

SATELLITES

Polar Orbiting

**Agreement between the
UNITED STATES OF AMERICA
and EUMETSAT**

Agreement Signed at Darmstadt June 4, 2003

with

Annex



NOTE BY THE DEPARTMENT OF STATE

Pursuant to Public Law 89—497, approved July 8, 1966
(80 Stat. 271; 1 U.S.C. 113)—

“. . .the Treaties and Other International Acts Series issued under the authority of the Secretary of State shall be competent evidence . . . of the treaties, international agreements other than treaties, and proclamations by the President of such treaties and international agreements other than treaties, as the case may be, therein contained, in all the courts of law and equity and of maritime jurisdiction, and in all the tribunals and public offices of the United States, and of the several States, without any further proof or authentication thereof.”

EUMETSAT

Satellites: Polar Orbiting

*Agreement signed at Darmstadt June 24, 2003;
Entered into force June 24, 2003;
With Annex.*

AGREEMENT
BETWEEN
THE UNITED STATES NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION (NOAA)
AND
THE EUROPEAN ORGANISATION
FOR THE
EXPLOITATION OF METEOROLOGICAL
SATELLITES (EUMETSAT)
ON
JOINT TRANSITION ACTIVITIES REGARDING
POLAR-ORBITING OPERATIONAL ENVIRONMENTAL
SATELLITE SYSTEMS

PREAMBLE

The United States National Oceanic and Atmospheric Administration (hereinafter referred to as "NOAA"), representing the interests of the National Aeronautics and Space Administration (NASA), and the Department of Defense (DoD) and other interested U.S. Government agencies,

and

The European Organisation for the Exploitation of Meteorological Satellites (hereinafter referred to as "EUMETSAT") established by the Convention opened for signature in Geneva on May 24, 1983 and entered into force on June 19, 1986, as amended by the Amending Protocol attached to EUMETSAT Council Resolution EUM/C/Res XXXVI, which entered into force on November 19, 2000;

RECALLING that EUMETSAT and NOAA have enjoyed long-standing and fruitful cooperation in the field of operational earth observation from space for meteorological purposes;

RECALLING that EUMETSAT has established the EUMETSAT Polar System (EPS) Programme, comprising a series of three Metop Satellites;

RECALLING that NOAA and EUMETSAT expanded their cooperation to the field of operational polar-orbiting satellites through the Agreement between NOAA and EUMETSAT on an Initial Joint Polar-orbiting Operational Satellite System (IJPS) on November 19, 1998;

RECALLING that with the entry into force of the Amending Protocol to the EUMETSAT Convention, a new objective of EUMETSAT is to contribute to the operational monitoring of the climate and the detection of global climatic changes;

RECOGNIZING the essential role environmental satellite data, particularly imaging and sounding, have had in global weather forecasting, and the importance of these data to research on climate change, environmental monitoring and other sectors of the global earth observation and scientific user communities;

RECOGNIZING the benefits to the meteorological, other scientific, and applications communities in having rapid access to the data of these missions;

RECOGNIZING specifically the need to maintain continuity of these global environmental measurements from space-borne instruments in polar orbit;

NOTING that the United States has initiated the development of the tri-agency (DoD, NASA and NOAA) National Polar-orbiting Operational Environmental Satellite System (NPOESS) to replace NOAA's Polar-orbiting Operational Environmental Satellite (POES) series and DoD's Defense Meteorological Satellite Program (DMSP) series;

NOTING that the nominal implementation of the NPOESS system is expected to provide observations from the early-morning, mid-morning and afternoon orbits until 2018;

NOTING the Agreement for Cooperation concerning the Metop satellite series between EUMETSAT and the European Space Agency (ESA), as amended on April 26, 2001, and the Agreement on ARGOS for the three Metop satellites between EUMETSAT and Centre National d'Etudes Spatiales (CNES) of February 27, 2001;

NOTING that the nominal implementation of the EPS system is expected to provide observations from the mid-morning orbit until 2018;

NOTING the Memorandum of Agreement among the Governments of the U.S., Canada and France concerning cooperation in a Search and Rescue Satellite System of September 11, 1995, and the Memorandum of Understanding between NOAA and CNES for the ARGOS Data Collection and Platform Location System of March 26, 1986, as amended for NOAA-N and NOAA-N';

NOTING the existing commitments of the United States, and several European States, to the Search and Rescue Program and that Program's long association with the operational polar-orbiting satellites;

NOTING that, in the IJPS Agreement, NOAA and EUMETSAT recognize the benefit of ensuring data continuity beyond the initial satellite series, continue to plan for the uninterrupted availability of data from their respective polar-orbiting satellite systems;

NOTING that NOAA and EUMETSAT acknowledge their willingness to improve polar observations beyond IJPS;

NOTING that additional agreements are necessary to ensure this continuity beyond NOAA N' and Metop-2;

