

## **AGREEMENT**

### **BETWEEN**

**The Centre National d'Etudes Spatiales**  
**Public institution of industrial and commercial nature**  
**Of which the head office is located at 2 place Maurice Quentin, 75039 PARIS Cedex 01,**  
**France**  
**Represented by its current Chief Executive Officer**  
Hereinafter referred to as 'the CNES',

**Universidad Tecnológica de Panamá (U.T.P.)**  
**Public Higher Education Institution**  
**Of which the head office is located at Victor Levi Sasso, Metropolitan Campus, Vía**  
**Universid Tecnológica de Panamá, Panama, República de Panama**  
**Represented by its current President**  
Hereinafter referred to as **U.T.P** or 'the host organisation'

### **AND**

**Fundación Tecnológica de Panamá (FTP)**  
**Non-profit entity duly registered in the Common Legal Entity Section of the Public Registry**  
**of Panama on Folio No. 11248 (M)**  
**Of which the head office is located at Vía Universidad Tecnológica, Plaza Centennial, Centro**  
**Plaza, local 6, Panama City, Panama**

**IT IS AGREED AS FOLLOWS:**



## **Preamble:**

SVOM (Space-based multiband astronomical Variable Objects Monitor) is a Chinese-French space mission dedicated to the detection and study of gamma-ray bursts and their use for astrophysics and cosmology. Gamma-ray bursts are considered as the brightest and the most energetic events in the Universe since the Big Bang.

After each detection and localization of a possible gamma-ray burst, SVOM satellite will transmit a warning message, via a network of ground stations, to the French Scientific Centre, which will then relay it to the Chinese Scientific Centre. The accurate positions will be transmitted to telescopes located in Mexico and in China for immediate observation.

Launched during the fall of 2023, the satellite will be injected into a circular orbit at 600 km altitude with an inclination of 30°. One of the main constraints of the mission is therefore to maintain a reliable and permanent contact with the satellite. For reasons of cost of the on-board and ground equipment, low-speed telemetry, simplicity and robustness over time, the solution of a dedicated VHF ground station network covering the satellite track will be implemented.

A deployment of around 60 stations will be carried out in the whole inter-tropical region. The objective is to have completed the deployment of all the ground stations before the end of 2022. Global coverage before the launch is essential in order to perform the first global system tests of the ground segment.

To establish the SVOM VHF Network, CNES is looking for Agencies, Universities, Research Centres and Institutions but also Private Organizations eager to be partners of this project by acting as hosting sites for SVOM VHF antennas.

## **Article 1: Purpose**

1.1 The purpose of this agreement is to define the respective obligations and liabilities of each party for the installation, operation and maintenance of a SVOM VHF antenna owned by the CNES and installed on infrastructures depending on **U.T.P.** and hereinafter referred to as 'the station'.



## CHAPTER 1: General provisions

### Article 2: Definitions

2.1 In this agreement, 'specific resources' refer to any resource that is the property of the CNES and deployed specifically within the framework of SVOM Network. These resources are listed and described in appendix 1 of this agreement.

2.2 In this agreement, 'support resources' means the resources available at **U.T.P. site** which contribute in any way to the installation, operation and maintenance of the station. These resources are listed and described in appendix 2 of this agreement.

### Article 3: Site

3.1 **U.T.P.** declares that it is the owner of the site, **U.T.P. site**, on which the VHF station is installed and therefore is able to guarantee maintenance throughout the term of this agreement.

### Article 4: Term of the agreement and Termination

4.1 This agreement takes effect from the date of signature by the last signatory and will last until end of 2026, which is the foreseen date for the end of SVOM Mission.

4.2 At the end of this period, this agreement will be automatically extended for a period of one (1) year with the same conditions and may be extended for further periods of the same duration; this will allow for covering of shifted launch dates or mission extensions.

4.3 Each party may terminate this agreement or its automatic extension by giving the other party a letter in recorded delivery with acknowledgement of receipt and respecting a minimum advance notice period of three (3) months before such termination takes effect.

4.4 In case of serious or repeated failures from a party to its contractual obligations set out herein, the diligent party could request from the defaulting party by giving notice by letter in recorded delivery, to meet its obligations within a reasonable time. If the defaulting party has not remedied to the breach alleged within a reasonable time, this agreement will be automatically terminated.

