

No. 13614

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**UNITED STATES OF AMERICA, BRAZIL  
and  
FEDERAL REPUBLIC OF GERMANY**

**Exchange of notes constituting an agreement relating to a  
space research project (with memorandum of under-  
standing dated 12, 15 and 16 October 1973). Brasília,  
17, 18 and 19 October 1973**

*Authentic texts: English and Portuguese.*

*Registered by the United States of America on 4 November 1974.*

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**ÉTATS-UNIS D'AMÉRIQUE, BRÉSIL  
et  
RÉPUBLIQUE FÉDÉRALE D'ALLEMAGNE**

**Échange de notes constituant un accord relatif à un projet  
de recherches spatiales (avec mémorandum d'accord  
en date des 12, 15 et 16 octobre 1973). Brasília, 17,  
18 et 19 octobre 1973**

*Textes authentiques : anglais et portugais.*

*Enregistré par les États-Unis d'Amérique le 4 novembre 1974.*

EXCHANGE OF NOTES CONSTITUTING AN AGREEMENT<sup>1</sup> BETWEEN THE UNITED STATES OF AMERICA, BRAZIL AND THE FEDERAL REPUBLIC OF GERMANY RELATING TO A SPACE RESEARCH PROJECT

I

*The American Embassy to the Brazilian Ministry of External Relations*

No. 485

The Embassy of the United States of America presents its compliments to the Ministry of External Relations and has the honor to refer to a proposed space research project planned jointly by the Conselho Nacional de Pesquisas (CNPQ) of the Federative Republic of Brazil, the Max Planck Society under the sponsorship of the Bundesministerium für Forschung und Technologie (BMFT) of the Federal Republic of Germany, and the National Aeronautics and Space Administration (NASA) of the United States of America. The nature of the project would be the use of sounding rockets at the Barreira Do Inferno Range at Natal, Brazil in October of 1973 for the purposes of studying the dynamics of artificial barium clouds, of measuring the electric field plasma density and ion drift velocity, and of detecting energetic protons and electron fluxes which may be associated with equatorial spread-F conditions.

The Embassy understands that the technical details of this project have been informally agreed upon by the participating agencies as set forth in the attached Memorandum of Understanding. The Embassy has the honor to propose, on behalf of the Government of the United States of America that, if this note and the attached Memorandum of Understanding are acceptable to the Government of Brazil and the Government of the Federal Republic of Germany, the acceptances to that effect and this note and the attached Memorandum of Understanding shall constitute an agreement between the three Governments which shall enter into effect on the date of the later of the acceptances and shall remain in effect until December 31, 1975 and thereafter until terminated by any Government on 90-days notice.

The Embassy takes this opportunity to renew to the Ministry the assurances of its highest consideration.

The Embassy of the United States of America

Brasília, October 17, 1973.

<sup>1</sup> Came into force on 19 October 1973, the date of the later of the acceptances, in accordance with the provisions of the said notes.

[TRANSLATION<sup>1</sup> — TRADUCTION<sup>2</sup>]

## MINISTRY OF FOREIGN AFFAIRS

DAI/DOI/DCS/DE-I/110/692/21 (B46) (F36)

The Ministry of Foreign Affairs presents its compliments to the Embassy of the United States of America and has the honor to acknowledge receipt of note No. 485 dated October 17, 1973, the text of which, in Portuguese, is as follows:

[See note I]

In reply, the Ministry of Foreign Affairs informs the Embassy of the United States of America that it concurs in the terms of the note transcribed above, which, together with this note, shall constitute an agreement between the Government of the Federative Republic of Brazil and the Government of the United States of America, which shall enter into force on today's date, formally confirming the Memorandum of Understanding between the Conselho Nacional de Pesquisas, the Bundesministerium für Forschung und Technologie and the National Aeronautics and Space Administration, signed by representatives of those agencies on October 15, 16, and 12, 1973, respectively.

Brasília, October 19, 1973.

## III

The Embassy of the United States of America presents its compliments to the Embassy of the Federal Republic of Germany and has the honor to refer to a proposed space research project planned jointly by the Conselho Nacional De Pesquisas (CNPQ) of the Federative Republic of Brazil, the Max Planck Society under the sponsorship of the Bundesministerium für Forschung und Technologie (BMFT) of the Federal Republic of Germany, and the National Aeronautics and Space Administration (NASA) of the United States of America. The nature of the project would be the use of sounding rockets at the Barreira Do Inferno Range at Natal, Brazil in October of 1973 for the purposes of studying the dynamics of artificial barium clouds, of measuring the electric field plasma density and ion drift velocity, and of detecting energetic protons and electron fluxes which may be associated with equatorial spread-f conditions.