NOTING that Article 13 and the Procedures and Process for Decision Making and Implementation of Data Denial on U.S. Instruments (Data Denial Annex) of the IJPS Agreement, signed November 19, 1998, are restated in this Agreement as Article 13, and Data Denial Annex, respectively;

CONFIRMING the undertaking of NOAA and EUMETSAT to create the conditions for continued cooperation beyond IJPS and the present Agreement and for the establishment of a future joint polar system;

HAVE AGREED AS FOLLOWS:

Article 1
PURPOSE AND SCOPE

- 1.1 This Agreement defines terms of cooperation between NOAA and EUMETSAT, jointly referred to as the Parties, during the transition from the IJPS Agreement to an agreement for a future joint polar system.
- 1.2 The Joint Transition Activities (hereinafter referred to as JTA or JT Activities) defined by this Agreement involve elements of three polar-orbiting satellites systems: POES, EPS, and NPOESS that will maintain complementary polar orbits.

For the purposes of this Agreement, the POES Series consists of NOAA N and N' in the afternoon orbit. The EPS Series consists of Metop-1, -2, and -3 in the mid-morning orbit. As currently planned by the U.S. Government, the NPOESS Series will consist of six NPOESS satellites (C-1 through C-6) in three orbital planes (early morning, mid-morning and afternoon orbits). NOAA N, N' and Metop-1, -2 are the IJPS satellites as defined by the IJPS Agreement.

- 1.3 The Joint Transition Activities defined by this Agreement include:
- 1) Metop-3 satellite activities for the continuation of data from the EPS mission, including provision of NOAA POES instruments to EUMETSAT for flight on Metop-3;
 - 2) Sharing of data and data products from Metop-3 and the NPOESS series and cross-support;
 - 3) Additional transition activities; and
 - 4) Planning for future cooperation on a joint polar system.

Article 2
NOAA RESPONSIBILITIES

2.1 METOP-3 SATELLITE ACTIVITIES

NOAA shall:

- 2.1.1 Subject to 2.1.2 and 2.1.7, take all reasonable efforts to provide the following NOAA POES instruments to EUMETSAT for flight on the Metop-3 satellite:
- 1) Advanced Very High Resolution Radiometer (AVHRR) provided to support the optimum implementation of the Infrared Atmospheric Sounding Interferometer (IASI) sounding mission on Metop-3, assuming that the NPOESS Visible/Infrared Imager Radiometer Suite

(VIIRS) provides the primary stand alone imaging mission in the mid-morning orbit;

- 2) Advanced Microwave Sounding Unit (AMSU-A); and
- 3) Space Environment Monitor (SEM).

2.1.2 Provide the instruments described in 2.1.1 above for integration on Metop-3 with the understanding that these instruments are spares for the IJPS satellites, and as such:

- 1) They will be fully available to EUMETSAT after all the IJPS satellites are launched;
- 2) Prior to the launch of all IJPS satellites, use of the instruments to support initial assembly, integration and testing of the Metop-3 satellite shall be in a manner consistent with their status as spares for the IJPS satellites and the overall IJPS schedule, and taking into consideration the schedule of the Metop industrial contract; and
- 3) NOAA cannot, at any given time, warrant the readiness of these instruments for flight on Metop-3.

2.1.3 Support initial integration and test of the NOAA instruments described in 2.1.1 onto the Metop-3 satellite.

2.1.4 Until the launch of the last IJPS satellite currently planned in January 2010:

- 1) Maintain the NOAA-provided instruments listed in 2.1.1 and their Ground Support Equipment, after their release following the completion of initial integration and test on Metop-3; and
- 2) Provide contingency support.

2.1.5 For SEM, continue to provide relevant pre-launch support, as necessary, until the launch of Metop-3, and provide relevant support to commissioning and operations, including contingency support.

2.1.6 For all other NOAA instruments described in 2.1.1 and selected by EUMETSAT for flight on Metop-3, procure support from U.S. contractors on behalf of EUMETSAT, or provide assistance to EUMETSAT for procuring such support, for EUMETSAT to fulfill its obligations under Article 3.1.3 below.

2.1.7 Allow the continued use, beyond the IJPS time frame, of NOAA's electrical ground support equipment necessary to test the NOAA-provided instruments and all mechanical and targeting equipment necessary for integration and test.

2.1.8 Provide technical information and assistance to EUMETSAT, as necessary, for EUMETSAT to assess the feasibility and cost of accommodating and flying the Advanced Technology Microwave Sounder (ATMS) on Metop-3, in place of AMSU-A.

- 2.1.9 Should EUMETSAT decide to fly the ATMS on the Metop-3 satellite, procure, on behalf and with the support of EUMETSAT, a Metop-compatible ATMS instrument and related support to Metop-3 activities from U.S. contractors.
- 2.1.10 Provide commanding access and housekeeping telemetry acquisition to / from the EUMETSAT Metop-3 satellite on request for specific operations (e.g., launch and early orbits, commissioning phase, and contingency).

