#### THE APPROVAL OF OPTIONAL PROGRAMMES

# Adopted at the 48<sup>th</sup> Meeting of the EUMETSAT Council on 25-26 June 2001

#### The EUMETSAT Council,

**TAKING INTO ACCOUNT** that the Amendments to the EUMETSAT Convention approved in Council Resolution EUM/C/Res. XXXVI, and subsequently accepted by all EUMETSAT Members States, entered into force on 19 November 2000,

**TAKING INTO ACCOUNT** that the Convention distinguishes between mandatory programmes in which all Member States participate and optional programmes with participation by those Member States that agree to do so,

**AWARE** that the legal framework established in the Convention needs to be completed by more detailed procedures on the approval of optional programmes,

**WISHING** to lay down a standard procedure to ensure consistency in approving EUMETSAT's future optional programmes,

**HAVING DUE REGARD** to Articles 2, 3, 5 and 10 of the EUMETSAT Convention,

- I In approving future optional programmes, the following sequence of formal steps shall be undertaken:
  - 1) the EUMETSAT Council shall approve a preliminary proposal for an optional programme through adoption of an "Initiating Resolution" in accordance with the majority established in Article 5.2 d) iii of the Convention;
  - 2) the Potential Participating States shall adopt a Programme Declaration and attached Programme Definition in accordance with Article 5.3 a) of the Convention. The Programme Declaration shall indicate the timeframe during which Member States may formally declare participation to the programme by signing the Declaration;
  - 3) the EUMETSAT Council shall approve the Programme Declaration and attached Programme Definition through adoption of an Enabling Resolution in accordance with Article 5.2 d) iii of the Convention;
  - 4) the Programme Declaration shall be open for signature by interested Member States within the timeframe indicated in the Declaration;

- 5) the optional programme shall take effect once at least one third of all EUMETSAT Member States have signed the Declaration within the established timeframe and the subscriptions of the Participating States have reached 90% of the total financial envelope for the programme.
- II The Director-General shall be entrusted with the preparation of the documentation required to accomplish the steps described above. This mandate shall include the organisation of meetings of Potential Participating States as required.

#### THE PREPARATION OF AN OPTIONAL PROGRAMME ON ALTIMETRY

# Adopted at the 48<sup>th</sup> Meeting of the EUMETSAT Council on 25-26 June 2001

### The EUMETSAT Council,

**TAKING INTO ACCOUNT** that the Amendments to the EUMETSAT Convention approved in Council Resolution EUM/C/Res. XXXV, and subsequently accepted by all Member States, entered into force on 19 November 2000,

**RECALLING** that the primary objective of EUMETSAT is to establish, maintain and exploit European systems of operational meteorological satellites, taking into account as far as possible the recommendations of the World Meteorological Organization, and that a further objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**BEARING IN MIND** that the EUMETSAT Convention defines Optional Programmes as programmes within the objectives of EUMETSAT agreed as such by Council,

**AWARE** that the Jason mission will provide essential data in support of marine meteorology, operational seasonal forecasting, operational oceanographic services and the operational monitoring of climate,

**HAVING REGARD** to the preliminary programme proposal on Altimetry as an Optional Programme contained in document EUM/C/48/01/DOC/17,

**HAVING REGARD** to Articles 2, 3, 5 and 10 of the EUMETSAT Convention,

- I That the proposed programme on Altimetry is consistent with EUMETSAT's objectives and should be established and implemented as an Optional Programme within the framework of the EUMETSAT Convention.
- II To invite all Member States to express their interest in participating in the proposed programme, thereby becoming Potential Participating States, on the understanding that this indication will not commit any of these Member States to formally participate in the programme.
- III To task the Director-General to draw up a Programme Declaration and Programme Definition in consultation with Potential Participating States, to be submitted for Council approval in an Enabling Resolution.

IV To task the Director-General to prepare the necessary cooperation agreements with CNES and NOAA, to be agreed by Council, regarding the respective contributions to the altimetry programme.

#### THE APPROVAL OF THE EUMETSAT STAFF COMPLEMENT

# Adopted at the 48<sup>th</sup> Meeting of the EUMETSAT Council on 25-26 June 2001

#### The EUMETSAT Council,

**RECALLING** that the primary objective of EUMETSAT is to establish, maintain and exploit European systems of operational meteorological satellites, and that a further objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**RECALLING** that the Convention entrusts the Director-General with the implementation of the decisions taken by the Council and with the execution of the tasks assigned to EUMETSAT,

**NOTING** that the Convention establishes that the Director-General shall be supported by the Secretariat, and that the Director-General shall have authority over the Secretariat staff as a whole.

**TAKING INTO ACCOUNT** that the staff constituting the Secretariat are composed of different categories, including staff members, local employees, consultants and contractors,

**TAKING INTO ACCOUNT** that the Protocol on Privileges and Immunities of EUMETSAT defines staff members as the Director-General and all persons employed by EUMETSAT holding permanent appointments and who are subject to its Staff Rules.