4.5 In case of termination by whichever means, the parties agree to consult one another in good faith in order to determine jointly the arrangements for ending the agreement and for the CNES to take back its equipment and for **U.T.P.** to have the antenna location returned to the state it was before the installation.

4.6 The premature termination of this agreement does not affect completion of the commitments and specific actions agreed by the parties up to and including the date of termination.



## Article 5: Correspondence

5.1 Any correspondence among the parties shall be in writing and can be sent by registered mail, electronic mail or delivered in person in English or French and addressed as follows:

### **CNES**

Centre National d'Etudes Spatiales  
Service DNO/TSA/IS, Bpi 1212  
18, avenue Edouard Belin  
31401 Toulouse Cedex 9  
France

E-mail: [svom.vhf-ntwk@cnes.fr](mailto:svom.vhf-ntwk@cnes.fr)

Fax: + 33 5 61 28 14 02

Tel: + 33 5 61 27 36 97

### **Universidad Tecnológica de Panamá (U.T.P.)**

Dirección Nacional de Ciencias Espaciales  
Campus Metropolitano Dr. Víctor Levi Sasso, Vía Universidad Tecnológica,  
0819-07289, El Dorado, Panamá  
República de Panamá  
E-mail: [dinace@utp.ac.pa](mailto:dinace@utp.ac.pa)  
Tel: +507 997-7323 Ext.1242

### **Fundación Tecnológica de Panamá (FTP)**

Vía Universidad Tecnológica, Plaza Centennial, Centro Plaza, local 6,  
Panamá, República de Panamá  
E-mail: [irisxiomara.quiel@utp.ac.pa](mailto:irisxiomara.quiel@utp.ac.pa)  
[fundaciontecnologicadepanama@utp.ac.pa](mailto:fundaciontecnologicadepanama@utp.ac.pa)  
Tel: +507 260-0616

## Article 6: Settlement of Differences

6.1 THE PARTIES agree to resolve any dispute, controversy or claim by mutual agreement, in good faith and in accordance with the spirit of solidarity cooperation that has encouraged them to sign this Agreement. If the dispute persists, for a period of time that exceeds three (3) months, it shall be referred to arbitration at the request of one of the Parties.

6.2 The court of arbitration shall be based in Paris. It shall be governed by the procedural rules laid down by the Rules of Conciliation and Arbitration of the International Chamber of Commerce in Paris.

6.3 French law shall apply.

## Article 7: Modification

7.1 Any modification of this agreement shall be subject to an amendment signed by all the parties and which shall form part hereof.



## **Article 8: Waiver of recourse**

8.1 Except in the case of gross negligence or wilful misconduct from **U.T.P.**, the CNES do hereby waive all recourse against **U.T.P.**, in the event of total or partial accidental destruction of the specific resources or personal injury to their personnel, contractors or subcontractors.

8.2 The CNES guarantees **U.T.P.** against any claims of third parties, that are in any manner based upon, arising out of, or attributable to the CNES's access to the Premises or any part thereto or in the activity of the CNES within the framework of the execution of this agreement.

8.3 Except in the case of gross negligence or wilful misconduct from the CNES, **U.T.P.** hereby waives all recourse against the CNES, their contractors or subcontractors, in the event of damage to its property or personal injury to its personnel.

8.4 In no event shall any of the parties have any liability to the other parties, their respective affiliates, subsidiaries, subcontractors, vendors or clients under or in connection with the agreement for any damages.

## **Article 9: Insurance**

9.1 Each party is responsible for dealing with insurance for the equipment it owns.

## **Article 10: Acknowledgement**

10.1 The parties agree to acknowledge the role and contribution of all parties in any publications and/or announcements relating to the stations and/or this agreement.

## **Article 11: Assignment**

11.1 This agreement may not be assigned in whole or in part by a party without the prior written consent of the other party and any assignment made without that consent is void and of no effect.

## **Article 12: Force majeure**

12.1 No party shall be liable to the other party for any failure or delay in the performance of the work caused by a force majeure case. Should a force majeure case affect the operation or completion of the work, the parties shall consult with each other and decide if any action is required.

