014             | 0.00011704   | 0.37740              | 346.12709                     | 47.06231                     | 212.63497             | 9.23587             |
| METEOSAT-9 | 14   | 146 | 26/05/2014 | 42166.63644             | 0.00001742   | 0.37715              | 347.99526                     | 93.75164                     | 170.90816             | 9.16721             |
| METEOSAT-9 | 14   | 153 | 02/06/2014 | 42166.07141             | 0.00008503   | 0.38025              | 351.38199                     | 2.96950                      | 265.19522             | 9.15930             |
| METEOSAT-9 | 14   | 160 | 09/06/2014 | 42164.60543             | 0.00009877   | 0.37954              | 353.19706                     | 70.25051                     | 203.04751             | 9.20837             |
| METEOSAT-9 | 14   | 167 | 16/06/2014 | 42165.26823             | 0.00008186   | 0.38281              | 356.96619                     | 44.73389                     | 231.79955             | 9.31332             |
| METEOSAT-9 | 14   | 174 | 23/06/2014 | 42163.61592             | 0.00003238   | 0.38258              | 358.98169                     | 142.34683                    | 139.22736             | 9.47016             |
| METEOSAT-9 | 14   | 181 | 30/06/2014 | 42164.02641             | 0.00005664   | 0.38363              | 2.41363                       | 341.30774                    | 303.95177             | 9.68786             |
| METEOSAT-9 | 14   | 188 | 07/07/2014 | 42167.35679             | 0.00004465   | 0.38194              | 4.16290                       | 292.17319                    | 358.15275             | 9.60420             |
| METEOSAT-9 | 14   | 195 | 14/07/2014 | 42169.04597             | 0.00010863   | 0.38355              | 7.86495                       | 280.81833                    | 12.53862              | 9.43762             |
| METEOSAT-9 | 14   | 202 | 21/07/2014 | 42166.30239             | 0.00013426   | 0.38360              | 9.63964                       | 240.17488                    | 58.19162              | 9.32247             |
| METEOSAT-9 | 14   | 209 | 28/07/2014 | 42167.28291             | 0.00016950   | 0.38256              | 12.71002                      | 269.56086                    | 32.58030              | 9.26793             |
| METEOSAT-9 | 14   | 216 | 04/08/2014 | 42165.06890             | 0.00006177   | 0.38074              | 14.00067                      | 245.93375                    | 61.80664              | 9.25844             |
| METEOSAT-9 | 14   | 223 | 11/08/2014 | 42166.78506             | 0.00014031   | 0.38149              | 17.22368                      | 252.22451                    | 59.24536              | 9.31133             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 14   | 230 | 18/08/2014 | 42163.76688             | 0.00017258   | 0.38293              | 18.41624                      | 227.12345                    | 90.15530              | 9.41337             |
| METEOSAT-9 | 14   | 237 | 25/08/2014 | 42164.72853             | 0.00019565   | 0.38194              | 20.87589                      | 252.61564                    | 69.26763              | 9.57799             |
| METEOSAT-9 | 14   | 244 | 01/09/2014 | 42167.70700             | 0.00000986   | 0.38276              | 21.49412                      | 30.35532                     | 297.71844             | 9.48732             |
| METEOSAT-9 | 14   | 251 | 08/09/2014 | 42168.40578             | 0.00008225   | 0.38466              | 24.00149                      | 245.60193                    | 86.71798              | 9.34125             |
| METEOSAT-9 | 14   | 258 | 15/09/2014 | 42166.20290             | 0.00010295   | 0.39014              | 24.52265                      | 219.67828                    | 118.92290             | 9.24423             |
| METEOSAT-9 | 14   | 265 | 22/09/2014 | 42166.54021             | 0.00013276   | 0.39208              | 26.20038                      | 257.03299                    | 86.75781              | 9.21203             |
| METEOSAT-9 | 14   | 272 | 29/09/2014 | 42165.75896             | 0.00002956   | 0.39811              | 26.37511                      | 241.82448                    | 108.69735             | 9.21830             |
| METEOSAT-9 | 14   | 279 | 06/10/2014 | 42164.99644             | 0.00013607   | 0.40339              | 28.24548                      | 230.50046                    | 125.12331             | 9.29098             |
| METEOSAT-9 | 14   | 286 | 13/10/2014 | 42164.31406             | 0.00013472   | 0.41549              | 28.46806                      | 225.79454                    | 136.63028             | 9.41519             |
| METEOSAT-9 | 14   | 293 | 20/10/2014 | 42163.48813             | 0.00017016   | 0.42129              | 29.85591                      | 248.28748                    | 119.83873             | 9.60483             |
| METEOSAT-9 | 14   | 300 | 27/10/2014 | 42168.79113             | 0.00009871   | 0.43511              | 29.97270                      | 151.43125                    | 223.39061             | 9.51774             |
| METEOSAT-9 | 14   | 307 | 03/11/2014 | 42166.77367             | 0.00018320   | 0.44417              | 31.67291                      | 191.26372                    | 188.59666             | 9.35682             |
| METEOSAT-9 | 14   | 314 | 10/11/2014 | 42167.53398             | 0.00015244   | 0.46232              | 32.17141                      | 187.81675                    | 198.34189             | 9.25395             |
| METEOSAT-9 | 14   | 321 | 17/11/2014 | 42165.57391             | 0.00015927   | 0.47133              | 33.65608                      | 210.55009                    | 180.98421             | 9.21467             |
| METEOSAT-9 | 14   | 328 | 24/11/2014 | 42166.60980             | 0.00008943   | 0.48986              | 34.24271                      | 165.57781                    | 232.27439             | 9.21956             |
| METEOSAT-9 | 14   | 335 | 01/12/2014 | 42163.95028             | 0.00020421   | 0.50027              | 36.06985                      | 198.60517                    | 204.37914             | 9.27920             |
| METEOSAT-9 | 14   | 342 | 08/12/2014 | 42165.45871             | 0.00014828   | 0.52062              | 37.04385                      | 196.09775                    | 212.93720             | 9.40422             |
| METEOSAT-9 | 14   | 349 | 15/12/2014 | 42162.93331             | 0.00017128   | 0.52906              | 38.69611                      | 214.04879                    | 200.41882             | 9.58959             |
| METEOSAT-9 | 14   | 356 | 22/12/2014 | 42169.28198             | 0.00008481   | 0.54790              | 39.72369                      | 81.52791                     | 338.78351             | 9.56144             |
| METEOSAT-9 | 14   | 363 | 29/12/2014 | 42166.68748             | 0.00010129   | 0.55603              | 41.59121                      | 180.91809                    | 244.24283             | 9.37900             |
| METEOSAT-9 | 15   | 5   | 05/01/2015 | 42168.06996             | 0.00004268   | 0.57413              | 42.85790                      | 151.17632                    | 279.50885             | 9.27047             |
| METEOSAT-9 | 15   | 12  | 12/01/2015 | 42165.89938             | 0.00004360   | 0.57872              | 44.42631                      | 207.58463                    | 228.37851             | 9.21755             |
| METEOSAT-9 | 15   | 19  | 19/01/2015 | 42166.47416             | 0.00006757   | 0.59444              | 45.54511                      | 63.23276                     | 18.50965              | 9.21631             |
| METEOSAT-9 | 15   | 26  | 26/01/2015 | 42164.66006             | 0.00009157   | 0.59864              | 47.12736                      | 185.34683                    | 261.74375             | 9.24753             |
| METEOSAT-9 | 15   | 33  | 02/02/2015 | 42165.20357             | 0.00002014   | 0.61272              | 48.30047                      | 176.08472                    | 276.84340             | 9.35894             |
| METEOSAT-9 | 15   | 40  | 09/02/2015 | 42164.07373             | 0.00002579   | 0.61338              | 49.42546                      | 207.37357                    | 251.49337             | 9.52369             |
| METEOSAT-9 | 15   | 47  | 16/02/2015 | 42167.62153             | 0.00004445   | 0.62599              | 50.26648                      | 177.38485                    | 287.38420             | 9.36766             |
| METEOSAT-9 | 15   | 54  | 23/02/2015 | 42167.08486             | 0.00017999   | 0.62780              | 51.24375                      | 193.06713                    | 277.48952             | 9.23344             |
| METEOSAT-9 | 15   | 61  | 02/03/2015 | 42166.39424             | 0.00010606   | 0.63993              | 52.05730                      | 207.20436                    | 269.38740             | 9.18291             |
| METEOSAT-9 | 15   | 68  | 09/03/2015 | 42166.48734             | 0.00010877   | 0.63975              | 52.50356                      | 196.76619                    | 286.28142             | 9.18592             |
| METEOSAT-9 | 15   | 75  | 16/03/2015 | 42164.55417             | 0.00003192   | 0.65197              | 52.97211                      | 180.38385                    | 309.15481             | 9.24625             |
| METEOSAT-9 | 15   | 82  | 23/03/2015 | 42165.26677             | 0.00017548   | 0.65584              | 53.24319                      | 188.59199                    | 307.66129             | 9.33270             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 15   | 89  | 30/03/2015 | 42163.36956             | 0.00009300   | 0.66945              | 53.71731                      | 212.69331                    | 290.15423             | 9.50163             |
| METEOSAT-9 | 15   | 96  | 06/04/2015 | 42164.57881             | 0.00010318   | 0.67319              | 53.62209                      | 187.82491                    | 322.23603             | 9.72037             |
| METEOSAT-9 | 15   | 103 | 13/04/2015 | 42167.48424             | 0.00011023   | 0.68910              | 53.89248                      | 307.43605                    | 209.18944             | 9.65560             |
| METEOSAT-9 | 15   | 110 | 20/04/2015 | 42168.90475             | 0.00013131   | 0.69769              | 53.79488                      | 233.45972                    | 289.95608             | 9.44865             |
| METEOSAT-9 | 15   | 117 | 27/04/2015 | 42166.40086             | 0.00013771   | 0.71496              | 54.23553                      | 281.29176                    | 248.45302             | 9.31839             |
| METEOSAT-9 | 15   | 124 | 04/05/2015 | 42167.64589             | 0.00008074   | 0.72437              | 54.00689                      | 269.95389                    | 266.84906             | 9.24806             |
| METEOSAT-9 | 15   | 131 | 11/05/2015 | 42164.97130             | 0.00009212   | 0.74404              | 54.46806                      | 311.84630                    | 231.38280             | 9.23528             |
| METEOSAT-9 | 15   | 138 | 18/05/2015 | 42166.31645             | 0.00011836   | 0.75763              | 54.39177                      | 227.99768                    | 322.23350             | 9.26106             |
| METEOSAT-9 | 15   | 145 | 25/05/2015 | 42164.04637             | 0.00012112   | 0.77679              | 55.07314                      | 280.95463                    | 275.58885             | 9.35457             |
| METEOSAT-9 | 15   | 152 | 01/06/2015 | 42164.66117             | 0.00005286   | 0.79003              | 55.04760                      | 268.97678                    | 294.64782             | 9.51016             |
| METEOSAT-9 | 15   | 159 | 08/06/2015 | 42167.19037             | 0.00007897   | 0.81020              | 55.84740                      | 215.76319                    | 353.84061             | 9.38906             |
| METEOSAT-9 | 15   | 166 | 15/06/2015 | 42167.76120             | 0.00020123   | 0.82578              | 55.99386                      | 198.38870                    | 17.83688              | 9.25745             |
| METEOSAT-9 | 15   | 173 | 22/06/2015 | 42166.36764             | 0.00014146   | 0.84296              | 56.92443                      | 224.45825                    | 357.66434             | 9.18516             |
| METEOSAT-9 | 15   | 180 | 29/06/2015 | 42165.85172             | 0.00011651   | 0.85622              | 57.13496                      | 188.62348                    | 40.17716              | 9.17419             |
| METEOSAT-9 | 15   | 187 | 06/07/2015 | 42165.43625             | 0.00010762   | 0.87314              | 58.15840                      | 198.75044                    | 35.97326              | 9.21688             |
| METEOSAT-9 | 15   | 194 | 13/07/2015 | 42164.78286             | 0.00021554   | 0.88754              | 58.45033                      | 190.88652                    | 50.53816              | 9.31055             |
| METEOSAT-9 | 15   | 201 | 20/07/2015 | 42164.47984             | 0.00016024   | 0.89973              | 59.45031                      | 213.40946                    | 34.06205              | 9.45816             |
| METEOSAT-9 | 15   | 208 | 27/07/2015 | 42162.81784             | 0.00013984   | 0.91026              | 59.71631                      | 175.96788                    | 78.34370              | 9.66538             |
| METEOSAT-9 | 15   | 215 | 03/08/2015 | 42169.20161             | 0.00008940   | 0.92218              | 60.72890                      | 248.12770                    | 11.99081              | 9.58595             |
| METEOSAT-9 | 15   | 222 | 10/08/2015 | 42167.16271             | 0.00014690   | 0.93404              | 60.96693                      | 209.06091                    | 57.55538              | 9.42319             |
| METEOSAT-9 | 15   | 229 | 17/08/2015 | 42167.75058             | 0.00014458   | 0.94088              | 61.79543                      | 246.99785                    | 25.57764              | 9.31221             |
| METEOSAT-9 | 15   | 236 | 24/08/2015 | 42165.51966             | 0.00006669   | 0.94914              | 61.90131                      | 205.20233                    | 74.11164              | 9.25809             |
| METEOSAT-9 | 15   | 243 | 31/08/2015 | 42167.35857             | 0.00013080   | 0.95685              | 62.66626                      | 227.23822                    | 58.21047              | 9.25909             |
| METEOSAT-9 | 15   | 250 | 07/09/2015 | 42164.38424             | 0.00018581   | 0.96823              | 62.68836                      | 202.69738                    | 89.68336              | 9.31465             |
| METEOSAT-9 | 15   | 257 | 14/09/2015 | 42165.39998             | 0.00017011   | 0.97219              | 63.17208                      | 235.05868                    | 63.84554              | 9.42308             |
| METEOSAT-9 | 15   | 264 | 21/09/2015 | 42163.25979             | 0.00010733   | 0.98136              | 63.00701                      | 200.98322                    | 105.14785             | 9.58601             |
| METEOSAT-9 | 15   | 271 | 28/09/2015 | 42164.75009             | 0.00018500   | 0.98819              | 63.42431                      | 218.18263                    | 94.65076              | 9.80648             |
| METEOSAT-9 | 15   | 278 | 05/10/2015 | 42167.45217             | 0.00010242   | 1.00250              | 63.21620                      | 185.32255                    | 134.46161             | 9.64980             |
| METEOSAT-9 | 15   | 285 | 12/10/2015 | 42168.31300             | 0.00008105   | 1.00800              | 63.37368                      | 250.37923                    | 75.97284              | 9.47564             |
| METEOSAT-9 | 15   | 292 | 19/10/2015 | 42166.81724             | 0.00003162   | 1.02217              | 63.04755                      | 148.97703                    | 184.48066             | 9.35528             |
| METEOSAT-9 | 15   | 299 | 26/10/2015 | 42167.08281             | 0.00011294   | 1.03176              | 63.22913                      | 213.92579                    | 126.18756             | 9.29245             |
| METEOSAT-9 | 15   | 306 | 02/11/2015 | 42165.25620             | 0.00013528   | 1.05206              | 63.01713                      | 198.77324                    | 148.44591             | 9.28587             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 15   | 313 | 09/11/2015 | 42165.36580             | 0.00012089   | 1.06167              | 63.07251                      | 240.25952                    | 113.85655             | 9.33773             |
| METEOSAT-9 | 15   | 320 | 16/11/2015 | 42164.83121             | 0.00005247   | 1.08215              | 62.87951                      | 198.96558                    | 162.34852             | 9.44201             |
| METEOSAT-9 | 15   | 327 | 23/11/2015 | 42167.35817             | 0.00014310   | 1.09507              | 63.07582                      | 248.16934                    | 119.77128             | 9.36421             |
| METEOSAT-9 | 15   | 334 | 30/11/2015 | 42167.13953             | 0.00012110   | 1.11966              | 63.11761                      | 246.08929                    | 128.59635             | 9.25016             |
| METEOSAT-9 | 15   | 341 | 07/12/2015 | 42166.07102             | 0.00016984   | 1.13183              | 63.30580                      | 271.20780                    | 110.13504             | 9.19501             |
| METEOSAT-9 | 15   | 348 | 14/12/2015 | 42166.53630             | 0.00008221   | 1.15518              | 63.43948                      | 288.53204                    | 99.57367              | 9.19092             |
| METEOSAT-9 | 15   | 355 | 21/12/2015 | 42164.30808             | 0.00018859   | 1.16834              | 63.79056                      | 247.72603                    | 146.97382             | 9.23591             |
| METEOSAT-9 | 15   | 362 | 28/12/2015 | 42165.40059             | 0.00014629   | 1.19225              | 64.14498                      | 255.38833                    | 145.96758             | 9.34617             |
| METEOSAT-9 | 16   | 4   | 04/01/2016 | 42163.22444             | 0.00020142   | 1.20258              | 64.49191                      | 269.66376                    | 138.41227             | 9.51365             |
| METEOSAT-9 | 16   | 11  | 11/01/2016 | 42164.36455             | 0.00010816   | 1.22361              | 64.89330                      | 286.48320                    | 128.31021             | 9.73292             |
| METEOSAT-9 | 16   | 18  | 18/01/2016 | 42167.20068             | 0.00033216   | 1.23325              | 65.29971                      | 237.16344                    | 183.98274             | 9.59320             |
| METEOSAT-9 | 16   | 25  | 25/01/2016 | 42168.81281             | 0.00026936   | 1.25209              | 65.81421                      | 241.68842                    | 185.67943             | 9.43050             |
| METEOSAT-9 | 16   | 32  | 01/02/2016 | 42166.25446             | 0.00030805   | 1.25775              | 66.12480                      | 250.59781                    | 183.24968             | 9.32253             |
| METEOSAT-9 | 16   | 39  | 08/02/2016 | 42167.36623             | 0.00020529   | 1.27384              | 66.56502                      | 250.88796                    | 189.36259             | 9.26757             |
| METEOSAT-9 | 16   | 46  | 15/02/2016 | 42164.94731             | 0.00034069   | 1.27954              | 66.80934                      | 240.40365                    | 206.47885             | 9.24612             |
| METEOSAT-9 | 16   | 53  | 22/02/2016 | 42166.20183             | 0.00027641   | 1.29295              | 67.25189                      | 247.51494                    | 205.88108             | 9.30436             |
| METEOSAT-9 | 16   | 60  | 29/02/2016 | 42164.17462             | 0.00030325   | 1.29564              | 67.31641                      | 253.15222                    | 207.18839             | 9.41590             |
| METEOSAT-9 | 16   | 67  | 07/03/2016 | 42164.41509             | 0.00021468   | 1.30854              | 67.60930                      | 256.34395                    | 210.76849             | 9.58277             |
| METEOSAT-9 | 16   | 74  | 14/03/2016 | 42167.62330             | 0.00022767   | 1.31393              | 67.55016                      | 245.66676                    | 228.29937             | 9.47943             |
| METEOSAT-9 | 16   | 81  | 21/03/2016 | 42167.84798             | 0.00017738   | 1.32544              | 67.80986                      | 264.03430                    | 216.42979             | 9.33876             |
| METEOSAT-9 | 16   | 88  | 28/03/2016 | 42166.95447             | 0.00018699   | 1.32996              | 67.58354                      | 265.33213                    | 222.17047             | 9.25241             |
| METEOSAT-9 | 16   | 95  | 04/04/2016 | 42165.92126             | 0.00012715   | 1.34345              | 67.71688                      | 282.60626                    | 211.63287             | 9.22324             |
| METEOSAT-9 | 16   | 102 | 11/04/2016 | 42165.74690             | 0.00022002   | 1.35339              | 67.42299                      | 246.90395                    | 254.52613             | 9.22089             |
| METEOSAT-9 | 16   | 109 | 18/04/2016 | 42164.68685             | 0.00017967   | 1.36676              | 67.56570                      | 272.64196                    | 235.62600             | 9.30153             |
| METEOSAT-9 | 16   | 116 | 25/04/2016 | 42165.00800             | 0.00016950   | 1.37711              | 67.20566                      | 266.48299                    | 249.18320             | 9.43932             |
| METEOSAT-9 | 16   | 123 | 02/05/2016 | 42162.80045             | 0.00012676   | 1.39347              | 67.32795                      | 288.22830                    | 234.41224             | 9.63506             |
| METEOSAT-9 | 16   | 130 | 09/05/2016 | 42168.99815             | 0.00015231   | 1.40977              | 67.01649                      | 210.47132                    | 319.27776             | 9.53092             |
| METEOSAT-9 | 16   | 137 | 16/05/2016 | 42166.85248             | 0.00005897   | 1.42577              | 67.20628                      | 252.14442                    | 284.15403             | 9.36868             |
| METEOSAT-9 | 16   | 144 | 23/05/2016 | 42167.97412             | 0.00006975   | 1.44184              | 66.94243                      | 212.08132                    | 331.28185             | 9.26790             |
| METEOSAT-9 | 16   | 151 | 30/05/2016 | 42165.23989             | 0.00001193   | 1.45947              | 67.20454                      | 148.04064                    | 41.91704              | 9.22283             |
| METEOSAT-9 | 16   | 158 | 06/06/2016 | 42166.76120             | 0.00015177   | 1.47982              | 67.04996                      | 205.26439                    | 351.74232             | 9.21561             |
| METEOSAT-9 | 16   | 165 | 13/06/2016 | 42164.23301             | 0.00004494   | 1.49559              | 67.39226                      | 250.10291                    | 313.52094             | 9.27366             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 16   | 172 | 20/06/2016 | 42165.39868             | 0.00007031   | 1.51392              | 67.31722                      | 194.47664                    | 16.24784              | 9.39812             |
| METEOSAT-9 | 16   | 179 | 27/06/2016 | 42162.92294             | 0.00003581   | 1.52915              | 67.73291                      | 150.99102                    | 66.39534              | 9.57504             |
| METEOSAT-9 | 16   | 186 | 04/07/2016 | 42169.02474             | 0.00011448   | 1.54948              | 67.76457                      | 246.02289                    | 338.14955             | 9.49260             |
| METEOSAT-9 | 16   | 193 | 11/07/2016 | 42166.91672             | 0.00011251   | 1.56134              | 68.19696                      | 309.38251                    | 281.09647             | 9.33203             |
| METEOSAT-9 | 16   | 200 | 18/07/2016 | 42167.33738             | 0.00005281   | 1.57806              | 68.26646                      | 288.62056                    | 308.59814             | 9.24227             |
| METEOSAT-9 | 16   | 207 | 25/07/2016 | 42165.87685             | 0.00005000   | 1.58836              | 68.72341                      | 314.00620                    | 289.61261             | 9.20094             |
| METEOSAT-9 | 16   | 214 | 01/08/2016 | 42166.16434             | 0.00011419   | 1.60602              | 68.83727                      | 233.78952                    | 16.62520              | 9.21282             |
| METEOSAT-9 | 16   | 221 | 08/08/2016 | 42165.02014             | 0.00009671   | 1.61230              | 69.21692                      | 296.27660                    | 320.71436             | 9.27142             |
| METEOSAT-9 | 16   | 228 | 15/08/2016 | 42164.23716             | 0.00003331   | 1.62599              | 69.30028                      | 250.01718                    | 13.91712              | 9.40116             |
| METEOSAT-9 | 16   | 235 | 22/08/2016 | 42164.25023             | 0.00005063   | 1.63129              | 69.64217                      | 261.17507                    | 9.49097               | 9.57807             |
| METEOSAT-9 | 16   | 242 | 29/08/2016 | 42167.80834             | 0.00007565   | 1.64635              | 69.71191                      | 163.97752                    | 113.41529             | 9.47782             |
| METEOSAT-9 | 16   | 249 | 05/09/2016 | 42167.74665             | 0.00003647   | 1.64895              | 69.89859                      | 18.04241                     | 265.91901             | 9.33631             |
| METEOSAT-9 | 16   | 256 | 12/09/2016 | 42165.90648             | 0.00008523   | 1.66125              | 69.88086                      | 105.66575                    | 185.13934             | 9.26525             |
| METEOSAT-9 | 16   | 263 | 19/09/2016 | 42167.21805             | 0.00003796   | 1.66491              | 70.00110                      | 127.70008                    | 169.85783             | 9.24090             |
| METEOSAT-9 | 16   | 270 | 26/09/2016 | 42164.84500             | 0.00010826   | 1.68059              | 69.97049                      | 173.81756                    | 130.70470             | 9.27676             |
| METEOSAT-9 | 16   | 277 | 03/10/2016 | 42165.58082             | 0.00000622   | 1.68370              | 69.91485                      | 288.50788                    | 23.04813              | 9.35636             |
| METEOSAT-9 | 16   | 284 | 10/10/2016 | 42163.28811             | 0.00009106   | 1.69844              | 69.79783                      | 131.31988                    | 187.39937             | 9.50333             |
| METEOSAT-9 | 16   | 291 | 17/10/2016 | 42165.08749             | 0.00006259   | 1.70501              | 69.71483                      | 186.84773                    | 139.05031             | 9.69909             |
| METEOSAT-9 | 16   | 298 | 24/10/2016 | 42167.41190             | 0.00001535   | 1.72436              | 69.64925                      | 158.24577                    | 174.52777             | 9.60827             |
| METEOSAT-9 | 16   | 305 | 31/10/2016 | 42168.46933             | 0.00009902   | 1.73237              | 69.46268                      | 352.85045                    | 346.83237             | 9.42964             |
| METEOSAT-9 | 16   | 312 | 07/11/2016 | 42166.42938             | 0.00006831   | 1.75188              | 69.36697                      | 57.12362                     | 289.44247             | 9.31513             |
| METEOSAT-9 | 16   | 319 | 14/11/2016 | 42167.61507             | 0.00004170   | 1.76368              | 69.23809                      | 311.93691                    | 41.59616              | 9.25083             |
| METEOSAT-9 | 16   | 326 | 21/11/2016 | 42165.30602             | 0.00005594   | 1.78976              | 69.33291                      | 229.81728                    | 130.49458             | 9.22163             |
| METEOSAT-9 | 16   | 333 | 28/11/2016 | 42166.09560             | 0.00009298   | 1.80268              | 69.19144                      | 322.47275                    | 44.89811              | 9.23630             |
| METEOSAT-9 | 16   | 340 | 05/12/2016 | 42164.80945             | 0.00002334   | 1.82517              | 69.26766                      | 25.91443                     | 348.35675             | 9.30989             |
| METEOSAT-9 | 16   | 347 | 12/12/2016 | 42164.63621             | 0.00008966   | 1.84003              | 69.23877                      | 268.75127                    | 112.57548             | 9.43405             |