The Embassy understands that the technical details of this project have been informally agreed upon by the participating agencies as set forth in the attached Memorandum of Understanding. The Embassy has the honor to propose, on behalf of the Government of the United States of America that, if this note and the attached Memorandum of Understanding are acceptable to the Government of Brazil and the Government of the Federal Republic of Germany, the acceptances to that effect and this note and the attached Memorandum of Understanding shall constitute an agreement between the three Governments which shall enter into effect on the date of the later of the acceptances and shall

<sup>1</sup> Translation supplied by the Government of the United States of America.

<sup>2</sup> Traduction fournie par le Gouvernement des Etats-Unis d'Amérique.

remain in effect until December 31, 1975 and thereafter until terminated by any Government on 90-days notice.

The Embassy takes this opportunity to renew to the Embassy the assurances of its highest consideration.

Embassy of the United States of America

Brasília, October 18, 1973.

#### IV

BOTSCHAFT DER BUNDESREPUBLIK DEUTSCHLAND<sup>1</sup>

EMBAIXADA DA REPÚBLICA FEDERAL DA ALEMANHA<sup>1</sup>

BRASÍLIA, D.F., BRASILIEN<sup>2</sup>

Ku 493

The Embassy of the Federal Republic of Germany presents its compliments to the Embassy of the United States of America and acknowledges receipt of the following note dated October 18, 1973:

[See note III]

The Government of the Federal Republic of Germany approves the project and this acknowledgment constitutes finalization of the Agreement.

The Embassy of the Federal Republic of Germany avails itself of this opportunity to renew to the Embassy of the United States of America the assurances of its highest consideration.

Brasília, October 18, 1973.

MEMORANDUM OF UNDERSTANDING BETWEEN THE CONSELHO NACIONAL DE PESQUISAS AND THE BUNDESMINISTERIUM FÜR FORSCHUNG UND TECHNOLOGIE AND THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

The Conselho Nacional de Pesquisas (CNPq) of Brazil, the Bundesministerium für Forschung und Technologie (BMFT) of the Federal Republic of Germany, and the National Aeronautics and Space Administration (NASA) of the United States of America reaffirm their desire to conduct space research projects of mutual interest for peaceful scientific purposes.

Accordingly, CNPq, BMFT and NASA agree to conduct a sounding rocket research project from the Barreira do Inferno Range at Natal, Brazil in the fall of 1973 for the purposes of studying the dynamics of artificial barium clouds, of measuring the electric field plasma density and ion drift velocity, and of detecting energetic protons and electron fluxes which may be associated with equatorial spread-F conditions.

To carry out this project, CNPq, BMFT and NASA agree to use their best efforts to discharge the following responsibilities.

<sup>1</sup> Embassy of the Federal Republic of Germany.

<sup>2</sup> Brazil.

*NASA Responsibilities:*

1. Provide, prepare for launching, as mutually agreed, and transport to the launch site two Javelin sounding rocket systems and necessary project support equipment.
2. Provide mutually agreed instrumentation in the payload for electric field measurements, plasma density, ion and electron flux measurements and helium scatter line observations and deliver instruments to Germany for payload integration.
3. Provide use of NASA-loaned equipment currently at the launch site.
4. Assist in rocket launching, tracking and telemetry operations as mutually agreed.
5. Provide other appropriate technical assistance to carry out the project as mutually agreed.

*BMFT Responsibilities:*

1. Provide barium cloud and solid state analyzer portions of the payload; design, fabricate, assemble, integrate, and test the payload and deliver it to the launch site.
2. Assist in rocket launching operations as mutually agreed.
3. Provide optical tracking stations and associated operational support systems, as mutually agreed.
4. Provide or arrange for ionosonde remote display equipment at the launch site.
5. Arrange such other ground support as might be mutually agreed to be necessary to carrying out the scientific objectives of the campaign.

