

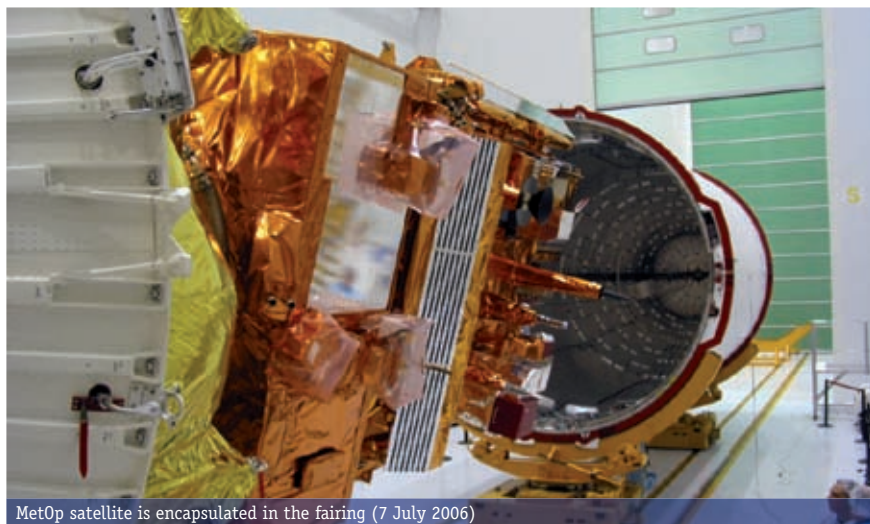


image

News from Europe's weather satellite organisation.

First MetOp satellite launch on schedule for October

Technical problems were encountered during July's three aborted launch attempts owing to launcher ground system issues. During this period, EUMETSAT and ESA/ESOC operational activities remained at 'green light' status. Since 19 July, the project teams have dedicated their efforts to optimising the Soyuz ground system and preparing for MetOp's rescheduled launch.



MetOp satellite is encapsulated in the fairing (7 July 2006)

July's long anticipated launch of MetOp, Europe's first polar-orbiting operational meteorological satellite, was called off three times shortly before lift-off, due to technical problems with the Soyuz ground system.

After a thorough analysis of the root cause of the problems, the decision was taken by EUMETSAT and its partners Starsem and ESA to suspend operations and set a new launch date – provisionally 7 October. The satellite and its payload of 11 instruments were returned to safe storage and the Soyuz/ST launcher was sent back for refurbishment to its contractor TsSKB-Progress in Samara, Russia.

"EUMETSAT's and ESA/ESOC's own areas of operational responsibility – the satellite, the launch and early orbit phase and the EUMETSAT ground segment – all function-

"Small setbacks are to be expected when one is pushing the bounds of space technology"

ed perfectly and remained in a 'go' status throughout," reports Marc Cohen, EUMETSAT's EPS Programme Manager.

"It was a frustrating time for everyone involved, all of whom worked tirelessly to be ready for each launch attempt. We are also sorry for our customers, who will have to wait a couple of months more to be able to receive and exploit the data. As a consequence we have been working hard, in collaboration with our partners, to get the satellite and launcher safely back on the launch pad at the earliest date possible. The EPS/MetOp system is very

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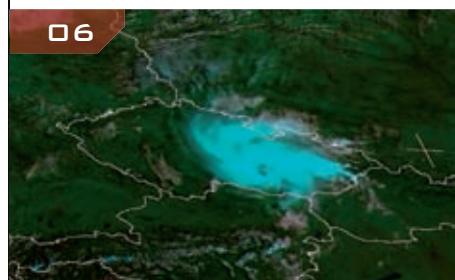
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DIRECTOR-GENERAL'S DESK



The summer of 2006 lies behind us – and what a summer it was. Not only in meteorological terms – I refer to the temperature records we saw all across Europe in July and, once again, the frequency of weather-related natural disasters. Extreme drought in Southern England, severe thunder- and hailstorms in Central Europe and

strong hurricane-like storms in the Czech Republic emphasised the importance of satellite data and images to help mitigate the effects of severe weather.

I refer also to the progress EUMETSAT, as Europe's meteorological satellite organisation, made at the summer Council at which, having established the baseline in the autumn Council of 2005, we set our sights on consolidating the organisation's future. Accordingly, EUMETSAT's long-term strategy was secured. I would encourage you to read about our future plans - you can download the strategy report from our website (www.eumetsat.int) or contact our User Service Helpdesk for a copy.

The summer Council's accomplishments, together with the past year's other significant achievements, represent major milestones en route to our ultimate goal: to become the European operational space agency of choice for all Earth observation programmes relevant to EUMETSAT's mandate. While operational meteorological and climate services remain EUMETSAT's priority, the development of new Earth observation satellite systems is ever more essential. These should cover the atmosphere, oceans, land and biosphere, as well as natural disasters, provided the observed elements drive or are driven by meteorological and/or climatological phenomena.