**AWARE** that, under the Convention, the Council adopts the annual budgets for the General Budget and mandatory programmes, together with their level of staff complements,

**AWARE** that, through adoption of the EUMETSAT Budgets the Council also approves the budgetary allocations for other categories of human resources,

**ACKNOWLEDGING** that, with EUMETSAT's increased activities it is necessary to provide the Director-General with the flexibility to manage the human resources of EUMETSAT, while maintaining sufficient visibility and control by Council,

- I The Council shall provide to the Director-General the necessary human resources through approval of a global staff complement within the EUMETSAT Budgets.
- II The financial appropriations for global staff complement shall be contained in Chapter 20 of each of the EUMETSAT Budgets.
- Within the global staff complement, the Director-General shall be entitled to decide the appropriate allocation of human resources among the different categories within the approved financial appropriations.
- IV In allocating the human resources among the different categories, the Director-General shall take into account that staff member posts, which are subject to the Staff Rules, should only be established for core and support activities of a permanent nature.
- V Concerning staff members subject to the EUMETSAT Staff Rules, the Director-General shall be authorised to establish a grading structure consistent with the relevant job descriptions, except for senior staff as defined in Article 1 of the Staff Rules.
- VI Concerning senior staff, the Council will continue to approve each post and to decide upon individual appointments and dismissals.
- VII To task the Director-General with the preparation of the required changes to the Financial and Staff Rules, to be submitted to Council for approval.

#### THE ACCESSION OF THE GRAND-DUCHY OF LUXEMBOURG TO

#### THE EUMETSAT CONVENTION

# Adopted at the 48<sup>th</sup> Meeting of the EUMETSAT Council on 25-26 June 2001

#### The EUMETSAT Council,

**CONSIDERING** that, according to Article 16 of the EUMETSAT Convention, any State may accede to the said Convention following a decision of the Council taken in conformity with the provisions of Article 5.2(a),

**WELCOMING** the formal request by Luxembourg to become a full member of EUMETSAT, expressed through a letter from the Minister of Foreign Affairs of Luxembourg on 10 November 2000,

**CONVINCED** that this accession will contribute to the achievement of the objectives set out in the EUMETSAT Convention,

**HAVING REGARD** to Articles 16 and 17 of the EUMETSAT Convention,

- I To the accession of Luxembourg to the EUMETSAT Convention in accordance with Article 16.3 of the EUMETSAT Convention.
- II To approve the accession agreement attached to this Resolution as Annex I and to authorise the Director-General to sign it.
- III To fix, in accordance with Article 16.5 of the EUMETSAT Convention, the payment to be made by Luxembourg with regard to the investments already made at MEUR 2.
- **IV** To amend the scale of Member State contributions for the year 2002 as attached in Annex II.
- V That all legal and financial implications of Luxembourg's accession will formally enter into force at the date of deposit of Luxembourg's instrument of accession, with effect from 1 January 2002.

### DRAFT

### **AGREEMENT**

# BETWEEN THE GOVERNMENT OF

### THE GRAND-DUCHY OF LUXEMBOURG

AND
THE EUROPEAN ORGANISATION
FOR THE

EXPLOITATION OF METEOROLOGICAL SATELLITES
(EUMETSAT)

CONCERNING THE ACCESSION OF
THE GRAND-DUCHY OF LUXEMBOURG TO THE
CONVENTION FOR THE ESTABLISHMENT OF A
EUROPEAN ORGANISATION FOR THE
EXPLOITATION OF METEOROLOGICAL SATELLITES
(EUMETSAT)

AND RELATED TERMS AND CONDITIONS

26 June 2001

#### **Preamble**

The Government of the Grand-Duchy of Luxembourg, (hereinafter referred to as "Luxembourg"),

and

the European Organisation for the Exploitation of Meteorological Satellites, established by the Convention opened for signature in Geneva on 24 May 1983 and entered into force on 19 June 1986 (hereinafter referred to as "EUMETSAT"),

**TAKING INTO ACCOUNT** that the EUMETSAT Council at its 15<sup>th</sup> meeting on 4 and 5 June 1991 recommended the Members States to accept Amendments to the Convention as proposed in the "Amending Protocol", attached to Resolution EUM/C/Res. XXXVI, and that these Amendments entered into force on 19 November 2000,

**CONSIDERING** that, according to Article 16 of the EUMETSAT Convention, any State may accede to the said Convention following a decision of the Council taken in conformity with the provisions of Article 5.2(a),

**CONSIDERING** that Luxembourg has applied to become a full member of EUMETSAT, and to accede to the EUMETSAT Convention through a letter dated 10 November 2000,

**RECALLING** that the EUMETSAT Council at its 48<sup>th</sup> meeting on 25-26 June 2001 agreed to welcome Luxembourg as a Member State through adoption of Resolution EUM/C/01/Res. IV,

**CONVINCED** that this accession will contribute to the achievement of the objectives set out in the EUMETSAT Convention,

**HAVING REGARD** to Articles 16 and 17 of the EUMETSAT Convention,

#### **HAVE AGREED AS FOLLOWS:**

#### Article 1

Luxembourg accedes to the EUMETSAT Convention in accordance with Article 16.3 of the EUMETSAT Convention.

#### **Article 2**

1. As from the date of accession, the provisions of the EUMETSAT Convention and all EUMETSAT rules, together with all decisions taken by the Council, including all approved mandatory programmes (General Budget, Meteosat Transition Programme, Meteosat Second Generation Programme and EUMETSAT Polar System Programme) shall be binding for Luxembourg.

Luxembourg shall be placed in the same situation as the other Member States with regard to decisions, rulings, resolutions or any other acts made by the Council or by any subordinate body and with regard to any Agreement concluded by EUMETSAT. Therefore, Luxembourg shall abide by the principles and policies stemming therefrom, and shall whenever necessary take appropriate measures to ensure their full implementation.

