



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ

Υπουργείο Ψηφιακής Διακυβέρνησης
ΕΛΛΗΝΙΚΟ ΚΕΝΤΡΟ ΔΙΑΣΤΗΜΑΤΟΣ



HELLENIC REPUBLIC

Ministry of Digital Governance
HELLENIC SPACE CENTER

Hellenic Space Center

Brief Overview

HSC's purposes



The Hellenic Space Center is the National Space Agency, operating under the Ministry of Digital Governance

National Space Strategy formulation
Based on citizens' needs and Greek
space related capabilities

National Capacity building in Space-related thematic areas
both in industry as well as in academia.

Coordination of public and private sector
for the implementation of the Space Strategy

Provision of satellite services for various purposes
(defense and security, climate change,
natural disasters, scientific research)

Development of international collaborations
Participation in international committees

Multi-Mission HR/VHR Satellite Tasking



Floods



Earthquakes



Humanitarian crisis



Fires



Operational Support in Monitoring & Post-disaster needs

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Multi-Mission HR/VHR Satellite Tasking

MAXAR
TECHNOLOGIES



WORLDVIEW-4
30CM
[DECOMMISSIONED]
MAXAR



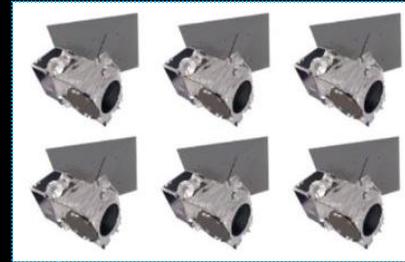
WORLDVIEW-3
30CM
MAXAR



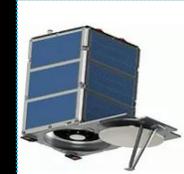
WORLDVIEW-2
46CM
MAXAR



GEOEYE-1
41CM
MAXAR

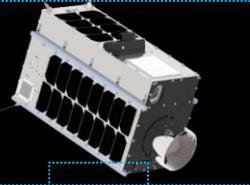


Legion



SKYSAT
50CM
PLANET

21 Sats



70cm
3 sats



70cm
3 sats

OneAtlas Data
IMAGERY

Multi-resolution and
Multi-sensors

Archive and Tasking

AIRBUS

Next integrations

- SPOT**
1,5m resolution
Optical
- Pléiades**
0,5m resolution
Optical
- Vision-1**
0,67m resolution
Optical
- TerraSAR-X**
0,25m to 40m
resolution
Radar
- Pléiades Neo**
0,3m resolution
Optical



National Connectivity strategy



The National Connectivity and Secure Communications strategy aims at:

Securing the operational connectivity of national users through the delivery of fit-for-purpose services responding to mapped needs.

Contributing to the overall Secure Connectivity program of Europe to support the EU vision for strategic autonomy (IRIS², GOVSATCOM).

Strengthening the Greek Space position by capitalizing on national assets (e.g. 39°E filings).



Ongoing Connectivity Activities



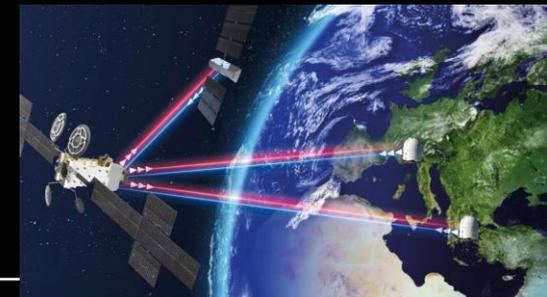
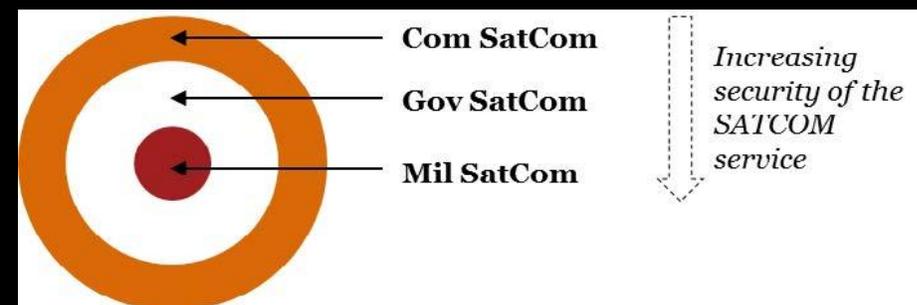
GOVSATCOM Sharing and Pooling (GR HellasSat capacity contribution)

GOVSATCOM-HUB hosting in Agios Ioannis-Athens region (one of the two European HUBs)

Setting-up of Greek Competent PRS and GOVSATCOM Authorities (CPA & CGA).

