

**No. 23046**

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**BRAZIL  
and  
EUROPEAN SPACE AGENCY**

**Agreement on the establishment and use of tracking and telemetry equipment to be installed in Brazilian territory (with implementing protocols of 19 September 1977). Signed at Brasília on 20 June 1977**

*Authentic texts: Portuguese and French.*

*Registered by Brazil on 24 August 1984.*

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**BRÉSIL  
et  
AGENCE SPATIALE EUROPÉENNE**

**Accord pour l'établissement et l'utilisation de moyens de poursuite et de télémessure à installer sur le territoire brésilien (avec protocoles d'application du 19 septembre 1977). Signé à Brasília le 20 juin 1977**

*Textes authentiques : portugais et français.*

*Enregistré par le Brésil le 24 août 1984.*

## [TRANSLATION — TRADUCTION]

AGREEMENT<sup>1</sup> BETWEEN THE GOVERNMENT OF THE FEDERATIVE REPUBLIC OF BRAZIL AND THE EUROPEAN SPACE AGENCY ON THE ESTABLISHMENT AND USE OF TRACKING AND TELEMETRY EQUIPMENT TO BE INSTALLED IN BRAZILIAN TERRITORY

The Government of the Federative Republic of Brazil (hereinafter referred to as "the Brazilian Government"), represented by General Moacyr Barcellos Potyguara, Chairman of the Brazilian Space Activities Commission (Comissão Brasileira de Atividades Espaciais), on the one hand,

And the European Space Research Organization, whose activities since 31 May 1975 have been carried out under the name of European Space Agency (hereinafter referred to as "the Agency", represented by its Director General, Mr. Roy Gibson, on the other hand,

Considering the interest of the European Space Agency and the Brazilian Government in co-operating with a view to installing and using tracking and telemetry equipment in Brazilian territory for the purpose of implementing the Agency's Ariane launcher programme and Brazilian programmes,

Noting that the National Centre for Space Studies (France) (Centre national d'études spatiales — CNES) has been designated by the States members of the Agency participating in the Ariane launcher programme to execute the development phase of that programme,

Considering the interest of the Brazilian Government in acquiring space-related technology,

Desiring to establish the appropriate institutional framework for these purposes,

Have agreed as follows:

*Article I.* The Brazilian Government shall authorize and guarantee the use of the Natal launch complex facilities for the Ariane programme. To that end, the Brazilian Government shall adapt the equipment of the launch complex, providing the necessary infrastructure and authorizing the installation of new Agency equipment.

*Article II.* The Brazilian Government shall, if necessary, authorize the establishment of a supplementary station in the Belém region. In such case, the Parties shall draw up an addendum to this Agreement.

*Article III.* 1. The Brazilian Government and the Agency shall delegate, respectively, the Brazilian Space Activities Commission, hereinafter referred to as "COBAE", and the National Centre for Space Studies, hereinafter referred to as "CNES", to implement this Agreement.

<sup>1</sup> Came into force on 4 July 1980, the date of the exchange of the notifications by which the Parties informed each other of the completion of the required formalities, in accordance with article XIV.

2. The details and procedures for implementing this Agreement shall be specified in two implementing protocols, signed by COBAE and CNES and annexed to this Agreement.

3. The mandate of COBAE and CNES concerning the tracking and telemetry facilities shall include an initial phase, called the development and qualification phase, which shall end six months after the final qualification launch of the Ariane launcher.

4. The possible extension of the COBAE and CNES mandate for a second phase, called the operational phase, to follow the development and qualification phase, shall be the subject of an understanding between the Parties to this Agreement.

*Article IV.* 1. The first of the implementing protocols to be signed by COBAE and CNES shall specify how the financial costs incurred in establishing and using the facilities referred to in article I are to be apportioned between the Parties.

2. COBAE shall operate the facilities, free of charge, for the Agency during the development and qualification phase referred to in article III, paragraph 3. The two Parties shall consult each other concerning the financial arrangements for using the equipment for the benefit of the Agency after the initial phase referred to in article III, paragraph 3.

3. Ownership of the equipment provided by the Agency for the Natal launch complex facilities shall be transferred to the Brazilian Government immediately after acceptance of the final configuration specified in the first of the implementing protocols referred to in article III, paragraph 2. Any equipment or component added after such acceptance shall immediately become the property of the Brazilian Government.

4. Should this Agreement be denounced by the Brazilian Government before the end of the development and qualification phase referred to in article III, paragraph 3, the Brazilian Government shall transfer ownership of the equipment provided by it back to the Agency and shall place such equipment at the Agency's disposal.