- 2. Luxembourg shall at the same time as the accession to the EUMETSAT Convention also accede to the Amending Protocol to the EUMETSAT Convention attached to Resolution EUM/C/Res. XXXVI.
- 3. Luxembourg shall accede to the EUMETSAT Protocol on Privileges and Immunities, which was opened for signature on 1 December 1986 and entered into force on 5 January 1989, at the same time as the accession to the EUMETSAT Convention.
- 4. Luxembourg shall take all the appropriate measures to adapt its internal legislation and rules to the rights and obligations resulting from its accession to EUMETSAT.

#### Article 3

- 1. In accordance with Article 16.5 of the EUMETSAT Convention, Luxembourg shall make a special payment to EUMETSAT of 2 million EUR. This payment shall be made no later than 30 days after the date of deposit of its instrument of accession.
- 2. No further payments will be requested from Luxembourg for the period up to the end of 2001.

#### **Article 4**

- 1. Luxembourg shall with regard to the provision of Article 3.2 above start to contribute to the EUMETSAT annual budget as from 1 January 2002.
- 2. Luxembourg shall acquire full voting rights at the EUMETSAT Council from the date of deposit of its instrument of accession.

#### Article 5

- 1. The present Agreement shall enter into force on the date of deposit of Luxembourg's instrument of accession with the Depositary of the EUMETSAT Convention, the Government of the Swiss Confederation.
- 2. In accordance with its Article 17.4, the EUMETSAT Convention shall become effective for Luxembourg on the date referred to in Article 5.1 above.

IN WITNESS WHEREOF, the undersigned Agreement.	ed being duly authorised, have signed this
Done in on French languages, both texts being equally a	
for the Government of the Grand-Duchy of Luxembourg	for the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)
	Dr. Tillmann Mohr Director-General

## **SCALE OF CONTRIBUTIONS 2002**

MEMBER STATE	CONTRIBUTION (%)
AUSTRIA (A)	2.44
BELGIUM (B)	2.90
SWITZERLAND (CH)	3.29
GERMANY (D)	25.25
DENMARK (DK)	1.91
SPAIN (E)	6.36
FRANCE (F)	16.44
FINLAND (FIN)	1.34
UNITED KINGDOM (GB)	13.30
GREECE (GR)	1.36
ITALY (I)	12.58
IRELAND (IRL)	0.72
NORWAY (N)	1.66
NETHERLANDS (NL)	4.44
PORTUGAL (P)	1.18
SWEDEN (S)	2.62
TURKEY (TR)	2.00
LUXEMBOURG (L)	0.21

COOPERATING STATE	CONTRIBUTION (%)
HUNGARY (H)	0.45
POLAND (PL)	1.46
SLOVAK REPUBLIC (SK)	0.20

#### PRINCIPLES OF PROCUREMENT

# Adopted at the 48<sup>th</sup> Meeting of the EUMETSAT Council on 25-26 June 2001

#### The EUMETSAT Member States,

**CONSIDERING** EUMETSAT's mandate, laid down in the EUMETSAT Convention, to establish, maintain and exploit European systems of operational meteorological satellites and to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**NOTING** that EUMETSAT's success in meeting the goals laid down in its Convention has ultimately depended on the Member States showing common cause, and that the future success of EUMETSAT requires the collective pursuit of the common good in procurements,

**BEARING IN MIND** also the need for conducting procurements with maximum cost-efficiency in the face of ever-tighter national budgets,

**BEARING IN MIND** the requirement of the EUMETSAT Convention to "take maximum advantage of the technologies developed in Europe, in particular in the field of meteorological satellites by providing for operational continuation of the programmes that have proved technically successful and cost-effective,"

**BEARING IN MIND** the long history of international solidarity and common purpose in meteorology,

**NOTING** the difficult approval process of recent large procurements,

- I That the principles of best value for money and open competition shall remain the all-pervasive foundation of the EUMETSAT procurement system.
- II That the process of continuous improvement of the procurement system shall remain applicable and that this process i.a. shall implement the recommendations formulated by the Special PAC in February 2000 (Appendix).
- III That the EUMETSAT procurement system shall empower industry to the extent possible, compatible with sound management and cost-efficiency.
- IV That EUMETSAT, whilst pursuing the highest degree of competition, shall facilitate involvement in procurements also of smaller enterprises in order to reach out to all centres of excellence.

#### **APPENDIX**

#### THE RECOMMENDATIONS OF THE SPECIAL PAC IN FEBRUARY 2000

- Look for improvements in the EUMITS system in order to stimulate more competition for contracts;
- Facilitate the role of the Industrial Focal Points (IFP), by enhancing the exchange of relevant information with due reference to EUMETSAT Resolution on IFPs (EUM/C/98/Res. VI);
- Continue with the current practice of having bidders' conferences;
- Inter alia facilitate a higher participation of Small and Medium Enterprises (SMEs) by including in ITTs an indication to the potential bidders of the importance of providing best value for money e.g. through the use of open competition in selecting sub-contractors. In addition, for large contracts, Austria, UK, Belgium and Spain wished to establish a percentage value that should be open to competition;
- Encourage the use of standardised items e.g. commercial off the shelf software (COTS).