Launch and commissioning of 3 Cubesats.

Upgrade of 3 Observatories to Optical Ground Stations (for EAGLE-1 QKD tests with GR OGSs. EAGLE-1)



Greek National Space Programme (200 M.Euros, through ESA, RRF funded)



Funded by the European Union
Greece 2.0
HELENIC REPUBLIC
Ministry of Digital Governance
esa

GREEK CUBESATS IN-ORBIT VALIDATION PROJECTS

ESA PARTNERSHIP PROJECTS

EXPLORING NEW SPACE OPPORTUNITIES IN TELECOMMUNICATIONS AND EARTH OBSERVATIONS FOR GREEK CITIZENS

Funded by the European Union
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HELLENIC AEROSPACE INDUSTRY ASSEMBLY, INTEGRATION AND TESTING FACILITIES

ESA PARTNERSHIP PROJECTS

A NATIONAL ASSET FOR GREEK SPACE PROGRAMMES

Funded by the European Union
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esa

GREEK CONNECTIVITY OPTICAL GROUND STATIONS

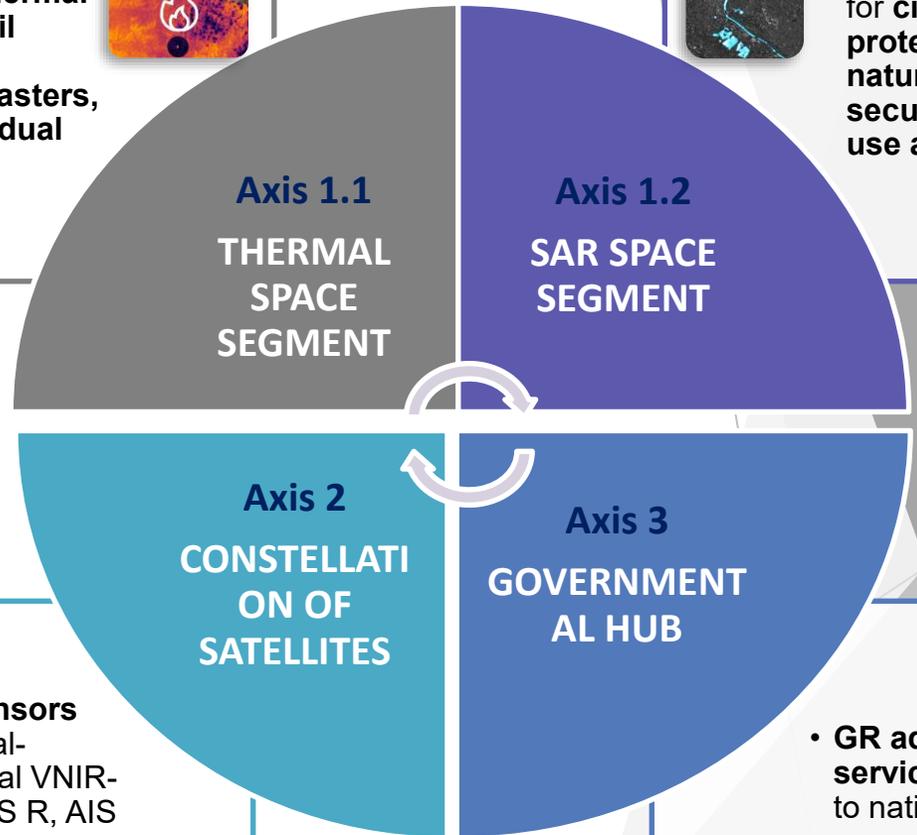
ESA PARTNERSHIP PROJECTS

AN EFFECTIVE OPTICAL GROUND STATION NETWORK IN GREECE FOR LASER AND QUANTUM COMMUNICATIONS



- High-res **Thermal** Sats for **civil protection, natural disasters, security & dual use apps**

- High-res **SAR** Sats for **civil protection, natural disasters, security & dual use apps**



- **Multiple sensors** (Multispectral-Hyperspectral VNIR-SWIR, GNSS R, AIS VDES, IoT)

- **GR added value-services** tailored to national needs.