5. Should the Agency denounce this Agreement, the Brazilian Government shall immediately become the owner of the equipment provided by the Agency.

*Article V.* The Brazilian Government and the Agency shall jointly specify, in accordance with article III, paragraph 2, the areas of technology in which information is to be transferred and the access of Brazilian technical personnel to such information; these matters shall be the subject of the second of the implementing protocols referred to in that article.

*Article VI.* The Brazilian Government and the Agency shall take the necessary steps to ensure the normal execution of their respective programmes.

*Article VII.* 1. The Brazilian Government shall, in accordance with Brazilian legislation, authorize the use of such radio frequencies as the Natal launch complex may require for carrying out the Ariane programme. The Brazilian Government shall also ensure the protection of telecommunications and radio reception.

2. The Brazilian Government shall ensure that the Agency has access to the Brazilian telecommunications network and to the international telecommunications network.

*Article VIII.* For the purpose of the activities of the launch complex, the Agency may import, free of customs duty, the equipment and spare parts owned by it for which there is no Brazilian equivalent.

*Article IX.* 1. Facilities in respect of their stay and travel in Brazilian territory shall be granted to the Agency and CNES personnel and to the persons designated by them who participate in Ariane programme activities in Brazilian territory.

2. Payments made by the Agency to its personnel shall not be subject to income tax, provided that such personnel are not residents and do not stay more than 183 days in Brazil in each financial year.

*Article X.* The Parties shall exchange the technical and scientific data derived from the use of the telemetry and tracking facilities for their respective programmes. Each Party undertakes not to divulge such data to third parties without the prior consent of the other Party.

*Article XI.* 1. Where damage caused to nationals of a State other than Brazil and other than any of the States members of the Agency involves liability under international law for damage caused by space objects, the Brazilian Government shall be liable only for the costs and compensation due in cases where the damage was caused by an operational error of the radar and/or tracking system under Brazilian responsibility. The Agency shall be liable for the costs and compensation due in all other cases.

2. Damage of any kind caused to persons in the service of the Agency or of the Brazilian Government who participate in activities connected with the execution of the Ariane programme shall be compensated by the Party in whose service such persons were acting, except in cases of gross negligence or of acts or omissions intended to cause damage.

3. The provisions of paragraph 2 shall also apply to damage caused to the property of the Parties.

*Article XII.* Any dispute which relates to the implementation or interpretation of this Agreement and concerning which it has not been possible to arrive at an amicable settlement between the Brazilian Government and the Agency shall be referred to an arbitral tribunal to be established jointly by the Parties, unless the Parties agree on another method of settling the dispute.

*Article XIII.* 1. This Agreement is concluded for a period of eight years and may be extended by mutual consent of the Parties, which shall determine the period and conditions of such extension.

2. This Agreement may be amended by mutual consent of the Parties, at the request of either Party. Amendments agreed upon by the two Parties shall enter into force following an exchange of notes between the Brazilian Government and the Agency.

3. This Agreement may be denounced in internationally recognized cases of *force majeure*, or by prior notice. Denunciation shall become operative 90 days after notification is given. In such case, each Party shall take the necessary action to facilitate continuation of the activities of the other Party by means of an *ad hoc* agreement.

*Article XIV.* This Agreement shall enter into force on the date on which each Party has notified the other, in writing, that the respective formalities required for its entry into force have been completed.

DONE at Brasília on 20 June 1977, in duplicate in the Portuguese and French languages, both texts being equally authentic.

For the Government  
of the Federative Republic of Brazil:

[Signed]

MOACYR BARCELLOS POTYGUARA

For the European Space Agency:

[Signed]

ROY GIBSON

#### PROTOCOL CONCERNING THE TRAINING OF BRAZILIAN PERSONNEL IN LAUNCHER TECHNOLOGY

The Brazilian Space Activities Commission (hereinafter referred to as "COBAE"), represented by its Chairman, General Moacyr Barcellos Potyguara, on the one hand, and

The National Centre for Space Studies (hereinafter referred to as "CNES"), represented by its Chairman, Professor Hubert Curien, on the other hand,

Considering the Agreement of 20 June 1977 between the Government of the Federative Republic of Brazil and the European Space Agency on the establishment and use of tracking and telemetry equipment to be installed in Brazilian territory, whereby the Parties shall jointly specify the areas of technology in which information is to be transferred,

Considering that, in accordance with the provisions of the above-mentioned Agreement, the transfer of technological information is to be dealt with in a Protocol signed by COBAE and CNES,

Have agreed as follows:

*Article I.* 1. For the purpose of implementing article V of the Agreement of 20 June 1977, CNES shall train in its own services or in subsidiary agencies or industries the Brazilian personnel designated by COBAE.