| METEOSAT-9 | 16   | 354 | 19/12/2016 | 42167.26874             | 0.00001377   | 1.86395              | 69.48217                      | 112.69508                    | 275.21756             | 9.36114             |
| METEOSAT-9 | 16   | 361 | 26/12/2016 | 42167.17152             | 0.00009225   | 1.87815              | 69.47375                      | 357.91956                    | 36.78687              | 9.24518             |
| METEOSAT-9 | 17   | 2   | 02/01/2017 | 42166.88123             | 0.00008601   | 1.89849              | 69.74706                      | 54.31079                     | 346.96554             | 9.18334             |
| METEOSAT-9 | 17   | 9   | 09/01/2017 | 42165.39514             | 0.00004711   | 1.91203              | 69.82014                      | 293.19561                    | 114.89469             | 9.17068             |
| METEOSAT-9 | 17   | 16  | 16/01/2017 | 42165.61214             | 0.00002574   | 1.93103              | 70.20063                      | 332.66848                    | 81.98948              | 9.21971             |
| METEOSAT-9 | 17   | 23  | 23/01/2017 | 42164.25293             | 0.00010917   | 1.94203              | 70.24849                      | 339.94944                    | 81.66660              | 9.32781             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 17   | 30  | 30/01/2017 | 42164.91112             | 0.00008276   | 1.95677              | 70.60063                      | 35.06691                     | 33.25267              | 9.48620             |
| METEOSAT-9 | 17   | 37  | 06/02/2017 | 42162.51350             | 0.00008491   | 1.96687              | 70.64886                      | 294.73355                    | 140.63952             | 9.69175             |
| METEOSAT-9 | 17   | 44  | 13/02/2017 | 42169.21328             | 0.00009052   | 1.97862              | 71.00048                      | 88.34629                     | 353.43129             | 9.55177             |
| METEOSAT-9 | 17   | 51  | 20/02/2017 | 42166.81476             | 0.00008455   | 1.98683              | 70.97292                      | 38.80499                     | 49.74918              | 9.40541             |
| METEOSAT-9 | 17   | 58  | 27/02/2017 | 42167.97921             | 0.00015130   | 1.99633              | 71.23478                      | 77.79509                     | 17.29399              | 9.30666             |
| METEOSAT-9 | 17   | 65  | 06/03/2017 | 42165.32372             | 0.00001910   | 2.00535              | 71.14522                      | 79.20178                     | 22.81715              | 9.25168             |
| METEOSAT-9 | 17   | 72  | 13/03/2017 | 42166.94578             | 0.00009230   | 2.01363              | 71.34918                      | 65.90194                     | 42.82438              | 9.26723             |
| METEOSAT-9 | 17   | 79  | 20/03/2017 | 42164.38327             | 0.00009800   | 2.02178              | 71.16946                      | 29.62392                     | 86.25109              | 9.34010             |
| METEOSAT-9 | 17   | 86  | 27/03/2017 | 42165.28219             | 0.00015010   | 2.03031              | 71.28688                      | 69.62965                     | 53.14701              | 9.46214             |
| METEOSAT-9 | 17   | 93  | 03/04/2017 | 42163.06113             | 0.00002890   | 2.04298              | 71.06044                      | 31.89020                     | 98.17251              | 9.62388             |
| METEOSAT-9 | 17   | 100 | 10/04/2017 | 42169.00724             | 0.00008890   | 2.05153              | 71.10616                      | 122.79739                    | 14.03638              | 9.54166             |
| METEOSAT-9 | 17   | 107 | 17/04/2017 | 42167.18708             | 0.00005230   | 2.06467              | 70.84649                      | 113.36633                    | 30.47892              | 9.39346             |
| METEOSAT-9 | 17   | 114 | 24/04/2017 | 42167.10795             | 0.00013710   | 2.07571              | 70.88334                      | 109.02772                    | 41.58451              | 9.29621             |
| METEOSAT-9 | 17   | 121 | 01/05/2017 | 42165.94681             | 0.00008020   | 2.09500              | 70.64316                      | 172.21042                    | 345.48421             | 9.23635             |
| METEOSAT-9 | 17   | 128 | 08/05/2017 | 42165.84842             | 0.00008290   | 2.10640              | 70.65577                      | 103.53141                    | 61.06718              | 9.24995             |
| METEOSAT-9 | 17   | 135 | 15/05/2017 | 42165.24289             | 0.00006550   | 2.12517              | 70.44202                      | 108.29113                    | 63.49929              | 9.32417             |
| METEOSAT-9 | 17   | 142 | 22/05/2017 | 42163.88426             | 0.00013760   | 2.13860              | 70.51470                      | 102.78640                    | 75.96158              | 9.45023             |
| METEOSAT-9 | 17   | 149 | 29/05/2017 | 42164.07555             | 0.00008210   | 2.16287              | 70.38834                      | 166.50168                    | 19.44143              | 9.61434             |
| METEOSAT-9 | 17   | 156 | 05/06/2017 | 42167.76249             | 0.00003770   | 2.17578              | 70.46536                      | 326.79072                    | 225.89233             | 9.52724             |
| METEOSAT-9 | 17   | 163 | 12/06/2017 | 42168.32956             | 0.00003980   | 2.19754              | 70.40511                      | 273.53704                    | 285.95526             | 9.37225             |
| METEOSAT-9 | 17   | 170 | 19/06/2017 | 42165.97413             | 0.00002760   | 2.21022              | 70.56183                      | 85.55106                     | 120.58366             | 9.26828             |
| METEOSAT-9 | 17   | 177 | 26/06/2017 | 42167.20002             | 0.00010510   | 2.23519              | 70.59488                      | 237.27012                    | 335.67249             | 9.20652             |
| METEOSAT-9 | 17   | 184 | 03/07/2017 | 42164.95620             | 0.00003640   | 2.24624              | 70.74105                      | 354.90799                    | 224.78732             | 9.20417             |
| METEOSAT-9 | 17   | 191 | 10/07/2017 | 42166.16924             | 0.00002950   | 2.26649              | 70.82354                      | 245.27945                    | 341.30188             | 9.27231             |
| METEOSAT-9 | 17   | 198 | 17/07/2017 | 42163.46523             | 0.00003590   | 2.27555              | 71.01735                      | 110.51737                    | 122.88593             | 9.38936             |
| METEOSAT-9 | 17   | 205 | 24/07/2017 | 42164.99694             | 0.00010720   | 2.29708              | 71.15910                      | 228.62135                    | 11.70317              | 9.55450             |
| METEOSAT-9 | 17   | 212 | 31/07/2017 | 42167.21857             | 0.00013790   | 2.30411              | 71.29791                      | 10.78473                     | 236.22252             | 9.47976             |
| METEOSAT-9 | 17   | 219 | 07/08/2017 | 42168.29035             | 0.00007550   | 2.32036              | 71.43858                      | 3.61221                      | 250.01889             | 9.34865             |
| METEOSAT-9 | 17   | 226 | 14/08/2017 | 42166.03586             | 0.00008520   | 2.32498              | 71.56833                      | 34.21816                     | 226.09252             | 9.26347             |
| METEOSAT-9 | 17   | 233 | 21/08/2017 | 42167.05484             | 0.00005890   | 2.34227              | 71.71905                      | 289.63662                    | 337.38588             | 9.23178             |
| METEOSAT-9 | 17   | 240 | 28/08/2017 | 42165.13681             | 0.00011640   | 2.34600              | 71.74885                      | 11.40644                     | 262.49146             | 9.24338             |
| METEOSAT-9 | 17   | 247 | 04/09/2017 | 42165.30693             | 0.00004710   | 2.35906              | 71.84832                      | 17.76490                     | 263.01707             | 9.33309             |



| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 17   | 254 | 11/09/2017 | 42164.19991             | 0.00005130   | 2.36204              | 71.82830                      | 33.99907                     | 253.82979             | 9.46591             |
| METEOSAT-9 | 17   | 261 | 18/09/2017 | 42164.06106             | 0.00005530   | 2.37708              | 71.91094                      | 267.28031                    | 27.55168              | 9.65676             |
| METEOSAT-9 | 17   | 268 | 25/09/2017 | 42168.22036             | 0.00010140   | 2.38137              | 71.78157                      | 289.53318                    | 12.23440              | 9.56704             |
| METEOSAT-9 | 17   | 275 | 02/10/2017 | 42167.12940             | 0.00010110   | 2.39440              | 71.80048                      | 240.88885                    | 67.61439              | 9.42436             |
| METEOSAT-9 | 17   | 282 | 09/10/2017 | 42167.46957             | 0.00011140   | 2.40065              | 71.62405                      | 250.68157                    | 64.79661              | 9.32429             |
| METEOSAT-9 | 17   | 289 | 16/10/2017 | 42166.00419             | 0.00019110   | 2.41707              | 71.65185                      | 243.91391                    | 78.39638              | 9.28420             |
| METEOSAT-9 | 17   | 296 | 23/10/2017 | 42166.18559             | 0.00012140   | 2.42638              | 71.40971                      | 277.44455                    | 52.01072              | 9.28551             |
| METEOSAT-9 | 17   | 303 | 30/10/2017 | 42164.24550             | 0.00014260   | 2.44592              | 71.40777                      | 234.58637                    | 101.84314             | 9.35494             |
| METEOSAT-9 | 17   | 310 | 06/11/2017 | 42165.71145             | 0.00016330   | 2.45896              | 71.17523                      | 252.36267                    | 91.31357              | 9.46483             |
| METEOSAT-9 | 17   | 317 | 13/11/2017 | 42163.08947             | 0.00023370   | 2.47848              | 71.23535                      | 244.28139                    | 106.41042             | 9.63529             |
| METEOSAT-9 | 17   | 324 | 20/11/2017 | 42163.99587             | 0.00016310   | 2.49423              | 71.01095                      | 271.03918                    | 87.00201              | 9.85412             |
| METEOSAT-9 | 17   | 331 | 27/11/2017 | 42167.61343             | 0.00025880   | 2.51317              | 71.07904                      | 205.55067                    | 159.18754             | 9.71325             |
| METEOSAT-9 | 17   | 338 | 04/12/2017 | 42169.28003             | 0.00024950   | 2.53171              | 70.91830                      | 221.25349                    | 150.35354             | 9.51539             |
| METEOSAT-9 | 17   | 345 | 11/12/2017 | 42166.26318             | 0.00031570   | 2.55192              | 71.09090                      | 221.90381                    | 156.29738             | 9.37668             |
| METEOSAT-9 | 17   | 352 | 18/12/2017 | 42167.37058             | 0.00020970   | 2.57093              | 70.98327                      | 231.03553                    | 154.09496             | 9.29352             |
| METEOSAT-9 | 17   | 359 | 25/12/2017 | 42165.48893             | 0.00027300   | 2.58832              | 71.17425                      | 213.34060                    | 178.47781             | 9.26880             |
| METEOSAT-9 | 18   | 1   | 01/01/2018 | 42166.33203             | 0.00028150   | 2.60770              | 71.12946                      | 229.67008                    | 169.12398             | 9.29734             |
| METEOSAT-9 | 18   | 8   | 08/01/2018 | 42163.96829             | 0.00032300   | 2.62390              | 71.39772                      | 228.97500                    | 176.53626             | 9.38213             |
| METEOSAT-9 | 18   | 15  | 15/01/2018 | 42164.62216             | 0.00023070   | 2.64142              | 71.39086                      | 239.73715                    | 172.82690             | 9.52917             |
| METEOSAT-9 | 18   | 22  | 22/01/2018 | 42167.89987             | 0.00022230   | 2.65295              | 71.63809                      | 242.00704                    | 177.12925             | 9.45143             |
| METEOSAT-9 | 18   | 29  | 29/01/2018 | 42167.35548             | 0.00028310   | 2.66919              | 71.64978                      | 257.45507                    | 168.43301             | 9.31928             |
| METEOSAT-9 | 18   | 36  | 05/02/2018 | 42166.43869             | 0.00028430   | 2.67866              | 71.89761                      | 255.54079                    | 176.91588             | 9.24138             |
| METEOSAT-9 | 18   | 43  | 12/02/2018 | 42166.04536             | 0.00024500   | 2.69271              | 71.89311                      | 273.41049                    | 165.93114             | 9.22885             |
| METEOSAT-9 | 18   | 50  | 19/02/2018 | 42165.99669             | 0.00022320   | 2.69832              | 72.07492                      | 251.06912                    | 195.01372             | 9.25964             |
| METEOSAT-9 | 18   | 57  | 26/02/2018 | 42202.77857             | 0.00012740   | 2.71195              | 72.03711                      | 261.35631                    | 189.52629             | 7.12745             |
| METEOSAT-9 | 18   | 64  | 05/03/2018 | 42203.20389             | 0.00009830   | 2.71688              | 72.16024                      | 258.55429                    | 195.78335             | 3.81010             |
| METEOSAT-9 | 18   | 71  | 12/03/2018 | 42167.19565             | 0.00009720   | 2.72996              | 72.08489                      | 307.29436                    | 153.64865             | 3.44797             |
| METEOSAT-9 | 18   | 78  | 19/03/2018 | 42167.93460             | 0.00005220   | 2.73362              | 72.12838                      | 226.30696                    | 241.37583             | 3.33859             |
| METEOSAT-9 | 18   | 85  | 26/03/2018 | 42165.75493             | 0.00013340   | 2.74913              | 72.01195                      | 279.03319                    | 195.59423             | 3.27345             |
| METEOSAT-9 | 18   | 92  | 02/04/2018 | 42167.21451             | 0.00007930   | 2.75420              | 71.98851                      | 283.49911                    | 198.02174             | 3.24861             |
| METEOSAT-9 | 18   | 99  | 09/04/2018 | 42165.01722             | 0.00011880   | 2.77021              | 71.85112                      | 319.36438                    | 169.21606             | 3.27449             |
| METEOSAT-9 | 18   | 106 | 16/04/2018 | 42166.28395             | 0.00003180   | 2.77624              | 71.79362                      | 252.03879                    | 243.54654             | 3.32351             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 18   | 113 | 23/04/2018 | 42163.76435             | 0.00013770   | 2.79681              | 71.66546                      | 294.43508                    | 208.26919             | 3.41403             |
| METEOSAT-9 | 18   | 120 | 30/04/2018 | 42165.52403             | 0.00007450   | 2.80568              | 71.56256                      | 312.87690                    | 196.96701             | 3.54834             |
| METEOSAT-9 | 18   | 127 | 07/05/2018 | 42163.11713             | 0.00012840   | 2.82613              | 71.45397                      | 330.30251                    | 186.73914             | 3.73313             |
| METEOSAT-9 | 18   | 134 | 14/05/2018 | 42168.78386             | 0.00009390   | 2.83643              | 71.37828                      | 173.67197                    | 350.20868             | 3.59072             |
| METEOSAT-9 | 18   | 141 | 21/05/2018 | 42166.66749             | 0.00008610   | 2.86148              | 71.33735                      | 252.63913                    | 278.02624             | 3.42756             |
| METEOSAT-9 | 18   | 148 | 28/05/2018 | 42167.91675             | 0.00003180   | 2.87419              | 71.24779                      | 189.05075                    | 348.49659             | 3.31218             |
| METEOSAT-9 | 18   | 155 | 04/06/2018 | 42166.20483             | 0.00002050   | 2.89676              | 71.24699                      | 295.77160                    | 248.61991             | 3.24724             |
| METEOSAT-9 | 18   | 162 | 11/06/2018 | 42166.39135             | 0.00008230   | 2.90902              | 71.22228                      | 162.69894                    | 28.59052              | 3.21243             |
| METEOSAT-9 | 18   | 169 | 18/06/2018 | 42165.32641             | 0.00007130   | 2.93468              | 71.31071                      | 253.80166                    | 304.30491             | 3.21022             |
| METEOSAT-9 | 18   | 176 | 25/06/2018 | 42165.51176             | 0.00002440   | 2.94806              | 71.28228                      | 135.26922                    | 69.81985              | 3.25790             |
| METEOSAT-9 | 18   | 183 | 02/07/2018 | 42164.99253             | 0.00000630   | 2.96846              | 71.39865                      | 240.19662                    | 331.78122             | 3.35793             |
| METEOSAT-9 | 18   | 190 | 09/07/2018 | 42163.93210             | 0.00008290   | 2.97921              | 71.41923                      | 151.36072                    | 67.63334              | 3.49192             |
| METEOSAT-9 | 18   | 197 | 16/07/2018 | 42164.22113             | 0.00006720   | 3.00124              | 71.60313                      | 246.31755                    | 339.55836             | 3.65655             |
| METEOSAT-9 | 18   | 204 | 23/07/2018 | 42167.64542             | 0.00009640   | 3.01242              | 71.60126                      | 16.72331                     | 215.92866             | 3.53235             |
| METEOSAT-9 | 18   | 211 | 30/07/2018 | 42168.32052             | 0.00008350   | 3.02761              | 71.77140                      | 352.86826                    | 246.37221             | 3.39447             |
| METEOSAT-9 | 18   | 218 | 06/08/2018 | 42166.22942             | 0.00004760   | 3.03522              | 71.77707                      | 55.34700                     | 190.67924             | 3.29180             |
| METEOSAT-9 | 18   | 225 | 13/08/2018 | 42167.56143             | 0.00009740   | 3.05154              | 71.97199                      | 312.87771                    | 299.77293             | 3.21823             |
| METEOSAT-9 | 18   | 232 | 20/08/2018 | 42165.50821             | 0.00009230   | 3.06043              | 71.92796                      | 26.42247                     | 233.13440             | 3.18957             |
| METEOSAT-9 | 18   | 239 | 27/08/2018 | 42166.88774             | 0.00005980   | 3.07042              | 72.07217                      | 349.47221                    | 276.85829             | 3.21722             |
| METEOSAT-9 | 18   | 246 | 03/09/2018 | 42164.36921             | 0.00003920   | 3.07657              | 71.99389                      | 71.55659                     | 201.80255             | 3.27832             |
| METEOSAT-9 | 18   | 253 | 10/09/2018 | 42166.02294             | 0.00009090   | 3.08878              | 72.12093                      | 305.19061                    | 335.02225             | 3.36926             |
| METEOSAT-9 | 18   | 260 | 17/09/2018 | 42163.67928             | 0.00008110   | 3.09811              | 71.98554                      | 30.57525                     | 256.79292             | 3.49916             |
| METEOSAT-9 | 18   | 267 | 24/09/2018 | 42164.94916             | 0.00003680   | 3.10626              | 72.04545                      | 335.04738                    | 319.33996             | 3.68659             |
| METEOSAT-9 | 18   | 274 | 01/10/2018 | 42167.32137             | 0.00010840   | 3.11529              | 71.86381                      | 11.73496                     | 289.65597             | 3.61518             |
| METEOSAT-9 | 18   | 281 | 08/10/2018 | 42168.47583             | 0.00016660   | 3.12688              | 71.91297                      | 331.80509                    | 336.27903             | 3.46181             |
| METEOSAT-9 | 18   | 288 | 15/10/2018 | 42166.66208             | 0.00016860   | 3.14063              | 71.70446                      | 9.74104                      | 305.33142             | 3.34384             |
| METEOSAT-9 | 18   | 295 | 22/10/2018 | 42167.06506             | 0.00011490   | 3.15096              | 71.70167                      | 346.89021                    | 335.02365             | 3.28203             |
| METEOSAT-9 | 18   | 302 | 29/10/2018 | 42165.94596             | 0.00009940   | 3.17029              | 71.47102                      | 352.63943                    | 336.38284             | 3.25699             |
| METEOSAT-9 | 18   | 309 | 05/11/2018 | 42166.06261             | 0.00016790   | 3.18439              | 71.49131                      | 323.53637                    | 12.37990              | 3.26603             |
| METEOSAT-9 | 18   | 316 | 12/11/2018 | 42165.28630             | 0.00016310   | 3.20457              | 71.29776                      | 358.27507                    | 344.78674             | 3.31054             |
| METEOSAT-9 | 18   | 323 | 19/11/2018 | 42164.44336             | 0.00010440   | 3.21808              | 71.30972                      | 326.72428                    | 23.33164              | 3.40749             |
| METEOSAT-9 | 18   | 330 | 26/11/2018 | 42164.82658             | 0.00011510   | 3.24072              | 71.14845                      | 338.12310                    | 19.13615              | 3.53905             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 18   | 337 | 03/12/2018 | 42163.60202             | 0.00017940   | 3.25643              | 71.21232                      | 317.88473                    | 46.39160              | 3.70920             |
| METEOSAT-9 | 18   | 344 | 10/12/2018 | 42168.52787             | 0.00011640   | 3.28046              | 71.11981                      | 26.90163                     | 344.24381             | 3.57528             |
| METEOSAT-9 | 18   | 351 | 17/12/2018 | 42166.71939             | 0.00001260   | 3.29414              | 71.20124                      | 349.16149                    | 28.65667              | 3.42012             |
| METEOSAT-9 | 18   | 358 | 24/12/2018 | 42168.27489             | 0.00006350   | 3.31901              | 71.15745                      | 10.82619                     | 13.82938              | 3.30524             |
| METEOSAT-9 | 18   | 365 | 31/12/2018 | 42165.92212             | 0.00010100   | 3.33251              | 71.28239                      | 322.50343                    | 68.85679              | 3.22867             |
| METEOSAT-9 | 19   | 7   | 07/01/2019 | 42166.99947             | 0.00012820   | 3.35516              | 71.30441                      | 11.96031                     | 26.25186              | 3.19831             |
| METEOSAT-9 | 19   | 14  | 14/01/2019 | 42164.92596             | 0.00004330   | 3.36456              | 71.42738                      | 314.93735                    | 90.06210              | 3.20741             |
| METEOSAT-9 | 19   | 21  | 21/01/2019 | 42166.76974             | 0.00010020   | 3.38661              | 71.46765                      | 350.82732                    | 61.08593              | 3.26264             |
| METEOSAT-9 | 19   | 28  | 28/01/2019 | 42163.93283             | 0.00013970   | 3.39491              | 71.58816                      | 324.42123                    | 94.35758              | 3.35326             |
| METEOSAT-9 | 19   | 35  | 04/02/2019 | 42165.22639             | 0.00015880   | 3.41277              | 71.65352                      | 2.65437                      | 63.09462              | 3.49572             |
| METEOSAT-9 | 19   | 42  | 11/02/2019 | 42163.51114             | 0.00008060   | 3.41669              | 71.72861                      | 325.78571                    | 106.95268             | 3.67003             |
| METEOSAT-9 | 19   | 49  | 18/02/2019 | 42168.92052             | 0.00006130   | 3.43458              | 71.76834                      | 17.91646                     | 61.55996              | 3.55861             |
| METEOSAT-9 | 19   | 56  | 25/02/2019 | 42166.67973             | 0.00007590   | 3.43903              | 71.79563                      | 342.11083                    | 104.08983             | 3.42246             |
| METEOSAT-9 | 19   | 63  | 04/03/2019 | 42167.53603             | 0.00012730   | 3.45355              | 71.82567                      | 27.31085                     | 65.66570              | 3.34111             |
| METEOSAT-9 | 19   | 70  | 11/03/2019 | 42166.60029             | 0.00002640   | 3.45548              | 71.78516                      | 35.68611                     | 64.16060              | 3.28365             |
| METEOSAT-9 | 19   | 77  | 18/03/2019 | 42166.30160             | 0.00010580   | 3.47207              | 71.77753                      | 2.27644                      | 104.46173             | 3.27941             |
| METEOSAT-9 | 19   | 84  | 25/03/2019 | 42165.44662             | 0.00011090   | 3.47723              | 71.67863                      | 357.67986                    | 116.07008             | 3.30288             |
| METEOSAT-9 | 19   | 91  | 01/04/2019 | 42165.25763             | 0.00016400   | 3.49245              | 71.65845                      | 21.76262                     | 98.97668              | 3.38041             |
| METEOSAT-9 | 19   | 98  | 08/04/2019 | 42165.28731             | 0.00006220   | 3.49752              | 71.50991                      | 27.90807                     | 99.97102              | 3.47733             |
| METEOSAT-9 | 19   | 105 | 15/04/2019 | 42163.69319             | 0.00015470   | 3.51642              | 71.48075                      | 2.67210                      | 132.28277             | 3.62661             |
| METEOSAT-9 | 19   | 112 | 22/04/2019 | 42164.36165             | 0.00014190   | 3.52667              | 71.30622                      | 11.72137                     | 130.48734             | 3.80516             |
| METEOSAT-9 | 19   | 119 | 29/04/2019 | 42167.71325             | 0.00017290   | 3.54483              | 71.28459                      | 347.51021                    | 161.55305             | 3.73432             |
| METEOSAT-9 | 19   | 126 | 06/05/2019 | 42168.59596             | 0.00008760   | 3.55595              | 71.10636                      | 314.89820                    | 201.06776             | 3.55209             |
| METEOSAT-9 | 19   | 133 | 13/05/2019 | 42166.22328             | 0.00019550   | 3.57772              | 71.12203                      | 334.50076                    | 188.22568             | 3.41924             |
| METEOSAT-9 | 19   | 140 | 20/05/2019 | 42167.82769             | 0.00014640   | 3.59363              | 70.95284                      | 340.67255                    | 189.03659             | 3.32143             |
| METEOSAT-9 | 19   | 147 | 27/05/2019 | 42165.53754             | 0.00019170   | 3.61346              | 70.99509                      | 356.10079                    | 180.43276             | 3.27554             |
| METEOSAT-9 | 19   | 154 | 03/06/2019 | 42166.81449             | 0.00008600   | 3.62903              | 70.86031                      | 334.76764                    | 208.79396             | 3.25534             |
| METEOSAT-9 | 19   | 161 | 10/06/2019 | 42164.33751             | 0.00020750   | 3.65086              | 70.96078                      | 344.71405                    | 205.68288             | 3.27793             |
| METEOSAT-9 | 19   | 168 | 17/06/2019 | 42166.03551             | 0.00014910   | 3.66956              | 70.85614                      | 353.81127                    | 203.66978             | 3.34486             |
| METEOSAT-9 | 19   | 175 | 24/06/2019 | 42163.77703             | 0.00019380   | 3.68692              | 70.97362                      | 3.02283                      | 201.36936             | 3.46289             |
| METEOSAT-9 | 19   | 182 | 01/07/2019 | 42164.69384             | 0.00008590   | 3.70334              | 70.90130                      | 352.80224                    | 218.72280             | 3.61517             |
| METEOSAT-9 | 19   | 189 | 08/07/2019 | 42167.18585             | 0.00018130   | 3.72121              | 71.07230                      | 21.49457                     | 196.66901             | 3.51965             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 19   | 196 | 15/07/2019 | 42168.19630             | 0.00015790   | 3.73900              | 71.02854                      | 43.70622                     | 181.25422             | 3.37090             |