# PROCUREMENT OF SEVIRI MIRRORS AND OBSOLETE PARTS FOR THE METEOSAT SECOND GENERATION (MSG) PROGRAMME AND MSG FOLLOW-ON

# Adopted at the 49<sup>th</sup> Meeting of the EUMETSAT Council on 4-5 December 2001

#### The EUMETSAT Member States,

**RECALLING** Resolution EUM/C/92/Res. VI on the MSG Programme, formally adopted at the 24<sup>th</sup> meeting of the EUMETSAT Council in November 1993, which includes the manufacture of 3 MSG Satellites,

**RECALLING** the Agreement with ESA signed in October 1996, which establishes ESA as EUMETSAT's Procurement Agent for the MSG Second and Third Satellites,

**RECALLING** that, under the above Agreement, ESA shall ensure availability of equipment spares and other items left over from MSG-1, to the extent that they are not consumed under the MSG-1 Programme,

**NOTING** that Article 8 of the above Agreement with ESA establishes an Agreement Change Notice (ACN) procedure for activities not covered by the limit of financial liability defined in the Agreement,

**WISHING** to ensure continuity of the EUMETSAT operational geostationary services,

**RECOGNISING** that this requires the procurement of at least a fourth MSG recurrent satellite, expected to be covered by an extension of the MSG Programme,

**RECALLING** that the 45<sup>th</sup> Council approved the two Procurement Proposals for the purpose of obtaining cost estimates for the procurement of a fully recurrent MSG-4 satellite, these costs to be used for the preparation of a detailed proposal to Council for the extension of the MSG Programme,

**TAKING INTO ACCOUNT** that Council, at its 42nd meeting, approved Resolution EUM/C/99/Res.III on Procurement of Critical Long Lead Items for the MSG Programme under the 1999 Budget within a maximum Limit of Liability (LOL) of 1.5 MEUR at 1999 economic conditions,

**TAKING INTO ACCOUNT** that Council, at its 43rd meeting, approved Resolution EUM/C/99/Res.IV on Procurement of Critical Long Lead Items for MSG Follow-On under the 1999 and 2000 budget within a maximum Limit of Liability (LOL) of 3.5 MEUR at 1999 economic conditions,

**TAKING INTO ACCOUNT** that Council, at its 45th meeting, approved Resolution EUM/C/00/Res.I on Procurement of Obsolete Parts for the MSG Follow-On under the 1999, 2000, 2001 and 2002 budgets within a maximum limit of liability (LOL) of 10.9 MEUR Firm Fixed Price (FFP) and within the ceiling of the General Budget for 2001 - 2005,

**CONSIDERING** the planned termination of manufacturing of MSG SEVIRI mirrors by the current MSG contractor, the resulting risks affecting both the MSG-3 destorage and the planned procurement of MSG-4,

**TAKING INTO ACCOUNT** that the funds for the procurement of one complete set of SEVIRI mirrors are available within the EUMETSAT Budgets,

- I To authorise the procurement of one complete set of mirrors for one SEVIRI plus spare parts within a limit to EUMETSAT of 4.4 MEUR (Firm Fixed Price) in order to protect the existing Programme and to preserve the possibility to procure one additional MSG satellite.
- II To authorise related expenditures from the MSG budget envelope, of 4.4 MEUR, to be ultimately covered by the planned extension of the MSG Programme.
- III That the Director General shall request ESA to carry out this procurement under an Agreement Change Notice (ACN) to the Agreement between EUMETSAT and ESA concerning the MSG second and third satellites.
- IV That the payments to ESA in 2002 and 2003 for obsolete parts procurements shall be paid from funds available within the 2002 and 2003 MSG Budgets.
- V That this decision on Long Lead Items (obsolete parts procurement) does not prejudice a decision on the procurement of additional MSG satellites.
- VI That the Secretariat will report on a regular basis on the status of the procurement of obsolete parts under the agreed ceiling.

#### **ENABLING RESOLUTION ON**

#### THE OPTIONAL EUMETSAT JASON-2 ALTIMETRY PROGRAMME

# Adopted at the 49<sup>th</sup> Meeting of the EUMETSAT Council on 4-5 December 2001

#### The EUMETSAT Council,

**TAKING INTO ACCOUNT** that the Amendments to the EUMETSAT Convention approved in Council Resolution EUM/C/Res. XXXVI, and subsequently accepted by all Member States, entered into force on 19 November 2000,

**RECALLING** that the primary objective of EUMETSAT is to establish, maintain and exploit European systems of operational meteorological satellites, taking into account as far as possible the recommendations of the World Meteorological Organization, and that a further objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**BEARING IN MIND** that the EUMETSAT Convention defines Optional Programmes as programmes within the objectives of EUMETSAT agreed as such by Council,

**HAVING REGARD** to Resolution EUM/C/01/Res. II on the Preparation of an Optional Programme on Altimetry, in which Council agreed that the proposed Programme on Altimetry is consistent with EUMETSAT's objectives and should be established and implemented as an Optional Programme within the framework of the EUMETSAT Convention,

**HAVING REGARD** to Declaration EUM/C/01/Decl. I and attached Programme Definition on the Optional EUMETSAT Jason-2 Altimetry Programme adopted by interested Member States on 4-5 December 2001,

**NOTING** that any Member State shall have the opportunity to become a Participating State of the Optional EUMETSAT Jason-2 Altimetry Programme through signature of the Declaration within the timeframe set out therein.