2.2 PROVISION OF DATA AND DATA PRODUCTS

NOAA shall:

- 2.2.1 Subject to Article 7, make available to EUMETSAT the data and data products from the NPOESS satellite instruments. The instruments planned for NPOESS include:
- 1) Visible/Infrared Imager Radiometer Suite (VIIRS)
 - 2) Cross-track Infrared Sounder (CrIS)
 - 3) Advanced Technology Microwave Sounder (ATMS)
 - 4) Conical-scanning Microwave Imager/Sounder (CMIS)
 - 5) Ozone Mapper and Profiling Suite (OMPS)
 - 6) GPS Occultation Sensor (GPSOS)
 - 7) Space Environmental Sensor Suite (SESS)
 - 8) Earth Radiation Budget Sensor (ERBS)
 - 9) Total Solar Irradiance Sensor (TSIS)
 - 10) Radar Altimeter (ALT) (Data products will include Precision Orbit Determination (POD) information)
 - 11) Aerosol Polarimeter Sensor (APS)
 - 12) Data Collection System (DCS/ARGOS)
 - 13) Search and Rescue (SARSAT)
- 2.2.2 Notify EUMETSAT when data denial implementation is required on data from NOAA-provided instruments on Metop-3 in accordance with Article 7.4.
- 2.2.3 For the mid-morning orbit, rely on atmospheric temperature and humidity sounding data and products (Level 1 and Level 2) derived from EUMETSAT's advanced infrared and microwave sounding instruments flown on the Metop satellites, to meet U.S. objective requirements.
- 2.2.4 Provide to EUMETSAT all technical details necessary for the receipt and processing of data from the NPOESS satellites including those needed for global data and data received from:
- 1) Low Rate Data (LRD) of NPOESS, which implements the Advanced High Resolution Picture Transmission (AHRPT) standard; and

- 2) High Rate Data (HRD) of NPOESS, which is transmitted at X-band frequencies and contains the complete, full resolution NPOESS data set including all sensor data and auxiliary data necessary to generate all NPOESS Environmental Data Records.

Article 3

EUMETSAT RESPONSIBILITIES

3.1 METOP-3 SATELLITE ACTIVITIES

EUMETSAT shall:

- 3.1.1 Integrate and test onto the Metop-3 satellite those instruments described in Article 2.1.1 that have been provided by NOAA in suitable condition and within a schedule compatible with EUMETSAT's needs.
- 3.1.2 Provide all necessary requirements and information for NOAA to fulfill its responsibility as defined in 2.1.6.
- 3.1.3 For all NOAA-provided instruments to be flown on Metop-3, with the exception of SEM and its Ground Segment Equipment, provide, at EUMETSAT cost:
 - 1) Maintenance, storage of instruments and their Ground Support Equipment and contingency support, as required for Metop 3 activities after the launch of the last IJPS satellite currently planned in January 2010;
 - 2) De-storage of the NOAA instruments and support to their subsequent final integration and test on the Metop 3 satellite; and
 - 3) Support to Metop-3 pre-launch and commissioning activities.
- 3.1.4 Provide to NOAA technical and interface data and other requirements as necessary, for NOAA to assist EUMETSAT in the assessment of the feasibility of accommodating and flying the ATMS on Metop-3.
- 3.1.5 Make the final decision on the instruments to be flown on the Metop-3 satellite and inform NOAA.
- 3.1.6 Should EUMETSAT decide to fly ATMS on the Metop-3 satellite in place of AMSU-A, provide to NOAA technical and interface data and other EUMETSAT requirements and support, as necessary, for NOAA to procure, on behalf of EUMETSAT and at EUMETSAT cost, a Metop-compatible ATMS instrument and related support to Metop-3 activities from U.S. contractors.
- 3.1.7 Operate and monitor the NOAA-provided instruments flown on the Metop-3 satellite.

3.2 PROVISION OF DATA AND DATA PRODUCTS

EUMETSAT shall:

- 3.2.1 Subject to Article 7, make available to NOAA the data and data products from the Metop-3 satellite instruments. The instruments planned for Metop-3 for flight in the mid-morning orbit include:
 - 1) The NOAA-provided instruments;
 - 2) Infrared Atmospheric Sounding Interferometer (IASI);
 - 3) Advanced Scatterometer (ASCAT);
 - 4) Global Navigation Satellite System Receiver for Atmospheric Sounding (GRAS);
 - 5) Microwave Humidity Sounder (MHS);
 - 6) Global Ozone Monitoring Experiment-2 (GOME-2);
 - 7) Data Collection System (DCS/ARGOS).
- 3.2.2 Implement data denial from NOAA-provided instruments on Metop-3 when requested by NOAA, in accordance with Article 7.4.
- 3.2.3 Provide to NOAA all technical details necessary for the receipt and processing of data from the Metop-3 satellite, including those needed for global data and data received from the direct broadcast services of Low Resolution Picture Transmission (LRPT) and AHRPT.