## **Article 13: Legal relationship**

13.1 Nothing in this agreement creates the relationship of principal and agent, employer and employee, partnership or joint venture among the parties.

## **Article 14: Successors**

14.1 This agreement shall apply to the benefit of -and shall be binding upon- the parties and their respective representatives, successors and assigns.

## **Article 15: Entire agreement**

15.1 This agreement constitutes the entire agreement among the parties with respect to the subject matter of this agreement and supersedes all previous negotiations, communications and other agreements, whether written or oral, among the parties in respect of the same subject matter.





## Chapter 2: Provisions relating to installing the station

### Article 16.1: CNES contribution

The CNES:

- owns the specific resources;
- supplies the specific resources for the purpose outlined herein;
- organises and is responsible for transporting the specific resources as well as the customs formalities and authorisations;
- supplies **U.T.P.** with the technical interface specification of the specific resources;
- supplies **U.T.P.** with the technical documentation and tutorials to install specific resources;
- *in the case the host organisation is unwilling or unable to do it, installs the specific equipment and material for the station;*
- defines how the station is configured;
- can take part in installing the specific resources on site (hosting site access rules shall be respected);
- carries out the no-fail operating tests.

### Article 16.2: U.T.P contribution

The U.T.P:

- informs the CNES of the support resources at its disposal and supplies the characteristics thereof;
- makes available the support resources necessary for the installation;
- installs the specific equipment / material for the station and supplies an installation report (short description with the steps of the installation process, panoramic photos around the station and others U.T.P considerations);
- *In the case the host organisation is unwilling or unable to do it, this activity will be performed by CNES (cf. 10.1) and therefore U.T.P. authorises the CNES, their contractors and subcontractors to install the specific resources;*
- provides a local support to the CNES for customs formalities and authorisations.



## Chapter 3: Provisions relating to operating and maintaining the station

### Article 17.1: CNES contribution

The CNES:

- owns the data produced by the station;
- is responsible for maintenance operations on the specific resources;
- supplies **U.T.P.** with the technical documentation and tutorials to maintain specific resources;
- supervises the no-fail operation of the station by remote monitoring and reports any major defects or faults on the system to **U.T.P.**;
- conducts occasional on-site inspection visits;
- organises and is responsible for transporting the specific resources as well as the customs formalities and authorisations;
- is responsible for managing operational configuration of the station;
- appoints a CNES correspondent for **U.T.P.** and a back-up person.

### Article 17.2: U.T.P contribution

The **U.T.P.**:

- agrees to inform the CNES prior to any modification of the antenna environment that might degrade nominal operation of the station (reception of signals in particular);
- agrees to report any event on site that is likely to affect station operation (e.g. internet access loss or network failure);
- agrees to report any defects or faults observed on the station;
- may, on CNES explicit request, carry out maintenance procedures on the specific resources or any other activity of its competence;
- takes delivery of spare material necessary for maintenance and guarantees proper storage of this material;
- provides a local support to the CNES for customs formalities and authorisations;
- carries out procedures on site for changing the station in case of failure;
- facilitates access by representatives of CNES, or of their contractors and subcontractors, to the different component parts of the station;
- appoints a hosting organisation correspondent for the CNES and a back-up person.



## Chapter 4: Provisions related to the end of station operations

### Article 18: Dismantling

18.1 At the end of the operation or termination of the agreement, whichever comes first, the CNES is in charge of dismantling and removing all of the specific resources for the stations.

18.2 If the CNES requires return of the station, the host organisation will arrange transport back to CNES with all costs to be covered by CNES after prior acceptance by CNES of such proposed expenses.

18.3 Otherwise, **U.T.P.** is free to dispose of the station.



## Chapter 5: Financial provisions

### Article 19: Amount of the contributions from the host organisation in respect of the installation

19.1 The parties agree that the services carried out by **U.T.P.** in respect of the station's installation are carried out free of charge.

### Article 20: Amount of the contributions from the host organisation in respect of the operation

20.1 The parties agree that the services carried out by **U.T.P.** in respect of the station's operation and maintenance are carried out free of charge.

### Article 21 Reimbursement of expenses

21.1 The expenses incurred by the host organisation according to the article 17.2 item 4 (at CNES' explicit request) are subject to reimbursement on presentation of the corresponding original invoice.