The MetOp satellites of the EUMETSAT Polar System will play a key role in this endeavour. Regrettably, July's launch of the inaugural MetOp satellite had to be postponed owing to problems with, on the first attempt, the launcher's ground system, on the second, unexpected telemetry readings resulting from the launcher being only partially fuelled and, on the third, transmitter problems. These things happen when one is creating pioneering space technology, and this small setback has given us the opportunity to consolidate, learn some lessons and take our time to prepare for our next attempt. As we go to print, we are counting down to what we hope will be a successful launch in October. Wish us luck!

Dr. Lars P. Prahm
Director-General of EUMETSAT

Continued from page 1: First MetOp satellite launch on schedule for October

"complex and we are confident that the root causes of the problems are now understood and that proper corrective measures have been implemented. EUMETSAT has used this time constructively to further improve the scientific processing of the data, which will be of significant benefit to the users after launch."

Events have, indeed, moved quickly since July. Starsem and its Russian partners have undertaken an intensive re-testing programme of the Soyuz ground systems to avoid encountering similar problems that led to the aborted launches. The satellite launch campaign was restarted on 29 August with the launch team's return to Baikonur, followed by three weeks of satellite-related activities. The launcher is planned to be rolled out onto the launch pad on 3 October.

"I have been very impressed with the state of readiness and the commitment from everybody," reports Ernst Koenemann, EUMETSAT's Director of Programme Development. "Launching a new satellite, especially an inaugural system for a truly innovative mission such as the EUMETSAT Polar System, is a complex and challenging task. Small setbacks are to be expected when one is pushing the bounds of space technology. The short delay has given us time to consolidate, absorb lessons learned from July's events and to resolve a few technical problems before the new launch date."

Once launched, Europe's first operational meteorological satellite in polar orbit will transform the way the Earth's weather, climate and environment are observed, says Dick Francis of the UK Met Office's satellite data team. "This is easily the most significant satellite launch in my 25 years of working in the science. The advances that MetOp will bring to studying the weather and climate will be enormous."

See **Stop Press** below for a status report on the launch preparations.

Croatia becomes our latest Member State

Things move fast in Zagreb, the capital of Croatia - after just five years as a Cooperating State the country is about to attain full membership, bringing EUMETSAT's number of Member States to 20 once the EUMETSAT Convention has been ratified by the Croatian Parliament. The accession agreement was signed at a ceremony in Zagreb on 11 July 2006 by Dr. Dragan Primorac, Croatia's Minister for Science, Education and Sports, and Dr. Lars Prahm, EUMETSAT's Director-General. Croatia follows Slovakia in becoming the second Cooperating State to accede to full membership, the many benefits of which include participation in EUMETSAT's decision-making process, maintaining full access to all EUMETSAT data, services and products and the opportunity for Croatian industry to bid for contracts.

Stop Press!

Due to a mechanical incident at the Baikonur launch base on 30 September, the launch of MetOp, originally planned for Saturday, 7 October 2006, had to be postponed. The launch is now planned on Tuesday, 17 October 2006. The satellite is scheduled to lift off at 16:28 UTC (18:28 CEST; 22:28 local time Baikonur) on a Soyuz/ST launcher.

Geostationary service secured for the future

The commissioning tests of Meteosat-9, the second in the Meteosat Second Generation's (MSG) four-satellite programme, were concluded in June. Following this the related programme reviews successfully took place between June and July. During July, the satellite was relocated to its final orbital position at 0° longitude. It is currently providing the backup service for Meteosat-8.

Meteosat-7 was moved at the same time, and takes up its new position at 57.5°E over the Indian Ocean in October 2006. The satellite will operate in parallel with Meteosat-5 for one month, and from the beginning of 2007 will provide the Indian Ocean Data Coverage (IODC) service.

The end of commissioning of Meteosat-9 and the relocation of satellites in orbit completes the transition for the service provided at 0° from the first to the second generation of EUMETSAT's geostationary satellite systems. The two MSG satellites in orbit, Meteosat-8 and Meteosat-9, now provide the operational meteorological service over Europe, Africa and the Atlantic Ocean up to the east coast of America. In parallel the remaining first generation satellites provide the service over the Indian Ocean, with vital information in a region subject to typhoons, tsunamis and other natural