Article 4 JOINT RESPONSIBILITIES

4.1 PROVISION OF DATA AND DATA PRODUCTS

Both Parties shall:

- 4.1.1 Establish telecommunication links between the Parties necessary to ensure the timely and reliable exchange of telemetry, telecommands, and global data relating to JT Activities including timely exchange of ancillary data required to utilize the data.
- 4.1.2 Make available to the other Party all data collected in connection with this Agreement in a timely manner in accordance with the provisions of Article 7.

4.1.3 Subject to Article 10.1.5, collaborate with the other Party on development of software to utilize the JTA data, as appropriate. Such cooperation by the Parties may include exchange of source and object code. Any distribution of the resulting software will be on a not-for-profit basis. The Parties may collaborate on development of other software, as appropriate, and exchange the resulting software in source and object form.

4.1.4 Subject to Article 10.1.5, in order to coordinate direct broadcast services from the NPOESS and Metop satellites and to optimize the value of the overall service to their respective users, taking into account recommendations from the Coordination Group of Meteorological Satellites (CGMS) and the World Meteorological Organization (WMO), NOAA and EUMETSAT shall exchange information regarding the content of the Metop-3 AHRPT and NPOESS LRD broadcast.

4.2 ANOMALY OR EMERGENCY

When requested, make all reasonable efforts to assist the other Party in cases of anomaly or emergency situations.

4.3 LAUNCH FAILURE

In the case of failure of any of the NPOESS or Metop-3 satellites, the Parties shall consult on actions necessary, if any, to ensure continuity of data from these satellite systems, taking into account the need and priorities for service continuity and their respective assets and re-launch policies.

4.4 ADDITIONAL TRANSITION ACTIVITIES

With a view to their early implementation, both Parties shall continue to explore cooperative activities in the following areas:

- 1) Delivery mechanisms (timeliness, format), and shared data processing and distribution;
- 2) Optimization of the configuration, and use, of ground system assets (including the mutual use of the Svalbard ground stations);
- 3) Tandem/formation operation of NPOESS and Metop satellites;
- 4) Risk mitigation, such as;
- 5) Preparatory activities, e.g., in the framework of the NPOESS Preparatory Project;
- 6) Possible bridge missions;
- 7) Satellite-based ocean altimetry; and
- 8) Any other activities that may be identified by the Parties.

Any specific cooperation identified in Article 4.4 may, if necessary, require a separate agreement.

Article 5
PLANNING FOR FUTURE COOPERATION ON A JOINT POLAR SYSTEM

Both Parties shall:

- 5.1 Work together on a long-term basis to define a joint polar system based on common user requirements and agreed upon technical concepts and implementation responsibilities.
- 5.2 Based on Article 5.1, undertake preparation of an agreement for the cooperative implementation of a future joint polar system.
- 5.3 Make all reasonable efforts to have the agreement for a future joint polar system ready for signature within 8 years of signature of the JTA Agreement, in order to ensure continuity of data and services from the systems identified in Article 1.2.

Article 6
FUNDING

- 6.1 Each Party shall bear the costs of fulfilling its respective responsibilities under this Agreement. As a general rule, there shall be no exchange of funds between the Parties, except as provided for in Articles 2.1.6, 2.1.9, 3.1.3 and 3.1.6 above. This does not preclude one Party from transferring funds to the other Party to facilitate implementation of other obligations of the transferring Party under the Agreement. Such transfers would be negotiated on a case-by-case basis, and agreed to in writing by the Parties.
- 6.2 The financial obligations of NOAA and EUMETSAT under this Agreement are subject to the funding procedures of the respective Parties and to the availability of appropriated funds.
- 6.3 The cost of transporting equipment required for the execution of this Agreement from one Party to a first destination of the other Party shall be borne by the Party dispatching the equipment. The receiving Party shall be responsible for any subsequent transport or return of the equipment to the Party of original dispatch.
- 6.4 Costs for telecommunications and related services provided by third parties for the exchange of data and relay of commands between the Parties, if required, shall be borne by the Party receiving the data unless otherwise agreed.

Article 7
DATA POLICY

- 7.1 The Parties shall make available to each other all data collected in connection with this Agreement without any conditions as to the Parties' official duty use.

- 7.2 All data from NPOESS satellites will be provided to other users in accordance with the U.S. data policy.
- 7.3 All data from Metop-3 will be provided to other users in accordance with the EUMETSAT data policy. However, EUMETSAT will not control access to the data from the NOAA instruments on the Metop-3 satellite. EUMETSAT will limit the application of its data policy concerning use of data from such NOAA instruments to the territories of its Member States and Cooperating States.
- 7.4 Denial of critical data for military purposes from NOAA-provided instruments on Metop-3 identified in Articles 2.1.1 is hereby subject to the Annex hereto. Reciprocal arrangements to those contained in the procedure in the Data Denial Annex can be established between NOAA and EUMETSAT. Implementation of data denial of NOAA provided instruments on Metop-3 will be in accordance with procedures developed under the IJPS Agreement for Metop-1 and -2.
- 7.5 Denial of critical data for military purposes from NPOESS instruments identified in Articles 2.2.1 will be in accordance with the U.S. policy to selectively deny critical environmental data to an adversary during crisis or war yet ensure the use of such data by the U.S. and non-adversaries.
- 7.6 This Article does not apply to the SARSAT and ARGOS instruments.