21.2 The invoices must contain the CNES Purpose Order reference number and any relevant milestones description. If any of the requisite information for identification is missing, the invoices will be returned to the host organisation.

21.3 All the invoices have to be sent to CNES via the online 'Chorus' portal:

<https://chorus-pro.gouv.fr>

The provision of invoices online must be made with the SIRET code N° 77566591200033 (CNES Toulouse Site) and no further information is required for the submission of invoices Chorus Pro: no code service, nor a legal commitment number.

Should this not be technically possible, the invoice could be sent by post mail in a single original at the address mentioned below with reference to this Agreement.

CENTRE NATIONAL D'ETUDES SPATIALES  
Etablissement de Toulouse  
Direction des Services Comptables  
DSC/CFT Bpi 1612  
18, Avenue Edouard Belin  
31401 Toulouse CEDEX 9

21.4 A copy of the invoice has to be sent by post mail or Email to the CNES address mentioned at Article 5.

21.5 The CNES pays the sums due under this Agreement by transfer to account in the name of the Holder specified below.

Account holder: FUNDACIÓN TECNOLÓGICA DE PANAMÁ  
Bank name: BANCO NACIONAL DE PANAMA  
Bank address: Panamá, Casa Matriz, vía España, torre banconal.  
Bank Identifier Code (BIC/SWIFT): Napapapa  
Iban: 021000021  
Bank Account Number: 010000032630



Bank Inter: JP Morgan Chase N. Y.  
CHASUS33.

**U.T.P.** has a non-profit organization called Fundación Tecnológica de Panamá, hereinafter the FTP, constituted in accordance with the laws of the Republic of Panama, whose primary purpose is to "contribute to the development of the Universidad Tecnológica de Panamá by obtaining resources and facilities that promote excellence in education, research, and outreach activities.

21.6 Payments are made by the Director of Accounting Services, 18 avenue Edouard Belin 31401 TOULOUSE CEDEX 9.



In witness whereof, the duly empowered legal representative of each party signs three copies.



Dr. Omar O. Aizpurúa P.

**President**

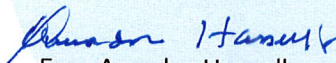
**Universidad Tecnológica de Panamá (UTP)**

Site: Panamá

Date: 28/09/2023



**RECTORÍA**



Eng. Amador Hassell

**President**

**Fundación Tecnológica de Panamá (FTP)**

Site: Panamá

Date: 28/09/2023

**Pour le Président du  
Centre National d'Études Spatiales et par délégation,**

Site: TOULOUSE

Date: 11.05.2023





APPENDIX 1  
LIST AND DESCRIPTION OF THE SPECIFIC EQUIPMENT SUPPLIED BY CNES FOR THE STATION

**Instrumentation:**

- 2 receive-only omnidirectional antennas (one LHCP, one RHCP working on the 137-138MHz VHF band (dedicated to Space Operations))
- A Software Defined Radio (SDR) receiver inside a weatherproof case located on support mast

**Mount:**

- Support mast

**Power supply**

- A Power Over Ethernet (PoE) Injector located nearby power supply local plug (UPS or NPS) and Internet access (local switch)

**Other equipment**

- Cabling:
  - Ethernet cable
  - Grounding cable



APPENDIX 2  
LIST AND DESCRIPTION OF PREMISES AND SUPPORT RESOURCES SUPPLIED BY HOSTING  
ORGANIZATION

**Station footprint:**

- Area occupied by the station

**Station housing:**

- Area where the Power Over Ethernet (PoE) Injector is located

**Power supply:**

- Provided in the station housing unit (UPS if possible, NPS if UPS not available)

**Network connection:**

- INTERNET access provided in the station housing unit
- Minimum rate 64 kbps
- Static IP address is required preferentially, otherwise DHCP has to be settled:
  - Hosting site has to configure the INTERNET connection and to give information (gateway-mask...) to CNES in order to configure the SVOM station on the site.
  - The connexion over INTERNET to communicate will be always initiated by the SVOM station from the hosting site to the CNES. The communication will append into a VPN (IPSEC TUNNEL) initiated by the station.