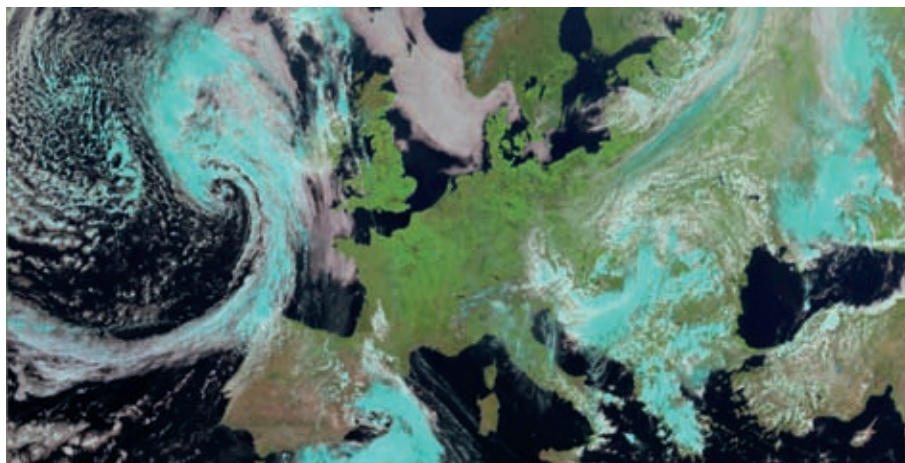
disasters. Meteosat-6 will join Meteosat-7 over the Indian Ocean ensuring service also during eclipse seasons. Meteosat-5 will be re-orbited to a graveyard location by early 2007.

"Meteosat-9 has been undergoing extensive in-orbit tests and now image and meteorological product validation is in progress. This will be finalised early in 2007," reports Sergio Rota, Associate Director for the Geostationary Satellite Programmes at EUMETSAT. "Then we will be in a position to take a final decision as to which will be the primary operational satellite – Meteosat-8 or -9. As far as the remaining two satellites in the MSG programme are concerned, MSG-3 has

completed the production and testing phase and is now in storage, while MSG-4 will be completed around the end of the year, ready for a pre-storage review next March.

"Following the successful launches of MSG-1 and MSG-2, the launch dates of MSG-3 and MSG-4 have been rescheduled by about two years from the previous plans. Revised plans show the new launch dates in January 2011 and January 2013, respectively. This will help to ensure a smooth transition to the Meteosat Third Generation, which we expect to start taking over from the current second generation of satellites from 2015."

Meteosat-8 colour image of Europe taken on 10 June 2006 at 12:00 UTC



Mapping out the future of GMES

EUMETSAT, through its expanding fleet of satellites and Satellite Application Facilities, is committed to securing its role as one of the main providers of data and products in the Global Monitoring for Environment and Security (GMES) initiative. According to its mandate, the organisation aims to become the operational agency of choice for space-based information on atmosphere, oceans and land for the monitoring of weather, climate and environment within GMES. To achieve these goals EUMETSAT is working closely with two key partners:

■ **The European Commission (EC):** EUMETSAT has established a strong link with the EC's new GMES Bureau and is supporting its activities. A key priority is the preparation of a proposal detailing the specific contributions EUMETSAT can make to the planned

GMES fast-track services. The proposal will be presented by the end of the year for consideration at Directorate-General level in early 2007.

■ **The European Space Agency (ESA):** discussions are underway to identify the operational role that EUMETSAT can play in the series of Sentinel satellites proposed by ESA for GMES, specifically Sentinel-3 (oceanography and land monitoring) and Sentinel-4 and -5 (atmosphere).

EUMETSAT and ESA are presently preparing a proposal on how the two organisations will work together within GMES. It will require an appropriate balance between ESA's research and development role and EUMETSAT's operational mandates. The proposal will be presented to relevant EUMETSAT and ESA decision-making

bodies, and then to the GMES Advisory Council.

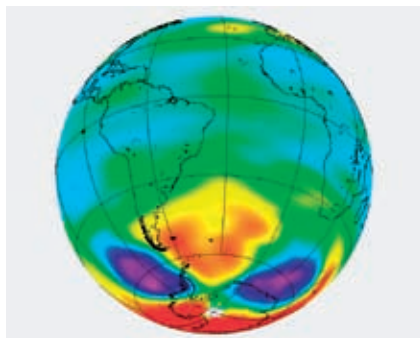
The African Monitoring of the Environment for Sustainable Development (AMESD) project, which follows on from PUMA (Preparation for the Use of MSG in Africa), was formally given the go-ahead on 12 and 13 July. AMESD activities will start in early 2007, and while the primary focus is on the practical application of Earth observation technology in Africa, the project will also feed into GMES's overall objectives. It will enable African countries to benefit from first class services based on Earth observation data and, in turn, ensure their participation in the activities of the Group on Earth Observations.

For more information about GMES visit: www.gmes.info

Monitoring and mapping ozone levels in the atmosphere is fundamental to research into climate change and the detection of long-term trends influencing the planet's environmental well-being. The Ozone Monitoring Satellite Application Facility makes an important contribution to environmental monitoring of the atmosphere, as well as providing invaluable data for Numerical Weather Prediction.