2. CNES shall make every effort to obtain training courses in other agencies or industries for the Brazilian personnel designated by COBAE.

*Article II.* The purposes of the training courses referred to in article I shall be:

- (a) To enable trainees to acquire knowledge in the area of satellite launchers in general and, in particular, systems design, general studies and performances, propulsion, electrical systems, structures and operations;
- (b) To familiarize trainees with the relevant techniques used in industry;
- (c) To familiarize trainees, through access to the relevant documentation, with programme management methods, *inter alia* those relating to the establishment of specifications and to quality control.

*Article III.* 1. The trainees designated by COBAE shall be incorporated into CNES technical teams.

2. The trainees may be given specific responsibilities, *inter alia* those involving relations with industry.

3. The trainees shall participate in the launcher programme activities carried out by CNES, particularly in connection with the Ariane programme.

4. The trainees shall undertake not to divulge without express authorization from CNES the technical and industrial documentation to which they have access in the discharge of their functions.

*Article IV.* 1. The training programme for the trainees shall have an annual staff of five engineers.

2. The course for each engineer shall last at least one year, and longer if possible.

3. The details of the training programme shall be established jointly by COBAE and CNES.

4. The designated trainees must have a level of knowledge compatible with the proposed programmes.

5. Where appropriate, the training course proper may be preceded by a university training programme.

*Article V.* 1. CNES shall award five fellowships per year for this programme, over a three-year period. At the end of that period, the fellowships may be renewed by mutual consent on the basis of an evaluation of the technical results achieved by the trainees.

2. The fellowships referred to in this article shall be awarded direct by CNES or under another financial procedure. The amount of the fellowships shall be equivalent to the amount of those of the "high-level" category awarded by the French Ministry of Foreign Affairs and shall include the benefits of the medical assistance scheme.

*Article VI.* COBAE shall defray the international travel costs arising from the programmes approved by it.

*Article VII.* This protocol shall enter into force on the date of the entry into force of the Agreement.

This protocol shall remain in force for six years and shall, in the absence of an express decision to the contrary, be renewed by tacit agreement between the Parties.

DONE at Brasília on 19 September 1977, in duplicate in the Portuguese and French languages, both texts being equally authentic.

For COBAE :

[Signed]

MOACYR BARCELLOS POTYGUARA  
Chairman of COBAE

For CNES :

[Signed]

HUBERT CURIEN  
Chairman of CNES

# PROTOCOL CONCERNING THE INSTALLATION OF EQUIPMENT AT THE NATAL LAUNCH COMPLEX AND THE USE OF THE FACILITIES OF THAT COMPLEX FOR THE ARIANE LAUNCHER PROGRAMME

The Brazilian Space Activities Commission (hereinafter referred to as "COBAE"), represented by its Chairman, General Moacyr Barcellos Potyguara, on the one hand, and

The National Centre for Space Studies (hereinafter referred to as "CNES"), represented by its Chairman, Professor Hubert Curien, on the other hand,

Desiring to implement the provisions of the Agreement between the Government of the Federative Republic of Brazil and the European Space Agency, signed at Brasília on 20 June 1977 (hereinafter referred to as "the Agreement"),

Have agreed as follows:

*Article I. PURPOSE OF THE PROTOCOL*

The purpose of this protocol shall be:

1. To determine the respective responsibilities of COBAE and CNES with regard to:
  - (a) Establishing the configuration of the technical equipment situated at the Natal launch complex in order to make it compatible with the requirements of the Ariane programme and those of the Brazilian programme;
  - (b) Supplying and installing new necessary equipment;
  - (c) Using the said equipment;
2. To determine the operational and financial conditions on the basis of which the activities referred to in paragraph 1 are carried out.

*Article II. ORGANIZATION OF WORK*

The activities referred to in this protocol shall be carried out in accordance with the following schedule:

1. The configuration of the Natal launch complex required for the Brazilian programme and the Ariane programme shall be established jointly by the CNES engineers and the Brazilian engineers designated by COBAE and seconded to CNES at Toulouse. A provisional configuration and a final configuration shall be established.
2. When the studies are completed, the two configurations shall be subject to formal approval by the two Parties.
3. COBAE shall be responsible for carrying out the necessary infrastructural work at Natal.
4. CNES shall supply the equipment necessary for establishing the final configuration.
5. As soon as the infrastructural work is completed, COBAE may proceed to install the equipment available for establishing the provisional configuration of the receiving station and the Kourou-Natal telecommunications link. The necessary technical assistance shall be provided by CNES.
6. As soon as the new equipment is available, it shall be installed in the same manner.
7. The checking and acceptance of the equipment shall be carried out jointly by the Brazilian engineers and the CNES engineers.
8. CNES shall train the operating personnel at the Guiana Space Centre or, if required, at another site. As soon as the facilities of the provisional configuration are available, the training may be carried out at Natal.
9. A recheck of the system shall be made with the assistance of CNES for each qualification launch.
10. Operational activities shall be carried out by the Brazilian personnel; technical assistance shall be provided by CNES if needed.
11. The Brazilian personnel shall be responsible for managing and operating the Natal launch complex for the purposes of the Ariane programme.

*Article III. RESPONSIBILITIES OF EACH PARTY*

1. *Responsibilities of COBAE*

COBAE shall assume responsibility for:

- Designing the configuration corresponding to Brazilian requirements;

- Providing technical assistance for designing the configuration corresponding to the requirements of the Ariane programme;
- Specifying, jointly with CNES, the installation of equipment;
- Formally approving the configurations adopted;
- Carrying out the necessary infrastructural work;
- Co-ordinating the installation and integration of equipment, with the technical assistance of CNES and in accordance with the latter's specifications for the Ariane configuration;
- Preparing the work schedule for the Natal launch complex and keeping it up to date;
- Operating the facilities and maintaining the equipment in accordance with the procedures established jointly with CNES for the equipment provided by CNES;
- Keeping CNES regularly informed about the operation of the said facilities and equipment and about the results of the maintenance activities;
- Controlling and operating the Natal facilities for launches carried out at the Guiana Space Centre, in accordance with the procedures specified in the "Order of Launching";
- Providing and deploying the operating and servicing technical personnel and, in particular, ensuring that the capability of the operating personnel is maintained;
- Providing all logistical support necessary for operating and using the facilities (transport, electrical power supply, link-up with the telecommunications network).

2. *Responsibilities of CNES*

CNES shall assume responsibility for:

- Designing the configuration of the Natal launch complex corresponding to the requirements of the Ariane programme;
- Providing technical assistance for designing the configuration corresponding to Brazilian requirements;
- Auditing the accounts of the two configurations;
- Formally approving the configurations accepted;
- Providing the new equipment necessary for the two configurations and the spare parts required throughout the development phase, until the end of the qualification launches;
- Establishing the installation and integration specifications for such equipment;
- Approving the updatings of the work schedule established by COBAE for the Natal site;
- Checking and acceptance of the configuration corresponding to the requirements of the Ariane launcher;
- Training the technical and operating personnel;
- Establishing, in conjunction with COBAE, the procedures for using and maintaining the equipment provided by CNES;
- Rechecking, in conjunction with COBAE, the technical and operational configuration of the Natal facilities and of the links with the Guiana Space Centre, and doing so before each launch of the Ariane launcher;
- Providing, for each launch of the Ariane launcher, the representatives required for technical and operational co-ordination;
- Preparing, and submitting to COBAE for approval in so far as Natal facilities are concerned, the document entitled "Order of Launching", which prescribes for each operation:
  - The programme, services and organization;
  - The equipment used;
  - The pattern of operations.



*Article IV. USE OF THE NATAL FACILITIES*

1. Immediately after acceptance of the facilities in the provisional configuration, COBAE may use those facilities, which will subsequently constitute part of the final configuration.

2. After acceptance of the facilities in the final configuration, and in order to co-ordinate their requirements, COBAE and CNES shall jointly establish the programme of operational activities of the Natal facilities, as follows:

- An annual co-ordination meeting for establishing the calendar of operations;
- Updatings every six months;
- Exchanges of information by telex on the progress of the operations.

3. After final acceptance, any change in the technical configuration and operational capacity must be approved by COBAE and CNES.

*Article V*

The configurations of the Natal launch complex and the services to be provided by each Party shall be specified in the technical annex<sup>1</sup> to this protocol.

*Article VI. FINANCIAL PROVISIONS*

1. COBAE shall be financially responsible for:

- (a) The infrastructural, installation and integration costs for the equipment emplaced at the Natal launch complex;
- (b) The wages, allowances and transport costs of its personnel participating in the activities connected with the implementation of this protocol and referred to in its technical annex;
- (c) The operating costs of the facilities;
- (d) The cost of transporting the equipment available at Fortaleza and Kourou to Natal.