| METEOSAT-9 | 19   | 203 | 22/07/2019 | 42166.77906             | 0.00018570   | 3.75069              | 71.17593                      | 40.43428                     | 191.17769             | 3.27147             |
| METEOSAT-9 | 19   | 210 | 29/07/2019 | 42166.70629             | 0.00011960   | 3.76502              | 71.13468                      | 66.83026                     | 171.65780             | 3.21142             |
| METEOSAT-9 | 19   | 217 | 05/08/2019 | 42166.01185             | 0.00018160   | 3.77697              | 71.30288                      | 26.46024                     | 218.71631             | 3.17621             |
| METEOSAT-9 | 19   | 224 | 12/08/2019 | 42165.87667             | 0.00017190   | 3.79277              | 71.26567                      | 50.99816                     | 201.12814             | 3.19999             |
| METEOSAT-9 | 19   | 231 | 19/08/2019 | 42165.68156             | 0.00016900   | 3.79866              | 71.37377                      | 45.48491                     | 213.48975             | 3.27002             |
| METEOSAT-9 | 19   | 238 | 26/08/2019 | 42164.35705             | 0.00013250   | 3.81121              | 71.30186                      | 73.37691                     | 192.66579             | 3.38162             |
| METEOSAT-9 | 19   | 245 | 02/09/2019 | 42164.95869             | 0.00017220   | 3.81874              | 71.40257                      | 28.09595                     | 244.85904             | 3.51046             |
| METEOSAT-9 | 19   | 252 | 09/09/2019 | 42163.53297             | 0.00017710   | 3.83383              | 71.32690                      | 57.54786                     | 222.55549             | 3.69928             |
| METEOSAT-9 | 19   | 259 | 16/09/2019 | 42168.90461             | 0.00008230   | 3.83716              | 71.34735                      | 93.11316                     | 193.79903             | 3.64281             |
| METEOSAT-9 | 19   | 266 | 23/09/2019 | 42166.64171             | 0.00012770   | 3.85088              | 71.22265                      | 126.29960                    | 167.49624             | 3.51434             |
| METEOSAT-9 | 19   | 273 | 30/09/2019 | 42168.10418             | 0.00006270   | 3.85754              | 71.22858                      | 48.95567                     | 251.61031             | 3.40009             |
| METEOSAT-9 | 19   | 280 | 07/10/2019 | 42165.85047             | 0.00012640   | 3.87560              | 71.11387                      | 100.15809                    | 207.35711             | 3.34155             |
| METEOSAT-9 | 19   | 287 | 14/10/2019 | 42167.24815             | 0.00007030   | 3.88066              | 71.05005                      | 108.40843                    | 206.05079             | 3.32477             |
| METEOSAT-9 | 19   | 294 | 21/10/2019 | 42164.77659             | 0.00012550   | 3.89933              | 70.89977                      | 133.03300                    | 188.50009             | 3.34777             |
| METEOSAT-9 | 19   | 301 | 28/10/2019 | 42166.32940             | 0.00004820   | 3.90927              | 70.84638                      | 49.08203                     | 279.44846             | 3.38712             |
| METEOSAT-9 | 19   | 308 | 04/11/2019 | 42164.66979             | 0.00010300   | 3.93316              | 70.77872                      | 109.91586                    | 225.63908             | 3.43578             |
| METEOSAT-9 | 19   | 315 | 11/11/2019 | 42165.75456             | 0.00005000   | 3.94280              | 70.69208                      | 145.04866                    | 197.57941             | 3.51045             |
| METEOSAT-9 | 19   | 322 | 18/11/2019 | 42163.86715             | 0.00010130   | 3.96716              | 70.59437                      | 148.37147                    | 201.38455             | 3.62644             |
| METEOSAT-9 | 19   | 329 | 25/11/2019 | 42164.73947             | 0.00002390   | 3.98075              | 70.54477                      | 11.92869                     | 344.93319             | 3.76676             |
| METEOSAT-9 | 19   | 336 | 02/12/2019 | 42167.66955             | 0.00014690   | 4.00692              | 70.52032                      | 65.42406                     | 298.22196             | 3.61029             |
| METEOSAT-9 | 19   | 343 | 09/12/2019 | 42167.75545             | 0.00007000   | 4.01954              | 70.46943                      | 54.41584                     | 316.02986             | 3.44337             |
| METEOSAT-9 | 19   | 350 | 16/12/2019 | 42167.08933             | 0.00008980   | 4.04567              | 70.47827                      | 74.74155                     | 302.48764             | 3.32070             |
| METEOSAT-9 | 19   | 354 | 20/12/2019 | 42165.89576             | 0.00004910   | 4.05208              | 70.52548                      | 29.09353                     | 351.98327             | 3.26527             |
| METEOSAT-9 | 19   | 364 | 30/12/2019 | 42166.39357             | 0.00014180   | 4.08423              | 70.54196                      | 54.91499                     | 335.94025             | 3.18751             |
| METEOSAT-9 | 20   | 6   | 06/01/2020 | 42165.32581             | 0.00005580   | 4.09539              | 70.53722                      | 31.62173                     | 6.14669               | 3.18968             |
| METEOSAT-9 | 20   | 13  | 13/01/2020 | 42166.09190             | 0.00009460   | 4.11814              | 70.63182                      | 50.27859                     | 354.34752             | 3.23910             |
| METEOSAT-9 | 20   | 20  | 20/01/2020 | 42164.54443             | 0.00014510   | 4.12951              | 70.63576                      | 10.38994                     | 41.21537              | 3.32431             |
| METEOSAT-9 | 20   | 27  | 27/01/2020 | 42165.10627             | 0.00015590   | 4.14722              | 70.75416                      | 42.75445                     | 15.76081              | 3.45856             |
| METEOSAT-9 | 20   | 34  | 03/02/2020 | 42163.23621             | 0.00007480   | 4.15453              | 70.73591                      | 8.73754                      | 56.86052              | 3.63394             |
| METEOSAT-9 | 20   | 41  | 10/02/2020 | 42169.42309             | 0.00010480   | 4.17184              | 70.84275                      | 83.84115                     | 348.48106             | 3.57803             |
| METEOSAT-9 | 20   | 48  | 17/02/2020 | 42166.79350             | 0.00009620   | 4.18051              | 70.79863                      | 33.01720                     | 46.09577              | 3.44096             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 20   | 55  | 24/02/2020 | 42167.95589             | 0.00014770   | 4.19228              | 70.88123                      | 69.06804                     | 16.75498              | 3.35123             |
| METEOSAT-9 | 20   | 62  | 02/03/2020 | 42165.97044             | 0.00004670   | 4.19776              | 70.79013                      | 73.63858                     | 19.10163              | 3.29651             |
| METEOSAT-9 | 20   | 69  | 09/03/2020 | 42167.70852             | 0.00012610   | 4.21154              | 70.85122                      | 59.12194                     | 40.43373              | 3.29153             |
| METEOSAT-9 | 20   | 76  | 16/03/2020 | 42164.87559             | 0.00013500   | 4.22142              | 70.72423                      | 26.57193                     | 80.01789              | 3.31658             |
| METEOSAT-9 | 20   | 83  | 23/03/2020 | 42166.07202             | 0.00017040   | 4.23166              | 70.74685                      | 58.32128                     | 55.20076              | 3.38658             |
| METEOSAT-9 | 20   | 90  | 30/03/2020 | 42164.54212             | 0.00007900   | 4.24000              | 70.57233                      | 50.72940                     | 69.95435              | 3.48610             |
| METEOSAT-9 | 20   | 97  | 06/04/2020 | 42165.20871             | 0.00016710   | 4.25430              | 70.58561                      | 44.09631                     | 83.61390              | 3.63386             |
| METEOSAT-9 | 20   | 104 | 13/04/2020 | 42163.26476             | 0.00017500   | 4.26979              | 70.40280                      | 28.69639                     | 106.26789             | 3.80880             |
| METEOSAT-9 | 20   | 111 | 20/04/2020 | 42168.50332             | 0.00011330   | 4.28187              | 70.39171                      | 28.92648                     | 112.87969             | 3.73829             |
| METEOSAT-9 | 20   | 118 | 27/04/2020 | 42167.80410             | 0.00005800   | 4.29710              | 70.19681                      | 340.63088                    | 168.10627             | 3.56865             |
| METEOSAT-9 | 20   | 125 | 04/05/2020 | 42167.05595             | 0.00015010   | 4.31326              | 70.20865                      | 11.54051                     | 143.97106             | 3.44509             |
| METEOSAT-9 | 20   | 132 | 11/05/2020 | 42166.62117             | 0.00014800   | 4.33501              | 70.04386                      | 4.53886                      | 157.95827             | 3.35212             |
| METEOSAT-9 | 20   | 139 | 18/05/2020 | 42166.13229             | 0.00015140   | 4.34899              | 70.05285                      | 32.84370                     | 136.51341             | 3.30447             |
| METEOSAT-9 | 20   | 146 | 25/05/2020 | 42166.39265             | 0.00007260   | 4.36986              | 69.90559                      | 9.94612                      | 166.46203             | 3.28918             |
| METEOSAT-9 | 20   | 153 | 01/06/2020 | 42164.51347             | 0.00019360   | 4.38645              | 69.95575                      | 19.52258                     | 163.78123             | 3.31532             |
| METEOSAT-9 | 20   | 160 | 08/06/2020 | 42165.50378             | 0.00015540   | 4.41152              | 69.86081                      | 17.91094                     | 172.47415             | 3.38157             |
| METEOSAT-9 | 20   | 167 | 15/06/2020 | 42163.81120             | 0.00018030   | 4.42461              | 69.91229                      | 38.69212                     | 158.67352             | 3.49547             |
| METEOSAT-9 | 20   | 174 | 22/06/2020 | 42164.85554             | 0.00008490   | 4.44708              | 69.84006                      | 29.88372                     | 174.62410             | 3.64932             |
| METEOSAT-9 | 20   | 181 | 29/06/2020 | 42166.66010             | 0.00027510   | 4.46054              | 69.92816                      | 8.08807                      | 203.05953             | 3.46585             |
| METEOSAT-9 | 20   | 188 | 06/07/2020 | 42168.39533             | 0.00021530   | 4.48476              | 69.90690                      | 4.10826                      | 213.83057             | 3.32787             |
| METEOSAT-9 | 20   | 195 | 13/07/2020 | 42166.04723             | 0.00022620   | 4.49419              | 69.97756                      | 19.05245                     | 205.62715             | 3.23672             |
| METEOSAT-9 | 20   | 202 | 20/07/2020 | 42167.32612             | 0.00014360   | 4.51459              | 69.96089                      | 1.53205                      | 230.01699             | 3.19130             |
| METEOSAT-9 | 20   | 209 | 27/07/2020 | 42165.02275             | 0.00027400   | 4.52313              | 70.04314                      | 14.41676                     | 223.92422             | 3.17279             |
| METEOSAT-9 | 20   | 216 | 03/08/2020 | 42166.62571             | 0.00020260   | 4.54373              | 70.05689                      | 11.85550                     | 233.40448             | 3.21715             |
| METEOSAT-9 | 20   | 223 | 10/08/2020 | 42164.50125             | 0.00021390   | 4.54789              | 70.09248                      | 23.67757                     | 228.51677             | 3.30361             |
| METEOSAT-9 | 20   | 230 | 17/08/2020 | 42165.23141             | 0.00013140   | 4.56520              | 70.08096                      | 11.38602                     | 247.83519             | 3.43852             |
| METEOSAT-9 | 20   | 237 | 24/08/2020 | 42163.71025             | 0.00026330   | 4.57019              | 70.10135                      | 18.32762                     | 247.90129             | 3.58871             |
| METEOSAT-9 | 20   | 244 | 31/08/2020 | 42168.46720             | 0.00009370   | 4.58793              | 70.10767                      | 14.53334                     | 258.52573             | 3.54737             |
| METEOSAT-9 | 20   | 251 | 07/09/2020 | 42167.31448             | 0.00009860   | 4.58985              | 70.06112                      | 25.20815                     | 254.66474             | 3.43662             |
| METEOSAT-9 | 20   | 258 | 14/09/2020 | 42166.91336             | 0.00002530   | 4.60615              | 70.02128                      | 3.76619                      | 282.96264             | 3.37318             |
| METEOSAT-9 | 20   | 265 | 21/09/2020 | 42166.58754             | 0.00015730   | 4.61144              | 69.95172                      | 16.42170                     | 277.20016             | 3.31441             |
| METEOSAT-9 | 20   | 272 | 28/09/2020 | 42166.06197             | 0.00007850   | 4.62899              | 69.93035                      | 27.80863                     | 272.72954             | 3.32349             |

| Spacecraft | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-9 | 20   | 279 | 05/10/2020 | 42166.11705             | 0.00008240   | 4.63359              | 69.79995                      | 19.56428                     | 288.03456             | 3.36317             |
| METEOSAT-9 | 20   | 286 | 12/10/2020 | 42164.52200             | 0.00001210   | 4.65205              | 69.73749                      | 30.98726                     | 283.65399             | 3.44737             |
| METEOSAT-9 | 20   | 293 | 19/10/2020 | 42165.39502             | 0.00014890   | 4.66222              | 69.60111                      | 13.59264                     | 308.17376             | 3.53438             |
| METEOSAT-9 | 20   | 300 | 26/10/2020 | 42163.64658             | 0.00005930   | 4.68267              | 69.57770                      | 38.47365                     | 290.37474             | 3.68579             |
| METEOSAT-9 | 20   | 307 | 02/11/2020 | 42168.71879             | 0.00008800   | 4.69376              | 69.41007                      | 293.20062                    | 42.65154              | 3.60959             |
| METEOSAT-9 | 20   | 314 | 09/11/2020 | 42166.38126             | 0.00009880   | 4.71563              | 69.37732                      | 250.28485                    | 92.38225              | 3.47554             |
| METEOSAT-9 | 20   | 321 | 16/11/2020 | 42167.94581             | 0.00012810   | 4.73166              | 69.23729                      | 327.37765                    | 22.22557              | 3.35166             |
| METEOSAT-9 | 20   | 328 | 23/11/2020 | 42165.13720             | 0.00007620   | 4.75622              | 69.23791                      | 269.86759                    | 86.62485              | 3.31919             |
| METEOSAT-9 | 20   | 335 | 30/11/2020 | 42166.48143             | 0.00011970   | 4.77267              | 69.10200                      | 288.66455                    | 74.90123              | 3.33281             |
| METEOSAT-9 | 20   | 342 | 07/12/2020 | 42164.16493             | 0.00012400   | 4.79520              | 69.13899                      | 259.99310                    | 110.51825             | 3.39201             |
| METEOSAT-9 | 20   | 349 | 14/12/2020 | 42165.61414             | 0.00015150   | 4.81476              | 69.04366                      | 319.11513                    | 58.49605              | 3.47462             |
| METEOSAT-9 | 20   | 356 | 21/12/2020 | 42166.83032             | 0.00005840   | 4.83542              | 69.13486                      | 212.96523                    | 171.39466             | 3.39647             |
| METEOSAT-9 | 20   | 363 | 28/12/2020 | 42167.71161             | 0.00007660   | 4.85300              | 69.05751                      | 264.13919                    | 127.09182             | 3.27621             |
| METEOSAT-9 | 21   | 4   | 04/01/2021 | 42166.17047             | 0.00009060   | 4.87176              | 69.15958                      | 238.20375                    | 159.76025             | 3.20219             |
| METEOSAT-9 | 21   | 11  | 11/01/2021 | 42166.81203             | 0.00009370   | 4.88998              | 69.10755                      | 322.04624                    | 82.83433              | 3.16324             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 12   | 205 | 23/07/2012 | 42029.86517             | 0.00011781   | 1.78968              | 255.90118                     | 107.59245                    | 292.67782             | -4.98052            |
| METEOSAT-10 | 12   | 212 | 30/07/2012 | 42167.01450             | 0.00003872   | 1.77130              | 255.79240                     | 108.22178                    | 300.58086             | -3.45627            |
| METEOSAT-10 | 12   | 219 | 06/08/2012 | 42166.47413             | 0.00005429   | 1.75783              | 255.20054                     | 121.02492                    | 295.21849             | -3.50577            |
| METEOSAT-10 | 12   | 226 | 13/08/2012 | 42166.20889             | 0.00006807   | 1.74310              | 255.05779                     | 37.05338                     | 26.21132              | -3.52493            |
| METEOSAT-10 | 12   | 233 | 20/08/2012 | 42166.67272             | 0.00010600   | 1.73248              | 254.47896                     | 103.65783                    | 327.06934             | -3.53828            |
| METEOSAT-10 | 12   | 240 | 27/08/2012 | 42165.44657             | 0.00001455   | 1.71625              | 254.35404                     | 91.35361                     | 346.40925             | -3.52419            |
| METEOSAT-10 | 12   | 247 | 03/09/2012 | 42166.27629             | 0.00004968   | 1.70953              | 253.85533                     | 89.36422                     | 355.83115             | -3.48661            |
| METEOSAT-10 | 12   | 254 | 10/09/2012 | 42164.82408             | 0.00007435   | 1.69673              | 253.77244                     | 23.05884                     | 69.18420              | -3.41818            |
| METEOSAT-10 | 12   | 261 | 17/09/2012 | 42166.17355             | 0.00010440   | 1.69037              | 253.34189                     | 98.06342                     | 1.57720               | -3.34743            |
| METEOSAT-10 | 12   | 268 | 24/09/2012 | 42164.05866             | 0.00001801   | 1.67385              | 253.31520                     | 8.33350                      | 98.32927              | -3.24887            |
| METEOSAT-10 | 12   | 275 | 01/10/2012 | 42165.73395             | 0.00006388   | 1.66920              | 253.03973                     | 68.36966                     | 45.59078              | -3.12374            |
| METEOSAT-10 | 12   | 282 | 08/10/2012 | 42167.09589             | 0.00001369   | 1.65461              | 253.08026                     | 308.21773                    | 172.49141             | -3.23252            |
| METEOSAT-10 | 12   | 289 | 15/10/2012 | 42168.69963             | 0.00010229   | 1.64745              | 252.86152                     | 138.43275                    | 349.24173             | -3.38420            |
| METEOSAT-10 | 12   | 296 | 22/10/2012 | 42166.38330             | 0.00005190   | 1.62643              | 252.92077                     | 225.13789                    | 269.25030             | -3.51074            |
| METEOSAT-10 | 12   | 303 | 29/10/2012 | 42168.12272             | 0.00004138   | 1.61883              | 252.84502                     | 132.55532                    | 8.71139               | -3.60773            |
| METEOSAT-10 | 12   | 310 | 05/11/2012 | 42166.23746             | 0.00001580   | 1.59902              | 252.91572                     | 358.02741                    | 150.00288             | -3.67415            |
| METEOSAT-10 | 12   | 317 | 12/11/2012 | 42167.30604             | 0.00009729   | 1.58774              | 252.80503                     | 130.72899                    | 24.25285              | -3.73431            |
| METEOSAT-10 | 12   | 324 | 19/11/2012 | 42165.59238             | 0.00003941   | 1.56080              | 252.78637                     | 226.49690                    | 295.36533             | -3.77441            |
| METEOSAT-10 | 12   | 331 | 26/11/2012 | 42166.67787             | 0.00004467   | 1.54824              | 252.75387                     | 104.10325                    | 64.68432              | -3.78331            |
| METEOSAT-10 | 12   | 338 | 03/12/2012 | 42165.70176             | 0.00001749   | 1.52371              | 252.66091                     | 54.57279                     | 121.23192             | -3.76130            |
| METEOSAT-10 | 12   | 345 | 10/12/2012 | 42165.64178             | 0.00009793   | 1.50920              | 252.47991                     | 123.95636                    | 58.96276              | -3.72986            |
| METEOSAT-10 | 12   | 352 | 17/12/2012 | 42165.15830             | 0.00003729   | 1.47960              | 252.19935                     | 212.01579                    | 338.13365             | -3.68215            |
| METEOSAT-10 | 12   | 359 | 24/12/2012 | 42165.08491             | 0.00005869   | 1.46493              | 252.02850                     | 92.05191                     | 105.24817             | -3.60385            |
| METEOSAT-10 | 12   | 366 | 31/12/2012 | 42165.34530             | 0.00002652   | 1.44055              | 251.62437                     | 108.29458                    | 96.42173              | -3.49300            |
| METEOSAT-10 | 13   | 7   | 07/01/2013 | 42164.03445             | 0.00010579   | 1.42728              | 251.28245                     | 123.58539                    | 88.49610              | -3.37035            |
| METEOSAT-10 | 13   | 14  | 14/01/2013 | 42164.87324             | 0.00005093   | 1.40131              | 250.68170                     | 199.92170                    | 19.79892              | -3.23212            |
| METEOSAT-10 | 13   | 21  | 21/01/2013 | 42126.53934             | 0.00006540   | 1.38941              | 250.35666                     | 145.65203                    | 84.08033              | -0.44432            |
| METEOSAT-10 | 13   | 28  | 28/01/2013 | 42169.73421             | 0.00008541   | 1.37044              | 249.70633                     | 186.16334                    | 52.05942              | 0.49710             |
| METEOSAT-10 | 13   | 35  | 04/02/2013 | 42167.31682             | 0.00013354   | 1.36163              | 249.33520                     | 157.05332                    | 88.23031              | 0.28861             |
| METEOSAT-10 | 13   | 42  | 11/02/2013 | 42168.95241             | 0.00013085   | 1.34317              | 248.58974                     | 207.52562                    | 45.21948              | 0.10667             |
| METEOSAT-10 | 13   | 49  | 18/02/2013 | 42166.85564             | 0.00007956   | 1.33548              | 248.34095                     | 151.13921                    | 108.60045             | -0.04522            |
| METEOSAT-10 | 13   | 56  | 25/02/2013 | 42168.42781             | 0.00011584   | 1.32283              | 247.67405                     | 186.65859                    | 80.54031              | -0.15043            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 13   | 63  | 04/03/2013 | 42165.97287             | 0.00015480   | 1.31646              | 247.49966                     | 165.66658                    | 108.51883             | -0.23584            |
| METEOSAT-10 | 13   | 70  | 11/03/2013 | 42167.56722             | 0.00015143   | 1.30355              | 246.86757                     | 207.91753                    | 73.73993              | -0.29357            |
| METEOSAT-10 | 13   | 77  | 18/03/2013 | 42165.70312             | 0.00009354   | 1.29609              | 246.86642                     | 164.66530                    | 123.85964             | -0.32513            |
| METEOSAT-10 | 13   | 84  | 25/03/2013 | 42166.60065             | 0.00015034   | 1.28569              | 246.36796                     | 188.04066                    | 107.89625             | -0.30984            |
| METEOSAT-10 | 13   | 91  | 01/04/2013 | 42164.93481             | 0.00017149   | 1.27611              | 246.47750                     | 175.55073                    | 127.20972             | -0.27535            |
| METEOSAT-10 | 13   | 98  | 08/04/2013 | 42165.80820             | 0.00017228   | 1.26385              | 246.02088                     | 209.46798                    | 100.71352             | -0.21001            |
| METEOSAT-10 | 13   | 105 | 15/04/2013 | 42164.74734             | 0.00010493   | 1.25174              | 246.22756                     | 180.35811                    | 136.60876             | -0.11742            |
| METEOSAT-10 | 13   | 112 | 22/04/2013 | 42164.36587             | 0.00018790   | 1.23932              | 245.85396                     | 190.80946                    | 133.56850             | 0.02010             |
| METEOSAT-10 | 13   | 119 | 29/04/2013 | 42164.14331             | 0.00018121   | 1.22269              | 246.09752                     | 186.51031                    | 144.68388             | 0.18009             |
| METEOSAT-10 | 13   | 126 | 06/05/2013 | 42163.77794             | 0.00019566   | 1.20809              | 245.68411                     | 212.81772                    | 125.88389             | 0.37339             |
| METEOSAT-10 | 13   | 133 | 13/05/2013 | 42163.74501             | 0.00011588   | 1.18957              | 245.88399                     | 196.18304                    | 149.44539             | 0.59924             |
| METEOSAT-10 | 13   | 140 | 20/05/2013 | 42162.17603             | 0.00021967   | 1.17459              | 245.44556                     | 196.41115                    | 156.82362             | 0.86606             |
| METEOSAT-10 | 13   | 147 | 27/05/2013 | 42170.05985             | 0.00003838   | 1.15180              | 245.56529                     | 152.91818                    | 206.96610             | 0.73434             |
| METEOSAT-10 | 13   | 154 | 03/06/2013 | 42168.56583             | 0.00006626   | 1.13587              | 245.00840                     | 247.60716                    | 119.45564             | 0.45502             |
| METEOSAT-10 | 13   | 161 | 10/06/2013 | 42169.40193             | 0.00003710   | 1.11348              | 244.95584                     | 16.89098                     | 356.87681             | 0.20673             |
| METEOSAT-10 | 13   | 168 | 17/06/2013 | 42167.35777             | 0.00007639   | 1.09913              | 244.28574                     | 196.95631                    | 184.16543             | -0.00983            |
| METEOSAT-10 | 13   | 175 | 24/06/2013 | 42169.34539             | 0.00002122   | 1.07413              | 244.07693                     | 236.89544                    | 151.15070             | -0.19453            |
| METEOSAT-10 | 13   | 182 | 01/07/2013 | 42166.79434             | 0.00008769   | 1.06092              | 243.28746                     | 263.16927                    | 132.41082             | -0.35005            |
| METEOSAT-10 | 13   | 189 | 08/07/2013 | 42168.09897             | 0.00005156   | 1.03940              | 242.86223                     | 347.76339                    | 55.02452              | -0.46712            |
| METEOSAT-10 | 13   | 196 | 15/07/2013 | 42166.20740             | 0.00007502   | 1.02977              | 241.98643                     | 221.79971                    | 188.66707             | -0.56340            |
| METEOSAT-10 | 13   | 203 | 22/07/2013 | 42167.97840             | 0.00004845   | 1.00757              | 241.42058                     | 289.20684                    | 128.66473             | -0.62355            |
| METEOSAT-10 | 13   | 210 | 29/07/2013 | 42165.45172             | 0.00010329   | 0.99998              | 240.54559                     | 281.96243                    | 143.64695             | -0.65949            |
| METEOSAT-10 | 13   | 217 | 05/08/2013 | 42166.63248             | 0.00007943   | 0.98286              | 239.86116                     | 342.43175                    | 90.76523              | -0.65495            |
| METEOSAT-10 | 13   | 224 | 12/08/2013 | 42165.39374             | 0.00006842   | 0.97920              | 239.03038                     | 248.00864                    | 192.93434             | -0.63811            |
| METEOSAT-10 | 13   | 231 | 19/08/2013 | 42166.09574             | 0.00008519   | 0.96154              | 238.30552                     | 307.96961                    | 140.65456             | -0.58027            |