THE OZONE MONITORING SAF*

**Planned to be renamed the Ozone and Atmospheric Chemistry Monitoring SAF in 2007*



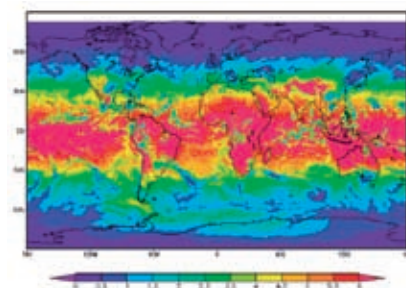
Breakdown of the ozone layer over the Antarctic measured by GOME/ERS-2 on 25 September 2002 (image: DLR)

The ozone layer high in the stratosphere protects all life on Earth from the harmful effects of ultraviolet (UV) radiation from the sun. Since the late 1970s scientists have detected severe ozone loss over the Antarctic regions and more recently over the Arctic. UV radiation levels have intensified as a consequence, increasing the incidence of skin cancer and eye damage, as well as having equally harmful effects on agriculture, forests and water ecosystems.

Despite reductions in the use of ozone-depleting chemicals such as chlorofluorocarbons, restricted since 1987 by the Montreal Protocol, ozone loss will continue to pose a threat to the environment for the foreseeable future. Although the layer is expected to recover gradually over decades, changes in stratospheric conditions caused by global warming could exacerbate ozone

depletion, especially over the Arctic. Extreme coldness in the stratosphere also affects ozone levels; recent very cold Arctic winters have resulted in a massive loss inside the Arctic vortex, while dilution of these air masses during the spring affects ozone concentration over the mid-latitude regions, including Europe.

The Ozone Monitoring Satellite Application Facility (O3M SAF) is an important element of EUMETSAT's strategy concerning the environmental monitoring of the atmosphere. Development of the O3M SAF began in 1997 under the leadership of the Finnish Meteorological Institute (FMI), and in partnership with the German Aerospace Centre (DLR), the Dutch (KNMI), Belgian (KMI), German (DWD), Danish (DMI), French (Météo-France) and Greek (HNMS) Meteorological Services,



An example of the O3M SAF offline UV product derived from ozone monitoring instrument data. The global map of erythemal daily UV dose [kJ/m^2] for 7 October 2005 shows enhanced levels of UV radiation at the tip of South America owing to the hole in the ozone layer (image: FMI)

as well as Greece's Aristotle University of Thessalonica.

The continuous, low-orbit observations gathered by the EUMETSAT Polar System's pioneering MetOp satellites will soon make available a wealth of round-the-clock, near-real-time and offline data for processing into highly specialised application-specific products.

The Global Ozone Monitoring Experiment-2 (GOME-2) spectrometer on board MetOp measures daytime concentrations of ozone and other chemicals in the atmosphere associated with ozone depletion. The measurements allow the amount of surface UV radiation to be determined, as well as natural sources of atmospheric pollution caused by, for example, volcanic eruptions or burning biomass. GOME-2's measurements are complemented by data collected during the night by another MetOp instrument, the infrared spectrometer HIRS/4.

Products in the pipeline

The innovative products developed by the O3M SAF will include total ozone, ozone profiles, trace gases, UV fields with clouds and albedo, aerosol indicators and clear sky UV fields:

- Ozone, for example, is an important variable in weather forecasting models because its photochemical reactions influence the temperature of the stratosphere. A major task of the O3M SAF is to develop near-real-time products which enable meteorologists

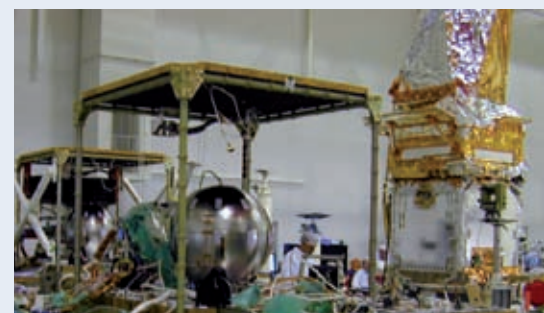


Jason-2 progressing to plan

The Ocean Surface Topography Mission on board the Jason-2 satellite (OSTM/Jason-2) remains on schedule for launch in mid-2008, following a fruitful summer constructing the satellite and its payload of instruments. NASA and CNES expect to complete their respective instruments by the end of the year, upon which they will be shipped to Alcatel's Toulouse site for integration into the satellite platform in early 2007 and to undergo validation tests.

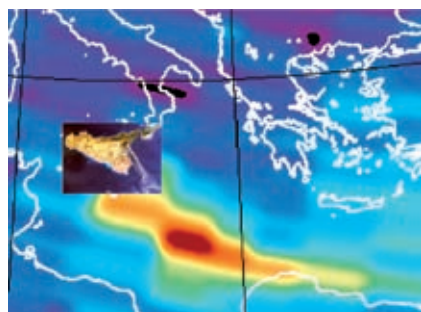
"Some issues were discovered for the instruments, but that's only to be expected during such a critical phase," reports François Parisot, EUMETSAT's Programme Manager of the Jason-2 mission. "Nevertheless, we are still en route for a mid-2008 launch."