In orbit by 2026

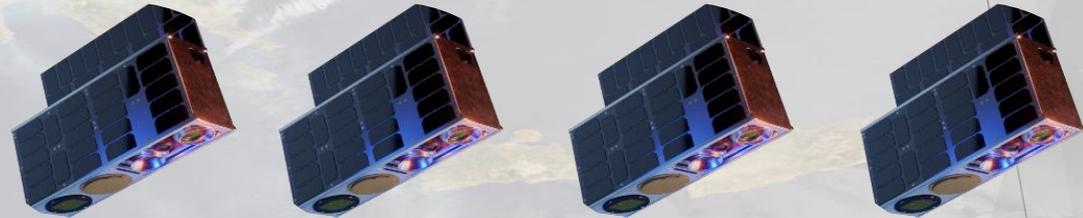
7 Optical smallsats



7 SmallSats (2 VHR and 5 HR satellites)

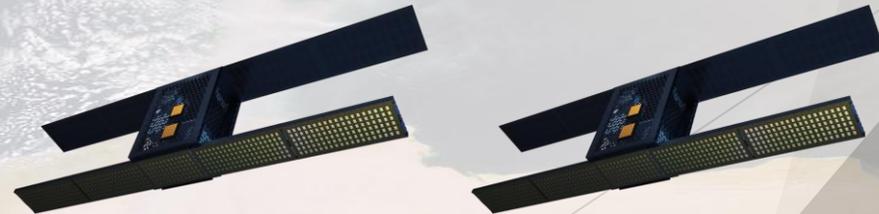
- 5xHR (2.5m VNIR, 13.7 m SWIR, 17.6 m HS VNIR)
- 2xVHR (0.5-1 m PAN, 4 m VNIR)

4 Thermal smallsats



4 Thermal Infrared (LWIR/MWIR) Sats, < 200 m GSD

2 SAR smallsats



2 SAR (X-Band) Sats, 0.5 – 15 m GSD



Governmental HUB by 2026



100% GR involvement



Raw Data

Upstream

Collect

PDGS



Mid-stream

Curate

Process

Analyze

Downstream

Services Product Analytics



End User

End User



Market

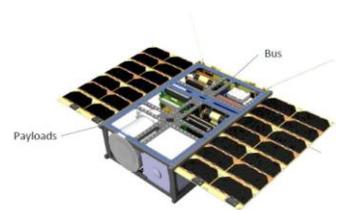
Greek Cubesat IoV

Design, Development, Launch and Operation of 11 satellites (standard CubeSat) from Industrial/Academic GR based Primes to build national capacity.

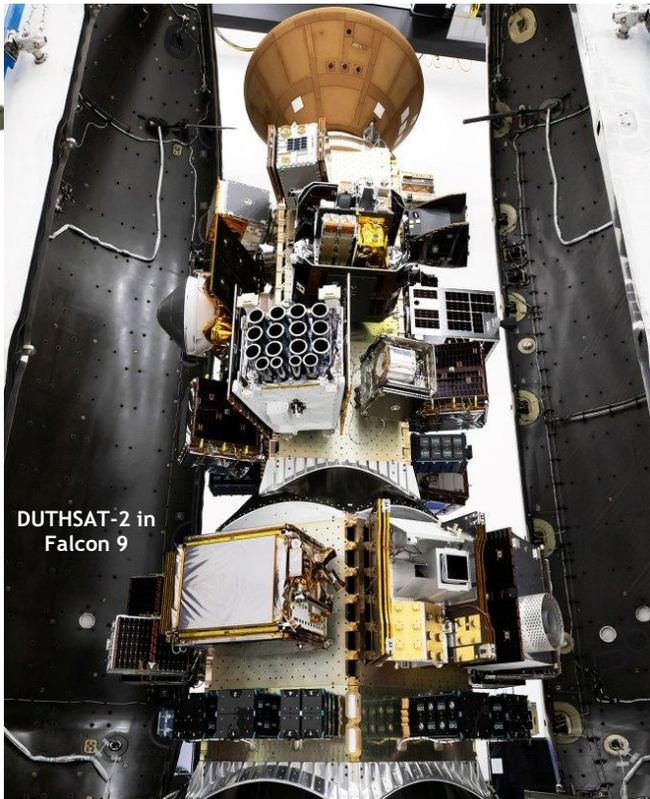
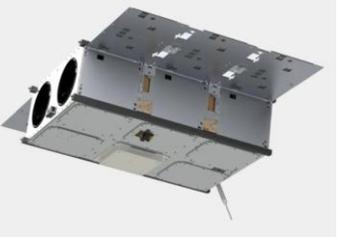
MICE-1