**AWARE** that the Optional EUMETSAT Jason-2 Altimetry Programme will take effect once at least one third of all EUMETSAT Member States have declared their participation by signing the Declaration within the timeframe set out and the subscriptions of these Participating States have reached 90% of the total financial envelope,

**IN CONFORMITY WITH** Articles 3, 5 and 10 of the EUMETSAT Convention, and with EUMETSAT Council Resolution EUM/C/01/Res. I on the Approval of Optional Programmes,

- I To approve the execution, within the framework of the EUMETSAT Convention, of an Optional EUMETSAT Jason-2 Altimetry Programme on the basis of the Declaration and Programme Definition attached thereto referred to in the Preamble of this Resolution.
- II To invite Participating States to sign the Declaration within the timeframe set out therein.
- III To task the Director-General with the preparation of the necessary cooperation agreements with the international partners contributing to the overall Ocean Surface Topography Mission (OSTM), to be submitted for Council approval.
- IV To task the Director-General with the execution of the EUMETSAT Jason-2 Altimetry Programme in accordance with EUMETSAT's Rules and Procedures.
- V To authorise Participating States to consider, if feasible, a possible extension of the EUMETSAT Jason-2 Altimetry Programme operations beyond the five-year period covered by the Declaration, it being understood that this extension shall require unanimous approval by those Participating States wishing to continue.
- VI To authorise Participating States to establish terms and conditions for possible contributions to the EUMETSAT Jason-2 Altimetry Programme by Cooperating States, on the understanding that any resulting agreements with Cooperating States will require Council approval.

#### SAF OPERATIONS FUNDING

# Adopted at the 49<sup>th</sup> Meeting of the EUMETSAT Council on 4-5 December 2001

The EUMETSAT Council,

**HAVING REGARD TO** the EUMETSAT Convention, as amended by the Amending Protocol attached to Council Resolution EUM/C/Rex. XXXVI,

**TAKING INTO ACCOUNT** the long-term policy regarding EUMETSAT Ground Systems established through Resolution EUM/C/92/Res. V, adopted at the 21<sup>st</sup> meeting of the EUMETSAT Council in November 1992,

**NOTING** that Resolution EUM/C/92/Res. V establishes the concept of a networked configuration comprising both distributed elements and a central facility having well defined key objectives,

**RECALLING** that the distributed network elements of the EUMETSAT Applications Ground Segment shall include Satellite Application Facilities (SAF) which shall be responsible for necessary research, development and operational activities not carried out by the central facility,

**CONSIDERING** that Resolution EUM/C/92/Res. VI on the Meteosat Second Generation (MSG) Programme, unanimously adopted by all EUMETSAT Member States in November 1993, establishes that the MSG Applications Ground Segment shall include a network of SAF in charge of the operational generation of SAF products as agreed by Council following analysis of user requirements,

**CONSIDERING** that Resolution EUM/C/96/Res. V on the EUMETSAT Polar System (EPS) Programme, unanimously adopted by all EUMETSAT Member States in June 1999, foresees the establishment of SAFs to provide meteorological and environmental products not generated by the centrally located Polar Product Extraction Facility (PPEF),

**RECALLING** that the EUMETSAT SAF Strategy recognises the need to foresee for a start of operations of the first pilot SAFs, with initial operations being primarily based on exploitation of MSG data until acceptance of EPS-dedicated upgrades, as well as covering the delta development needed to implement these upgrades,

**IN LINE WITH** the decisions on SAF operations funding taken by Council at its 48<sup>th</sup> meeting held in June 2001,

- I That the first phase of SAF operations covering the period 2002 to 2007 shall be funded from within the agreed financial envelope of the MSG Programme, with the expectation that the required funds will ultimately be covered by the planned extension of the MSG Programme.
- II That individual decisions to fund SAF activities beyond the currently agreed development phases will be taken by Council in line with the two-step procedure established in the SAF Strategy.
- III To decide in due course on the adequate mandatory funding framework for SAF operations beyond 2007, on the basis of relevant proposals to be elaborated by the Director-General.

#### **DECLARATION ON**

#### THE OPTIONAL EUMETSAT JASON-2 ALTIMETRY PROGRAMME

Adopted by Potential Participating States on 4-5 December 2001 at the 49<sup>th</sup> Meeting of the EUMETSAT Council.

### The Potential Participating States,

**HAVING REGARD** to the EUMETSAT Convention which states that the primary objective of EUMETSAT is to establish, maintain and exploit European systems of operational meteorological satellites, taking into account as far as possible the recommendations of the World Meteorological Organization (WMO), and that a further objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes,

**TAKING INTO ACCOUNT** the requirement for satellite ocean altimetry observations expressed by the WMO, the Global Ocean Data Assimilation Experiment (GODAE), the Global Ocean Observing System (GOOS), the Ocean Observations Programme Committee (OOPC) and the Integrated Global Observing Strategy Partnership (IGOS-P),

**BEARING IN MIND** that the Topex/Poseidon and Jason-1 missions established by the Centre National d'Etudes Spatiales (CNES) and the United States National Aeronautics and Space Administration (NASA) have proven the value of altimetry observations in support of operational activities such as marine meteorology, seasonal forecasting, oceanographic services and the monitoring of the climate,

**CONSIDERING** that, after Jason-1, there is a requirement to continue these services on an operational basis, and that the above agencies cannot justify a follow-on mission without a contribution from operational partners,

**CONSIDERING** the desirability in the long-term of having a single global altimetry system covering both the non-synchronous and the sun-synchronous orbits, with common technology being used to the extent possible, to which at least Europe and the US would contribute,

**WISHING** to capitalise on the European investments already made in the development and operations of Topex/Poseidon and Jason-1, and in the development of operational applications of precise altimetry data,

**BEARING IN MIND** that Article 2 of the EUMETSAT Convention defines Optional Programmes as programmes within the objectives of EUMETSAT and agreed as such by the Council,

**HAVING REGARD** to Resolution EUM/C/01/Res. II on the Preparation of an Optional Programme on Altimetry, in which Council agreed that the proposed programme on Altimetry is consistent with EUMETSAT's objectives and should be established and implemented as an Optional Programme within the framework of the EUMETSAT Convention,