Following an internal review, conducted by EUMETSAT in September, the next major milestone will be the review of the system interface in mid-December. Meanwhile, maintenance teams have undergone training sessions for the earth terminal, hardware and other aspects of the core ground segment at the mission's primary ground station at Usingen, Germany.



Jason-2 satellite bus integration (image: CNES and Alcatel)

Looking to the future, initial preparations are already in the pipeline for Jason-3, the follow-on programme to OSTM/Jason-2, which would be required to be operational from 2013. EUMETSAT is also working closely with NOAA, CNES and the other partners to define the Jason-3 concept with regard to the on-board instruments, development and costs for presentation at the autumn Council meeting. EUMETSAT and ESA are currently negotiating and defining their respective roles with reference to the Sentinel-3 series of satellites, which will also have an ocean altimetry function.



Total sulphur dioxide content derived from GOME/ERS-2 on 22-24 July 2001 during the eruptions of Mount Etna, Sicily (image: DLR)

to assimilate ozone measurements into forecasting models and validate the outputs of models designed to map ozone fields.

- The O3M SAF will provide total column products of other trace gases measured by GOME-2, including nitrogen dioxide, bromine monoxide, chlorine dioxide, sulphur dioxide, formaldehyde, as well as water vapour.
- Monitoring aerosols from space is becoming more important as the atmosphere becomes increasingly polluted by man-made chemicals. Highly refined measurements from GOME-2 will significantly improve the quality of aerosol products.

The products will be disseminated via EUMETCast and the Internet to National Meteorological Services, researchers and other end-users, enhancing their

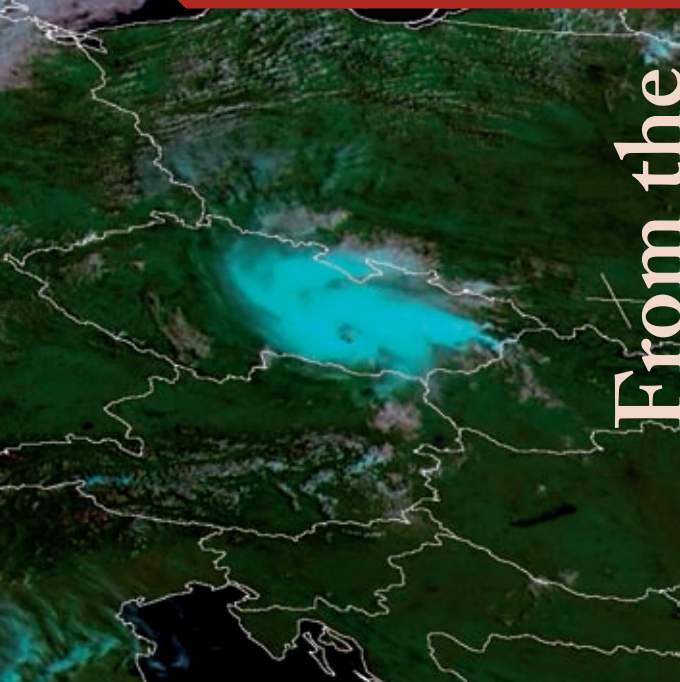
capabilities for monitoring the seasonal variations in ozone levels and their environmental and climatic impact over time.

Monitoring the Earth's atmosphere is a challenging task on a global scale, requiring continuous measurements, meticulous calibration of instruments and constant validation of all data and products. EUMETSAT's MetOp satellites will provide operational continuity from polar orbit until 2020. The O3M SAF partners and the GOME-2 teams at EUMETSAT and ESA will be responsible for providing reliable, consistently accurate data and products for operational meteorology and for monitoring the state of the atmosphere and the long-term effects of its chemical constituents on the ozone layer, the Earth and its climate.

For further information about the O3M SAF please visit: <http://o3msaf.fmi.fi>

About SAFs

SAFs are dedicated centres of excellence for processing satellite data and form an integral component of EUMETSAT's distributed applications ground segment. Located at National Meteorological Services in Member States, they use the expertise of the EUMETSAT community to process application-specific data from geostationary and polar-orbiting satellites for the generation of new products and tools for the meteorological and climate data user communities.



Meteosat-8 RGB (NIR1.6 - VIS0.8 - VIS0.6) image, 27 June 2006, 09:15 UTC.

archive

A highly unusual phenomenon was observed over the Czech Republic in June. A large storm with a small but very strong core was dissipating when the core started to rotate, forming what looked like a hurricane 'eye' in the centre. This phenomenon, known as a 'mesoscale convective vortex', is occasionally observed in the US and over the Mediterranean sea, but never before over European landmasses. It originates from mesoscale convective systems at the end of their lifetimes.

