



# **Announcement of Opportunity Soliciting for Payloads onboard Chang'E-7 Mission**

## Schedule

<b>LoI Due</b>	<b>February 1<sup>st</sup>, 2023</b>
Primary Selection of the Projects	April 1 <sup>st</sup> , 2023
Proposals Due	June 1 <sup>st</sup> , 2023
Experts Review	July 1 <sup>st</sup> , 2023
Final Confirmation of the Project's Interface, Technical Specifications	September 1 <sup>st</sup> , 2023
Signature of Implementation Agreement	TBD

## Table of Contents

1. Background .....	1
2. Objectives of the AO .....	1
3. Scientific Objectives of CE-7 .....	1
4. The Mission's Opportunity .....	2
5. Enrollment and Selection .....	3
Appendix I: A Guide for the Letter of Intent Concerning Cooperation .....	5
Appendix II: A Guide for the Proposal .....	6
Appendix III: Contact Us .....	8

## 1. Background

Chang'E-7 (CE-7 for short) Mission, which belongs to the fourth phase of China's Lunar Exploration Program (CLEP), is slated for performing survey of surface environment, water ice and volatile in the lunar south pole region, collecting remote-sensing and in-situ scientific data, and laying the foundation for the construction of International Lunar Research Station in the future. CE-7 probe, consisting of an orbiter, a lander, a relay satellite, a rover and a flyby spacecraft, will be launched around 2026. The selected landing site is located in the South Pole-Aitken basin and its latitude is above 85 degrees south of the Moon.

## 2. Objectives of the AO

- To exploit the potential of CE-7 Mission, and deepen cooperation on the scientific exploration of the Moon.
- Based on the optimized design of CE-7 probe, to expand cooperation on the devices for science, technology and exploration.

## 3. Scientific Objectives of CE-7 Mission

- Investigation and study of lunar surface environment and water ice in its soil.
- High-precision investigation and study of morphology, composition and structure of the Moon.
- Investigation and study of interior structure, magnetic field and thermal characteristics of the Moon.
- General investigation and study of surface environment of the south pole of the Moon.

- Moon-based observation and study of the Earth's magnetotail and plasmasphere.

## 4.Opportunity

CE-7 Mission's opportunity of soliciting payload is open to international community. The payloads could either be devices which need support from the orbiter or the lander, or ones which operate independently. The payloads can be developed by one party, or by several parties.

### (1) Opportunity on the orbiter

- Maximum Size of the Single Device: 300mm × 200 mm×200mm.
- Operating Temperature Range: -60°C~+40°C.
- Total Mass Available: ≤15kg.
- Total Power Available: ≤ 100W(Earth-Moon Transfer phase), ≤50W(Orbiting the Moon phase).
- The orbiter, with a lifespan of 8 years, operates in a circular orbit with an altitude of 200km (Temporarily 200km × 15km orbit), inclination of 90° .
- Information (mass, power, interface, ground test requirements and others) of the onboard payloads will be specified when the cooperation agreement reaches.

### (2) Opportunity on the lander

- Maximum Size of the Single Device: 300mm×150 mm×150mm.
- Operating Temperature Range: -60 °C ~+80 °C (before the landing), -180 °C ~+80 °C ( after the landing). Thermal control

are available.

- Total Mass Available:  $\leq 10\text{kg}$ .
- Total Power Available:  $\leq 50\text{W}$ .
- The lander, with a lifespan of 8 years, will land on the highlands near the rim of the crater whose latitude is above  $85^\circ \text{ S}$ .
- Information (mass, power, interface, ground test requirements and others) of the onboard payloads will be specified when the cooperation agreement reaches.

## 5. Enrollment and Selection

After releasing of the AO, international proposers shall submit a Letter of Intent (LOI) Concerning Cooperation to both its domestic space agency or related organizations and China National Space Administration (CNSA), and the deadline for the submitting of the Letter of Intent (LoI) is **due on February 1<sup>st</sup>, 2023**.

By April 1<sup>st</sup>, 2023, primary selection will be carried out. CNSA will organize an expert review of the Letter of Intent (LoI), communicate with the proposer and confirm the cooperation in time; For international proposer, a joint team will be established to facilitate communication, and an intergovernmental Memorandum of Understanding (MOU) shall be signed at the proper time.

By June 1<sup>st</sup>, 2023, proposals shall be submitted to Lunar Exploration and Space Engineering Center, CNSA.

By July 1<sup>st</sup>, 2023, expert review of those proposals shall be completed.

By September 1<sup>st</sup>, 2023, confirmation of technical specifications (interface, ground test and others) of the proposed projects shall be

completed.

The implementation agreement shall be signed as appropriate.

## Appendix I: A Guide for the Letter of Intent Concerning Cooperation

After releasing of the AO, international proposer shall submit a Letter of Intent (LoI) Concerning Cooperation to both its domestic space agency or related organizations and CNSA.

The content of the Letter of Intent (LoI) shall include necessary information of the project: summary, name list of teammates, targeted opportunity, name of the project, description for the hosted payload which covers types of the function, size, technical specifications and expected scientific objectives.

The Letter of Intent (LoI) shall be with required content in Chinese or English in a PDF document.

The deadline for the submitting of the Letter of Intent (LoI) is **February 1<sup>st</sup>, 2023**.

## Appendix II :A Guide for the Proposal

Bidding team shall submit the proposal to Lunar Exploration and Space Engineering Center, CNSA.

The proposal shall be a bilingual (Chinese/English) version and sent through the Internet in a PDF document.

The deadline for the submitting of the proposal is June 1<sup>st</sup>, 2023.

The proposal shall include the following contents:

- 1) Basic Information of the Project  
(Refer to Appendix II Attachment)
- 2 ) Analysis of the Necessity
- 3 ) Analysis of the Status Quo
- 4 ) The Scientific Problems/Objectives
- 5 ) Program of the Development
  - 5.1 Research Proposal
  - 5.2 Technical Approaches
- 6 ) Main Technical Specifications
- 7 ) Expected Achievements
- 8 ) Time Schedule and Milestones
- 9) Information of the Executive Organization
- 10) Information of the Executive Team (principals, teammates, and mode of organization)



## Attachment for Appendix II

### Basic Information of the Project

Name of the Project			
Organization			
Nation			
Areas	A. Scientific Study		B. Technical Cooperation
	C. Payload Cooperation		D. Others
Principals	International:	Phone Number	International:
	China:		China:
Necessity			
Program Summary			
Main Technical Specifications			
Expected Achievements			
Cooperation Team	Organizations		Types of the Organization (Enterprise/Research Institute/ Colleges and Universities)
Date of Delivery of the Flight Model			
Total of the Teammates			
Financial Resources of the Project			

## Appendix III: Contact Us

China National Space Administration, CNSA

Please visit: [www.cnsa.gov.cn](http://www.cnsa.gov.cn)

Dr. GAN Yong, 86-10-88581246, [gany@cnsa.gov.cn](mailto:gany@cnsa.gov.cn)

Mr. YANG Ruihong, 86-10-88432162, [yangruihong@cnsa.gov.cn](mailto:yangruihong@cnsa.gov.cn)

Postcode: 100048