**TAKING INTO ACCOUNT** the Programme Proposal on the Optional EUMETSAT Jason-2 Altimetry Programme contained in Document EUM/C/49/01/DOC/61,

**IN CONFORMITY WITH** Articles 3, 5 and 10 of the EUMETSAT Convention, and with EUMETSAT Council Resolution EUM/C/01/Res. I on the Approval of Optional Programmes,

- I To establish an optional EUMETSAT Jason-2 Altimetry Programme within the framework of the EUMETSAT Convention as described in the EUMETSAT Jason-2 Altimetry Programme Proposal referred to in the Preamble.
- II That the System Description and Implementation Plan of the EUMETSAT Jason-2 Altimetry Programme shall be as described in the EUMETSAT Jason-2 Altimetry Programme Definition attached as Annex I to this Declaration.
- That the EUMETSAT Jason-2 Altimetry Programme shall constitute a contribution to the joint Ocean Surface Topography Mission (OSTM) established in conjunction with the Centre National d'Etudes Spatiales (CNES), the United States National Aeronautics and Space Administration (NASA) and the United States National Oceanic and Atmospheric Administration (NOAA).
- IV That EUMETSAT's contribution to the Ocean Surface Topography Mission (OSTM) shall be subject to the conclusion of cooperation agreements with the above international partners. The conclusion of any cooperation agreement will require separate approval by the EUMETSAT Council.
- V That the overall financial envelope for the EUMETSAT Jason-2 Altimetry Programme amounts to a maximum of 30 MEUR at 2001 economic conditions, with an indicative payment profile as contained in Annex II to this Declaration. All efforts shall be made to keep actual expenditure below this figure.
- VI To participate in the EUMETSAT Jason-2 Altimetry Programme in accordance with a scale of contributions as set out in Annex II to this Declaration.
- VII To consider, if feasible, a possible extension of EUMETSAT Jason-2 Altimetry Programme operations beyond the 5-year period covered by the EUMETSAT Jason-2 Altimetry Programme Proposal, it being understood that this extension shall require unanimous approval by those EUMETSAT Participating States wishing to continue.

- VIII To invite the EUMETSAT Member States interested in participating in this EUMETSAT Jason-2 Altimetry Programme to sign this Declaration as soon as possible and no later than 30 November 2002, thereby becoming Participating States.
- IX To invite EUMETSAT Cooperating States to contribute to the EUMETSAT Jason-2 Altimetry Programme under terms to be agreed by the EUMETSAT Participating States.

This Declaration has been signed by the following Participating States:

Participating State	Date

#### **EUMETSAT JASON-2 ALTIMETRY PROGRAMME DEFINITION**

#### 1 GENERAL

The primary objective of the EUMETSAT Jason-2 Altimetry Programme will be to ensure that the EUMETSAT user community continues to receive precise altimetry data on an operational basis. To meet this need, Jason-2 will be an Earth orbiting satellite in a 66° orbit equipped with a radar altimeter and other instruments to directly measure sea surface elevation along a fixed grid of sub-satellite groundtracks. Jason-2 will, for an estimated period of five years, continue the data collection started with Topex/Poseidon and continued with Jason-1. The intention is for EUMETSAT to be an equal partner in the Ocean Surface Topography Mission (OSTM) alongside NOAA, NASA and CNES. Both NASA and CNES have confirmed that a decision by their authorities to proceed with support for OSTM is dependent on the financial involvement of the operational agencies EUMETSAT and NOAA.

#### 2 MISSION OBJECTIVES

The main focus of OSTM is to pursue the unique accuracy, continuity and coverage of the Topex/Poseidon and Jason-1 missions in support of operational activities such as marine meteorology, seasonal forecasting, oceanographic services and the monitoring of the climate and for describing and understanding the ocean circulation, its variability on all scales, and its influence on climate.

The basic missions to be addressed by OSTM are described below.

### 2.1 Marine meteorology

The two parameters measured by altimetry that have meteorological applications are wind speed and significant waveheight (SWH). Sea-state is a parameter with rapid short timescale changes of a few hours. Sea-state prediction models are forced by NWP forecasts of surface winds, but dense and frequent measurements on short timescales are needed to constrain the models efficiently, and this is beyond the scope of in-situ networks. Real time wind speed and SWH as measured by the Jason-2 altimeter will be of value in data assimilation into models. Operational systems are already running in several meteorological centres providing reliable 12-24 hours forecasts.

#### 2.2 Mesoscale oceanography

Three dimensional mesoscale structures have horizontal spatial scales of 30-300 km and time-scales of 20-90 days. They are mainly associated with the formation and propagation of eddies which are very energetic, have a key role in heat transport from low to high latitudes, and need to be forecast to support fisheries and other applications.

#### 2.3 Seasonal Forecasts and Climate

Seasonal and Interannual variability is known to be significantly impacted by the El Niño and this has a consequential impact on a wide range of economic and social activities of countries affected by these events. To date altimetric data assimilation runs have significantly improved the quality of the seasonal and interannual forecasting (6 months to 1 year in advance), and Jason-2 will continue to contribute and enhance this service.

OSTM will have a major contribution to the observation of large spatial variability (intra-seasonal to interannual) thanks to the expected low error budget and a very precise orbit determination. The OSTM observations will allow an improved characterisation of the seasonal cycle and its geographic dependence as well as better understanding of the associated ocean-atmosphere interactions. The accurate knowledge of the seasonal cycle is especially important to evaluate and to adjust at a first order the ocean models and climate models. OSTM will also continue to contribute to our understanding of mean sea level trends

#### 2.4 Other Applications

Altimetry is also useful for many applications in geodesy, geophysics, glaciology and hydrology.