| METEOSAT-10 | 13   | 238 | 26/08/2013 | 42164.56084             | 0.00011148   | 0.95875              | 237.65002                     | 302.40567                    | 153.85223             | -0.50037            |
| METEOSAT-10 | 13   | 245 | 02/09/2013 | 42164.91819             | 0.00011116   | 0.94550              | 236.96755                     | 345.84459                    | 118.11695             | -0.37758            |
| METEOSAT-10 | 13   | 252 | 09/09/2013 | 42164.66138             | 0.00006080   | 0.94439              | 236.47341                     | 274.24479                    | 197.24002             | -0.24677            |
| METEOSAT-10 | 13   | 259 | 16/09/2013 | 42163.94312             | 0.00012163   | 0.92902              | 235.81598                     | 321.09472                    | 158.12219             | -0.07110            |
| METEOSAT-10 | 13   | 266 | 23/09/2013 | 42163.90709             | 0.00011336   | 0.92590              | 235.58434                     | 321.65544                    | 164.89267             | 0.12949             |
| METEOSAT-10 | 13   | 273 | 30/09/2013 | 42162.97793             | 0.00014052   | 0.91264              | 235.04937                     | 350.89650                    | 143.33176             | 0.37523             |
| METEOSAT-10 | 13   | 280 | 07/10/2013 | 42163.74975             | 0.00005495   | 0.90825              | 234.95395                     | 297.49149                    | 203.98678             | 0.63035             |



| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 13   | 287 | 14/10/2013 | 42161.80658             | 0.00015169   | 0.89104              | 234.36686                     | 332.21042                    | 177.05674             | 0.93233             |
| METEOSAT-10 | 13   | 294 | 21/10/2013 | 42170.02046             | 0.00007987   | 0.88245              | 234.45551                     | 222.05172                    | 293.82173             | 0.72740             |
| METEOSAT-10 | 13   | 301 | 28/10/2013 | 42168.04195             | 0.00002130   | 0.86581              | 233.93686                     | 261.57263                    | 261.47368             | 0.48135             |
| METEOSAT-10 | 13   | 308 | 04/11/2013 | 42169.46827             | 0.00013385   | 0.85469              | 233.99597                     | 199.85285                    | 329.80144             | 0.24835             |
| METEOSAT-10 | 13   | 315 | 11/11/2013 | 42167.00588             | 0.00006529   | 0.83401              | 233.21866                     | 268.08747                    | 269.05213             | 0.05608             |
| METEOSAT-10 | 13   | 322 | 18/11/2013 | 42168.73479             | 0.00005672   | 0.81856              | 233.27787                     | 212.72862                    | 331.09675             | -0.09907            |
| METEOSAT-10 | 13   | 329 | 25/11/2013 | 42166.51903             | 0.00000724   | 0.79922              | 232.46351                     | 321.14603                    | 230.28022             | -0.21286            |
| METEOSAT-10 | 13   | 336 | 02/12/2013 | 42167.90028             | 0.00012080   | 0.78352              | 232.24848                     | 195.65366                    | 27.9042               | -0.31006            |
| METEOSAT-10 | 13   | 343 | 09/12/2013 | 42165.64270             | 0.00004698   | 0.76245              | 230.93810                     | 285.32890                    | 281.25833             | -0.37725            |
| METEOSAT-10 | 13   | 350 | 16/12/2013 | 42167.11999             | 0.00004309   | 0.74401              | 230.56332                     | 194.62680                    | 19.20960              | -0.40258            |
| METEOSAT-10 | 13   | 357 | 23/12/2013 | 42165.46320             | 0.00000598   | 0.72863              | 229.13294                     | 137.99181                    | 84.18637              | -0.39090            |
| METEOSAT-10 | 13   | 364 | 30/12/2013 | 42166.01804             | 0.00011170   | 0.71267              | 228.50137                     | 191.78850                    | 37.95355              | -0.35800            |
| METEOSAT-10 | 14   | 6   | 06/01/2014 | 42164.71595             | 0.00003709   | 0.69815              | 226.56342                     | 293.42175                    | 305.20889             | -0.30661            |
| METEOSAT-10 | 14   | 13  | 13/01/2014 | 42165.26532             | 0.00004204   | 0.68276              | 225.69933                     | 174.36075                    | 72.13135              | -0.20838            |
| METEOSAT-10 | 14   | 20  | 20/01/2014 | 42164.73301             | 0.00002276   | 0.67619              | 223.84729                     | 183.73196                    | 71.64427              | -0.07536            |
| METEOSAT-10 | 14   | 27  | 27/01/2014 | 42162.83123             | 0.00008156   | 0.66520              | 222.89050                     | 162.92693                    | 160.62608             | 0.08365             |
| METEOSAT-10 | 14   | 34  | 03/02/2014 | 42164.06044             | 0.00003999   | 0.66001              | 220.90312                     | 285.49837                    | 346.94933             | 0.25400             |
| METEOSAT-10 | 14   | 41  | 10/02/2014 | 42163.30006             | 0.00005349   | 0.64950              | 219.94357                     | 168.97196                    | 111.55478             | 0.47465             |
| METEOSAT-10 | 14   | 48  | 17/02/2014 | 42164.00048             | 0.00004409   | 0.65012              | 218.38266                     | 210.81099                    | 78.43263              | 0.73163             |
| METEOSAT-10 | 14   | 55  | 24/02/2014 | 42168.21542             | 0.00003752   | 0.64154              | 217.64622                     | 71.75759                     | 224.93854             | 0.54856             |
| METEOSAT-10 | 14   | 62  | 03/03/2014 | 42169.41459             | 0.00013754   | 0.64150              | 216.13634                     | 8.22175                      | 296.62862             | 0.29369             |
| METEOSAT-10 | 14   | 69  | 10/03/2014 | 42167.60126             | 0.00009966   | 0.63087              | 215.39463                     | 52.89875                     | 259.38699             | 0.08814             |
| METEOSAT-10 | 14   | 76  | 17/03/2014 | 42169.08001             | 0.00008375   | 0.63215              | 214.42752                     | 19.63723                     | 300.34631             | -0.08057            |
| METEOSAT-10 | 14   | 83  | 24/03/2014 | 42166.57028             | 0.00002355   | 0.62003              | 213.85766                     | 80.02103                     | 247.29307             | -0.21951            |
| METEOSAT-10 | 14   | 90  | 31/03/2014 | 42168.25810             | 0.00013511   | 0.61815              | 212.88957                     | 5.75016                      | 329.30595             | -0.34525            |
| METEOSAT-10 | 14   | 97  | 07/04/2014 | 42166.08632             | 0.00008859   | 0.60356              | 212.20158                     | 54.60691                     | 287.95606             | -0.42605            |
| METEOSAT-10 | 14   | 104 | 14/04/2014 | 42167.56306             | 0.00007067   | 0.60035              | 211.48446                     | 6.02225                      | 344.11399             | -0.46966            |
| METEOSAT-10 | 14   | 111 | 21/04/2014 | 42165.22386             | 0.00000935   | 0.58311              | 210.74263                     | 21.40868                     | 336.35463             | -0.48434            |
| METEOSAT-10 | 14   | 118 | 28/04/2014 | 42166.69296             | 0.00013620   | 0.57667              | 209.87239                     | 2.60186                      | 2.93498               | -0.48088            |
| METEOSAT-10 | 14   | 125 | 05/05/2014 | 42164.92729             | 0.00008117   | 0.55864              | 208.72420                     | 46.49613                     | 327.13383             | -0.43585            |
| METEOSAT-10 | 14   | 132 | 12/05/2014 | 42165.52864             | 0.00007037   | 0.55187              | 207.79563                     | 345.03118                    | 36.50863              | -0.35412            |
| METEOSAT-10 | 14   | 139 | 19/05/2014 | 42164.20462             | 0.00003185   | 0.53235              | 206.21999                     | 336.87645                    | 53.24980              | -0.24310            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 14   | 146 | 26/05/2014 | 42164.80934             | 0.00014435   | 0.52426              | 204.96735                     | 1.77067                      | 36.64243              | -0.10845            |
| METEOSAT-10 | 14   | 153 | 02/06/2014 | 42163.98295             | 0.00009036   | 0.50828              | 202.89133                     | 37.49191                     | 10.07108              | 0.06583             |
| METEOSAT-10 | 14   | 160 | 09/06/2014 | 42163.29133             | 0.00008878   | 0.50268              | 201.44334                     | 335.15783                    | 80.96096              | 0.27432             |
| METEOSAT-10 | 14   | 167 | 16/06/2014 | 42163.51037             | 0.00006457   | 0.48838              | 198.75488                     | 353.62587                    | 72.32129              | 0.51479             |
| METEOSAT-10 | 14   | 174 | 23/06/2014 | 42162.77336             | 0.00016237   | 0.48368              | 197.01117                     | 6.39340                      | 68.46530              | 0.78339             |
| METEOSAT-10 | 14   | 181 | 30/06/2014 | 42169.42923             | 0.00008726   | 0.47650              | 194.13663                     | 136.47270                    | 307.97917             | 0.60269             |
| METEOSAT-10 | 14   | 188 | 07/07/2014 | 42167.75166             | 0.00006275   | 0.47609              | 192.49104                     | 229.81867                    | 222.93755             | 0.36229             |
| METEOSAT-10 | 14   | 195 | 14/07/2014 | 42169.31147             | 0.00005209   | 0.47202              | 189.27283                     | 175.14569                    | 287.52244             | 0.15663             |
| METEOSAT-10 | 14   | 202 | 21/07/2014 | 42167.32057             | 0.00004285   | 0.47288              | 187.60874                     | 39.03631                     | 72.01750              | -0.02100            |
| METEOSAT-10 | 14   | 209 | 28/07/2014 | 42168.32221             | 0.00008250   | 0.47540              | 184.86185                     | 125.20916                    | 355.34958             | -0.16238            |
| METEOSAT-10 | 14   | 216 | 04/08/2014 | 42166.32821             | 0.00003774   | 0.47888              | 183.64713                     | 263.56914                    | 224.98508             | -0.28089            |
| METEOSAT-10 | 14   | 223 | 11/08/2014 | 42168.44848             | 0.00004281   | 0.48331              | 180.86471                     | 124.00455                    | 14.14973              | -0.36285            |
| METEOSAT-10 | 14   | 230 | 18/08/2014 | 42165.72043             | 0.00007835   | 0.48514              | 179.72477                     | 49.69128                     | 96.44546              | -0.41979            |
| METEOSAT-10 | 14   | 237 | 25/08/2014 | 42167.04303             | 0.00009842   | 0.49237              | 177.72188                     | 113.55055                    | 41.46812              | -0.44043            |
| METEOSAT-10 | 14   | 244 | 01/09/2014 | 42165.30508             | 0.00001653   | 0.49403              | 177.08517                     | 343.51758                    | 179.03487             | -0.44290            |
| METEOSAT-10 | 14   | 251 | 08/09/2014 | 42166.90227             | 0.00007874   | 0.50045              | 175.03292                     | 92.84199                     | 78.69978              | -0.40567            |
| METEOSAT-10 | 14   | 258 | 15/09/2014 | 42164.44619             | 0.00011300   | 0.49779              | 174.19774                     | 63.35845                     | 115.97974             | -0.34411            |
| METEOSAT-10 | 14   | 265 | 22/09/2014 | 42165.44790             | 0.00012626   | 0.50348              | 172.71543                     | 107.84552                    | 79.97442              | -0.24444            |
| METEOSAT-10 | 14   | 272 | 29/09/2014 | 42164.43597             | 0.00003558   | 0.49880              | 172.07597                     | 63.63025                     | 131.84553             | -0.12765            |
| METEOSAT-10 | 14   | 279 | 06/10/2014 | 42164.68764             | 0.00012758   | 0.50305              | 170.30777                     | 87.71677                     | 116.58608             | 0.03142             |
| METEOSAT-10 | 14   | 286 | 13/10/2014 | 42163.49929             | 0.00013922   | 0.49481              | 169.10686                     | 78.48673                     | 134.10271             | 0.21770             |
| METEOSAT-10 | 14   | 293 | 20/10/2014 | 42163.50258             | 0.00015980   | 0.49772              | 167.57495                     | 108.50309                    | 112.74570             | 0.44562             |
| METEOSAT-10 | 14   | 300 | 27/10/2014 | 42163.51425             | 0.00006151   | 0.48861              | 166.21984                     | 90.65624                     | 139.09354             | 0.69217             |
| METEOSAT-10 | 14   | 307 | 03/11/2014 | 42168.65245             | 0.00005171   | 0.49243              | 164.18515                     | 42.97094                     | 195.59395             | 0.57317             |
| METEOSAT-10 | 14   | 314 | 10/11/2014 | 42169.02029             | 0.00004327   | 0.48363              | 162.06565                     | 23.57761                     | 223.75992             | 0.32710             |
| METEOSAT-10 | 14   | 321 | 17/11/2014 | 42167.80724             | 0.00004221   | 0.48853              | 160.15591                     | 125.10596                    | 130.83531             | 0.12183             |
| METEOSAT-10 | 14   | 328 | 24/11/2014 | 42168.78835             | 0.00006941   | 0.48233              | 157.80134                     | 302.26648                    | 322.74346             | -0.06322            |
| METEOSAT-10 | 14   | 335 | 01/12/2014 | 42166.68933             | 0.00007115   | 0.48977              | 155.63830                     | 92.37384                     | 181.54610             | -0.21548            |
| METEOSAT-10 | 14   | 342 | 08/12/2014 | 42168.14648             | 0.00002212   | 0.48950              | 153.05779                     | 82.64618                     | 200.63870             | -0.33027            |
| METEOSAT-10 | 14   | 349 | 15/12/2014 | 42166.09253             | 0.00006710   | 0.50108              | 151.23870                     | 146.58803                    | 145.33643             | -0.40905            |
| METEOSAT-10 | 14   | 356 | 22/12/2014 | 42167.61185             | 0.00005767   | 0.50440              | 148.64961                     | 291.25141                    | 10.10423              | -0.46630            |
| METEOSAT-10 | 14   | 363 | 29/12/2014 | 42165.15879             | 0.00008626   | 0.52070              | 146.99218                     | 115.76930                    | 194.10826             | -0.50120            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 15   | 5   | 05/01/2015 | 42166.95956             | 0.00002696   | 0.52973              | 144.58754                     | 146.47022                    | 172.72195             | -0.49077            |
| METEOSAT-10 | 15   | 12  | 12/01/2015 | 42164.81323             | 0.00007476   | 0.54612              | 143.64123                     | 163.39987                    | 163.67949             | -0.44943            |
| METEOSAT-10 | 15   | 19  | 19/01/2015 | 42166.08064             | 0.00005722   | 0.55656              | 141.72379                     | 281.12472                    | 54.83848              | -0.38278            |
| METEOSAT-10 | 15   | 26  | 26/01/2015 | 42164.04630             | 0.00009171   | 0.57452              | 141.01304                     | 132.07192                    | 211.57883             | -0.30569            |
| METEOSAT-10 | 15   | 33  | 02/02/2015 | 42165.36904             | 0.00004086   | 0.58758              | 139.43617                     | 178.33489                    | 173.92362             | -0.17474            |
| METEOSAT-10 | 15   | 40  | 09/02/2015 | 42164.01101             | 0.00007221   | 0.59986              | 139.46352                     | 182.54645                    | 176.73934             | -0.01987            |
| METEOSAT-10 | 15   | 47  | 16/02/2015 | 42164.23267             | 0.00006964   | 0.61060              | 138.15204                     | 267.61836                    | 100.06262             | 0.16386             |
| METEOSAT-10 | 15   | 54  | 23/02/2015 | 42163.31516             | 0.00008707   | 0.62311              | 137.93341                     | 142.60453                    | 232.38238             | 0.35137             |
| METEOSAT-10 | 15   | 61  | 02/03/2015 | 42168.52472             | 0.00007524   | 0.16481              | 264.65652                     | 193.94222                    | 61.08525              | 0.21634             |
| METEOSAT-10 | 15   | 68  | 09/03/2015 | 42168.28538             | 0.00007280   | 0.16145              | 262.35126                     | 201.11952                    | 62.93987              | 0.04375             |
| METEOSAT-10 | 15   | 75  | 16/03/2015 | 42167.20552             | 0.00015188   | 0.14757              | 262.36167                     | 192.06455                    | 78.74469              | -0.09543            |
| METEOSAT-10 | 15   | 82  | 23/03/2015 | 42167.61033             | 0.00006304   | 0.14215              | 261.07147                     | 262.02636                    | 16.83449              | -0.23328            |
| METEOSAT-10 | 15   | 89  | 30/03/2015 | 42166.53729             | 0.00008163   | 0.12691              | 261.11856                     | 188.33520                    | 97.29981              | -0.31150            |
| METEOSAT-10 | 15   | 96  | 06/04/2015 | 42167.43439             | 0.00008986   | 0.12373              | 261.33955                     | 209.72194                    | 82.54366              | -0.35919            |
| METEOSAT-10 | 15   | 103 | 13/04/2015 | 42165.32652             | 0.00015620   | 0.10749              | 263.05736                     | 192.07085                    | 105.36255             | -0.37306            |
| METEOSAT-10 | 15   | 110 | 20/04/2015 | 42166.73394             | 0.00007735   | 0.10019              | 264.79574                     | 257.65389                    | 44.93088              | -0.38264            |
| METEOSAT-10 | 15   | 117 | 27/04/2015 | 42164.71545             | 0.00009338   | 0.08179              | 266.88455                     | 181.54920                    | 125.89123             | -0.33769            |
| METEOSAT-10 | 15   | 124 | 04/05/2015 | 42166.24016             | 0.00010900   | 0.07515              | 271.16173                     | 207.30692                    | 102.83393             | -0.25944            |
| METEOSAT-10 | 15   | 131 | 11/05/2015 | 42163.70562             | 0.00016306   | 0.05525              | 277.51347                     | 182.82422                    | 127.97617             | -0.14774            |
| METEOSAT-10 | 15   | 138 | 18/05/2015 | 42165.43214             | 0.00009293   | 0.04584              | 287.94686                     | 234.88304                    | 72.50692              | -0.02418            |
| METEOSAT-10 | 15   | 145 | 25/05/2015 | 42163.23131             | 0.00009976   | 0.02733              | 307.83036                     | 147.30607                    | 147.27110             | 0.14692             |
| METEOSAT-10 | 15   | 152 | 01/06/2015 | 42164.50210             | 0.00012949   | 0.02520              | 335.89426                     | 149.02051                    | 124.60000             | 0.35474             |
| METEOSAT-10 | 15   | 159 | 08/06/2015 | 42162.40788             | 0.00016278   | 0.02787              | 29.65896                      | 79.72539                     | 147.27042             | 0.59509             |
| METEOSAT-10 | 15   | 166 | 15/06/2015 | 42169.68668             | 0.00006696   | 0.04116              | 44.06670                      | 227.20378                    | 352.15947             | 0.47079             |
| METEOSAT-10 | 15   | 173 | 22/06/2015 | 42168.10265             | 0.00007892   | 0.05827              | 62.78715                      | 295.38172                    | 271.92406             | 0.23415             |
| METEOSAT-10 | 15   | 180 | 29/06/2015 | 42168.40734             | 0.00001828   | 0.07180              | 65.56692                      | 3.42687                      | 207.79966             | 0.03518             |
| METEOSAT-10 | 15   | 187 | 06/07/2015 | 42167.49308             | 0.00004456   | 0.09254              | 74.59526                      | 338.54405                    | 230.38897             | -0.13383            |
| METEOSAT-10 | 15   | 194 | 13/07/2015 | 42167.82304             | 0.00007796   | 0.10804              | 75.70782                      | 182.01808                    | 32.55837              | -0.27735            |
| METEOSAT-10 | 15   | 201 | 20/07/2015 | 42167.24107             | 0.00006502   | 0.12597              | 81.68916                      | 257.14927                    | 318.23348             | -0.38932            |
| METEOSAT-10 | 15   | 208 | 27/07/2015 | 42166.38870             | 0.00002320   | 0.13799              | 82.32121                      | 74.71991                     | 146.85321             | -0.46637            |
| METEOSAT-10 | 15   | 215 | 03/08/2015 | 42166.99989             | 0.00001103   | 0.15678              | 86.84199                      | 243.11061                    | 340.79189             | -0.51582            |
| METEOSAT-10 | 15   | 222 | 10/08/2015 | 42165.99521             | 0.00010440   | 0.17000              | 86.78535                      | 163.51174                    | 67.32590              | -0.53672            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 15   | 229 | 17/08/2015 | 42166.41768             | 0.00007273   | 0.18356              | 90.25527                      | 220.97797                    | 13.29528              | -0.53068            |
| METEOSAT-10 | 15   | 236 | 24/08/2015 | 42164.69152             | 0.00004637   | 0.19258              | 90.00517                      | 110.70229                    | 130.75945             | -0.49167            |
| METEOSAT-10 | 15   | 243 | 31/08/2015 | 42166.53834             | 0.00005919   | 0.20681              | 92.64523                      | 181.27173                    | 64.51714              | -0.42397            |
| METEOSAT-10 | 15   | 250 | 07/09/2015 | 42164.23119             | 0.00014119   | 0.21780              | 91.63787                      | 158.43073                    | 95.36309              | -0.32574            |
| METEOSAT-10 | 15   | 257 | 14/09/2015 | 42165.34868             | 0.00010011   | 0.22656              | 93.43247                      | 201.86348                    | 57.16035              | -0.20049            |
| METEOSAT-10 | 15   | 264 | 21/09/2015 | 42163.35979             | 0.00007395   | 0.23398              | 92.07094                      | 134.06937                    | 133.37286             | -0.04293            |
| METEOSAT-10 | 15   | 271 | 28/09/2015 | 42165.43995             | 0.00011473   | 0.24461              | 93.19999                      | 179.11050                    | 94.29189              | 0.14694             |
| METEOSAT-10 | 15   | 278 | 05/10/2015 | 42162.58764             | 0.00017835   | 0.25645              | 91.22746                      | 162.85593                    | 119.64060             | 0.36922             |
| METEOSAT-10 | 15   | 285 | 12/10/2015 | 42163.84912             | 0.00013455   | 0.26355              | 91.57561                      | 197.58793                    | 91.71330              | 0.62282             |
| METEOSAT-10 | 15   | 292 | 19/10/2015 | 42162.24156             | 0.00010168   | 0.27422              | 89.41798                      | 154.98655                    | 143.65827             | 0.90946             |
| METEOSAT-10 | 15   | 299 | 26/10/2015 | 42170.13009             | 0.00005729   | 0.28524              | 89.46871                      | 115.18725                    | 190.10993             | 0.71323             |
| METEOSAT-10 | 15   | 306 | 02/11/2015 | 42167.95691             | 0.00010968   | 0.30276              | 87.35344                      | 125.13631                    | 188.92535             | 0.46301             |
| METEOSAT-10 | 15   | 313 | 09/11/2015 | 42168.74744             | 0.00001622   | 0.31277              | 87.09177                      | 166.38367                    | 154.62376             | 0.24776             |
| METEOSAT-10 | 15   | 320 | 16/11/2015 | 42167.96344             | 0.00008790   | 0.33090              | 85.27194                      | 79.03540                     | 250.50675             | 0.06313             |
| METEOSAT-10 | 15   | 327 | 23/11/2015 | 42167.75698             | 0.00008491   | 0.34525              | 85.32415                      | 157.59800                    | 178.63996             | -0.08831            |
| METEOSAT-10 | 15   | 334 | 30/11/2015 | 42167.00500             | 0.00010167   | 0.36915              | 84.19854                      | 146.54275                    | 197.60341             | -0.20540            |
| METEOSAT-10 | 15   | 341 | 07/12/2015 | 42166.80292             | 0.00004736   | 0.38287              | 84.24239                      | 203.46078                    | 147.45832             | -0.28815            |
| METEOSAT-10 | 15   | 348 | 14/12/2015 | 42167.04782             | 0.00006255   | 0.40648              | 83.59728                      | 90.75400                     | 267.65463             | -0.34349            |
| METEOSAT-10 | 15   | 355 | 21/12/2015 | 42165.60820             | 0.00011173   | 0.42238              | 84.10235                      | 178.99173                    | 185.78298             | -0.37199            |
| METEOSAT-10 | 15   | 362 | 28/12/2015 | 42166.35176             | 0.00008622   | 0.44840              | 84.09129                      | 163.29126                    | 208.40452             | -0.36184            |
| METEOSAT-10 | 16   | 4   | 04/01/2016 | 42164.93724             | 0.00007129   | 0.46162              | 84.69462                      | 216.92056                    | 161.11374             | -0.31965            |
| METEOSAT-10 | 16   | 11  | 11/01/2016 | 42166.10519             | 0.00004140   | 0.48552              | 84.93398                      | 91.10459                     | 293.65855             | -0.25130            |
| METEOSAT-10 | 16   | 18  | 18/01/2016 | 42163.85971             | 0.00012599   | 0.49855              | 85.70240                      | 191.61992                    | 199.36283             | -0.16290            |
| METEOSAT-10 | 16   | 25  | 25/01/2016 | 42165.55121             | 0.00006811   | 0.52125              | 86.29518                      | 178.21280                    | 219.21104             | -0.02882            |
| METEOSAT-10 | 16   | 32  | 01/02/2016 | 42163.34845             | 0.00008240   | 0.53008              | 86.96937                      | 226.42800                    | 177.38588             | 0.13596             |
| METEOSAT-10 | 16   | 39  | 08/02/2016 | 42164.84580             | 0.00002559   | 0.54975              | 87.47478                      | 73.15757                     | 337.24386             | 0.32929             |
| METEOSAT-10 | 16   | 46  | 15/02/2016 | 42162.45474             | 0.00012850   | 0.55819              | 87.98715                      | 199.67658                    | 217.31807             | 0.53562             |
| METEOSAT-10 | 16   | 53  | 22/02/2016 | 42164.20272             | 0.00005504   | 0.57541              | 88.58466                      | 197.68451                    | 225.87403             | 0.79762             |
| METEOSAT-10 | 16   | 60  | 29/02/2016 | 42168.39298             | 0.00018150   | 0.57943              | 88.80457                      | 179.81410                    | 250.23512             | 0.60914             |
| METEOSAT-10 | 16   | 67  | 07/03/2016 | 42169.36567             | 0.00014020   | 0.59501              | 89.09395                      | 147.80479                    | 288.61492             | 0.36979             |
| METEOSAT-10 | 16   | 74  | 14/03/2016 | 42167.60277             | 0.00024866   | 0.60062              | 88.97691                      | 176.77319                    | 266.43020             | 0.13747             |