These systems are relatively small, though not necessarily localised, cloud systems occurring together with an ensemble of convective storms which produce a horizontal precipitation area of 100 km². The resulting mesoscale convective vortex is caused by a divergent cloud mass spreading like a ripple near the tropopause, the boundary between the troposphere and the stratosphere, which can result in a weak, short-lived rotation at that level. However, latent heating of the cloud mass can further create a cyclonic rotation in the mid-troposphere – producing a mesoscale convective vortex like the one witnessed over the Czech Republic. It can last for several hours – and possibly days – after the disappearance of the mesoscale convective system from which it originated.

User Platform

01 GEONETCAST DEMO SERVICE LAUNCHED

GEONETCast is a global network of data dissemination systems providing environmental data and services to a worldwide user community. The current partners within the GEONETCast initiative include the National Oceanic and Atmospheric Administration (NOAA), the World Meteorological Organization (WMO) and EUMETSAT, as well as many prospective data provider partners. The initial GEONETCast demonstration service, which is planned to run until the end of 2008, utilises the existing EUMETCast framework to provide additional services to an expanding user community. The integration of dissemination networks provided by the other GEONETCast partners is currently under consideration.

The first release of the GEONETCast demonstration service comprises new services for the EUMETCast-Americas user community. Users will receive EUMETSAT's High Rate SEVIRI image data service, NOAA image data and products and a subset of the EUMETSAT meteorological products including Satellite Application Facility products. NOAA products delivered by GEONETCast are also being made available to European users via the EUMETCast-Europe service.

For further information...

...contact the User Service Helpdesk:

Tel: +49 6151 807 366/377
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Website: www.eumetsat.int

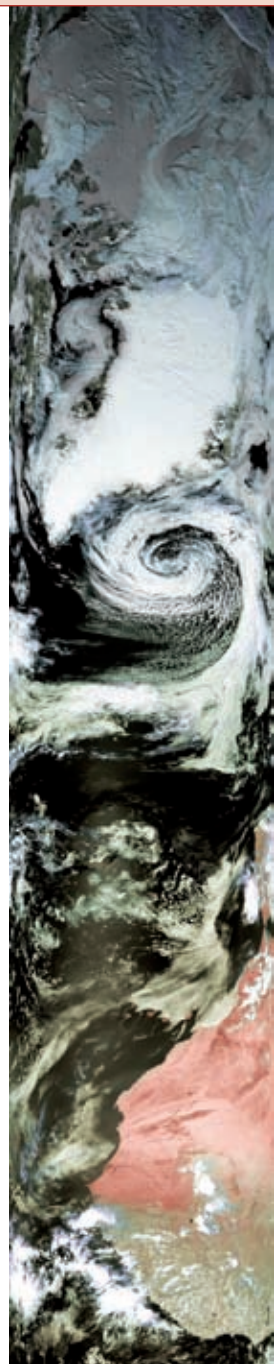
EARS-AVHRR image received from NOAA-18 on 11 July 2006

02 WHAT'S NEW ON EUMETCAST

- EUMETSAT is conducting pre-launch data dissemination tests via EUMETCast-Europe in preparation for the EPS Global Data Service. This will enable industrial partners, National Meteorological Services and station manufacturers to test reception equipment with products generated from simulated data and real data from NOAA satellites. Tests will continue periodically until the launch of the first MetOp satellite, after which EUMETSAT will make level 1 products available at the earliest opportunity.
- From Spring 2006, the trial EARS-AVHRR service has been delivering AVHRR raw data from NOAA-17 and -18 from a network of EARS HRPT stations located in Maspalomas (Canary Islands), Svalbard (Norway), and Lannion (France).
- ECMWF products are now available from the Basic Meteorological Data service provided via EUMETCast-Europe to members of WMO Regional Association VI. A list can be obtained from ECMWF's website at www.ecmwf.int

03 NEW WEB-BASED IMAGE PRODUCTS

The Multi-Sensor Precipitation Estimate (MPE) product service, which had until now been using Meteosat-7 data, was updated in July 2006 to utilise Meteosat-8 data for generating the 0° longitude product. MPE is greatly enhanced by the superior resolution delivered by MSG data and now delivers 96 products per day in 15-minute intervals, representing a significant increase from the 48 half-hourly products provided by Meteosat-7. A new volcanic ash and a fire monitoring product are planned for Autumn 2006.



PROFILE: PAUL COUNET

Consolidating EUMETSAT's international profile

Following his two-year stay with the European Commission, Mr. Paul Counet could not resist the lure of EUMETSAT and has returned as Head of the Strategy and International Relations Division (SIR).