ERMIS



DUTHSAT-2



DUTHSAT-2 in Falcon 9



Funded by the European Union NextGenerationEU

Greece 2.0 NATIONAL RECOVERY AND RESILIENCE PLAN

HELLENIC REPUBLIC Ministry of Digital Governance

esa

GREEK CUBESATS IN-ORBIT VALIDATION PROJECTS

ESA PARTNERSHIP PROJECTS

EXPLORING NEW SPACE OPPORTUNITIES IN TELECOMMUNICATIONS AND EARTH OBSERVATIONS FOR GREEK CITIZENS

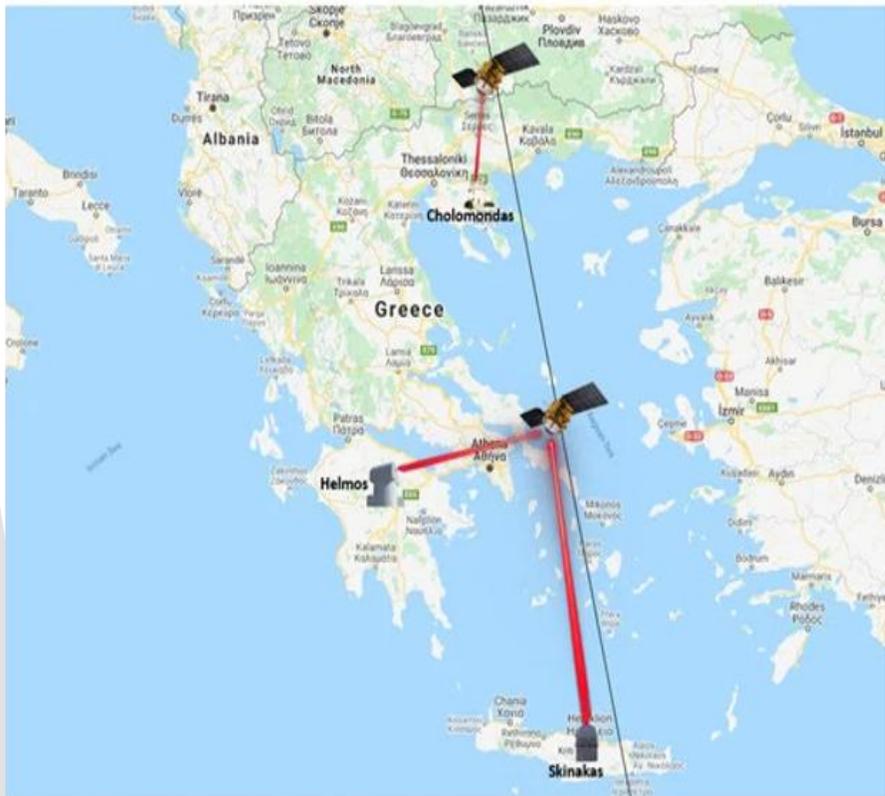
ΕΡΕΥΝΑ ΚΑΙ ΕΦΑΡΜΟΓΕΣ ΚΑΤΑΧΩΡΗΣΗΣ ΚΑΙ ΕΠΕΞΕΡΧΟΜΕΝΩΝ ΔΕΔΟΜΕΝΩΝ

Observatories to Optical Ground Stations



Upgrade of three Greek astronomical observatories into optical ground stations (OGS) for optical and quantum satellite communications.