| METEOSAT-10 | 16   | 81  | 21/03/2016 | 42168.66643             | 0.00017573   | 0.61469              | 89.23772                      | 169.60991                    | 280.06021             | -0.03407            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 16   | 88  | 28/03/2016 | 42167.43926             | 0.00017153   | 0.61770              | 88.78986                      | 177.79813                    | 279.07732             | -0.17549            |
| METEOSAT-10 | 16   | 95  | 04/04/2016 | 42167.32409             | 0.00012972   | 0.63257              | 88.74909                      | 151.14701                    | 312.56033             | -0.28342            |
| METEOSAT-10 | 16   | 102 | 11/04/2016 | 42166.74610             | 0.00024529   | 0.64013              | 87.99741                      | 177.17355                    | 294.07946             | -0.38833            |
| METEOSAT-10 | 16   | 109 | 18/04/2016 | 42166.63607             | 0.00015850   | 0.65491              | 87.98557                      | 174.15208                    | 303.96712             | -0.43308            |
| METEOSAT-10 | 16   | 116 | 25/04/2016 | 42166.62047             | 0.00016844   | 0.66232              | 87.10533                      | 174.52317                    | 311.36195             | -0.44647            |
| METEOSAT-10 | 16   | 123 | 02/05/2016 | 42165.26301             | 0.00012402   | 0.67980              | 86.97665                      | 153.15827                    | 339.77482             | -0.42649            |
| METEOSAT-10 | 16   | 130 | 09/05/2016 | 42165.98431             | 0.00024737   | 0.69337              | 86.05357                      | 176.72849                    | 324.05195             | -0.40162            |
| METEOSAT-10 | 16   | 137 | 16/05/2016 | 42164.59939             | 0.00014213   | 0.71115              | 86.10857                      | 176.50710                    | 331.19770             | -0.32182            |
| METEOSAT-10 | 16   | 144 | 23/05/2016 | 42165.66523             | 0.00017399   | 0.72496              | 85.28867                      | 170.92810                    | 344.61082             | -0.20732            |
| METEOSAT-10 | 16   | 151 | 30/05/2016 | 42163.39604             | 0.00012858   | 0.74509              | 85.44581                      | 152.44465                    | 9.98350               | -0.06086            |
| METEOSAT-10 | 16   | 158 | 06/06/2016 | 42164.60466             | 0.00026292   | 0.76264              | 84.71254                      | 176.85146                    | 353.39497             | 0.12410             |
| METEOSAT-10 | 16   | 165 | 13/06/2016 | 42162.42485             | 0.00014293   | 0.78172              | 85.08792                      | 177.23590                    | 359.77478             | 0.36360             |
| METEOSAT-10 | 16   | 172 | 20/06/2016 | 42163.93312             | 0.00019129   | 0.79944              | 84.63868                      | 169.11221                    | 15.52856              | 0.64419             |
| METEOSAT-10 | 16   | 179 | 27/06/2016 | 42167.12182             | 0.00014639   | 0.52240              | 5.01706                       | 181.07962                    | 90.00317              | 0.56552             |
| METEOSAT-10 | 16   | 186 | 04/07/2016 | 42168.83316             | 0.00019375   | 0.52837              | 7.02402                       | 225.82112                    | 49.97647              | 0.38791             |
| METEOSAT-10 | 16   | 193 | 11/07/2016 | 42166.71271             | 0.00010387   | 0.52131              | 8.91168                       | 191.06614                    | 89.60078              | 0.24556             |
| METEOSAT-10 | 16   | 200 | 18/07/2016 | 42167.83279             | 0.00016307   | 0.52564              | 10.62138                      | 198.19495                    | 87.56358              | 0.14754             |
| METEOSAT-10 | 16   | 207 | 25/07/2016 | 42166.02472             | 0.00016570   | 0.51779              | 12.48798                      | 183.52361                    | 107.19470             | 0.07457             |
| METEOSAT-10 | 16   | 214 | 01/08/2016 | 42167.13152             | 0.00021331   | 0.52225              | 14.36599                      | 218.22651                    | 77.46725              | 0.02862             |
| METEOSAT-10 | 16   | 221 | 08/08/2016 | 42165.76709             | 0.00012192   | 0.51430              | 15.81770                      | 193.45432                    | 107.66610             | 0.00765             |
| METEOSAT-10 | 16   | 228 | 15/08/2016 | 42165.82633             | 0.00019220   | 0.51794              | 17.28356                      | 193.19459                    | 113.38446             | 0.03274             |
| METEOSAT-10 | 16   | 235 | 22/08/2016 | 42165.34502             | 0.00018381   | 0.51038              | 18.64079                      | 190.47611                    | 121.69266             | 0.08028             |
| METEOSAT-10 | 16   | 242 | 29/08/2016 | 42165.25614             | 0.00023948   | 0.51552              | 20.21029                      | 214.15497                    | 103.42435             | 0.16085             |
| METEOSAT-10 | 16   | 249 | 05/09/2016 | 42164.94903             | 0.00014140   | 0.50975              | 21.04272                      | 200.45398                    | 123.29330             | 0.26183             |
| METEOSAT-10 | 16   | 256 | 12/09/2016 | 42163.78329             | 0.00022242   | 0.51545              | 22.16368                      | 192.82338                    | 136.85069             | 0.41006             |
| METEOSAT-10 | 16   | 263 | 19/09/2016 | 42164.82881             | 0.00019960   | 0.51185              | 22.95235                      | 200.63322                    | 135.32343             | 0.58182             |
| METEOSAT-10 | 16   | 270 | 26/09/2016 | 42163.26256             | 0.00026806   | 0.52034              | 24.28426                      | 213.93226                    | 127.80192             | 0.79163             |
| METEOSAT-10 | 16   | 277 | 03/10/2016 | 42169.58278             | 0.00003655   | 0.52027              | 24.62633                      | 170.09105                    | 177.99505             | 0.58611             |
| METEOSAT-10 | 16   | 284 | 10/10/2016 | 42167.66288             | 0.00012998   | 0.53037              | 25.60322                      | 174.76601                    | 179.01336             | 0.35661             |
| METEOSAT-10 | 16   | 291 | 17/10/2016 | 42169.65228             | 0.00008546   | 0.53316              | 26.10779                      | 202.23643                    | 157.73387             | 0.15253             |
| METEOSAT-10 | 16   | 298 | 24/10/2016 | 42167.05016             | 0.00016093   | 0.54623              | 27.51023                      | 217.63780                    | 147.66400             | -0.01328            |
| METEOSAT-10 | 16   | 305 | 31/10/2016 | 42168.27184             | 0.00004774   | 0.55254              | 27.79502                      | 218.98973                    | 152.78446             | -0.15572            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 16   | 312 | 07/11/2016 | 42166.30402             | 0.00013266   | 0.56677              | 29.00267                      | 189.62875                    | 187.73763             | -0.25574            |
| METEOSAT-10 | 16   | 319 | 14/11/2016 | 42168.19266             | 0.00011165   | 0.57512              | 29.63283                      | 227.68437                    | 155.87719             | -0.33003            |
| METEOSAT-10 | 16   | 326 | 21/11/2016 | 42165.44517             | 0.00018133   | 0.59055              | 31.35475                      | 225.82160                    | 162.87925             | -0.36867            |
| METEOSAT-10 | 16   | 333 | 28/11/2016 | 42166.72417             | 0.00007252   | 0.60065              | 31.92524                      | 243.33627                    | 151.68229             | -0.38008            |
| METEOSAT-10 | 16   | 340 | 05/12/2016 | 42165.26990             | 0.00013000   | 0.61536              | 33.50745                      | 202.11385                    | 198.24783             | -0.35452            |
| METEOSAT-10 | 16   | 347 | 12/12/2016 | 42166.08896             | 0.00014736   | 0.62531              | 34.40283                      | 239.99273                    | 166.42465             | -0.30297            |
| METEOSAT-10 | 16   | 354 | 19/12/2016 | 42164.26902             | 0.00018664   | 0.63920              | 36.38250                      | 232.14958                    | 179.27409             | -0.21670            |
| METEOSAT-10 | 16   | 361 | 26/12/2016 | 42164.94124             | 0.00009711   | 0.64890              | 37.21486                      | 256.22143                    | 161.38675             | -0.09921            |
| METEOSAT-10 | 17   | 2   | 02/01/2017 | 42164.40306             | 0.00012086   | 0.65984              | 38.98941                      | 210.54081                    | 212.34566             | 0.04989             |
| METEOSAT-10 | 17   | 9   | 09/01/2017 | 42163.79857             | 0.00017527   | 0.66797              | 39.95709                      | 246.72948                    | 182.26364             | 0.22502             |
| METEOSAT-10 | 17   | 16  | 16/01/2017 | 42163.54511             | 0.00017097   | 0.67588              | 41.82496                      | 236.04349                    | 198.19305             | 0.43694             |
| METEOSAT-10 | 17   | 23  | 23/01/2017 | 42162.99236             | 0.00011488   | 0.68361              | 42.66451                      | 264.88937                    | 175.65434             | 0.68460             |
| METEOSAT-10 | 17   | 30  | 30/01/2017 | 42169.44607             | 0.00014476   | 0.69006              | 44.33248                      | 149.25594                    | 296.33727             | 0.50286             |
| METEOSAT-10 | 17   | 37  | 06/02/2017 | 42167.69357             | 0.00010334   | 0.69630              | 45.03930                      | 204.55320                    | 247.00143             | 0.27211             |
| METEOSAT-10 | 17   | 44  | 13/02/2017 | 42168.83058             | 0.00010317   | 0.70049              | 46.60825                      | 175.76256                    | 280.93256             | 0.08241             |
| METEOSAT-10 | 17   | 51  | 20/02/2017 | 42167.10760             | 0.00002960   | 0.70581              | 47.02139                      | 154.56519                    | 308.46058             | -0.07270            |
| METEOSAT-10 | 17   | 58  | 27/02/2017 | 42168.39711             | 0.00012800   | 0.70943              | 48.28142                      | 140.20933                    | 328.32472             | -0.20349            |
| METEOSAT-10 | 17   | 65  | 06/03/2017 | 42166.06257             | 0.00008150   | 0.71668              | 48.56170                      | 213.08188                    | 261.96091             | -0.31343            |
| METEOSAT-10 | 17   | 72  | 13/03/2017 | 42167.90707             | 0.00007640   | 0.71967              | 49.58022                      | 160.89063                    | 319.96767             | -0.37853            |
| METEOSAT-10 | 17   | 79  | 20/03/2017 | 42165.60599             | 0.00001690   | 0.72747              | 49.57681                      | 117.89054                    | 9.83876               | -0.41003            |
| METEOSAT-10 | 17   | 86  | 27/03/2017 | 42167.02588             | 0.00011850   | 0.73220              | 50.37042                      | 132.10146                    | 1.72651               | -0.41706            |
| METEOSAT-10 | 17   | 93  | 03/04/2017 | 42164.74142             | 0.00006420   | 0.74461              | 50.35079                      | 218.79088                    | 281.96551             | -0.40767            |
| METEOSAT-10 | 17   | 100 | 10/04/2017 | 42166.43165             | 0.00006050   | 0.75005              | 50.95445                      | 141.40757                    | 5.70390               | -0.34844            |
| METEOSAT-10 | 17   | 107 | 17/04/2017 | 42164.44587             | 0.00002430   | 0.76356              | 50.81135                      | 90.88272                     | 63.36484              | -0.25511            |
| METEOSAT-10 | 17   | 114 | 24/04/2017 | 42165.17159             | 0.00011210   | 0.77170              | 51.36484                      | 124.25613                    | 36.45769              | -0.13515            |
| METEOSAT-10 | 17   | 121 | 01/05/2017 | 42163.68543             | 0.00005250   | 0.79059              | 51.41161                      | 216.60756                    | 311.09385             | -0.00076            |
| METEOSAT-10 | 17   | 128 | 08/05/2017 | 42164.44839             | 0.00005780   | 0.79947              | 51.91074                      | 115.85861                    | 58.43030              | 0.18586             |
| METEOSAT-10 | 17   | 135 | 15/05/2017 | 42163.21618             | 0.00003470   | 0.81715              | 51.88848                      | 109.73581                    | 71.72264              | 0.43295             |
| METEOSAT-10 | 17   | 142 | 22/05/2017 | 42162.68217             | 0.00011030   | 0.82765              | 52.55139                      | 119.87400                    | 68.10091              | 0.71217             |
| METEOSAT-10 | 17   | 149 | 29/05/2017 | 42168.52840             | 0.00009720   | 0.89430              | 349.68860                     | 143.83134                    | 113.71636             | 0.52193             |
| METEOSAT-10 | 17   | 156 | 05/06/2017 | 42167.98586             | 0.00019610   | 0.88857              | 350.46743                     | 136.92597                    | 126.54626             | 0.32656             |
| METEOSAT-10 | 17   | 163 | 12/06/2017 | 42168.29326             | 0.00017210   | 0.89109              | 351.70195                     | 136.86780                    | 132.11347             | 0.17119             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 17   | 170 | 19/06/2017 | 42166.62451             | 0.00022900   | 0.88294              | 352.55351                     | 147.10344                    | 127.79757             | 0.04368             |
| METEOSAT-10 | 17   | 177 | 26/06/2017 | 42167.68204             | 0.00010010   | 0.88310              | 354.06695                     | 147.44615                    | 132.72830             | -0.06849            |
| METEOSAT-10 | 17   | 184 | 03/07/2017 | 42166.03563             | 0.00021290   | 0.87503              | 354.83802                     | 133.89693                    | 152.33405             | -0.13976            |
| METEOSAT-10 | 17   | 191 | 10/07/2017 | 42167.29508             | 0.00017240   | 0.87325              | 356.12293                     | 139.55939                    | 152.25743             | -0.16813            |
| METEOSAT-10 | 17   | 198 | 17/07/2017 | 42164.93927             | 0.00022990   | 0.86303              | 356.84532                     | 146.77972                    | 151.20962             | -0.17230            |
| METEOSAT-10 | 17   | 205 | 24/07/2017 | 42166.68796             | 0.00010040   | 0.85956              | 358.30607                     | 153.63674                    | 149.80702             | -0.15651            |
| METEOSAT-10 | 17   | 212 | 31/07/2017 | 42164.47354             | 0.00021790   | 0.85060              | 358.88117                     | 133.70577                    | 176.10837             | -0.11032            |
| METEOSAT-10 | 17   | 219 | 07/08/2017 | 42166.00002             | 0.00017090   | 0.84613              | 0.04284                       | 144.13281                    | 171.51348             | -0.01607            |
| METEOSAT-10 | 17   | 226 | 14/08/2017 | 42163.67107             | 0.00021930   | 0.83673              | 0.49555                       | 149.58237                    | 172.62659             | 0.09977             |
| METEOSAT-10 | 17   | 233 | 21/08/2017 | 42165.28730             | 0.00010110   | 0.83207              | 1.76245                       | 161.87087                    | 166.11440             | 0.24315             |
| METEOSAT-10 | 17   | 240 | 28/08/2017 | 42163.30824             | 0.00020680   | 0.82592              | 2.06505                       | 135.34409                    | 199.40425             | 0.40906             |
| METEOSAT-10 | 17   | 247 | 04/09/2017 | 42164.19638             | 0.00017020   | 0.82208              | 3.03559                       | 151.39972                    | 189.49799             | 0.62898             |
| METEOSAT-10 | 17   | 254 | 11/09/2017 | 42162.72948             | 0.00019590   | 0.81746              | 3.24216                       | 154.19672                    | 193.63567             | 0.87029             |
| METEOSAT-10 | 17   | 261 | 18/09/2017 | 42169.75457             | 0.00011220   | 0.81484              | 4.33142                       | 260.94708                    | 92.57038              | 0.74456             |
| METEOSAT-10 | 17   | 268 | 25/09/2017 | 42168.65178             | 0.00005200   | 0.81496              | 4.48053                       | 180.30320                    | 179.69483             | 0.47430             |
| METEOSAT-10 | 17   | 275 | 02/10/2017 | 42168.36989             | 0.00010440   | 0.81450              | 5.37016                       | 222.05124                    | 143.74279             | 0.25985             |
| METEOSAT-10 | 17   | 282 | 09/10/2017 | 42168.28204             | 0.00009910   | 0.81716              | 5.56526                       | 222.99888                    | 149.30554             | 0.06537             |
| METEOSAT-10 | 17   | 289 | 16/10/2017 | 42167.77318             | 0.00013610   | 0.81795              | 6.67227                       | 262.17758                    | 115.76314             | -0.09133            |
| METEOSAT-10 | 17   | 296 | 23/10/2017 | 42167.72209             | 0.00004430   | 0.82499              | 6.94217                       | 216.46668                    | 167.96562             | -0.22972            |
| METEOSAT-10 | 17   | 303 | 30/10/2017 | 42166.34368             | 0.00013070   | 0.82777              | 7.96673                       | 232.15299                    | 158.06800             | -0.31635            |
| METEOSAT-10 | 17   | 310 | 06/11/2017 | 42167.63269             | 0.00010290   | 0.83641              | 8.43754                       | 245.42040                    | 151.16266             | -0.38318            |
| METEOSAT-10 | 17   | 317 | 13/11/2017 | 42165.82044             | 0.00016260   | 0.83875              | 9.74365                       | 266.53359                    | 135.61404             | -0.41221            |
| METEOSAT-10 | 17   | 324 | 20/11/2017 | 42166.66659             | 0.00005180   | 0.84941              | 10.35029                      | 255.83883                    | 152.59405             | -0.41982            |
| METEOSAT-10 | 17   | 331 | 27/11/2017 | 42164.69553             | 0.00014810   | 0.85214              | 11.60790                      | 242.20709                    | 171.90559             | -0.38188            |
| METEOSAT-10 | 17   | 338 | 04/12/2017 | 42166.69219             | 0.00011470   | 0.86240              | 12.42609                      | 265.36502                    | 154.88912             | -0.32149            |
| METEOSAT-10 | 17   | 345 | 11/12/2017 | 42164.01784             | 0.00018280   | 0.86255              | 13.93160                      | 272.19282                    | 153.55016             | -0.22640            |
| METEOSAT-10 | 17   | 352 | 18/12/2017 | 42165.35084             | 0.00006860   | 0.87232              | 14.82759                      | 281.13358                    | 150.73596             | -0.10289            |
| METEOSAT-10 | 17   | 359 | 25/12/2017 | 42163.47136             | 0.00015180   | 0.87129              | 16.20133                      | 251.20571                    | 186.35017             | 0.05815             |
| METEOSAT-10 | 18   | 1   | 01/01/2018 | 42165.05002             | 0.00013550   | 0.87934              | 17.20475                      | 279.68440                    | 163.95483             | 0.24605             |
| METEOSAT-10 | 18   | 8   | 08/01/2018 | 42162.52225             | 0.00018920   | 0.87510              | 18.68982                      | 278.48116                    | 170.79219             | 0.46628             |
| METEOSAT-10 | 18   | 15  | 15/01/2018 | 42163.71341             | 0.00008660   | 0.88157              | 19.65397                      | 298.58894                    | 156.87483             | 0.72204             |
| METEOSAT-10 | 18   | 22  | 22/01/2018 | 42165.51615             | 0.00017990   | 0.87597              | 20.88711                      | 237.28651                    | 223.89880             | 0.77781             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 18   | 29  | 29/01/2018 | 42165.83256             | 0.00015880   | 0.88138              | 21.82422                      | 264.04117                    | 203.15317             | 0.82509             |
| METEOSAT-10 | 18   | 36  | 05/02/2018 | 42164.49476             | 0.00018040   | 0.87411              | 23.01194                      | 262.82462                    | 210.16018             | 0.90425             |
| METEOSAT-10 | 18   | 43  | 12/02/2018 | 42131.46674             | 0.00003940   | 0.87901              | 23.81727                      | 163.11860                    | 317.58579             | 2.53025             |
| METEOSAT-10 | 18   | 50  | 19/02/2018 | 42131.30478             | 0.00012220   | 0.87181              | 24.68062                      | 195.97122                    | 293.91874             | 5.68004             |
| METEOSAT-10 | 18   | 57  | 26/02/2018 | 42129.66920             | 0.00006870   | 0.87766              | 25.39558                      | 252.53126                    | 246.73931             | 8.87622             |
| METEOSAT-10 | 18   | 64  | 05/03/2018 | 42168.87610             | 0.00005960   | 0.87154              | 26.13202                      | 216.90442                    | 289.05760             | 9.40448             |
| METEOSAT-10 | 18   | 71  | 12/03/2018 | 42167.15226             | 0.00002640   | 0.87856              | 26.70441                      | 92.88489                     | 59.24754              | 9.24756             |
| METEOSAT-10 | 18   | 78  | 19/03/2018 | 42167.68047             | 0.00009980   | 0.87442              | 27.20106                      | 179.73712                    | 338.70686             | 9.15585             |
| METEOSAT-10 | 18   | 85  | 26/03/2018 | 42165.16143             | 0.00003730   | 0.88443              | 27.78985                      | 282.51384                    | 242.20664             | 9.12113             |
| METEOSAT-10 | 18   | 92  | 02/04/2018 | 42166.68889             | 0.00003890   | 0.88339              | 28.17875                      | 170.34492                    | 0.91072               | 9.14514             |
| METEOSAT-10 | 18   | 99  | 09/04/2018 | 42164.13683             | 0.00005290   | 0.89491              | 28.69544                      | 70.93935                     | 106.78957             | 9.23491             |
| METEOSAT-10 | 18   | 106 | 16/04/2018 | 42165.24308             | 0.00008810   | 0.89623              | 29.03143                      | 165.49314                    | 18.93164              | 9.36660             |
| METEOSAT-10 | 18   | 113 | 23/04/2018 | 42162.64222             | 0.00002840   | 0.91105              | 29.73369                      | 333.89587                    | 216.91362             | 9.55324             |
| METEOSAT-10 | 18   | 120 | 30/04/2018 | 42164.12980             | 0.00004970   | 0.91575              | 30.05102                      | 122.49430                    | 75.14810              | 9.80334             |
| METEOSAT-10 | 18   | 127 | 07/05/2018 | 42167.83377             | 0.00017330   | 0.93067              | 30.74256                      | 13.92675                     | 189.86962             | 9.74861             |
| METEOSAT-10 | 18   | 134 | 14/05/2018 | 42168.48150             | 0.00007230   | 0.93611              | 31.16035                      | 15.50313                     | 194.58367             | 9.55691             |
| METEOSAT-10 | 18   | 141 | 21/05/2018 | 42166.52603             | 0.00017490   | 0.95304              | 32.14550                      | 353.13368                    | 222.72773             | 9.41655             |
| METEOSAT-10 | 18   | 148 | 28/05/2018 | 42167.25742             | 0.00013240   | 0.96073              | 32.59152                      | 19.54727                     | 202.69259             | 9.34134             |
| METEOSAT-10 | 18   | 155 | 04/06/2018 | 42165.46864             | 0.00016330   | 0.97462              | 33.47658                      | 15.79911                     | 212.46567             | 9.35157             |
| METEOSAT-10 | 18   | 162 | 11/06/2018 | 42165.07069             | 0.00007790   | 0.98081              | 34.03040                      | 25.98274                     | 208.68952             | 9.41356             |
| METEOSAT-10 | 18   | 169 | 18/06/2018 | 42164.30335             | 0.00016520   | 0.99574              | 35.26758                      | 352.92104                    | 247.52279             | 9.52284             |
| METEOSAT-10 | 18   | 176 | 25/06/2018 | 42163.82893             | 0.00013630   | 1.00311              | 35.82756                      | 26.92740                     | 220.02901             | 9.69647             |
| METEOSAT-10 | 18   | 183 | 02/07/2018 | 42168.29449             | 0.00023200   | 1.10615              | 346.44445                     | 89.10840                     | 214.03157             | 9.60530             |
| METEOSAT-10 | 18   | 190 | 09/07/2018 | 42166.64576             | 0.00018640   | 1.09880              | 346.90645                     | 105.37687                    | 204.06439             | 9.46939             |
| METEOSAT-10 | 18   | 197 | 16/07/2018 | 42167.18856             | 0.00020890   | 1.08606              | 348.07011                     | 72.24216                     | 242.84400             | 9.37822             |
| METEOSAT-10 | 18   | 204 | 23/07/2018 | 42165.53924             | 0.00023700   | 1.08009              | 348.55827                     | 99.60226                     | 221.86389             | 9.34672             |
| METEOSAT-10 | 18   | 211 | 30/07/2018 | 42166.35331             | 0.00021400   | 1.06739              | 349.41613                     | 88.79063                     | 238.75608             | 9.38512             |
| METEOSAT-10 | 18   | 218 | 06/08/2018 | 42163.86215             | 0.00018230   | 1.06033              | 349.73915                     | 106.62580                    | 227.58307             | 9.47024             |
| METEOSAT-10 | 18   | 225 | 13/08/2018 | 42165.24770             | 0.00019580   | 1.04583              | 350.70229                     | 69.94956                     | 270.32776             | 9.60139             |
| METEOSAT-10 | 18   | 232 | 20/08/2018 | 42162.82195             | 0.00023200   | 1.04156              | 351.06815                     | 101.29746                    | 245.69993             | 9.78695             |
| METEOSAT-10 | 18   | 239 | 27/08/2018 | 42169.73015             | 0.00007920   | 1.02901              | 351.69714                     | 53.72230                     | 299.44556             | 9.68590             |
| METEOSAT-10 | 18   | 246 | 03/09/2018 | 42167.10498             | 0.00003250   | 1.02599              | 351.90858                     | 97.85471                     | 261.80129             | 9.48509             |



| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 18   | 253 | 10/09/2018 | 42168.51879             | 0.00011580   | 1.01360              | 352.64586                     | 20.01270                     | 345.65528             | 9.33388             |
| METEOSAT-10 | 18   | 260 | 17/09/2018 | 42166.10746             | 0.00008680   | 1.01432              | 352.97790                     | 91.36463                     | 280.76918             | 9.23143             |
| METEOSAT-10 | 18   | 267 | 24/09/2018 | 42166.99857             | 0.00005840   | 1.00527              | 353.47046                     | 39.69667                     | 338.81912             | 9.20570             |
| METEOSAT-10 | 18   | 274 | 01/10/2018 | 42165.02055             | 0.00001910   | 1.00857              | 353.74532                     | 60.41885                     | 324.74223             | 9.22574             |
| METEOSAT-10 | 18   | 281 | 08/10/2018 | 42165.68851             | 0.00011070   | 1.00045              | 354.41145                     | 11.29687                     | 20.17115              | 9.29885             |
| METEOSAT-10 | 18   | 288 | 15/10/2018 | 42164.02209             | 0.00007500   | 1.00695              | 354.90623                     | 81.25542                     | 316.73788             | 9.41911             |