Article 8

MANAGEMENT, CONSULTATION, COORDINATION AND IMPLEMENTATION

8.1 MANAGEMENT AND CONSULTATION

- 8.1.1 While the Parties JTA management structures remain independent, each Party shall consult as necessary with the other Party on any matter under its control that may affect the implementation of this Agreement.
- 8.1.2 The Parties shall organize joint meetings whenever matters of mutual interest need to be discussed.
- 8.1.3 In order to facilitate the necessary level of management and consultation, a joint high level group, co-chaired by the EUMETSAT Director-General and the NOAA Assistant Administrator for Satellite and Information Services, shall meet every six months, or as appropriate, to review the implementation of this Agreement. Prior to each meeting, the Parties shall prepare and exchange reports on the execution of their tasks.

8.2 COORDINATION AND IMPLEMENTATION OF ACTIVITIES

For each of the Joint Transition Activities identified in this Agreement, each Party shall nominate a manager responsible for implementation and for ensuring close coordination of NOAA and EUMETSAT responsibilities; and shall jointly establish and maintain implementation documents associated with the activities between NOAA and EUMETSAT. In the event of inconsistency between implementation documents and this Agreement, this Agreement shall prevail.

8.3 EXCHANGE OF REPRESENTATIVES

- 8.3.1 Each Party may select an individual to be located at the premises of the other Party for purposes of liaison regarding this Agreement.
- 8.3.2 The Representatives shall facilitate the cooperative relationship between the Parties, subject to Article 10.
- 8.3.3 The sending Party shall remain responsible for all employment aspects of its own representative. The receiving Party shall provide adequate office infrastructure and facilitate the issuance of any necessary visas and permits required by the representative of the other Party to support the activities related to this Agreement.

Article 9 TITLE AND RISK

Title and risk of loss and damage to supplies, defined for the purposes of this Agreement to be hardware and software furnished to one Party by the other Party, is retained by the providing Party. If a supply is lost or damaged, the providing Party, in consultation with the other Party, shall determine whether the providing Party shall restore the supply, taking into consideration the need to maintain continuity of operational environmental data obtained from satellites in polar orbit, and the potential cost and the availability of industrial support to maintain and repair the supply. Should the providing Party determine that it will not restore the supply, the other Party may choose to do so.

Article 10 RELEASE OF INFORMATION

10.1 EXCHANGE OF TECHNICAL DATA, GOODS AND SOFTWARE

Each Party shall transfer to the other Party those technical data, goods and software necessary to fulfill the responsibilities of the transferring Party under this Agreement, subject to the following:

- 10.1.1 The Parties shall exchange interface, integration, and safety data (excluding detailed design, manufacturing, and processing data, and associated software) without restrictions as to use or disclosure.
- 10.1.2 If a Party transfers technical data or software, other than those specified in paragraph 1 above, that are proprietary, and for which protection is to be maintained, that Party shall mark such data or software with a notice indicating that they shall not be used or disclosed by the receiving Party and its contractors and subcontractors except for the purposes of fulfilling the receiving Party's responsibilities under this Agreement, and that the data or software shall not be disclosed or retransferred to any other entity without prior written permission of the furnishing Party.
- 10.1.3 If a Party transfers technical data, software and goods that are to be protected for export control purposes, that Party shall mark with a notice, or otherwise specifically identify, such technical data, software or goods indicating that such data shall not be disclosed and that such data, software and goods shall not be used by the receiving Party and its contractors and subcontractors except for the purposes of fulfilling the receiving Party's responsibilities under this Agreement. The notice or identification shall also provide that such data and software shall not be disclosed, and that such data, software and goods shall not be retransferred, to any other entity without prior written permission of the furnishing Party.
- 10.1.4 The Parties shall abide by the terms of any notice or identification specified in this Article and to protect the marked or identified data, software and goods from unauthorized use or disclosure. To this end, each Party shall take all necessary steps, including ensuring appropriate contractual conditions in their contracts and subcontracts to ensure that contractors and subcontractors protect the marked or identified data, software or goods. The Parties are under no obligation to protect any unmarked or unidentified technical data, software or goods.
- 10.1.5 Nothing in this Agreement requires the Parties to transfer technical data, software and goods contrary to relevant laws relating to export controls. Specific exports may involve export licenses, technical assistance agreements, or other export mechanisms.