The observations from OSTM will continue to contribute to our improved knowledge of tides. Water vapour content as measured by the radiometers on-board altimetric satellites can be useful to monitor atmosphere characteristics in the troposphere and to constrain operational weather models. Precipitation is another parameter that may be derived from the dual-frequency radar altimeter and the radiometer and be used by meteorologists to complete their data sets.

Despite the inappropriate technical design and orbit geometry, interesting results have been obtained with Topex/Poseidon data by scientists studying sea-ice, enclosed seas, lakes, large rivers and flat continental topography.

## 3 OCEAN SURFACE TOPOGRAPHY MISSION (OSTM) SYSTEM DESCRIPTION

#### 3.1 Overview

The OSTM end to end system includes a satellite, launch, and a full ground system. The task sharing between the four partners will ensure a coherent overall system. The overall system described below is the total system that will be jointly provided by the four partners. Section 4 deals with the specific EUMETSAT activities.

#### 3.2 Space Segment

The Jason-2 payload consists of a:

- Two-frequency altimeter called Poseidon-2 and its antenna
- Three-frequency radiometer and its antenna
- Doppler Obitography and Radiopositioning Integrated by Satellite (Doris) on board package;
- Laser retroreflector array;
- Turbo Rogue Space Receiver (TRSR) GPS space receiver and up to two (2) antennas

The Jason-2 satellite bus will be the PROTEUS (Plateforme Reconfigurable pour l'Observation de la terre, les Telecommunications et les Utilisations Scientifiques) platform developed for Jason-1.

NASA will provide the launch of the Jason-2 satellite.

### 3.3 Ground System Description

The ground system consists of a control ground system and a mission ground system distributed between the US and Europe and between the four partners.

### 3.3.1 Control Ground System

The Control Ground System comprises:

- **a.** A Satellite Control Centre (SCC) located in Toulouse to monitor the satellite during the complete mission lifetime. Satellite control and operations are also executed from this centre until the end of the assessment phase.
- **b.** A Project Operation Control Centre (POCC) expected to be located in Pasadena California under NOAA/NASA control. This centre will be operational from the end of the assessment phase and will control the satellite and the associated instruments for the remainder of the mission.
- **c. An Earth Terminal Network** to provide command transmission and data acquisition. There will be at least three Earth Terminals, one of which will be in Europe to provide global coverage.

#### 3.3.2 Mission Ground System

The Mission Ground System comprises:

- **a.** The EUMETSAT Mission Centre(EMC) to provide:
  - Data reception and primary processing for real time products;
  - User interfaces:
  - Real time data distribution and archiving.

- **b.** The CNES Mission System Centre comprises the Segment Sol Multimission Altimétrie et Orbitographie (SSALTO) and a DORIS system beacon network. The functions are:
  - Instrument programming and monitoring (altimeter and DORIS)
  - Commands requests generation (altimeter and DORIS)
  - Mission management and operation plan definition
  - Precise Orbit Determination (POD)
  - Algorithm definition and POD data production and validation
  - Offline altimeter data processing and validation of altimetry product
  - Offline data distribution and archiving
  - Network of ground beacons
- **c. A NASA/NOAA Mission Centre** (expected to be part of the JPL POCC) whose functions are:
  - Instrument programming and monitoring (Radiometer and TRSR)
  - Command requests generation (Radiometer and TRSR).
  - Offline altimeter data processing and validation of altimetry product in parallel with the EUMETSAT, CNES mission centre
  - Real Time altimeter data processing
  - Real time and offline data distribution and archiving

#### 3.4 Data Products and Services

#### 3.4.1 Geophysical Products

The basic data services proposed for OSTM are a continuation of the services provided for Jason-1. The products are:

- A three hour real time Operational Sensor Data Record (OSDR), mainly for marine meteorological applications. The aim is to have 75% of the data available within three hours and 95% within five hours, but every effort will be made to improve upon this aim for European regional data. The wind wave accuracy will be better than 2m/s or 10% with an orbit accuracy of better than 50cm and a range accuracy of better than 4.5cm.
- A three day Interim Geophysical Data Record (IGDR) for oceanography. The aim is to have 95% of the products available. The wind wave accuracy will be better than 1.7m/s or 10% with an orbit accuracy of better than 4cm and a range accuracy of better than 3.3cm.
- A thirty day Geophysical Data Record (GDR) for off-line science. The wind wave accuracy will be better than 1.7m/s or 10% with an orbit accuracy of better than 2cm and a range accuracy of better than 3.3cm.

#### 3.4.2 Other Products

In addition there will be a set of specialist products, such as the combined products making effective use of OSTM and Envisat altimetry data, designed for expert users who wish to undertake certain analysis. These primarily concern orbit parameters and cross over products as well as the radiometer data.

#### 3.4.3 Data Dissemination

The OSDR will be distributed using the GTS network, and such other networks (e.g. the World Wide Web) as may be agreed by EUMETSAT Participating States. EUMETSAT will be responsible for receiving data within Europe and making the data available to users on a routine basis in a way that ensures all EUMETSAT Participating States gain access to them in an optimum manner. NOAA/NASA will have a similar responsibility within the USA.

The IGDR will be distributed using the GTS network, and such other networks (e.g. the World Wide Web) as may be available. Within Europe the primary centre for processing the IGDR will be the SSALTO based in Toulouse. They will receive and archive all the data from both the European and US based Earth Terminals.