| METEOSAT-10 | 18   | 295 | 22/10/2018 | 42167.80880             | 0.00010800   | 1.00201              | 355.45642                     | 304.83958                    | 99.43746              | 9.35351             |
| METEOSAT-10 | 18   | 302 | 29/10/2018 | 42167.08557             | 0.00010060   | 1.01036              | 356.04015                     | 297.49404                    | 112.98596             | 9.24076             |
| METEOSAT-10 | 18   | 309 | 05/11/2018 | 42166.54896             | 0.00015940   | 1.00527              | 356.81902                     | 324.05200                    | 92.49123              | 9.18368             |
| METEOSAT-10 | 18   | 316 | 12/11/2018 | 42165.99816             | 0.00005730   | 1.01456              | 357.63976                     | 326.83422                    | 95.77898              | 9.17527             |
| METEOSAT-10 | 18   | 323 | 19/11/2018 | 42164.62215             | 0.00014290   | 1.01077              | 358.37942                     | 300.22113                    | 128.61410             | 9.23814             |
| METEOSAT-10 | 18   | 330 | 26/11/2018 | 42165.28804             | 0.00012010   | 1.01990              | 359.35011                     | 307.11213                    | 127.76344             | 9.35037             |
| METEOSAT-10 | 18   | 337 | 03/12/2018 | 42163.44707             | 0.00018280   | 1.01429              | 0.27289                       | 321.69165                    | 119.32749             | 9.51807             |
| METEOSAT-10 | 18   | 344 | 10/12/2018 | 42163.92944             | 0.00008430   | 1.02167              | 1.39406                       | 332.73965                    | 114.27834             | 9.73942             |
| METEOSAT-10 | 18   | 351 | 17/12/2018 | 42167.53366             | 0.00014660   | 1.01534              | 2.24839                       | 251.58159                    | 201.32373             | 9.58246             |
| METEOSAT-10 | 18   | 358 | 24/12/2018 | 42169.10919             | 0.00009130   | 1.02114              | 3.47532                       | 247.63133                    | 210.76575             | 9.40237             |
| METEOSAT-10 | 18   | 365 | 31/12/2018 | 42166.33267             | 0.00011280   | 1.01245              | 4.41312                       | 284.99380                    | 179.23694             | 9.27513             |
| METEOSAT-10 | 19   | 7   | 07/01/2019 | 42167.40024             | 0.00004000   | 1.01504              | 5.63191                       | 217.16421                    | 252.67827             | 9.20676             |
| METEOSAT-10 | 19   | 14  | 14/01/2019 | 42165.20922             | 0.00013380   | 1.00545              | 6.39806                       | 259.99929                    | 215.95954             | 9.19037             |
| METEOSAT-10 | 19   | 21  | 21/01/2019 | 42166.70754             | 0.00006760   | 1.00698              | 7.64103                       | 269.93639                    | 211.71985             | 9.23159             |
| METEOSAT-10 | 19   | 28  | 28/01/2019 | 42163.81399             | 0.00010410   | 0.99637              | 8.38081                       | 300.57990                    | 187.32501             | 9.32085             |
| METEOSAT-10 | 19   | 35  | 04/02/2019 | 42164.87288             | 0.00000530   | 0.99545              | 9.48619                       | 258.50607                    | 235.34684             | 9.47474             |
| METEOSAT-10 | 19   | 42  | 11/02/2019 | 42167.56082             | 0.00003020   | 0.98553              | 9.96176                       | 195.72517                    | 304.47335             | 9.39638             |
| METEOSAT-10 | 19   | 49  | 18/02/2019 | 42167.99685             | 0.00005540   | 0.98562              | 11.03838                      | 75.41681                     | 70.47782              | 9.26930             |
| METEOSAT-10 | 19   | 56  | 25/02/2019 | 42166.01920             | 0.00006270   | 0.97749              | 11.46576                      | 45.10852                     | 107.17620             | 9.18693             |
| METEOSAT-10 | 19   | 63  | 04/03/2019 | 42166.42886             | 0.00012260   | 0.97696              | 12.37816                      | 88.10652                     | 70.15256              | 9.17359             |
| METEOSAT-10 | 19   | 70  | 11/03/2019 | 42165.66442             | 0.00002770   | 0.97149              | 12.55064                      | 114.23000                    | 50.78092              | 9.19781             |
| METEOSAT-10 | 19   | 77  | 18/03/2019 | 42164.70275             | 0.00009890   | 0.97382              | 13.48185                      | 58.01517                     | 113.05656             | 9.28951             |
| METEOSAT-10 | 19   | 84  | 25/03/2019 | 42164.25482             | 0.00009650   | 0.97255              | 13.68786                      | 60.74277                     | 117.15975             | 9.42605             |
| METEOSAT-10 | 19   | 91  | 01/04/2019 | 42163.44479             | 0.00015780   | 0.97527              | 14.52212                      | 79.45308                     | 104.72439             | 9.63484             |
| METEOSAT-10 | 19   | 98  | 08/04/2019 | 42169.06573             | 0.00008200   | 0.97706              | 14.60201                      | 227.01896                    | 323.87511             | 9.53108             |
| METEOSAT-10 | 19   | 105 | 15/04/2019 | 42166.96503             | 0.00002350   | 0.98264              | 15.56511                      | 10.72398                     | 185.93495             | 9.35873             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 19   | 112 | 22/04/2019 | 42167.89534             | 0.00001620   | 0.98868              | 15.80271                      | 161.21312                    | 41.98397              | 9.23437             |
| METEOSAT-10 | 19   | 119 | 29/04/2019 | 42165.90746             | 0.00007540   | 0.99412              | 16.73917                      | 99.65308                     | 109.45517             | 9.18185             |
| METEOSAT-10 | 19   | 126 | 06/05/2019 | 42166.79875             | 0.00006400   | 1.00171              | 16.97526                      | 204.20412                    | 11.55308              | 9.16703             |
| METEOSAT-10 | 19   | 133 | 13/05/2019 | 42164.16366             | 0.00005410   | 1.00831              | 18.12356                      | 57.26079                     | 164.29894             | 9.21799             |
| METEOSAT-10 | 19   | 140 | 20/05/2019 | 42165.74290             | 0.00005030   | 1.01874              | 18.56989                      | 125.52226                    | 102.59361             | 9.32090             |
| METEOSAT-10 | 19   | 147 | 27/05/2019 | 42163.16922             | 0.00010530   | 1.02367              | 19.66935                      | 96.67406                     | 137.41394             | 9.49303             |
| METEOSAT-10 | 19   | 154 | 03/06/2019 | 42168.75106             | 0.00014080   | 1.03318              | 20.14642                      | 223.35963                    | 17.07335              | 9.41596             |
| METEOSAT-10 | 19   | 161 | 10/06/2019 | 42166.27109             | 0.00002660   | 1.03730              | 21.45909                      | 240.92245                    | 4.96304               | 9.28195             |
| METEOSAT-10 | 19   | 168 | 17/06/2019 | 42167.62797             | 0.00008480   | 1.04805              | 22.11203                      | 199.02593                    | 53.02901              | 9.20550             |
| METEOSAT-10 | 19   | 175 | 24/06/2019 | 42165.40371             | 0.00006450   | 1.04938              | 23.28052                      | 161.19979                    | 96.57427              | 9.19429             |
| METEOSAT-10 | 19   | 182 | 01/07/2019 | 42165.79652             | 0.00013950   | 1.05740              | 23.86028                      | 209.04486                    | 55.08887              | 9.23521             |
| METEOSAT-10 | 19   | 189 | 08/07/2019 | 42164.14371             | 0.00002880   | 1.05702              | 25.20186                      | 188.25720                    | 81.52378              | 9.32531             |
| METEOSAT-10 | 19   | 196 | 15/07/2019 | 42164.58811             | 0.00010020   | 1.06586              | 25.93018                      | 179.60557                    | 96.49845              | 9.47821             |
| METEOSAT-10 | 19   | 203 | 22/07/2019 | 42163.42504             | 0.00008350   | 1.06236              | 26.97238                      | 164.59901                    | 117.57710             | 9.69389             |
| METEOSAT-10 | 19   | 210 | 29/07/2019 | 42167.77340             | 0.00013020   | 1.16667              | 341.14019                     | 192.22801                    | 142.63071             | 9.64736             |
| METEOSAT-10 | 19   | 217 | 05/08/2019 | 42167.40196             | 0.00011600   | 1.14613              | 341.70074                     | 139.85490                    | 201.19290             | 9.49634             |
| METEOSAT-10 | 19   | 224 | 12/08/2019 | 42166.60355             | 0.00015860   | 1.14034              | 342.37329                     | 168.88856                    | 178.30259             | 9.41163             |
| METEOSAT-10 | 19   | 231 | 19/08/2019 | 42166.68730             | 0.00013780   | 1.12364              | 342.62487                     | 161.99776                    | 191.82021             | 9.38929             |
| METEOSAT-10 | 19   | 238 | 26/08/2019 | 42164.80367             | 0.00014990   | 1.12018              | 343.10510                     | 193.16379                    | 167.10473             | 9.41937             |
| METEOSAT-10 | 19   | 245 | 02/09/2019 | 42165.62212             | 0.00011140   | 1.10217              | 343.46720                     | 142.90216                    | 223.97124             | 9.48567             |
| METEOSAT-10 | 19   | 252 | 09/09/2019 | 42163.68143             | 0.00017310   | 1.09856              | 344.08135                     | 172.56091                    | 200.73335             | 9.62009             |
| METEOSAT-10 | 19   | 259 | 16/09/2019 | 42164.67278             | 0.00012630   | 1.08690              | 344.17337                     | 168.83025                    | 211.47101             | 9.81872             |
| METEOSAT-10 | 19   | 266 | 23/09/2019 | 42167.41672             | 0.00019120   | 1.08723              | 344.69303                     | 236.35345                    | 150.23676             | 9.72711             |
| METEOSAT-10 | 19   | 273 | 30/09/2019 | 42168.84278             | 0.00007060   | 1.07563              | 344.97221                     | 235.51060                    | 157.51176             | 9.53856             |
| METEOSAT-10 | 19   | 280 | 07/10/2019 | 42166.31226             | 0.00016840   | 1.07601              | 345.72917                     | 218.94100                    | 180.10315             | 9.41747             |
| METEOSAT-10 | 19   | 287 | 14/10/2019 | 42167.51736             | 0.00013240   | 1.07066              | 345.87077                     | 238.40418                    | 167.34167             | 9.36136             |
| METEOSAT-10 | 19   | 294 | 21/10/2019 | 42165.02212             | 0.00019460   | 1.07416              | 346.65232                     | 238.62647                    | 173.23681             | 9.36096             |
| METEOSAT-10 | 19   | 301 | 28/10/2019 | 42166.23120             | 0.00008000   | 1.06842              | 347.03743                     | 243.36115                    | 175.05579             | 9.40076             |
| METEOSAT-10 | 19   | 308 | 04/11/2019 | 42163.93017             | 0.00016790   | 1.07015              | 348.08389                     | 221.93973                    | 202.43443             | 9.50542             |
| METEOSAT-10 | 19   | 315 | 11/11/2019 | 42164.53221             | 0.00014570   | 1.06785              | 348.45096                     | 247.23246                    | 183.84323             | 9.67525             |
| METEOSAT-10 | 19   | 322 | 18/11/2019 | 42168.04866             | 0.00022820   | 1.07047              | 349.55879                     | 208.97998                    | 227.78414             | 9.57269             |
| METEOSAT-10 | 19   | 329 | 25/11/2019 | 42168.35333             | 0.00013810   | 1.06563              | 350.17329                     | 190.89349                    | 251.96324             | 9.38133             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 19   | 336 | 02/12/2019 | 42166.97781             | 0.00022510   | 1.06608              | 351.46589                     | 192.49897                    | 255.83541             | 9.25282             |
| METEOSAT-10 | 19   | 343 | 09/12/2019 | 42166.50081             | 0.00017220   | 1.06245              | 352.04137                     | 211.87145                    | 242.71838             | 9.18536             |
| METEOSAT-10 | 19   | 350 | 16/12/2019 | 42166.16794             | 0.00020180   | 1.06129              | 353.39181                     | 205.79259                    | 254.33560             | 9.17534             |
| METEOSAT-10 | 19   | 354 | 20/12/2019 | 42164.54300             | 0.00015520   | 1.05381              | 353.79975                     | 219.33743                    | 244.34090             | 9.19137             |
| METEOSAT-10 | 19   | 364 | 30/12/2019 | 42165.05070             | 0.00020120   | 1.05005              | 355.47700                     | 185.91730                    | 286.05631             | 9.30837             |
| METEOSAT-10 | 20   | 6   | 06/01/2020 | 42163.46101             | 0.00014910   | 1.04382              | 356.07634                     | 214.54874                    | 263.87659             | 9.46059             |
| METEOSAT-10 | 20   | 13  | 13/01/2020 | 42164.46186             | 0.00017230   | 1.03700              | 357.44801                     | 196.33869                    | 287.82670             | 9.67298             |
| METEOSAT-10 | 20   | 20  | 20/01/2020 | 42166.80462             | 0.00001030   | 1.03005              | 358.08987                     | 344.28476                    | 146.09596             | 9.63092             |
| METEOSAT-10 | 20   | 27  | 27/01/2020 | 42167.51513             | 0.00007410   | 1.02005              | 359.30855                     | 172.66899                    | 323.30834             | 9.54651             |
| METEOSAT-10 | 20   | 34  | 03/02/2020 | 42165.35548             | 0.00006580   | 1.01331              | 359.72306                     | 273.17985                    | 229.24614             | 9.51011             |
| METEOSAT-10 | 20   | 41  | 10/02/2020 | 42167.02187             | 0.00004280   | 1.00390              | 0.91768                       | 191.56960                    | 316.58967             | 9.53800             |
| METEOSAT-10 | 20   | 48  | 17/02/2020 | 42164.07867             | 0.00004020   | 0.99943              | 1.38861                       | 45.06118                     | 109.60021             | 9.61107             |
| METEOSAT-10 | 20   | 55  | 24/02/2020 | 42165.17719             | 0.00007340   | 0.98835              | 2.31573                       | 140.17642                    | 20.59584              | 9.74880             |
| METEOSAT-10 | 20   | 62  | 02/03/2020 | 42167.99719             | 0.00014210   | 0.98630              | 2.53062                       | 261.53742                    | 265.79168             | 9.62034             |
| METEOSAT-10 | 20   | 69  | 09/03/2020 | 42169.26134             | 0.00008910   | 0.97823              | 3.52817                       | 229.28591                    | 303.75977             | 9.43410             |
| METEOSAT-10 | 20   | 76  | 16/03/2020 | 42166.49510             | 0.00004070   | 0.98002              | 3.88298                       | 268.46393                    | 270.98473             | 9.29160             |
| METEOSAT-10 | 20   | 83  | 23/03/2020 | 42167.38821             | 0.00008690   | 0.97257              | 4.59695                       | 195.29974                    | 350.25989             | 9.21619             |
| METEOSAT-10 | 20   | 90  | 30/03/2020 | 42165.96792             | 0.00010320   | 0.97744              | 4.79303                       | 255.03796                    | 297.19255             | 9.18287             |
| METEOSAT-10 | 20   | 97  | 06/04/2020 | 42165.99564             | 0.00004620   | 0.97302              | 5.67834                       | 196.19579                    | 2.08659               | 9.21978             |
| METEOSAT-10 | 20   | 104 | 13/04/2020 | 42164.37901             | 0.00001110   | 0.98131              | 6.20579                       | 182.84244                    | 21.89317              | 9.30031             |
| METEOSAT-10 | 20   | 111 | 20/04/2020 | 42167.66148             | 0.00001500   | 0.97873              | 6.99247                       | 107.85440                    | 102.94993             | 9.25574             |
| METEOSAT-10 | 20   | 118 | 27/04/2020 | 42167.13713             | 0.00007440   | 0.98897              | 7.36937                       | 298.00283                    | 279.22883             | 9.16011             |
| METEOSAT-10 | 20   | 125 | 04/05/2020 | 42165.77274             | 0.00005390   | 0.98654              | 8.34410                       | 46.20786                     | 176.92103             | 9.13238             |
| METEOSAT-10 | 20   | 132 | 11/05/2020 | 42165.71228             | 0.00004970   | 0.99960              | 9.15393                       | 28.87781                     | 200.35946             | 9.15099             |
| METEOSAT-10 | 20   | 139 | 18/05/2020 | 42164.62077             | 0.00005590   | 0.99763              | 10.03273                      | 103.00537                    | 132.33818             | 9.23677             |
| METEOSAT-10 | 20   | 146 | 25/05/2020 | 42165.00945             | 0.00003870   | 1.00981              | 10.75800                      | 291.12156                    | 310.52824             | 9.36910             |
| METEOSAT-10 | 20   | 153 | 01/06/2020 | 42166.64669             | 0.00011130   | 1.00640              | 11.85798                      | 16.49128                     | 230.89681             | 9.30834             |
| METEOSAT-10 | 20   | 160 | 08/06/2020 | 42167.82729             | 0.00009500   | 1.01916              | 12.92581                      | 352.71582                    | 260.39253             | 9.19741             |
| METEOSAT-10 | 20   | 167 | 15/06/2020 | 42165.67681             | 0.00005610   | 1.01567              | 13.85732                      | 29.73811                     | 229.28984             | 9.14981             |
| METEOSAT-10 | 20   | 174 | 22/06/2020 | 42166.68350             | 0.00009770   | 1.02598              | 14.84417                      | 311.56415                    | 313.37834             | 9.15243             |
| METEOSAT-10 | 20   | 181 | 29/06/2020 | 42163.97591             | 0.00010020   | 1.01955              | 15.90105                      | 33.22308                     | 237.62001             | 9.21124             |
| METEOSAT-10 | 20   | 188 | 06/07/2020 | 42165.58103             | 0.00006400   | 1.02940              | 17.11839                      | 354.79306                    | 281.85275             | 9.33256             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-10 | 20   | 195 | 13/07/2020 | 42163.05547             | 0.00004520   | 1.02259              | 17.95642                      | 52.25144                     | 230.63430             | 9.51191             |
| METEOSAT-10 | 20   | 202 | 20/07/2020 | 42164.02899             | 0.00007320   | 1.02988              | 19.02777                      | 297.84998                    | 351.09803             | 9.74673             |
| METEOSAT-10 | 20   | 209 | 27/07/2020 | 42167.26107             | 0.00019650   | 1.38170              | 342.68340                     | 112.87976                    | 219.25794             | 9.69656             |
| METEOSAT-10 | 20   | 216 | 03/08/2020 | 42168.39048             | 0.00013150   | 1.37244              | 343.48516                     | 118.11527                    | 219.97263             | 9.54765             |
| METEOSAT-10 | 20   | 223 | 10/08/2020 | 42166.40955             | 0.00015770   | 1.35815              | 343.58967                     | 128.09350                    | 216.69620             | 9.45291             |
| METEOSAT-10 | 20   | 230 | 17/08/2020 | 42166.61608             | 0.00006910   | 1.35069              | 344.25412                     | 133.49917                    | 217.49202             | 9.41763             |
| METEOSAT-10 | 20   | 237 | 24/08/2020 | 42165.35410             | 0.00019010   | 1.33670              | 344.40056                     | 117.53164                    | 240.20837             | 9.41162             |
| METEOSAT-10 | 20   | 244 | 31/08/2020 | 42165.43227             | 0.00013180   | 1.32660              | 345.08558                     | 129.90531                    | 234.12446             | 9.48510             |
| METEOSAT-10 | 20   | 251 | 07/09/2020 | 42164.59260             | 0.00013980   | 1.31779              | 345.05541                     | 130.66497                    | 240.42118             | 9.61018             |
| METEOSAT-10 | 20   | 258 | 14/09/2020 | 42163.54204             | 0.00007500   | 1.31210              | 345.67565                     | 152.00349                    | 225.55226             | 9.79899             |
| METEOSAT-10 | 20   | 265 | 21/09/2020 | 42169.02458             | 0.00005580   | 1.30432              | 345.75506                     | 132.92855                    | 251.30789             | 9.65850             |
| METEOSAT-10 | 20   | 272 | 28/09/2020 | 42167.82415             | 0.00006250   | 1.29754              | 346.43882                     | 217.14482                    | 173.11409             | 9.46432             |
| METEOSAT-10 | 20   | 279 | 05/10/2020 | 42168.15194             | 0.00003930   | 1.29617              | 346.45731                     | 225.05398                    | 171.94383             | 9.32174             |
| METEOSAT-10 | 20   | 286 | 12/10/2020 | 42166.04608             | 0.00010350   | 1.29328              | 347.15584                     | 256.12760                    | 146.99343             | 9.24368             |
| METEOSAT-10 | 20   | 293 | 19/10/2020 | 42167.06913             | 0.00004480   | 1.29277              | 347.38260                     | 133.02532                    | 276.71467             | 9.18998             |
| METEOSAT-10 | 20   | 300 | 26/10/2020 | 42164.86615             | 0.00007870   | 1.28732              | 348.18661                     | 227.64159                    | 188.22311             | 9.21956             |
| METEOSAT-10 | 20   | 307 | 02/11/2020 | 42165.91818             | 0.00004120   | 1.29105              | 348.41275                     | 253.05582                    | 169.56414             | 9.30236             |
| METEOSAT-10 | 20   | 314 | 09/11/2020 | 42163.33750             | 0.00011380   | 1.28915              | 349.29756                     | 259.70763                    | 169.07332             | 9.44956             |
| METEOSAT-10 | 20   | 321 | 16/11/2020 | 42169.02145             | 0.00012420   | 1.29106              | 349.75709                     | 157.21516                    | 277.91066             | 9.35578             |
| METEOSAT-10 | 20   | 328 | 23/11/2020 | 42166.44540             | 0.00015060   | 1.28422              | 350.74722                     | 198.37042                    | 242.53476             | 9.22695             |
| METEOSAT-10 | 20   | 335 | 30/11/2020 | 42167.52425             | 0.00009300   | 1.28866              | 351.25191                     | 195.35289                    | 251.87270             | 9.15416             |
| METEOSAT-10 | 20   | 342 | 07/12/2020 | 42165.26724             | 0.00013260   | 1.28242              | 352.25931                     | 217.97289                    | 235.13231             | 9.14293             |
| METEOSAT-10 | 20   | 349 | 14/12/2020 | 42166.29885             | 0.00010430   | 1.28392              | 352.94081                     | 151.93157                    | 307.41519             | 9.16798             |
| METEOSAT-10 | 20   | 356 | 21/12/2020 | 42164.19491             | 0.00013370   | 1.27287              | 353.98065                     | 197.27462                    | 268.02251             | 9.25976             |
| METEOSAT-10 | 20   | 363 | 28/12/2020 | 42164.56184             | 0.00006910   | 1.27418              | 354.62184                     | 199.52696                    | 272.17733             | 9.40985             |
| METEOSAT-10 | 21   | 4   | 04/01/2021 | 42163.32643             | 0.00010450   | 1.26216              | 355.62687                     | 211.96168                    | 265.84540             | 9.61882             |
| METEOSAT-10 | 21   | 11  | 11/01/2021 | 42168.55542             | 0.00012460   | 1.26127              | 356.34494                     | 70.11893                     | 53.78149              | 9.53138             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 15   | 222 | 10/08/2015 | 42166.73058             | 0.00010375   | 3.12254              | 264.96162                     | 15.10418                     | 34.71988              | -3.41588            |
| METEOSAT-11 | 15   | 229 | 17/08/2015 | 42167.12477             | 0.00011396   | 3.10801              | 264.60885                     | 63.62458                     | 353.39335             | -3.47082            |
| METEOSAT-11 | 15   | 236 | 24/08/2015 | 42165.56926             | 0.00002104   | 3.09954              | 264.45593                     | 18.27262                     | 45.76195              | -3.50098            |
| METEOSAT-11 | 15   | 243 | 31/08/2015 | 42167.37879             | 0.00007782   | 3.08508              | 264.10096                     | 50.20457                     | 21.07055              | -3.50713            |
| METEOSAT-11 | 15   | 250 | 07/09/2015 | 42165.33211             | 0.00013542   | 3.07428              | 263.98386                     | 9.24447                      | 69.05356              | -3.49185            |
| METEOSAT-11 | 15   | 257 | 14/09/2015 | 42166.47600             | 0.00013341   | 3.06581              | 263.66765                     | 51.05204                     | 34.48869              | -3.45470            |
| METEOSAT-11 | 15   | 264 | 21/09/2015 | 42164.61736             | 0.00005569   | 3.05885              | 263.58883                     | 3.97916                      | 88.58608              | -3.39835            |
| METEOSAT-11 | 15   | 271 | 28/09/2015 | 42166.84391             | 0.00012398   | 3.04832              | 263.30244                     | 34.64180                     | 65.17944              | -3.31814            |
| METEOSAT-11 | 15   | 278 | 05/10/2015 | 42164.11737             | 0.00017213   | 3.03684              | 263.27298                     | 9.16439                      | 97.67681              | -3.21838            |
| METEOSAT-11 | 15   | 285 | 12/10/2015 | 42168.42781             | 0.00010738   | 3.02981              | 263.05866                     | 62.53054                     | 51.31490              | -3.32046            |
| METEOSAT-11 | 15   | 292 | 19/10/2015 | 42166.83399             | 0.00002507   | 3.01958              | 263.07806                     | 0.50654                      | 120.09090             | -3.44322            |
| METEOSAT-11 | 15   | 299 | 26/10/2015 | 42168.34572             | 0.00011062   | 3.00863              | 262.87947                     | 36.88051                     | 90.71374              | -3.54108            |
| METEOSAT-11 | 15   | 306 | 02/11/2015 | 42166.09124             | 0.00013942   | 2.99191              | 262.91523                     | 12.83981                     | 121.53787             | -3.62052            |
| METEOSAT-11 | 15   | 313 | 09/11/2015 | 42167.13556             | 0.00013813   | 2.98207              | 262.76934                     | 53.46825                     | 87.89855              | -3.67787            |
| METEOSAT-11 | 15   | 320 | 16/11/2015 | 42166.29805             | 0.00005922   | 2.96498              | 262.82047                     | 23.50388                     | 124.67318             | -3.71947            |
| METEOSAT-11 | 15   | 327 | 23/11/2015 | 42166.46411             | 0.00016263   | 2.95075              | 262.64453                     | 32.17310                     | 123.06635             | -3.73793            |
| METEOSAT-11 | 15   | 334 | 30/11/2015 | 42165.55613             | 0.00016440   | 2.92767              | 262.64971                     | 21.97636                     | 140.16725             | -3.73525            |