1. Chelmos on the Northern Peloponnese.
2. Skinakas on the island of Crete near Heraklion.
3. Cholomondas near Thessaloniki.



GREEK CONNECTIVITY OPTICAL GROUND STATIONS

ESA PARTNERSHIP PROJECTS

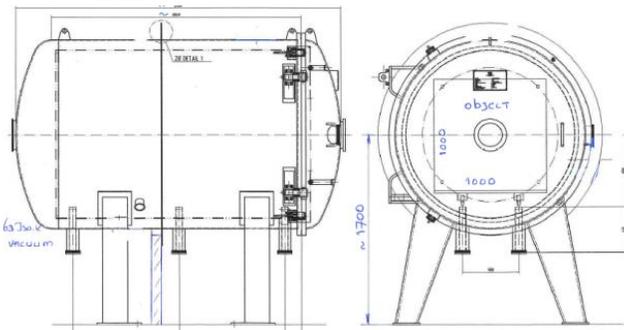
AN EFFECTIVE OPTICAL GROUND STATION NETWORK IN GREECE FOR LASER AND QUANTUM COMMUNICATIONS



Greek AIT Infrastructures in the Hellenic Aviation Industry (HAITF)



350 sq m "clean room" for testing microsatellites up to 500 kg mass



Hellenic Space Tracking Radar (HSTR)

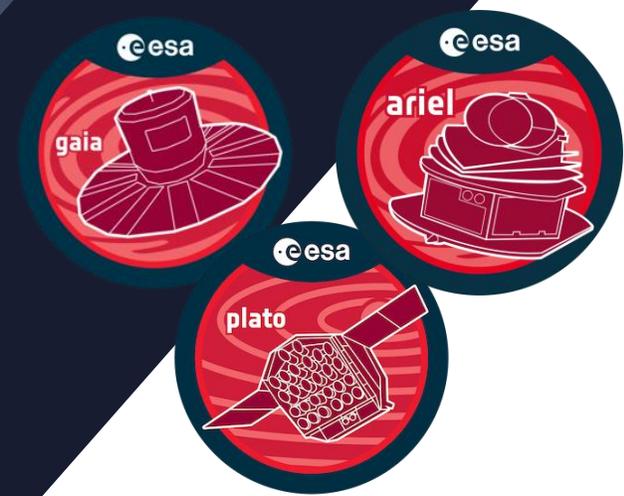


- Greece is building a 13 m antenna new radar to monitor satellites and space debris
- It will be able to monitor objects < 5cm at 1000km
- It will contribute significantly to the pan-European prediction of objects falling from the atmosphere and avoiding collisions of objects in orbit



Space Science @HSC: Contributions & Coordination

- Representation of Greece at ESA boards (Human & Robotic Exploration – HRE, Science Programme Committee – SPC)
- Advocacy of the Greek ecosystem’s scientific needs at ESA (science, human spaceflight & exploration), examples of Greek **companies** that are already contributing to ESA HRE projects in areas like robotics, data systems, and mission analysis, bringing national innovation into Europe’s exploration programme, are: HTR, EMTECH, TEMMA S.A, ISD and of **public research groups** are: CERTH, FORTH, Aristotle U of Thessaloniki, U of Athens and more.
- National strategy for the first Greek Astronaut and coordination of Greek scientific experiments in orbit
- HSC membership in the International Space Exploration Coordination Group (ISECG) Το ΕΛΚΕΔ μέλος του «International Space Exploration Coordination Group»
- Greece as a signatory of the Artemis Accords
- active role in international space science & technology



Capacity Building & Collaborations

- Support for Greek university students to participate in international workshops and summer schools
- Organization of international workshops in Greece, fostering Greek participation and attracting leading scientists in space and planetary sciences
- Collaborations with international space agencies & organizations
- Promotion of new scientific and technological opportunities