10.2 RELEASE OF PUBLIC INFORMATION

Each Party may release to the public information of a general, non-technical nature regarding this Agreement and its implementation after ensuring, through consultation with the other Party when necessary, that this information is fairly and accurately represented.

Article 11
LIABILITY

- 11.1 (a) NOAA and EUMETSAT agree to a cross-waiver of liability pursuant to which each Party waives all claims against any of the entities or persons listed below based on injury to persons or damage to property. This cross-waiver shall apply only if the person, entity or property causing the damage is involved in activities under this Agreement and the person, entity or property damaged is damaged by virtue of its involvement in activities under this Agreement. The cross-waiver shall apply to any claims for damage, whatever the legal basis for such claims, including but not limited to tort (including negligence of every degree and kind) and contract, against:
- 1) The other Party;
 - 2) A related entity of the other Party (contractor or subcontractor, collaborating organization, contractor or subcontractor of a collaborating organization);
 - 3) The employees of the other Party or its related entities.
- (b) In addition, each Party shall extend the cross-waiver of liability as set forth in Article 11.1 to its own related entities by requiring them, by contract or otherwise, to waive all claims against the entities identified in (1) through (3) above.
- (c) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of liability arising from the Convention on the International Liability for Damage Caused by Space Objects of March 29, 1972 (Liability Convention), where the person, entity or property causing the damage is involved in activities under this Agreement, and the person, entity or property damaged is damaged by virtue of its involvement in activities under this Agreement.
- (d) Notwithstanding the other provisions of Article 11.2 this cross-waiver of liability shall not be applicable to:
- 1) Claims between a Party and its own related entities or between its own related entities;
 - 2) Claims made by a natural person, his/her estate, survivors, or subrogee for injury or death of such natural person;
 - 3) Claims for damage caused by willful misconduct;
 - 4) Intellectual property claims.
- (e) Nothing in this Article shall be construed to create the basis for a claim or suit where none would otherwise exist.
- 11.2 The Parties shall ensure that any agreement for the use of data resulting from this Agreement expressly provides that neither Party can guarantee the timeliness or suitability of these data for any purpose, and shall not be liable for any damage which may result from the defective operation of the systems described in this Agreement.

- 11.3 In the event of a claim arising out of the Liability Convention as a result of activities under this Agreement, the Parties shall consult promptly on any potential liability, on any apportionment of such liability, and on the defense of such claim.

Article 12
SETTLEMENT OF DISPUTES

- 12.1 Any dispute in the interpretation or implementation of the terms of this Agreement that cannot be resolved by the nominated managers shall be referred to the signatories of this Agreement for settlement.
- 12.2 Any dispute in the interpretation or implementation of the terms of this Agreement that cannot be resolved by the signatories of this Agreement may, upon agreement of the Parties, be submitted to conciliation, mediation, arbitration or other form of dispute resolution.

Article 13
TAXES AND CUSTOMS

Each Party shall facilitate customs clearance and freedom from import duties, taxes or similar charges for System-related equipment moving between countries concerned. Further, each Party shall facilitate the issuance of any necessary visas and permits to staff engaged in the activities related to this Agreement.

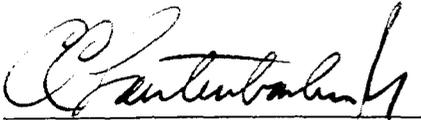
Article 14
ENTRY INTO FORCE, AMENDMENTS, TERMINATION, DURATION

- 14.1 This Agreement shall enter into force upon signature of both Parties and shall remain in force until the end of operational life of the last satellite referred to in this Agreement.
- 14.2 The Agreement may be extended or amended by written agreement of the Parties.
- 14.3 In the event of, inter alia, major technical schedule or funding difficulties and if despite all reasonable efforts the difficulties cannot be resolved, either Party may terminate the Agreement ensuring, however, that any major disadvantages for the other Party are considered. If a Party gives notice of termination, the Parties shall reach agreement as soon as possible concerning the terms and conditions of termination, with a view toward ensuring the orderly reorganization or termination of this cooperation.
- 14.4 Termination of this Agreement shall not affect a Party's continuing obligations under Articles 7, 10, and 11 unless otherwise agreed by the Parties.

IN WITNESS WHEREOF, the undersigned, being duly authorized, have signed this Agreement.

DONE at DAARMSTADT, this 24TH day of JUNE, 2003, in two originals in the English language.

FOR THE
UNITED STATES NATIONAL
OCEANIC AND ATMOSPHERIC
ADMINISTRATION:



Conrad C. Lautenbacher, Jr.
Vice Admiral, U.S. Navy (Ret.)
Under Secretary of Commerce for
Oceans and Atmosphere

FOR THE
EUROPEAN ORGANISATION FOR
THE EXPLOITATION OF
METEOROLOGICAL SATELLITES:



Dr. Tillmann Mohr
Director-General

ANNEX TO EUMETSAT / NOAA JOINT TRANSITION ACTIVITIES AGREEMENT

PROCEDURE AND PROCESS FOR DECISION MAKING AND IMPLEMENTATION OF DATA DENIAL ON U.S. INSTRUMENTS

1. U.S. Cabinet-level authority assess whether a crisis or war situation exists, or is developing, which would require selective denial of critical data from U.S. provided instruments on Metop-1, -2, and -3 to an adversary.