| METEOSAT-11 | 15   | 341 | 07/12/2015 | 42165.63518             | 0.00017145   | 2.91399              | 262.47586                     | 51.19939                     | 118.05197             | -3.70903            |
| METEOSAT-11 | 15   | 348 | 14/12/2015 | 42165.82312             | 0.00008408   | 2.89093              | 262.44599                     | 36.03643                     | 140.19565             | -3.66659            |
| METEOSAT-11 | 15   | 355 | 21/12/2015 | 42164.64929             | 0.00020648   | 2.87492              | 262.20529                     | 34.45910                     | 148.98512             | -3.60374            |
| METEOSAT-11 | 15   | 362 | 28/12/2015 | 42165.28165             | 0.00017529   | 2.84885              | 262.07678                     | 32.18134                     | 158.39061             | -3.51261            |
| METEOSAT-11 | 16   | 4   | 04/01/2016 | 42164.11326             | 0.00019864   | 2.83544              | 261.81058                     | 53.16511                     | 144.69587             | -3.39693            |
| METEOSAT-11 | 16   | 11  | 11/01/2016 | 42165.27389             | 0.00009802   | 2.81146              | 261.62735                     | 47.05241                     | 158.03229             | -3.26208            |
| METEOSAT-11 | 16   | 18  | 18/01/2016 | 42166.70567             | 0.00021474   | 2.79817              | 261.30015                     | 60.85287                     | 151.38869             | -3.33621            |
| METEOSAT-11 | 16   | 25  | 25/01/2016 | 42168.38363             | 0.00016533   | 2.77516              | 261.02200                     | 70.27790                     | 149.01575             | -3.46399            |
| METEOSAT-11 | 16   | 32  | 01/02/2016 | 42166.36955             | 0.00021898   | 2.76654              | 260.70143                     | 80.34111                     | 146.06801             | -3.56890            |
| METEOSAT-11 | 16   | 39  | 08/02/2016 | 42167.98685             | 0.00012558   | 2.74682              | 260.41573                     | 99.00509                     | 134.50294             | -3.65337            |
| METEOSAT-11 | 16   | 46  | 15/02/2016 | 42165.67526             | 0.00023334   | 2.73913              | 260.09178                     | 66.15074                     | 174.49735             | -3.73306            |
| METEOSAT-11 | 16   | 53  | 22/02/2016 | 42167.59852             | 0.00017734   | 2.72202              | 259.76177                     | 79.05825                     | 168.77876             | -3.76825            |
| METEOSAT-11 | 16   | 60  | 29/02/2016 | 42165.56101             | 0.00022262   | 2.71873              | 259.50383                     | 85.51230                     | 169.45952             | -3.78422            |
| METEOSAT-11 | 16   | 67  | 07/03/2016 | 42166.82738             | 0.00014021   | 2.70347              | 259.23149                     | 104.27777                    | 157.86429             | -3.77827            |
| METEOSAT-11 | 16   | 74  | 14/03/2016 | 42165.02022             | 0.00023720   | 2.69885              | 259.02472                     | 70.80103                     | 198.44062             | -3.77693            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 16   | 81  | 21/03/2016 | 42166.37531             | 0.00018735   | 2.68540              | 258.74640                     | 86.50731                     | 189.95519             | -3.72595            |
| METEOSAT-11 | 16   | 88  | 28/03/2016 | 42165.09476             | 0.00021249   | 2.68279              | 258.64066                     | 89.52532                     | 194.00361             | -3.65731            |
| METEOSAT-11 | 16   | 95  | 04/04/2016 | 42165.28625             | 0.00015133   | 2.66831              | 258.44231                     | 107.80909                    | 182.90392             | -3.56474            |
| METEOSAT-11 | 16   | 102 | 11/04/2016 | 42164.62222             | 0.00023082   | 2.66122              | 258.38366                     | 72.36692                     | 225.38231             | -3.48158            |
| METEOSAT-11 | 16   | 109 | 18/04/2016 | 42164.78413             | 0.00019488   | 2.64681              | 258.16476                     | 92.80835                     | 212.19074             | -3.34683            |
| METEOSAT-11 | 16   | 116 | 25/04/2016 | 42164.70583             | 0.00019438   | 2.63978              | 258.18375                     | 91.07194                     | 220.96028             | -3.19254            |
| METEOSAT-11 | 16   | 123 | 02/05/2016 | 42167.34171             | 0.00006680   | 2.62257              | 257.99824                     | 106.37273                    | 212.68550             | -3.25206            |
| METEOSAT-11 | 16   | 130 | 09/05/2016 | 42167.99226             | 0.00016635   | 2.60953              | 258.02271                     | 49.81272                     | 275.95903             | -3.41558            |
| METEOSAT-11 | 16   | 137 | 16/05/2016 | 42166.85989             | 0.00011262   | 2.59190              | 257.79390                     | 85.15511                     | 247.63364             | -3.53071            |
| METEOSAT-11 | 16   | 144 | 23/05/2016 | 42167.89321             | 0.00010231   | 2.57853              | 257.82769                     | 68.50359                     | 271.06309             | -3.62329            |
| METEOSAT-11 | 16   | 151 | 30/05/2016 | 42165.84391             | 0.00005927   | 2.55851              | 257.57574                     | 107.67163                    | 238.98380             | -3.69221            |
| METEOSAT-11 | 16   | 158 | 06/06/2016 | 42167.43699             | 0.00016297   | 2.54005              | 257.55894                     | 45.38480                     | 308.12338             | -3.76229            |
| METEOSAT-11 | 16   | 165 | 13/06/2016 | 42165.46071             | 0.00010378   | 2.52135              | 257.22771                     | 89.43083                     | 271.28444             | -3.79299            |
| METEOSAT-11 | 16   | 172 | 20/06/2016 | 42167.07421             | 0.00009243   | 2.50392              | 257.17319                     | 59.61045                     | 308.06189             | -3.79651            |
| METEOSAT-11 | 16   | 179 | 27/06/2016 | 42164.70572             | 0.00004596   | 2.48490              | 256.78158                     | 95.89057                     | 279.09678             | -3.77891            |
| METEOSAT-11 | 16   | 186 | 04/07/2016 | 42166.56552             | 0.00016499   | 2.46459              | 256.65358                     | 41.26902                     | 340.77688             | -3.75290            |
| METEOSAT-11 | 16   | 193 | 11/07/2016 | 42164.50768             | 0.00009551   | 2.44915              | 256.19996                     | 85.82150                     | 303.63661             | -3.69781            |
| METEOSAT-11 | 16   | 200 | 18/07/2016 | 42165.86160             | 0.00008832   | 2.43181              | 256.02774                     | 48.14605                     | 348.47366             | -3.61027            |
| METEOSAT-11 | 16   | 207 | 25/07/2016 | 42163.99136             | 0.00004717   | 2.41810              | 255.52230                     | 61.17953                     | 342.95196             | -3.50422            |
| METEOSAT-11 | 16   | 214 | 01/08/2016 | 42165.35408             | 0.00017258   | 2.39982              | 255.29646                     | 37.58539                     | 13.79451              | -3.38022            |
| METEOSAT-11 | 16   | 221 | 08/08/2016 | 42163.95776             | 0.00009858   | 2.39077              | 254.80007                     | 74.37290                     | 344.54427             | -3.23633            |
| METEOSAT-11 | 16   | 228 | 15/08/2016 | 42167.86805             | 0.00009402   | 2.37657              | 254.56627                     | 340.64956                    | 85.33453              | -3.29896            |
| METEOSAT-11 | 16   | 235 | 22/08/2016 | 42167.24540             | 0.00007942   | 2.36924              | 254.06790                     | 336.96658                    | 96.28380              | -3.42564            |
| METEOSAT-11 | 16   | 242 | 29/08/2016 | 42167.51901             | 0.00017199   | 2.35375              | 253.82680                     | 8.02688                      | 72.25535              | -3.52893            |
| METEOSAT-11 | 16   | 249 | 05/09/2016 | 42167.13355             | 0.00007108   | 2.35052              | 253.42061                     | 18.22041                     | 69.27072              | -3.61962            |
| METEOSAT-11 | 16   | 256 | 12/09/2016 | 42166.29984             | 0.00012470   | 2.33848              | 253.22905                     | 343.94758                    | 110.57290             | -3.67541            |
| METEOSAT-11 | 16   | 263 | 19/09/2016 | 42167.19041             | 0.00011328   | 2.33482              | 252.85862                     | 359.92493                    | 101.81638             | -3.71861            |
| METEOSAT-11 | 16   | 270 | 26/09/2016 | 42166.07699             | 0.00020275   | 2.31948              | 252.67634                     | 10.33543                     | 98.46481              | -3.73660            |
| METEOSAT-11 | 16   | 277 | 03/10/2016 | 42166.66400             | 0.00010476   | 2.31734              | 252.43944                     | 24.46456                     | 91.45876              | -3.74560            |
| METEOSAT-11 | 16   | 284 | 10/10/2016 | 42164.99588             | 0.00015492   | 2.30352              | 252.33710                     | 351.73391                    | 131.21295             | -3.72113            |
| METEOSAT-11 | 16   | 291 | 17/10/2016 | 42166.99864             | 0.00015246   | 2.29826              | 252.12282                     | 16.22772                     | 113.86823             | -3.68407            |
| METEOSAT-11 | 16   | 298 | 24/10/2016 | 42164.66224             | 0.00023695   | 2.27903              | 251.98223                     | 14.68563                     | 122.51386             | -3.62075            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 16   | 305 | 31/10/2016 | 42165.89926             | 0.00013962   | 2.27293              | 251.87922                     | 30.60279                     | 113.67500             | -3.54601            |
| METEOSAT-11 | 16   | 312 | 07/11/2016 | 42164.02226             | 0.00018140   | 2.25391              | 251.78498                     | 2.10277                      | 149.27846             | -3.43913            |
| METEOSAT-11 | 16   | 319 | 14/11/2016 | 42166.07094             | 0.00019742   | 2.24371              | 251.63764                     | 26.86013                     | 131.69392             | -3.31674            |
| METEOSAT-11 | 16   | 326 | 21/11/2016 | 42163.38030             | 0.00026699   | 2.21941              | 251.43069                     | 20.84945                     | 144.96493             | -3.16770            |
| METEOSAT-11 | 16   | 333 | 28/11/2016 | 42168.48412             | 0.00008432   | 2.20787              | 251.32992                     | 42.95612                     | 129.74194             | -3.28905            |
| METEOSAT-11 | 16   | 340 | 05/12/2016 | 42167.02672             | 0.00011908   | 2.18451              | 251.10369                     | 358.54151                    | 181.15047             | -3.42612            |
| METEOSAT-11 | 16   | 347 | 12/12/2016 | 42168.11888             | 0.00015252   | 2.17048              | 250.89730                     | 35.67980                     | 151.00282             | -3.54629            |
| METEOSAT-11 | 16   | 354 | 19/12/2016 | 42166.21780             | 0.00019352   | 2.14486              | 250.49679                     | 26.30909                     | 167.58484             | -3.63978            |
| METEOSAT-11 | 16   | 361 | 26/12/2016 | 42167.12518             | 0.00011228   | 2.13122              | 250.27642                     | 53.91115                     | 147.03390             | -3.71235            |
| METEOSAT-11 | 17   | 2   | 02/01/2017 | 42166.51626             | 0.00011917   | 2.10895              | 249.82795                     | 14.28746                     | 193.96565             | -3.75957            |
| METEOSAT-11 | 17   | 9   | 09/01/2017 | 42166.28541             | 0.00018514   | 2.09586              | 249.50416                     | 45.77072                     | 169.67565             | -3.79148            |
| METEOSAT-11 | 17   | 16  | 16/01/2017 | 42165.84106             | 0.00018673   | 2.07504              | 248.90270                     | 37.27776                     | 185.66639             | -3.79542            |
| METEOSAT-11 | 17   | 23  | 23/01/2017 | 42165.68018             | 0.00013243   | 2.06465              | 248.58492                     | 65.13505                     | 165.04431             | -3.77698            |
| METEOSAT-11 | 17   | 30  | 30/01/2017 | 42166.11876             | 0.00011048   | 2.04858              | 247.98208                     | 26.95606                     | 210.76320             | -3.73773            |
| METEOSAT-11 | 17   | 37  | 06/02/2017 | 42164.70140             | 0.00020139   | 2.03951              | 247.63074                     | 56.18321                     | 188.83619             | -3.68569            |
| METEOSAT-11 | 17   | 44  | 13/02/2017 | 42165.71637             | 0.00016457   | 2.02679              | 246.97501                     | 48.15478                     | 204.49975             | -3.60212            |
| METEOSAT-11 | 17   | 51  | 20/02/2017 | 42164.29682             | 0.00014407   | 2.02004              | 246.71492                     | 76.35325                     | 183.56353             | -3.49525            |
| METEOSAT-11 | 17   | 58  | 27/02/2017 | 42165.59822             | 0.00009620   | 2.01026              | 246.13278                     | 37.29515                     | 230.22375             | -3.37014            |
| METEOSAT-11 | 17   | 65  | 06/03/2017 | 42163.43300             | 0.00020440   | 2.00283              | 245.90337                     | 65.67199                     | 209.10568             | -3.23569            |
| METEOSAT-11 | 17   | 72  | 13/03/2017 | 42168.61178             | 0.00006280   | 1.99558              | 245.36048                     | 52.51121                     | 229.66510             | -3.27510            |
| METEOSAT-11 | 17   | 79  | 20/03/2017 | 42166.45915             | 0.00007660   | 1.98963              | 245.23892                     | 107.83943                    | 181.25195             | -3.37740            |
| METEOSAT-11 | 17   | 86  | 27/03/2017 | 42167.99493             | 0.00002570   | 1.98121              | 244.78407                     | 334.22532                    | 322.13307             | -3.46170            |
| METEOSAT-11 | 17   | 93  | 03/04/2017 | 42165.76911             | 0.00012120   | 1.97034              | 244.70488                     | 77.76734                     | 225.48854             | -3.54092            |
| METEOSAT-11 | 17   | 100 | 10/04/2017 | 42167.61343             | 0.00004420   | 1.96334              | 244.31081                     | 74.42968                     | 236.08083             | -3.57867            |
| METEOSAT-11 | 17   | 107 | 17/04/2017 | 42165.64244             | 0.00007390   | 1.95120              | 244.30406                     | 117.18769                    | 200.21428             | -3.59341            |
| METEOSAT-11 | 17   | 114 | 24/04/2017 | 42166.62142             | 0.00001520   | 1.94127              | 243.93650                     | 305.27489                    | 19.39859              | -3.58994            |
| METEOSAT-11 | 17   | 121 | 01/05/2017 | 42165.07090             | 0.00011250   | 1.92339              | 243.88376                     | 83.10297                     | 248.53111             | -3.58357            |
| METEOSAT-11 | 17   | 128 | 08/05/2017 | 42166.13970             | 0.00003410   | 1.91375              | 243.55126                     | 108.74835                    | 230.16946             | -3.53453            |
| METEOSAT-11 | 17   | 135 | 15/05/2017 | 42165.08337             | 0.00006060   | 1.89557              | 243.50897                     | 121.93435                    | 224.00352             | -3.45961            |
| METEOSAT-11 | 17   | 142 | 22/05/2017 | 42164.91684             | 0.00001660   | 1.88309              | 243.09811                     | 264.71652                    | 88.63001              | -3.36511            |
| METEOSAT-11 | 17   | 149 | 29/05/2017 | 42164.60328             | 0.00010430   | 1.85941              | 242.92312                     | 81.36441                     | 279.15934             | -3.26632            |
| METEOSAT-11 | 17   | 156 | 05/06/2017 | 42167.52060             | 0.00004960   | 1.84791              | 242.48832                     | 269.94806                    | 97.89426              | -3.28572            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 17   | 163 | 12/06/2017 | 42167.70430             | 0.00002780   | 1.82654              | 242.26084                     | 285.28484                    | 89.57837              | -3.39508            |
| METEOSAT-11 | 17   | 170 | 19/06/2017 | 42166.34756             | 0.00009310   | 1.81494              | 241.71209                     | 286.56277                    | 95.66117              | -3.48546            |
| METEOSAT-11 | 17   | 177 | 26/06/2017 | 42167.30588             | 0.00006320   | 1.79057              | 241.30924                     | 30.61966                     | 358.82613             | -3.56802            |
| METEOSAT-11 | 17   | 184 | 03/07/2017 | 42165.94153             | 0.00006400   | 1.78123              | 240.75727                     | 267.62114                    | 129.22719             | -3.61824            |
| METEOSAT-11 | 17   | 191 | 10/07/2017 | 42167.15216             | 0.00003950   | 1.76140              | 240.30595                     | 312.56680                    | 91.61606              | -3.63489            |
| METEOSAT-11 | 17   | 198 | 17/07/2017 | 42165.01121             | 0.00009850   | 1.75487              | 239.65970                     | 295.34940                    | 116.37772             | -3.63590            |
| METEOSAT-11 | 17   | 205 | 24/07/2017 | 42166.77639             | 0.00007820   | 1.73478              | 239.05430                     | 27.19830                     | 32.04422              | -3.62402            |
| METEOSAT-11 | 17   | 212 | 31/07/2017 | 42164.73127             | 0.00007220   | 1.73040              | 238.47813                     | 276.62366                    | 150.12574             | -3.59067            |
| METEOSAT-11 | 17   | 219 | 07/08/2017 | 42166.35686             | 0.00005570   | 1.71575              | 237.88681                     | 330.90451                    | 103.40474             | -3.51895            |
| METEOSAT-11 | 17   | 226 | 14/08/2017 | 42164.09262             | 0.00010200   | 1.71397              | 237.32456                     | 311.81906                    | 130.03250             | -3.43518            |
| METEOSAT-11 | 17   | 233 | 21/08/2017 | 42165.88284             | 0.00009630   | 1.69960              | 236.65407                     | 27.29818                     | 62.22329              | -3.33197            |
| METEOSAT-11 | 17   | 240 | 28/08/2017 | 42163.94468             | 0.00006970   | 1.69906              | 236.21386                     | 293.08223                    | 163.89059             | -3.21690            |
| METEOSAT-11 | 17   | 247 | 04/09/2017 | 42168.10389             | 0.00007780   | 1.68845              | 235.64849                     | 39.15709                     | 65.20563              | -3.28894            |
| METEOSAT-11 | 17   | 254 | 11/09/2017 | 42166.53314             | 0.00007840   | 1.68868              | 235.28038                     | 15.51941                     | 96.00708              | -3.39008            |
| METEOSAT-11 | 17   | 261 | 18/09/2017 | 42167.60645             | 0.00015190   | 1.67658              | 234.69097                     | 56.21939                     | 62.71783              | -3.46640            |
| METEOSAT-11 | 17   | 268 | 25/09/2017 | 42166.43510             | 0.00003750   | 1.67488              | 234.48274                     | 45.02125                     | 80.95208              | -3.53657            |
| METEOSAT-11 | 17   | 275 | 02/10/2017 | 42166.51018             | 0.00010510   | 1.66397              | 234.00809                     | 35.58530                     | 97.73630              | -3.56199            |
| METEOSAT-11 | 17   | 282 | 09/10/2017 | 42166.25172             | 0.00010220   | 1.66005              | 233.85135                     | 34.88993                     | 105.46975             | -3.58024            |
| METEOSAT-11 | 17   | 289 | 16/10/2017 | 42166.11713             | 0.00017340   | 1.64643              | 233.31892                     | 56.69931                     | 91.10353              | -3.57018            |
| METEOSAT-11 | 17   | 296 | 23/10/2017 | 42165.98007             | 0.00006520   | 1.63842              | 233.25742                     | 60.03485                     | 94.74694              | -3.55371            |
| METEOSAT-11 | 17   | 303 | 30/10/2017 | 42164.86475             | 0.00013790   | 1.62441              | 232.79717                     | 37.97127                     | 124.23292             | -3.49341            |
| METEOSAT-11 | 17   | 310 | 06/11/2017 | 42166.04548             | 0.00012810   | 1.61284              | 232.68915                     | 52.30649                     | 116.97669             | -3.42438            |
| METEOSAT-11 | 17   | 317 | 13/11/2017 | 42164.52745             | 0.00020090   | 1.59651              | 232.06451                     | 60.13365                     | 116.77603             | -3.32506            |
| METEOSAT-11 | 17   | 324 | 20/11/2017 | 42165.32542             | 0.00009440   | 1.58148              | 231.94679                     | 71.63844                     | 112.40236             | -3.21383            |
| METEOSAT-11 | 17   | 331 | 27/11/2017 | 42166.58984             | 0.00014520   | 1.56573              | 231.31978                     | 19.73674                     | 171.74925             | -3.29786            |
| METEOSAT-11 | 17   | 338 | 04/12/2017 | 42168.60130             | 0.00010890   | 1.54861              | 231.05981                     | 41.73100                     | 156.80272             | -3.41171            |
| METEOSAT-11 | 17   | 345 | 11/12/2017 | 42166.12931             | 0.00017610   | 1.53312              | 230.19067                     | 51.51413                     | 154.70462             | -3.49725            |
| METEOSAT-11 | 17   | 352 | 18/12/2017 | 42167.50005             | 0.00006180   | 1.51570              | 229.83549                     | 52.94263                     | 160.46429             | -3.56487            |
| METEOSAT-11 | 17   | 359 | 25/12/2017 | 42165.67177             | 0.00014890   | 1.50347              | 228.94889                     | 34.35094                     | 186.80691             | -3.60070            |
| METEOSAT-11 | 18   | 1   | 01/01/2018 | 42167.47486             | 0.00012280   | 1.48698              | 228.44168                     | 62.96295                     | 165.58080             | -3.62135            |
| METEOSAT-11 | 18   | 8   | 08/01/2018 | 42164.98950             | 0.00018010   | 1.47818              | 227.37027                     | 64.27372                     | 172.24306             | -3.61852            |
| METEOSAT-11 | 18   | 15  | 15/01/2018 | 42166.38505             | 0.00007120   | 1.46394              | 226.79208                     | 80.52677                     | 163.49266             | -3.59219            |



| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 18   | 22  | 22/01/2018 | 42164.23739             | 0.00012220   | 1.45583              | 225.67023                     | 55.80023                     | 196.33157             | -3.49925            |
| METEOSAT-11 | 18   | 29  | 29/01/2018 | 42164.95504             | 0.00013260   | 1.44387              | 225.03579                     | 91.17070                     | 168.63944             | -3.35262            |
| METEOSAT-11 | 18   | 36  | 05/02/2018 | 42163.46959             | 0.00015790   | 1.44363              | 224.01183                     | 86.02023                     | 181.87842             | -3.18508            |
| METEOSAT-11 | 18   | 43  | 12/02/2018 | 42128.96107             | 0.00008760   | 1.43397              | 223.41380                     | 120.74453                    | 157.77395             | -0.05947            |
| METEOSAT-11 | 18   | 50  | 19/02/2018 | 42168.87515             | 0.00010450   | 1.43670              | 222.58254                     | 69.52901                     | 217.26048             | 0.48322             |
| METEOSAT-11 | 18   | 57  | 26/02/2018 | 42167.90235             | 0.00014960   | 1.42722              | 222.02516                     | 106.75321                    | 187.28667             | 0.27841             |
| METEOSAT-11 | 18   | 64  | 05/03/2018 | 42168.10416             | 0.00012960   | 1.43062              | 221.28972                     | 100.35232                    | 201.14727             | 0.10465             |
| METEOSAT-11 | 18   | 71  | 12/03/2018 | 42167.24086             | 0.00010460   | 1.42131              | 220.81522                     | 139.98146                    | 168.75876             | -0.02802            |
| METEOSAT-11 | 18   | 78  | 19/03/2018 | 42167.95012             | 0.00008560   | 1.42440              | 220.26045                     | 81.93523                     | 234.14406             | -0.14289            |
| METEOSAT-11 | 18   | 85  | 26/03/2018 | 42166.02676             | 0.00015250   | 1.41221              | 219.79797                     | 121.13631                    | 202.22375             | -0.22458            |
| METEOSAT-11 | 18   | 92  | 02/04/2018 | 42167.42932             | 0.00010090   | 1.41294              | 219.33945                     | 115.63755                    | 215.03193             | -0.27390            |
| METEOSAT-11 | 18   | 99  | 09/04/2018 | 42165.47456             | 0.00011620   | 1.39955              | 218.91469                     | 154.13057                    | 183.85702             | -0.28153            |
| METEOSAT-11 | 18   | 106 | 16/04/2018 | 42166.78823             | 0.00006770   | 1.39805              | 218.51794                     | 92.42267                     | 252.87149             | -0.27279            |
| METEOSAT-11 | 18   | 113 | 23/04/2018 | 42164.41393             | 0.00014900   | 1.38091              | 217.96665                     | 134.01489                    | 218.77449             | -0.23051            |
| METEOSAT-11 | 18   | 120 | 30/04/2018 | 42166.25050             | 0.00007930   | 1.37606              | 217.59491                     | 134.74441                    | 225.39642             | -0.15227            |
| METEOSAT-11 | 18   | 127 | 07/05/2018 | 42163.94791             | 0.00011900   | 1.35906              | 217.01077                     | 166.08222                    | 201.66538             | -0.03131            |
| METEOSAT-11 | 18   | 134 | 14/05/2018 | 42165.16301             | 0.00005020   | 1.35321              | 216.56121                     | 106.05996                    | 269.17838             | 0.10857             |
| METEOSAT-11 | 18   | 141 | 21/05/2018 | 42163.05417             | 0.00014130   | 1.33407              | 215.71285                     | 144.76774                    | 238.39245             | 0.28082             |
| METEOSAT-11 | 18   | 148 | 28/05/2018 | 42164.45976             | 0.00006850   | 1.32603              | 215.22085                     | 158.77700                    | 231.98745             | 0.49252             |
| METEOSAT-11 | 18   | 155 | 04/06/2018 | 42162.73296             | 0.00011160   | 1.30987              | 214.33077                     | 174.47864                    | 224.33241             | 0.74883             |
| METEOSAT-11 | 18   | 162 | 11/06/2018 | 42168.97410             | 0.00010940   | 1.39173              | 250.34820                     | 233.41731                    | 136.17382             | 0.65141             |
| METEOSAT-11 | 18   | 169 | 18/06/2018 | 42167.85611             | 0.00011930   | 1.36514              | 249.80352                     | 181.19104                    | 195.62203             | 0.42723             |
| METEOSAT-11 | 18   | 176 | 25/06/2018 | 42168.26081             | 0.00014550   | 1.35257              | 249.44231                     | 217.12810                    | 166.76268             | 0.24284             |