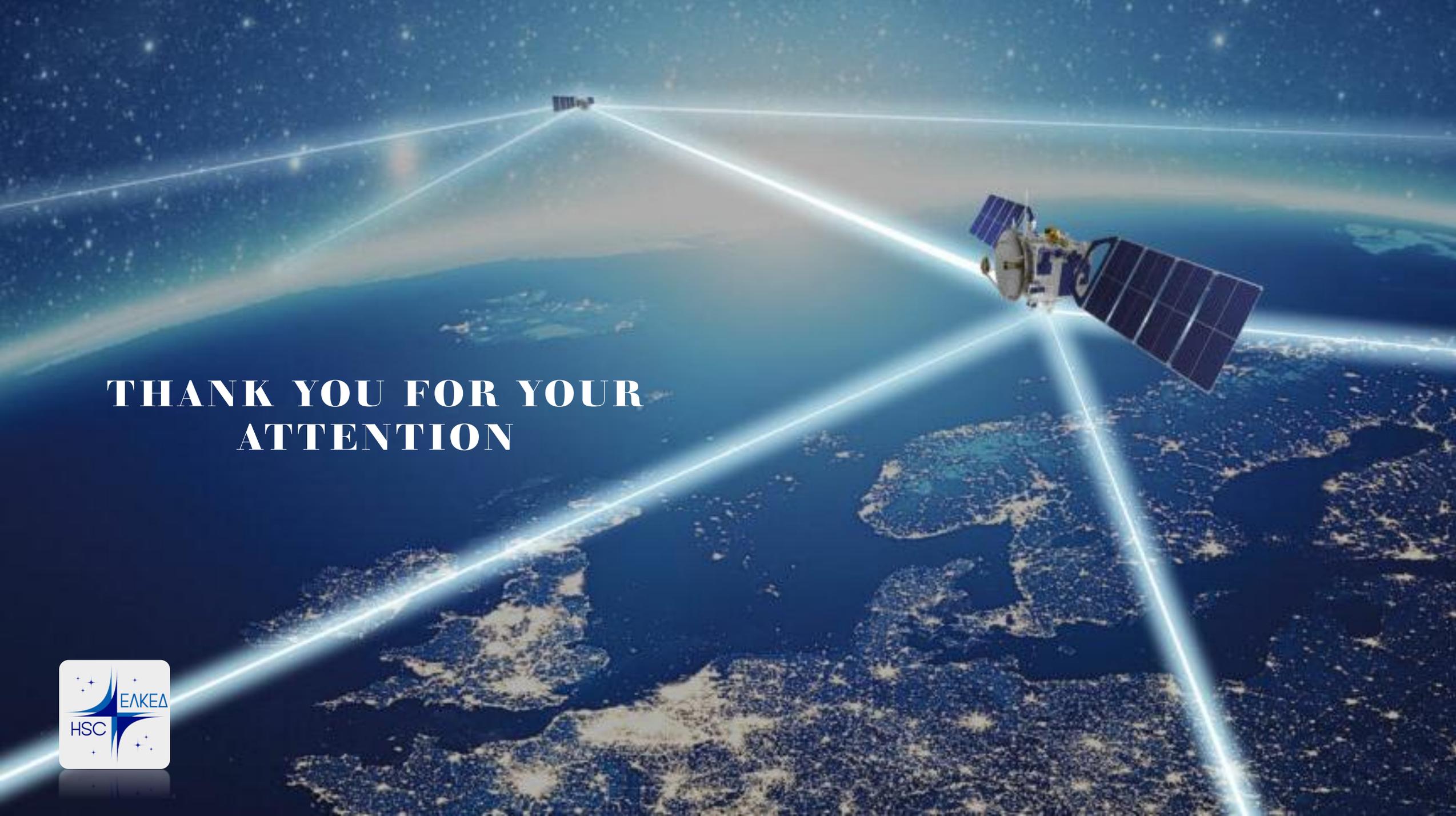
planetary Workshop

Terrestrial Analogues for Solar System Studies

3-6 June 2024, Milos, Greece
<https://sites.google.com/view/milosanaloguesworkshop/home>

We study Earth, to understand the Universe

EGU HELLINIC SPACE CENTER THE GREEK SPACE AGENCY EUR PLANET SOCIETY



**THANK YOU FOR YOUR
ATTENTION**