As befits the new Head of SIR, Paul has worked most of his professional life in the international arena since his first job teaching remote sensing technology - the discipline in which he specialised on graduating as an agricultural engineer - at Swiss Federal School of Technology in Lausanne in the framework of a UN programme.

When Paul first joined EUMETSAT as a Strategy and International Relations Officer in 1998, he brought valuable international experience from previous positions which saw him frequently working in close collaboration with the EC and the World Bank. He has recently completed a two-year stint with the EC's Space Policy and Coordination Unit, where he worked on the definition of Europe's space policy, GMES- and GEOSS-related matters. He was also deeply involved in the definition of the AMESD initiative, a follow-up to the PUMA project that he supported during his first term in EUMETSAT.

Paul's exposure to the GMES initiative in association with EU, ESA and their Member States, together with his extensive knowledge of EUMETSAT

"I am confident that EUMETSAT has all the necessary assets to successfully face major challenges in the crucial years to come"

and its goals gained earlier as its SIR Officer, superbly equip him to handle the challenge of developing and consolidating the organisation's strategic thrust in the crucial years to come.

"EUMETSAT must continue to strengthen its profile further in Europe's rapidly changing space landscape," says Paul. "We will build on our established and very successful cooperation with our space partners in Europe, including ESA, the EC and the national space agencies but also worldwide. With the support of our Member States, I am confident that EUMETSAT has all the necessary assets to successfully face the challenge of being the leading operational satellite agency for European Earth Observation Programmes that are consistent with its Convention. I am personally committed to ensuring the organisation achieves its strategic objectives."



Born: Charleroi, Belgium, in 1965

Career path:

- **2006:** gained a Master in International Relations and Strategy from CERIS (Belgium)
- **2004:** joined the EC's Space Policy and Coordination Unit in Brussels
- **2004:** gained a Master in International Business from INSEAD (France)
- **1998:** joined EUMETSAT as a Strategy and International Relations Officer
- **1996:** started his own consultancy, working as a full-time advisor to the EC reviewing projects and invitations to tender relating to remote sensing applications directed at Europe and Africa
- **1992:** returned to Belgium to work for a start-up company specialising in the application of remote sensing technology to agriculture, working closely with the EC and the World Bank
- **1992:** gained a degree in business management from the Solvay Business School (Belgium)
- **1988-1991:** taught remote sensing at the Swiss Federal School of Technology in Lausanne
- **1988:** graduated from University of Gembloux (Belgium) as an agricultural engineer specialising in remote sensing

Private life:

Married, with three children. Interested in international politics, enjoys nature, sailing and skiing.

Celebrating 20 years of success!

EUMETSAT celebrated its 20th anniversary on 3 July at the 59th Council Meeting - it was actually founded on 19 June 1986, but the official celebrations were delayed a few days so that Council Members and stakeholders could join in the celebrations. Representatives from the German federal and state governments, the European Commission, WMO, ESA, ECMWF, NOAA and the international meteorological community heard speakers recall memorable milestones of the past two decades,

a period which has seen EUMETSAT rapidly become one of the world's pre-eminent meteorological and environmental satellite organisations.

Mr. Wolfgang Tiefensee, Transport Minister of the German Federal Government, EUMETSAT's largest financial contributor, expressed strong support for the organisation, in particular its goal to participate fully in the EU's future space policy-making. The highly successful day

was crowned with the annual summer barbecue, with employees and their families joining in the anniversary celebrations. "The success of EUMETSAT is very much the success story of meteorology itself and truly an occasion for celebration," said Dr. Lars Prahm, Director-General. "The data and images provided by our satellites have helped to radically improve weather forecasts and contribute to a better understanding of climate and the environment."

GLOBAL SATELLITE UPDATE

Europe:

- **Meteosat-5** provides the Indian Ocean Data Coverage (IODC) service at 63°E. It will be replaced by Meteosat-7 in January 2007 and relocated to a graveyard position.
- **Meteosat-6** provides the operational Rapid Scanning Service at 10°E. It will be relocated to 67.5°E in early 2007 to provide backup to Meteosat-7 for the IODC service.
- **Meteosat-7** is currently being relocated to 57.5°E. On reaching its final position in October 2006 it is planned to provide the IODC service until the end of 2008.
- **Meteosat-8** provides the primary operational service at 0° longitude. MSG data are transmitted via EUMETSAT-Cast, which provides coverage over Europe, Africa, the Middle East, South and Central America and parts of North America.
- **Meteosat-9** (formerly MSG-2) was launched on 21 December 2005 and has successfully completed its commissioning phase. It is currently providing the backup service for Meteosat-8.
- The first **MetOp** satellite (to be renamed METOP-A post-commissioning) is planned for launch on 17 October 2006.