| METEOSAT-11 | 18   | 183 | 02/07/2018 | 42167.65832             | 0.00015210   | 1.33109              | 248.81212                     | 205.49666                    | 185.78467             | 0.10257             |
| METEOSAT-11 | 18   | 190 | 09/07/2018 | 42166.87893             | 0.00012310   | 1.32099              | 248.30403                     | 237.50181                    | 161.06971             | -0.01535            |
| METEOSAT-11 | 18   | 197 | 16/07/2018 | 42167.06117             | 0.00011240   | 1.29818              | 247.42293                     | 187.33468                    | 218.92375             | -0.10918            |
| METEOSAT-11 | 18   | 204 | 23/07/2018 | 42166.26988             | 0.00016000   | 1.28794              | 246.93660                     | 224.99315                    | 188.59207             | -0.16776            |
| METEOSAT-11 | 18   | 211 | 30/07/2018 | 42166.86047             | 0.00013730   | 1.27242              | 246.05631                     | 213.24765                    | 208.10294             | -0.18127            |
| METEOSAT-11 | 18   | 218 | 06/08/2018 | 42165.03437             | 0.00012720   | 1.26616              | 245.51852                     | 244.88480                    | 183.90996             | -0.17307            |
| METEOSAT-11 | 18   | 225 | 13/08/2018 | 42166.33675             | 0.00009910   | 1.25035              | 244.47340                     | 190.72307                    | 246.04622             | -0.14162            |
| METEOSAT-11 | 18   | 232 | 20/08/2018 | 42164.51225             | 0.00016340   | 1.24311              | 244.03623                     | 233.24314                    | 210.92249             | -0.08017            |
| METEOSAT-11 | 18   | 239 | 27/08/2018 | 42165.90527             | 0.00011680   | 1.23407              | 243.13259                     | 220.46204                    | 231.61482             | 0.02973             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 18   | 246 | 03/09/2018 | 42163.53499             | 0.00011840   | 1.22990              | 242.77906                     | 253.14648                    | 206.31321             | 0.16135             |
| METEOSAT-11 | 18   | 253 | 10/09/2018 | 42165.27031             | 0.00008490   | 1.21965              | 241.80817                     | 191.34010                    | 276.14599             | 0.31891             |
| METEOSAT-11 | 18   | 260 | 17/09/2018 | 42163.04310             | 0.00015570   | 1.21232              | 241.58752                     | 239.12313                    | 235.66581             | 0.50290             |
| METEOSAT-11 | 18   | 267 | 24/09/2018 | 42164.43703             | 0.00009450   | 1.20606              | 240.84764                     | 227.67454                    | 254.98992             | 0.73997             |
| METEOSAT-11 | 18   | 274 | 01/10/2018 | 42168.18520             | 0.00004160   | 1.19880              | 240.74694                     | 52.74134                     | 76.73231              | 0.54950             |
| METEOSAT-11 | 18   | 281 | 08/10/2018 | 42169.52183             | 0.00012250   | 1.18964              | 239.97169                     | 103.07751                    | 33.83356              | 0.31219             |
| METEOSAT-11 | 18   | 288 | 15/10/2018 | 42167.72283             | 0.00002720   | 1.17729              | 239.93596                     | 158.04807                    | 345.58570             | 0.09937             |
| METEOSAT-11 | 18   | 295 | 22/10/2018 | 42168.36522             | 0.00007620   | 1.16910              | 239.33502                     | 87.24953                     | 63.72501              | -0.06095            |
| METEOSAT-11 | 18   | 302 | 29/10/2018 | 42167.20318             | 0.00006330   | 1.15439              | 239.33960                     | 65.71519                     | 92.01688              | -0.19926            |
| METEOSAT-11 | 18   | 309 | 05/11/2018 | 42167.60352             | 0.00013260   | 1.14295              | 238.61392                     | 99.62386                     | 65.62718              | -0.30674            |
| METEOSAT-11 | 18   | 316 | 12/11/2018 | 42166.76125             | 0.00004250   | 1.12363              | 238.53434                     | 130.45622                    | 41.69279              | -0.38917            |
| METEOSAT-11 | 18   | 323 | 19/11/2018 | 42166.21572             | 0.00010280   | 1.11242              | 237.85314                     | 78.13553                     | 101.56081             | -0.42397            |
| METEOSAT-11 | 18   | 330 | 26/11/2018 | 42166.45356             | 0.00008420   | 1.09079              | 237.65455                     | 81.65680                     | 105.12698             | -0.43592            |
| METEOSAT-11 | 18   | 337 | 03/12/2018 | 42165.59598             | 0.00015040   | 1.07804              | 236.73877                     | 100.45547                    | 94.16413              | -0.41666            |
| METEOSAT-11 | 18   | 344 | 10/12/2018 | 42165.83437             | 0.00006860   | 1.05503              | 236.29766                     | 128.79227                    | 73.21699              | -0.36863            |
| METEOSAT-11 | 18   | 351 | 17/12/2018 | 42164.25989             | 0.00013090   | 1.04450              | 235.32740                     | 81.57797                     | 128.38977             | -0.28067            |
| METEOSAT-11 | 18   | 358 | 24/12/2018 | 42165.74598             | 0.00010350   | 1.02128              | 234.65813                     | 100.85434                    | 116.79734             | -0.16594            |
| METEOSAT-11 | 18   | 365 | 31/12/2018 | 42163.66817             | 0.00017100   | 1.01241              | 233.44692                     | 107.98067                    | 117.92529             | -0.02246            |
| METEOSAT-11 | 19   | 7   | 07/01/2019 | 42164.73768             | 0.00009620   | 0.99231              | 232.51949                     | 137.79795                    | 96.11356              | 0.15640             |
| METEOSAT-11 | 19   | 14  | 14/01/2019 | 42162.76176             | 0.00014900   | 0.98790              | 231.33329                     | 93.72679                     | 148.47961             | 0.36617             |
| METEOSAT-11 | 19   | 21  | 21/01/2019 | 42164.64973             | 0.00012600   | 0.96949              | 230.24707                     | 120.66185                    | 129.77286             | 0.60956             |
| METEOSAT-11 | 19   | 28  | 28/01/2019 | 42161.95199             | 0.00018810   | 0.96781              | 228.99047                     | 121.03553                    | 137.82368             | 0.87905             |
| METEOSAT-11 | 19   | 35  | 04/02/2019 | 42169.80767             | 0.00004850   | 0.95462              | 227.81887                     | 32.65127                     | 234.09339             | 0.69439             |
| METEOSAT-11 | 19   | 42  | 11/02/2019 | 42168.11418             | 0.00014910   | 0.95693              | 226.80766                     | 49.81439                     | 224.59247             | 0.44707             |
| METEOSAT-11 | 19   | 49  | 18/02/2019 | 42169.35453             | 0.00008290   | 0.94444              | 225.64984                     | 63.80976                     | 218.44649             | 0.24006             |
| METEOSAT-11 | 19   | 56  | 25/02/2019 | 42167.12118             | 0.00010910   | 0.94671              | 224.74607                     | 85.77282                     | 204.09993             | 0.05432             |
| METEOSAT-11 | 19   | 63  | 04/03/2019 | 42168.18381             | 0.00001790   | 0.93778              | 223.66949                     | 73.82923                     | 223.87916             | -0.08547            |
| METEOSAT-11 | 19   | 70  | 11/03/2019 | 42167.22407             | 0.00011640   | 0.94080              | 223.10200                     | 59.79813                     | 245.25084             | -0.21121            |
| METEOSAT-11 | 19   | 77  | 18/03/2019 | 42167.24403             | 0.00006600   | 0.92983              | 222.07026                     | 97.79685                     | 215.10187             | -0.29260            |
| METEOSAT-11 | 19   | 84  | 25/03/2019 | 42166.27789             | 0.00007620   | 0.92919              | 221.60865                     | 103.98082                    | 216.21617             | -0.35529            |
| METEOSAT-11 | 19   | 91  | 01/04/2019 | 42166.38631             | 0.00002440   | 0.91948              | 220.65589                     | 188.00735                    | 140.02748             | -0.37013            |
| METEOSAT-11 | 19   | 98  | 08/04/2019 | 42166.36483             | 0.00008450   | 0.91709              | 220.41239                     | 64.63128                     | 270.54255             | -0.37442            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 19   | 105 | 15/04/2019 | 42165.10928             | 0.00006110   | 0.90403              | 219.35864                     | 138.21009                    | 204.96073             | -0.33157            |
| METEOSAT-11 | 19   | 112 | 22/04/2019 | 42165.63883             | 0.00004140   | 0.89634              | 219.06727                     | 126.79612                    | 223.62940             | -0.26841            |
| METEOSAT-11 | 19   | 119 | 29/04/2019 | 42164.46332             | 0.00005500   | 0.88421              | 217.98115                     | 215.90765                    | 142.61659             | -0.15633            |
| METEOSAT-11 | 19   | 126 | 06/05/2019 | 42165.32197             | 0.00005570   | 0.87500              | 217.70438                     | 62.46717                     | 303.35771             | -0.03269            |
| METEOSAT-11 | 19   | 133 | 13/05/2019 | 42163.08709             | 0.00006730   | 0.86262              | 216.33335                     | 173.00261                    | 201.26804             | 0.14154             |
| METEOSAT-11 | 19   | 140 | 20/05/2019 | 42164.65244             | 0.00001820   | 0.84927              | 215.83238                     | 175.07665                    | 206.79728             | 0.34378             |
| METEOSAT-11 | 19   | 147 | 27/05/2019 | 42162.52624             | 0.00007480   | 0.83825              | 214.36064                     | 230.46170                    | 160.03443             | 0.59411             |
| METEOSAT-11 | 19   | 154 | 03/06/2019 | 42163.83072             | 0.00003980   | 0.82603              | 213.71920                     | 50.83450                     | 347.47002             | 0.86137             |
| METEOSAT-11 | 19   | 161 | 10/06/2019 | 42167.75372             | 0.00018460   | 1.06804              | 260.19292                     | 206.64123                    | 151.98339             | 0.75864             |
| METEOSAT-11 | 19   | 168 | 17/06/2019 | 42169.52074             | 0.00017740   | 1.05049              | 260.19575                     | 226.47231                    | 138.81993             | 0.52844             |
| METEOSAT-11 | 19   | 175 | 24/06/2019 | 42167.32798             | 0.00022810   | 1.02936              | 259.42574                     | 219.32804                    | 153.44932             | 0.34280             |
| METEOSAT-11 | 19   | 182 | 01/07/2019 | 42168.40628             | 0.00015030   | 1.01348              | 259.27399                     | 244.29530                    | 135.36870             | 0.17733             |
| METEOSAT-11 | 19   | 189 | 08/07/2019 | 42166.52182             | 0.00020420   | 0.99108              | 258.20585                     | 213.10180                    | 174.39547             | 0.04212             |
| METEOSAT-11 | 19   | 196 | 15/07/2019 | 42167.74939             | 0.00020200   | 0.97391              | 257.96644                     | 232.63943                    | 161.89841             | -0.05662            |
| METEOSAT-11 | 19   | 203 | 22/07/2019 | 42166.30279             | 0.00022960   | 0.95746              | 256.83415                     | 226.72552                    | 175.78484             | -0.11611            |
| METEOSAT-11 | 19   | 210 | 29/07/2019 | 42166.49014             | 0.00017170   | 0.94315              | 256.48040                     | 249.81793                    | 159.90996             | -0.15168            |
| METEOSAT-11 | 19   | 217 | 05/08/2019 | 42165.71324             | 0.00020850   | 0.92697              | 255.08759                     | 219.98593                    | 198.01786             | -0.16770            |
| METEOSAT-11 | 19   | 224 | 12/08/2019 | 42165.85965             | 0.00021780   | 0.91170              | 254.68779                     | 239.85171                    | 185.47606             | -0.14245            |
| METEOSAT-11 | 19   | 231 | 19/08/2019 | 42165.59703             | 0.00021640   | 0.90306              | 253.44126                     | 234.51126                    | 199.02408             | -0.08006            |
| METEOSAT-11 | 19   | 238 | 26/08/2019 | 42164.55587             | 0.00018640   | 0.89190              | 253.10066                     | 256.92942                    | 183.93559             | 0.01039             |
| METEOSAT-11 | 19   | 245 | 02/09/2019 | 42165.09021             | 0.00020230   | 0.88304              | 251.75159                     | 225.61911                    | 223.59721             | 0.11414             |
| METEOSAT-11 | 19   | 252 | 09/09/2019 | 42163.94990             | 0.00022670   | 0.86886              | 251.42496                     | 247.38818                    | 209.20246             | 0.26318             |
| METEOSAT-11 | 19   | 259 | 16/09/2019 | 42164.81678             | 0.00019740   | 0.86563              | 250.42985                     | 240.87235                    | 223.79892             | 0.45018             |
| METEOSAT-11 | 19   | 266 | 23/09/2019 | 42162.75267             | 0.00019090   | 0.85376              | 250.31606                     | 263.21106                    | 208.69231             | 0.66963             |
| METEOSAT-11 | 19   | 273 | 30/09/2019 | 42164.21654             | 0.00019260   | 0.84768              | 249.31180                     | 228.53300                    | 251.50651             | 0.90263             |
| METEOSAT-11 | 19   | 280 | 07/10/2019 | 42168.36105             | 0.00007910   | 0.83109              | 249.16191                     | 254.82381                    | 232.06771             | 0.70542             |
| METEOSAT-11 | 19   | 287 | 14/10/2019 | 42169.80742             | 0.00003660   | 0.82744              | 248.54926                     | 213.09099                    | 281.07325             | 0.46624             |
| METEOSAT-11 | 19   | 294 | 21/10/2019 | 42167.43182             | 0.00005500   | 0.81037              | 248.58196                     | 310.09236                    | 190.73397             | 0.26134             |
| METEOSAT-11 | 19   | 301 | 28/10/2019 | 42169.07334             | 0.00007540   | 0.80184              | 247.86179                     | 178.20637                    | 330.04925             | 0.07076             |
| METEOSAT-11 | 19   | 308 | 04/11/2019 | 42166.84426             | 0.00006900   | 0.77966              | 247.73558                     | 260.84256                    | 254.29355             | -0.07503            |
| METEOSAT-11 | 19   | 315 | 11/11/2019 | 42168.10711             | 0.00001640   | 0.77165              | 247.26218                     | 183.07350                    | 339.32841             | -0.18276            |
| METEOSAT-11 | 19   | 322 | 18/11/2019 | 42166.19152             | 0.00004310   | 0.74782              | 247.08273                     | 326.59437                    | 202.81287             | -0.25714            |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 19   | 329 | 25/11/2019 | 42167.30285             | 0.00007190   | 0.73646              | 246.34154                     | 171.55316                    | 5.43738               | -0.31513            |
| METEOSAT-11 | 19   | 336 | 02/12/2019 | 42165.69984             | 0.00005500   | 0.70949              | 245.76133                     | 255.08779                    | 289.36744             | -0.33094            |
| METEOSAT-11 | 19   | 343 | 09/12/2019 | 42166.05564             | 0.00002420   | 0.69860              | 245.02740                     | 110.18440                    | 81.92354              | -0.31217            |
| METEOSAT-11 | 19   | 350 | 16/12/2019 | 42165.26972             | 0.00002260   | 0.67218              | 244.16278                     | 343.47440                    | 216.45038             | -0.26005            |
| METEOSAT-11 | 19   | 354 | 20/12/2019 | 42164.30670             | 0.00005220   | 0.66659              | 243.17666                     | 91.04455                     | 113.84926             | -0.21995            |
| METEOSAT-11 | 19   | 364 | 30/12/2019 | 42164.80650             | 0.00005380   | 0.63540              | 241.52197                     | 233.17629                    | 343.37273             | -0.07629            |
| METEOSAT-11 | 20   | 6   | 06/01/2020 | 42163.96127             | 0.00004900   | 0.62627              | 240.38545                     | 109.62084                    | 115.10635             | 0.06587             |
| METEOSAT-11 | 20   | 13  | 13/01/2020 | 42164.61683             | 0.00001100   | 0.60466              | 238.50738                     | 185.84012                    | 47.84243              | 0.24363             |
| METEOSAT-11 | 20   | 20  | 20/01/2020 | 42163.34851             | 0.00009990   | 0.59656              | 237.10844                     | 168.52666                    | 73.65359              | 0.44317             |
| METEOSAT-11 | 20   | 27  | 27/01/2020 | 42163.88893             | 0.00007510   | 0.58152              | 234.85210                     | 220.25902                    | 31.31792              | 0.68425             |
| METEOSAT-11 | 20   | 34  | 03/02/2020 | 42162.16813             | 0.00006970   | 0.57778              | 233.63191                     | 131.63212                    | 128.33085             | 0.95112             |
| METEOSAT-11 | 20   | 41  | 10/02/2020 | 42170.39471             | 0.00010700   | 0.56529              | 231.29541                     | 345.06739                    | 283.94224             | 0.76209             |
| METEOSAT-11 | 20   | 48  | 17/02/2020 | 42168.00444             | 0.00002440   | 0.56029              | 230.13568                     | 351.27516                    | 285.53922             | 0.50809             |
| METEOSAT-11 | 20   | 55  | 24/02/2020 | 42169.20178             | 0.00009810   | 0.55438              | 227.77751                     | 316.16383                    | 329.69682             | 0.29702             |
| METEOSAT-11 | 20   | 62  | 02/03/2020 | 42167.31851             | 0.00007820   | 0.55308              | 227.12295                     | 25.64796                     | 267.57589             | 0.10658             |
| METEOSAT-11 | 20   | 69  | 09/03/2020 | 42169.17093             | 0.00007820   | 0.54573              | 224.92340                     | 326.41440                    | 335.76174             | -0.04003            |
| METEOSAT-11 | 20   | 76  | 16/03/2020 | 42166.46273             | 0.00002820   | 0.53968              | 224.27685                     | 258.15488                    | 51.44004              | -0.16710            |
| METEOSAT-11 | 20   | 83  | 23/03/2020 | 42167.78232             | 0.00010180   | 0.53616              | 222.51150                     | 302.07672                    | 16.09829              | -0.25184            |
| METEOSAT-11 | 20   | 90  | 30/03/2020 | 42166.28425             | 0.00004640   | 0.52978              | 222.21556                     | 10.82602                     | 314.47817             | -0.31804            |
| METEOSAT-11 | 20   | 97  | 06/04/2020 | 42167.26047             | 0.00007720   | 0.52239              | 220.24013                     | 293.98848                    | 40.17030              | -0.33863            |
| METEOSAT-11 | 20   | 104 | 13/04/2020 | 42165.25218             | 0.00006500   | 0.50993              | 219.77083                     | 254.11680                    | 87.40902              | -0.34056            |
| METEOSAT-11 | 20   | 111 | 20/04/2020 | 42166.07325             | 0.00012000   | 0.50484              | 218.00959                     | 290.19724                    | 60.03064              | -0.29955            |
| METEOSAT-11 | 20   | 118 | 27/04/2020 | 42165.34198             | 0.00004440   | 0.49106              | 217.67148                     | 326.56715                    | 30.95890              | -0.23920            |
| METEOSAT-11 | 20   | 125 | 04/05/2020 | 42164.92325             | 0.00011140   | 0.48319              | 215.43620                     | 274.15265                    | 92.61417              | -0.13360            |
| METEOSAT-11 | 20   | 132 | 11/05/2020 | 42164.35280             | 0.00009930   | 0.46466              | 214.32601                     | 265.74154                    | 109.16201             | -0.00681            |
| METEOSAT-11 | 20   | 139 | 18/05/2020 | 42164.09843             | 0.00014740   | 0.45851              | 212.09078                     | 288.06395                    | 96.14406              | 0.16266             |
| METEOSAT-11 | 20   | 146 | 25/05/2020 | 42164.19813             | 0.00006820   | 0.44379              | 210.85976                     | 315.93071                    | 76.60883              | 0.36354             |
| METEOSAT-11 | 20   | 153 | 01/06/2020 | 42162.52088             | 0.00015340   | 0.44020              | 207.91186                     | 276.16192                    | 126.46972             | 0.60807             |
| METEOSAT-11 | 20   | 160 | 08/06/2020 | 42168.75342             | 0.00024900   | 0.87095              | 276.11217                     | 211.82095                    | 129.49868             | 0.59957             |
| METEOSAT-11 | 20   | 167 | 15/06/2020 | 42167.26893             | 0.00030230   | 0.85202              | 275.56373                     | 218.08265                    | 130.51930             | 0.43312             |
| METEOSAT-11 | 20   | 174 | 22/06/2020 | 42168.31951             | 0.00021020   | 0.83151              | 275.98639                     | 225.61984                    | 129.31965             | 0.29299             |
| METEOSAT-11 | 20   | 181 | 29/06/2020 | 42166.01060             | 0.00031640   | 0.81035              | 275.18843                     | 211.13197                    | 151.39657             | 0.18370             |

| Spacecraft  | Year | Day | Epoch      | Semi-Major Axis<br>(km) | Eccentricity | Inclination<br>(deg) | RA of Ascending Node<br>(deg) | Argument of Perigee<br>(deg) | True Anomaly<br>(deg) | Longitude<br>(degE) |
|-------------|------|-----|------------|-------------------------|--------------|----------------------|-------------------------------|------------------------------|-----------------------|---------------------|
| METEOSAT-11 | 20   | 188 | 06/07/2020 | 42167.74253             | 0.00026950   | 0.78579              | 275.45064                     | 217.40637                    | 151.68624             | 0.10970             |
| METEOSAT-11 | 20   | 195 | 13/07/2020 | 42165.57556             | 0.00032330   | 0.76913              | 274.50406                     | 221.55027                    | 155.34962             | 0.07028             |
| METEOSAT-11 | 20   | 202 | 20/07/2020 | 42166.94272             | 0.00023170   | 0.74731              | 274.58114                     | 230.83044                    | 152.88342             | 0.06131             |
| METEOSAT-11 | 20   | 209 | 27/07/2020 | 42164.68355             | 0.00033930   | 0.73053              | 273.39256                     | 216.37467                    | 175.43659             | 0.07032             |
| METEOSAT-11 | 20   | 216 | 03/08/2020 | 42166.39543             | 0.00028480   | 0.70677              | 273.24612                     | 224.30272                    | 174.60913             | 0.12474             |
| METEOSAT-11 | 20   | 223 | 10/08/2020 | 42164.35548             | 0.00032730   | 0.69641              | 272.06892                     | 227.59477                    | 179.47770             | 0.20873             |
| METEOSAT-11 | 20   | 230 | 17/08/2020 | 42165.27075             | 0.00024890   | 0.67674              | 271.87916                     | 238.23382                    | 176.04810             | 0.32904             |
| METEOSAT-11 | 20   | 237 | 24/08/2020 | 42163.73181             | 0.00034580   | 0.66674              | 270.61164                     | 222.68975                    | 199.88640             | 0.45664             |
| METEOSAT-11 | 20   | 244 | 31/08/2020 | 42164.63035             | 0.00029690   | 0.64608              | 270.22516                     | 232.16623                    | 197.87970             | 0.64074             |
| METEOSAT-11 | 20   | 251 | 07/09/2020 | 42163.48658             | 0.00031520   | 0.64163              | 269.28644                     | 233.67821                    | 204.41705             | 0.85245             |
| METEOSAT-11 | 20   | 258 | 14/09/2020 | 42169.18697             | 0.00015880   | 0.62440              | 269.12778                     | 272.52190                    | 172.50824             | 0.72954             |
| METEOSAT-11 | 20   | 265 | 21/09/2020 | 42168.83245             | 0.00020490   | 0.61816              | 268.29925                     | 234.81513                    | 217.66718             | 0.45426             |
| METEOSAT-11 | 20   | 272 | 28/09/2020 | 42168.53034             | 0.00018080   | 0.59851              | 267.96308                     | 255.92985                    | 203.57580             | 0.24222             |
| METEOSAT-11 | 20   | 279 | 05/10/2020 | 42168.55217             | 0.00017320   | 0.59600              | 267.67771                     | 253.39897                    | 213.10463             | 0.05583             |
| METEOSAT-11 | 20   | 286 | 12/10/2020 | 42167.20738             | 0.00016900   | 0.57728              | 267.71170                     | 277.86849                    | 195.35648             | -0.08817            |
| METEOSAT-11 | 20   | 293 | 19/10/2020 | 42168.02569             | 0.00019500   | 0.57011              | 267.58823                     | 236.42853                    | 243.67322             | -0.23419            |
| METEOSAT-11 | 20   | 300 | 26/10/2020 | 42166.55731             | 0.00018300   | 0.54756              | 267.39040                     | 262.73117                    | 224.38483             | -0.31738            |
| METEOSAT-11 | 20   | 307 | 02/11/2020 | 42167.55685             | 0.00015340   | 0.54125              | 267.77892                     | 256.01892                    | 237.55019             | -0.37511            |
| METEOSAT-11 | 20   | 314 | 09/11/2020 | 42165.42800             | 0.00016550   | 0.51811              | 267.73282                     | 281.49329                    | 219.00535             | -0.39145            |
| METEOSAT-11 | 20   | 321 | 16/11/2020 | 42166.99531             | 0.00017880   | 0.50562              | 268.20902                     | 234.85293                    | 272.05449             | -0.40604            |
| METEOSAT-11 | 20   | 328 | 23/11/2020 | 42164.78134             | 0.00017540   | 0.47923              | 267.72713                     | 267.11348                    | 247.21820             | -0.36361            |
| METEOSAT-11 | 20   | 335 | 30/11/2020 | 42166.19777             | 0.00013250   | 0.46678              | 268.37431                     | 256.19681                    | 264.45786             | -0.29306            |
| METEOSAT-11 | 20   | 342 | 07/12/2020 | 42163.95816             | 0.00015070   | 0.43993              | 267.83647                     | 283.24009                    | 244.96229             | -0.18318            |
| METEOSAT-11 | 20   | 349 | 14/12/2020 | 42165.52446             | 0.00016350   | 0.42218              | 268.20046                     | 232.12135                    | 302.73609             | -0.06385            |
| METEOSAT-11 | 20   | 356 | 21/12/2020 | 42163.38006             | 0.00016220   | 0.39501              | 266.73568                     | 268.59991                    | 274.78985             | 0.10375             |
| METEOSAT-11 | 20   | 363 | 28/12/2020 | 42164.40944             | 0.00011170   | 0.37845              | 266.96461                     | 255.85064                    | 294.40980             | 0.30368             |
| METEOSAT-11 | 21   | 4   | 04/01/2021 | 42162.84962             | 0.00012970   | 0.35254              | 264.96352                     | 280.64046                    | 278.75784             | 0.54061             |
| METEOSAT-11 | 21   | 11  | 11/01/2021 | 42163.64583             | 0.00015340   | 0.33409              | 264.62976                     | 230.47203                    | 336.41607             | 0.79705             |