Such assessment will be based on the following definitions:

Crisis or War

Crisis or war is an international situation involving U.S. and/or Allied operations which could range across the spectrum of military operations. This spectrum would include:

- A major regional conflict;
- A peacemaking or peacekeeping operation involving U.S. and Allied personnel and resources;
- A humanitarian operation involving U.S. and Allied personnel and resources; or
- A show of force operation (such as deploying naval or ground forces to reflect international disapproval) involving U.S. and Allied personnel and resources.

In all of these situations, a rigorous assessment would be carried out to determine whether U.S. and Allied personnel and resources could be adversely impacted by an adversary's access to the data.

Critical Data

Data denial may be applied to data which an adversary might use to support or enhance military planning and operations. For example, satellite visual, infrared or microwave imagery and infrared or microwave atmospheric sounding information have offensive and defensive military applications and are considered critical environmental data.

Adversary

A state or group of states or a politically unrecognized force within a state or group of states which pose a distinct threat to the U.S. or its Allies, especially regarding military operations.

2. Senior NOAA official briefs EUMETSAT Director-General on the situation and consults with him on the implementation of data denial.
3. U.S. Cabinet level authority analyzes the situation to determine whether in accordance with 1 above and the criteria hereunder the data from U.S. instruments should be denied. U.S. Cabinet level authority makes determination.

Criteria for determination:

- Whether a condition of crisis or war exists or is developing and whether the crisis or war poses an immediate and serious threat to U.S.-Allied national security objectives such as whether it affects the lives of U.S. or Allied personnel and resources;
 - An adversary's ability to receive and exploit environmental data from U.S. sensors for military purposes;
 - An adversary's ability to receive and exploit similar environmental data from other sources for military purposes;
 - What advantage the data from the U.S. instruments would provide an adversary, given that similar data may be available from other sources;
 - The impact of denying data to non-adversaries who may also be affected by data denial;
 - The U.S. would consider its international obligations, including those with EUMETSAT and its members, in making a decision on data denial.
4. Senior NOAA official consults with EUMETSAT Director-General and conveys to him the determination of the U.S. Cabinet level authority. Senior NOAA official requests EUMETSAT Director-General to implement data denial:
 - To a specific user;
 - To a group of users;
 - To a geographic region; or
 - To all users except the National Meteorological Services of the United States and the EUMETSAT Member States who will not redistribute the data except as agreed to by the Parties; and
 - Within a specific time frame.
 5. The EUMETSAT Director-General authorizes the implementation of data denial in accordance with the criteria and procedure above.

On request of either Party, consultations should take place at any time with a view to end data denial. Except as provided for in paragraph 6 hereafter data denial will stop 120 days after it starts.

6. If the U.S. Cabinet level authority reassesses the situation and determines in accordance with the above criteria that data denial shall be extended beyond 120 days or continued in a different form, steps 1 through 5 would apply again.
7. The Parties shall take appropriate measures to protect sensitive information exchanged under this Annex.

AMENDMENT TO THE AGREEMENT

BETWEEN

THE UNITED STATES

NATIONAL OCEANIC AND ATMOSPHERIC

ADMINISTRATION (NOAA)

AND

THE EUROPEAN ORGANISATION

FOR THE EXPLOITATION OF METEOROLOGICAL

SATELLITES (EUMETSAT)

ON

JOINT TRANSITION ACTIVITIES

REGARDING POLAR-ORBITING OPERATIONAL

ENVIRONMENTAL SATELLITE SYSTEMS

PREAMBLE

The United States National Oceanic and Atmospheric Administration (hereinafter referred to as "NOAA"), representing the interests of the National Aeronautics and Space Administration (NASA), and the Department of Defense (DoD) and other interested U.S. Government agencies,

and

The European Organisation for the Exploitation of Meteorological Satellites (hereinafter referred to as "EUMETSAT") established by the Convention opened for signature in Geneva on May 24, 1983, and entered into force on June 19, 1986, as amended by the Amending Protocol attached to EUMETSAT Council Resolution EUM/C/Res XXXVI, which entered into force on November 19, 2000,

RECALLING that EUMETSAT and NOAA have enjoyed long-standing and fruitful cooperation in the field of operational earth observation from space for meteorological purposes,

RECALLING that NOAA and EUMETSAT signed, on 24 June 2003, an Agreement on Joint Transition Activities Regarding Polar-Orbiting Operational Environmental Satellite Systems, hereinafter referred to as "the JTA Agreement,"