2. CNES shall be financially responsible for:

- (a) Purchasing the new equipment and spare parts required during the development phase of the Ariane programme;
- (b) Packing the said equipment and spare parts and transporting them to Natal;
- (c) The wages, allowances and transport costs of its personnel participating in the activities connected with the implementation of this protocol;
- (d) The cost of training Brazilian operating personnel;
- (e) Leasing the telecommunications circuits required for carrying out operations connected with the Ariane programme;
- (f) The transport costs and daily assignment allowances, outside Brazilian territory, of the Brazilian personnel who are not specified in the technical annex and whose assistance has been requested by CNES for implementing this protocol;
- (g) The transport costs and daily assignment allowances of the personnel specified in the technical annex for travel away from their normal place of work undertaken at the request of CNES.

<sup>1</sup> Not published, pursuant to the provisions of article 12(2) of the General Assembly regulations to give effect to Article 102 of the Charter of the United Nations as amended in the last instance by General Assembly resolution 33/141 A of 19 December 1978.

### *Article VII. SCHEDULE OF WORK*

A detailed schedule of the work to be done under this protocol shall be established jointly by CNES and COBAE.

The following deadlines shall be adhered to:

— Appointment of a project team consisting of three engineers . . . . .	1 February	1976
— Specification of the configurations . . . . .	1 February	1976
— Approval of the configurations . . . . .	1 February	1976
— Delivery of the buildings and infrastructure . . . . .	1 October	1977
— Deployment of the operating personnel for training . . . . .	1 June	1977
— Acceptance of the facilities in the provisional configuration . . . . .	1 October	1977
— Natal station ready . . . . .	15 September	1978
— Natal station ready for first Ariane campaign . . . . .	1 February	1979
— First qualification launch . . . . .	15 June	1979

Each of the Parties undertakes to do everything possible to abide by the schedule and to inform the other Party, in good time, of any event that may involve a change.

### *Article VIII*

Without prejudice to their respective responsibilities, COBAE and CNES may, when appropriate, designate agencies or contractors of their own choice to carry out the work referred to in this protocol.

In the case of the Brazilian Party, the designated implementing agencies shall be, for the time being:

- The Ministry of Aviation;
- The National Council for Scientific and Technological Development (Conselho Nacional para o Desenvolvimento Científico e Tecnológico).

### *Article IX. PROTECTION OF RADIO RECEPTION*

Pursuant to the provisions of article VII of the Agreement between the Brazilian Government and the European Space Agency, COBAE shall, in accordance with Brazilian regulations, protect the radio telecommunications of the launch complex by establishing easement zones for protecting the chosen site against the emplacement of obstacles of any kind capable of changing its original configuration and of creating more difficult conditions for the propagation of radio signals.

COBAE shall make every effort to protect radio reception against electromagnetic interference by establishing easement zones wherein it shall be prohibited:

- To create or propagate any perturbations that may interfere with the range of radio waves received by the station and may create a higher degree of interference than is compatible with operation of the facilities;
- To put into operation any equipment capable of interfering with radio reception at the Natal launch complex.

### *Article X*

CNES shall be liable for compensation in respect of damage of any kind caused to personnel designated by CNES and participating in activities connected with the implementation of this protocol.

COBAE shall be liable for compensation in respect of damage of any kind caused to persons designated and/or remunerated by COBAE and participating in activities connected with the implementation of this protocol.

The foregoing provisions shall apply even where the other Party is responsible for the damage, except in the case of gross negligence or of a wilful act or omission by that other Party.

They shall apply only to the relations between CNES and COBAE and shall be without prejudice to any rights and actions which the victims of accidents or those to whom their rights are transferred may lawfully invoke or initiate.

*Article XI*

The technical annex shall constitute an integral part of this protocol and may be amended with the consent of both Parties.

*Article XII*

The provisions of this protocol may be amended with the consent of both Parties, at the request of either Party, provided that the new provisions are compatible with the provisions of the Agreement. The said consent shall be established by an exchange of letters between the Parties.

*Article XIII*

This protocol shall enter into force on the date of the entry into force of the Agreement.

This protocol shall cease to have effect six months after the last qualification launch of the Ariane programme. It may be extended in accordance with the provisions of article III, paragraph 4, of the Agreement.

*Article XIV*

In the event of a discrepancy between the provisions of the Agreement and those of the protocol, the provisions of the Agreement shall prevail over those of the protocol.

DONE at Brasília on 19 September 1977, in duplicate in the Portuguese and French languages, both texts being equally authentic.

For COBAE:

[Signed]

MOACYR BARCELLOS POTYGUARA  
Chairman of COBAE

For CNES:

[Signed]

HUBERT CURIEN  
Chairman of CNES