USA:

- **GOES-9** is currently stationed at 160°E and could act as an additional backup for the GOES series if necessary.
- **GOES-10** is drifting to 60°W to support South America.
- **GOES-11 (West)** is operating at 135°W as the GOES West operational satellite.
- **GOES-12 (East)** is operating at 75°W as the GOES East operational spacecraft.
- **GOES-13** was launched in May 2006 and will be stored in orbit at 105°W.
- **GOES-0, -P, -R** will be launched in 2008, 2009 and 2014 respectively.
- **NOAA-12** is a morning polar orbit satellite (acting as backup for NOAA-15 and -17).
- **NOAA-14** is an afternoon polar orbit satellite in standby mode (acting as backup for NOAA-16 and -18).
- **NOAA-15** is the backup polar-orbiting morning satellite for NOAA-17.
- **NOAA-16** is a backup afternoon satellite for NOAA-18.
- **NOAA-17** is the primary morning satellite since October 2002.
- **NOAA-18** is the primary afternoon satellite. It replaced NOAA-16 and is the first spacecraft of the Initial Joint Polar System (IJPS).
- **NOAA-N'** is scheduled for launch in 2009.
- **NPP** is scheduled for launch in 2009 and **NPOESS** in 2013.

Russia:

- **Meteor-3M N1** continues to operate in a sun-synchronous morning polar orbit at 99.7°.
- **Meteor-M N1** is planned for launch in 2006 and **Meteor-M N2** in 2008.
- **GOMS-N1**, launched in November 1994, is in standby mode at 76°E.
- **Electro-L N1** is planned for launch in 2007 and will be positioned at 76°E.
- **Electro-L N2** is planned for launch in 2009.

China:

- **Fengyun-1D (FY-1D)**, launched in May 2002, is the primary polar-orbiting meteorological satellite operating in a sun-synchronous early morning orbit.
- **FY-2B** acts as limited backup satellite for FY-2C at 123.5°E.
- **FY-2C** is operating at 105°E as the primary geostationary satellite.
- **FY-2D** is planned for launch in December 2006 to act as backup for FY-2C at 86.5°E.
- **FY-2E, -2F** and **-2G** are planned for launch in 2009, 2011 and 2013 respectively.
- **FY-3A**, the first of the second generation of Chinese polar-orbiting meteorological satellites, is planned for launch in 2007, and **FY-3B** in 2010. This will be followed by another five satellites in this series until 2020.

Japan:

- **MTSAT-1R** went operational on 28 June 2005 and is stationed at 140°E.
- **MTSAT-2** was successfully launched on 18 February 2006 and is stationed at 145°E in standby mode.

India:

- **KALPANA-1** (formerly METSAT), India's first exclusively meteorological satellite, is positioned at 74°E.
- **INSAT-3A** is operating at 93.5°E.
- **INSAT-3D** is planned for launch in the first quarter of 2007.

Republic of Korea:

- **COMS** (Communication, Ocean and Meteorological Satellite) is planned for launch in 2008 and will be positioned at 116.2°E or 128.2°E.

The 7th EUMETSAT User Forum in Africa

This year's User Forum in Africa takes place from 16 to 20 October in Maputo, Mozambique, and is hosted by the country's Instituto Nacional de Meteorologia (INAM). EUMETSAT has been running the successful biennial forum since 1995 to reinforce its dialogue with the African user community and to optimise the use of EUMETSAT satellite data, products and services in Africa. The forum also provides an opportunity to identify practical actions and initiatives that, subject to resources, EUMETSAT could undertake to meet the requirements of African users.

The forum's thematic session will be on the mitigation of natural disasters – a topic of major relevance to Africa as a whole. Delegates will review the current status of EUMETSAT's programmes and evaluate the outcome of the Preparation for the Use of MSG in Africa (PUMA) project including the long-term sustainability of its assets. Another subject for discussion will be PUMA's successor, the African Monitoring of the Environment for Sustainable Development (AMESD) project, which is scheduled to start in early 2007. The forum will also address the need for timely planning for the post-AMESD phase, to ensure the continuation of the momentum of the two projects and their achievements beyond 2011.

Please visit <http://ufa.eumetsat.int> for further information on the forum.

Events Diary

- **Launch of MetOp, EUMETSAT's first polar-orbiting satellite**
Rescheduled for 17 October 2006
- **7th EUMETSAT User Forum in Africa**
16-20 October 2006, Maputo, Mozambique
- **34th meeting of the Coordination Group for Meteorological Satellites (CGMS)**
2-7 November 2006, Shanghai, China
- **2nd Workshop on Geostationary Fire Monitoring and Applications**
4-6 December, Darmstadt, Germany
- **Joint 2007 EUMETSAT Meteorological Satellite Conference and the 15th American Meteorological Society (AMS) Satellite Meteorology & Oceanography Conference**
24-28 September 2007, Amsterdam, The Netherlands

For further information about these events visit:
www.eumetsat.int

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