TAKING INTO ACCOUNT that, following the NOAA decision to rebuild NOAA N', NOAA has confirmed to EUMETSAT its decision to make available to EUMETSAT AVHRR and AMSU-A instruments for integration on the Metop-3 satellite, despite the unexpected cost impacts,

TAKING INTO ACCOUNT that NOAA has also confirmed its requirement for a re-tested MHS instrument for integration on the NOAA N' satellite,

NOTING that EUMETSAT has agreed to re-test the MHS instrument, at no cost to NOAA, despite the unexpected cost impacts,

AWARE that the NOAA has offered, in return for the MHS re-testing, to extend its support for the AMSU-A instrument designated for integration on the Metop-3 satellite, at no cost to EUMETSAT,

CONSCIOUS that the above undertaking by NOAA regarding the long term support of AMSU-A will alter some of the provisions of the JTA Agreement,

WISHING therefore to adjust the JTA to the new circumstances,

HAVE AGREED AS FOLLOWS:

Article 1

The JTA Agreement between NOAA and EUMETSAT shall be amended as follows:

1. Article 2, Paragraph 2.1.1 shall read:

“Subject to 2.1.2 and 2.1.7, take all reasonable efforts to provide the following NOAA POES instruments to EUMETSAT for flight on the Metop-3 satellite:

- 1) Advanced Very High Resolution Radiometer (AVHRR) provided to support the optimum implementation of the Infrared Atmospheric Sounding Interferometer (IASI) sounding mission on Metop-3, assuming that the NPOESS Visible/Infrared Imager Radiometer Suite (VIIRS) provides the primary stand alone imaging mission in the mid-morning orbit; and
- 2) Advanced Microwave Sounding Unit (AMSU-A).”

2. Article 2, Paragraph 2.1.5 shall read:

“For AMSU-A, continue to provide relevant pre-launch support, as necessary, until the launch of Metop-3, and provide relevant support to commissioning activities. Should the launch of Metop-3 occur after mid-2015, any support for pre-launch or commissioning activities shall be provided by NOAA to EUMETSAT on a reimbursable basis pursuant to Article 6.1.”

3. Article 2, Paragraph 2.1.6 shall read:

“For the AVHRR instrument for flight on Metop-3, procure support from U.S. contractors on behalf of EUMETSAT, or provide assistance to EUMETSAT for procuring such support, for EUMETSAT to fulfil its obligations under Article 3.1.3 below.”

4. Article 3, Paragraph 3.1.3 shall read:

“For all NOAA-provided instruments to be flown on Metop-3, with the exception of AMSU-A and its Ground Segment Equipment, provide, at EUMETSAT cost:

- 1) Maintenance, storage of instruments and their Ground Support Equipment and contingency support, as required for Metop-3 activities after the launch of the last IJPS satellite currently planned in January 2010;
- 2) De-storage of the NOAA instruments and support to their subsequent final integration and test on the Metop-3 satellite; and
- 3) Support to Metop-3 pre-launch and commissioning activities.”

5. A New Article 3, Paragraph 3.1.4 shall read:

“For the AMSU-A instrument, should Metop-3 be launched after mid-2015, reimburse NOAA, pursuant to Article 6.1, for any support for pre-launch and commissioning activities provided by NOAA.”

6. The following paragraphs of Article 3 of the JTA Agreement are renumbered:

Article 3.1.4 is renumbered as 3.1.5

Article 3.1.5 is renumbered as 3.1.6

Article 3.1.6 is renumbered as 3.1.7

Article 3.1.7 is renumbered as 3.1.8

7. Article 6, Paragraph 6.1 shall read:

“Each Party shall bear the costs of fulfilling its respective responsibilities under this Agreement. As a general rule, there shall be no exchange of funds between the Parties; except as provided for in Articles 2.1.5, 2.1.6, 2.1.9, 3.1.3, 3.1.4 and 3.1.7 above. This does not preclude one Party from transferring funds to the other Party to facilitate implementation of other obligations of the transferring Party under the Agreement. Such transfers would be negotiated on a case-by-case basis, and agreed to in writing by the Parties.”

Article 2

This Amendment shall enter into force upon signature of both Parties.

Article 3

All other provisions of the JTA Agreement remain valid and in force.

IN WITNESS WHEREOF, the undersigned, being duly authorized, have signed this Agreement.

DONE in two originals in the English language.

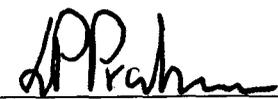
FOR THE
UNITED STATES NATIONAL
OCEANIC AND ATMOSPHERIC
ADMINISTRATION:



Conrad C. Lautenbacher, Jr.
Vice Admiral, U.S. Navy (Ret.)
Under Secretary of Commerce for
Oceans and Atmosphere

1/2/05 WASH. DC USA
Date and Place

FOR THE
EUROPEAN ORGANISATION
FOR THE EXPLOITATION OF
METEOROLOGICAL SATELLITES:



Dr. Lars Prahm
Director-General

20 January 2005, Darmstadt
Date and Place