*CNPq Responsibilities:*

1. Prepare and operate the launching range and associated facilities.
2. Assist in the installation and operation of all project support equipment supplied by NASA and BMFT.
3. Store and assist in the assembly of the NASA-supplied sounding rocket and the BMFT-supplied payload.
4. Assist in telemetry operations and conduct the sounding rocket launching in accordance with a mutually agreed schedule.

Each agency agrees to designate a Project Manager to be responsible for coordinating the agreed functions and responsibilities of each agency with the other in the implementation of this agreement.

There will be no exchange of funds between the cooperating agencies. Each agency will bear the costs of discharging its respective responsibilities, including travel and subsistence of its own personnel and transportation charges on all equipment for which it is responsible.

BMFT, CNPq, and NASA will use their best efforts to arrange for free customs clearance of equipment required in this project.

The results of all experiments covered by this Agreement will be available to BMFT, CNPq and NASA.

First publication rights will reside with the Principal Investigators for one year after launch. Results of the investigations will be made available to the scientific community in general through publication in appropriate journals or other established channels.

Release of public information regarding this cooperative project may be made by each agency for its own activities as desired and, insofar as the participation of the other is involved, after suitable coordination.

The BMFT, CNPq and NASA shall bear full responsibility for any damage to their respective nationals in the course of this cooperative project. In the event of damage to

nationals of countries which are not parties to this agreement, for which damage there is liability under the principles of international law or the Convention on International Liability for Damage Caused by Space Objects, the BMFT, CNPq, and NASA agree to consult promptly on an equitable sharing of the payments for any settlement required. If agreement is not reached within 180 days, the three agencies will act promptly to arrange for early arbitration to settle the sharing of such claims following the 1958 model rules on arbitral procedure of the International Law Commission.<sup>1</sup>

It is understood that the ability of the BMFT, CNPq and NASA to carry out activities under this Agreement is subject to the availability of appropriated funds.

This Memorandum of Understanding is subject to acceptance by the Governments of Brazil, the Federal Republic of Germany and the United States of America.

J. FACANHA  
For the Conselho Nacional  
de Pesquisas

*Date* 15 de outubro de 1973

JOHN E. NAUGLE  
For the National Aeronautics  
and Space Administration

*Date* 12 Oct. 73

OVE SCHLICHTING  
For the Bundesministerium für Forschung  
und Technologie

*Date* 16, Okt. 1973

[PORTUGUESE TEXT — TEXTE PORTUGAIS]

MEMORANDO DE ENTENDIMENTO ENTRE O CONSELHO NACIONAL DE PESQUISAS E — O  
MINISTÉRIO FEDERAL DE PESQUISA E TECNOLOGIA E A ADMINISTRAÇÃO NACIONAL  
DE AERONÁUTICA E ESPAÇO

O Conselho Nacional de Pesquisas (CNPq) do Brasil, o Ministério Federal de Pesquisa e Tecnologia (BMFT) da República Federal da Alemanha e a Administração Nacional de Aeronáutica e Espaço (NASA) dos Estados Unidos da América, reafirmam o seu propósito de levar a efeito projetos de pesquisa espacial de mútuo interesse para fins científicos pacíficos.

Assim, CNPq, BMFT e NASA concordam em pôr em execução um projeto de pesquisa com foguete de sondagem, na Barreira do Inferno, em Natal, Brasil, no outono de 1973, com a finalidade de estudar a dinâmica de nuvens artificiais de bário, de medir a desidade do campo elétrico de plasma e velocidade flutuante de ion, e a detecção de fluxos de protons energéticos e de eletrons, fluxos esses que possam estar associados com condições da propagação-F-equatorial.

Para executar este projeto, o CNPq, o BMFT e a NASA concordam em esforçar-se para o melhor desempenho possível das seguintes responsabilidades:

*Responsabilidades da NASA:*

1. Prover, preparar para lançamento, conforme mutuamente combinado e transportar para o local de lançamento dois sistemas de foguetes de sondagem « Javelin » e necessário equipamento de apoio ao projeto.
2. Prover, na carga útil, instrumentação selecionada de comum acordo para medidas do campo elétrico, densidade de plasma, medidas de fluxo de ion e eletron, de linhas de dispersão de helio, entregar instrumentos à Alemanha para integração da carga útil.

<sup>1</sup> *Yearbook of the International Law Commission, 1958, vol. II, p. 83-88.*