Within Europe the primary centre for processing and distributing the GDR will be the SSALTO based in Toulouse. They will receive and archive all the data from both the European and US based Earth Terminals. These data will be available on request.

#### 3.4.4 Data Policy

It is recommended that all data available through this programme be made available in accordance with WMO Resolution 40 (Cg-XII) and that all OSTM data are classified as "essential".

#### 4 THE EUMETSAT JASON-2 ALTIMETRY PROGRAMME CONTENT

The EUMETSAT Jason-2 Altimetry Programme covers the EUMETSAT contribution to the US-European OSTM and aims at providing a five-year OSTM operational data service to Member States and other users. The main elements of the EUMETSAT Programme are:

- **a.** A financial contribution by EUMETSAT to CNES. This, along with the CNES, NASA, and NOAA funds will ensure the supply of the satellite, launcher and all ground segment and operations not specifically provided by EUMETSAT
- **b.** Acquisition, installation, operations and maintenance of a EUMETSAT Earth Terminal to receive data from the satellite and uplink the commands to the satellite. The preferred location is Darmstadt.
- c. The algorithms for the processing of the real time data in EUMETSAT will be provided by the SSALTO based on the Jason-1 activities. Associated with this will be the need for a computing hardware and data dissemination chain.

- **d.** The operational role of EUMETSAT shall be to:
  - Receive via the EUMETSAT Earth Terminal all data scheduled for reception in Europe;
  - Process these raw data to produce the OSDR products;
  - Transmit all the received raw data to the SSALTO and the NASA/NOAA Mission Centre for archiving and offline processing;
  - Receive the OSDR products generated in the US from their reception site (TBC);
  - Distribute the OSDR products to users;
  - Maintain a rolling archive to ensure data are safely archived at the long term archives:
  - Provide a user interface for enquiries on data formats, quality availability etc:
  - Contribute to activities related to scientific Announcements of Opportunity and visiting scientists;
  - Engage in other activities as agreed, to optimise the data service provided to EUMETSAT Member States and other users.
- e. Management of the Cooperation with CNES, and the US partners.

#### 5 IMPLEMENTATION

OSTM is a four party activity with clear and distinct responsibilities being allocated to each party. A four party Memorandum of Understanding and associated bilateral Agreements will set out these roles in detail.

An OSTM Joint Steering Group (OSG) will be established to provide direction and to review project implementation status. The OSG will establish a Project Plan. This plan will contain detailed statements as to how the cooperative project is to be carried out. It will include all aspects of the mission. This Project Plan will form the basis for the EUMETSAT/CNES activities.

Each party will also establish its own OSTM Project Office to provide for its project planning and management. Each office will be responsible for ensuring that its role is fulfilled.

EUMETSAT will implement the EUMETSAT Jason-2 Altimetry Programme in a single slice. Jason-2 has to be ready for launch in December 2004. The actual launch date is dependent upon the successful launch and operations of Jason-1. The expected period of operations of 5 years. It is intended that agreement will be sought to extend operations if the performance of the satellite remains satisfactory towards the end of this period. This will require a separate decision by all EUMETSAT Participating States wishing to continue.

# EUMETSAT JASON-2 ALTIMETRY PROGRAMME FINANCIAL ENVELOPE AND SCALE OF CONTRIBUTIONS

#### 1 FINANCIAL ENVELOPE

The overall envelope for EUMETSAT's contribution to the Ocean Surface Topography Mission (OSTM) through the EUMETSAT Jason-2 Altimetry Programme shall be limited to a maximum of 30 MEUR at 2001 economic conditions.

The indicative EUMETSAT payment profile, based upon a 2004 December launch and five years of operations, is:

Year	2003	2004	2005	2006	2007	2008	2009
MEUR	3	4.0	4.6	4.6	4.6	4.6	4.6

#### 2 SCALE OF CONTRIBUTIONS

The Participating States shall contribute to the EUMETSAT Jason-2 Altimetry Programme in accordance with the following scale of contributions:

DADTICIDATING CTATE	CONTRIBUTION
PARTICIPATING STATE	CONTRIBUTION 1%
Austria	[0-2.44]
Belgium	[2.91]
Denmark	[1.91]
Finland	[0-1.35]
France	[16.48]
Germany	[0-25.30]
Ireland	[0.72]
Italy	[0-12.60]
Netherlands	[4.45]
Norway	[1.66]
Portugal	[1.18]
Spain	[0-6.37]
Sweden	[2.62]
Switzerland	[3.29]
United Kingdom	[0 - 13.33]
Shortfall	[64.77 - 3.38]
TOTAL	[100.00]

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<sup>&</sup>lt;sup>1</sup> The above scale of contributions is indicative. A definitive scale of contributions will be established on the basis of the final indications by Participating Member States when signing the Declaration.

### EUMETSAT JASON-2 ALTIMETRY PROGRAMME VOTING COEFFICIENT

Pursuant to the scale of contributions contained in Annex II of the Declaration on the EUMETSAT Optional Jason-2 Altimetry Programme, and taking into account Article 5.3 b) of the EUMETSAT Convention, the voting coefficient of Participating States shall be as follows:

PARTICIPATING STATE	% voting coefficient
Austria	
Belgium	
Denmark	
Finland	
France	
Germany	
Ireland	
Italy	
Netherlands	
Norway	
Portugal	
Spain	
Sweden	
Switzerland	
United Kingdom	
TOTAL	100.00