



 esa

Evropská kosmická agentura (ESA)



- Mezinárodní vládní organizace
- Podpora spolupráce mezi členskými státy v oblasti kosmického výzkumu a technologií
- Vývoj kosmických aplikací za výlučně mírovými účely – vědecké aplikace, funkční systémy
- Založena 30. května 1975 v Paříži



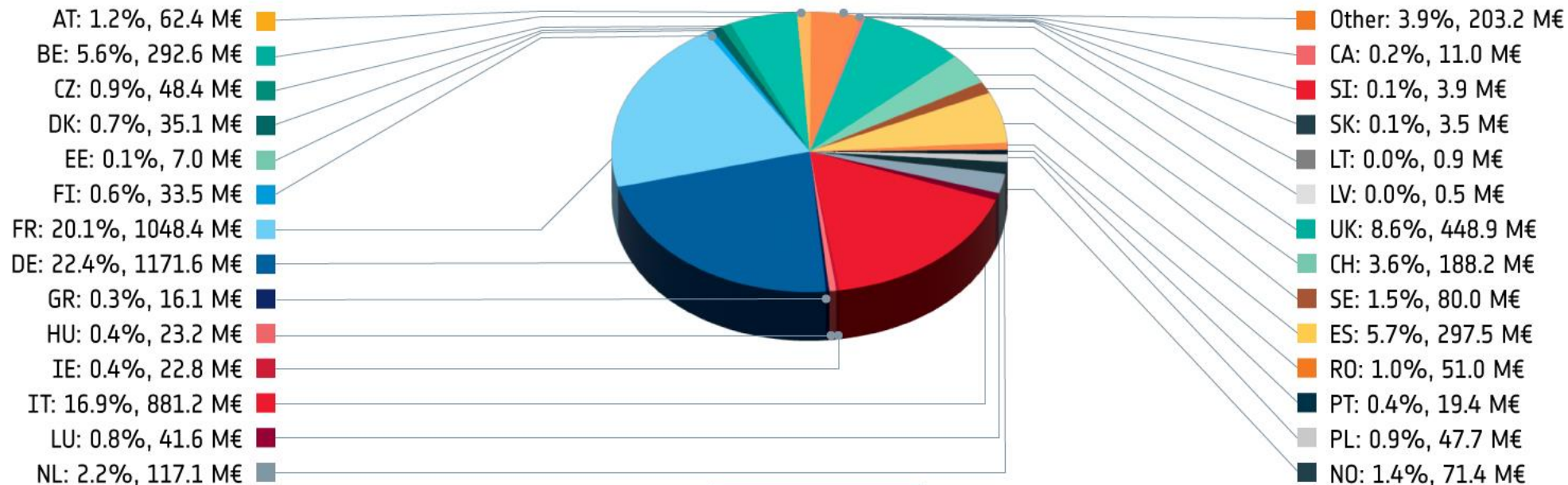
ESA

- 22 členských států
- 5000 zaměstnanců
- Hlavní sídlo v Paříži – ESA Headquarters
- 5 výzkumných středisek (NL, IT, DE, ES)
- Kosmodrom – Francouzská Guyana
- Rozpočet 2024 – 7,8 mld. €
 - Finanční příspěvky členských států
 - Státy se řídí národními kosmickými plány



BUDGET 2024

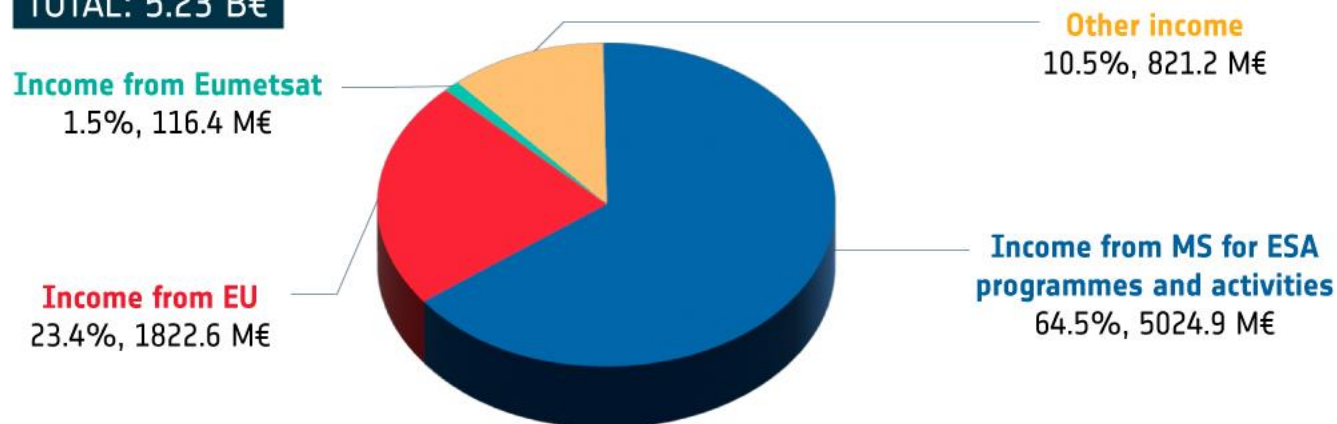
ESA Activities and Programmes



TOTAL: 5.23 B€

BUDGET 2024 BY FUNDING SOURCE

TOTAL: 7.79 B€ (+10% vs. 2023)





18.11. 2008

ÚČAST ČR V ESA

- Participace českých subjektů na více než 600 projektech
- Přímá spolupráce s ESA
 - Přes 60 firem + desítky subdodavatelů
 - 23 vědeckých ústavů a vysokých škol
- Účast na programech ESA
 - **Povinné:** Provoz a rozvoj kosmodromu, Vývoj technologií s nízkou TRL, Vědecké programy
 - **Volitelné:** Pozorování Země, Družicová navigace, Družicové telekomunikace, Nosné rakety
 - **Rámcové projekty:** Rozvoj průmyslu, univerzitních a výzkumných center, Výcvikové rámce



A central graphic featuring a globe of Earth surrounded by a circular collage of images: agricultural fields, a port with shipping containers, a person running, and a coastal landscape. Overlaid on the collage are icons for a bar chart, lungs, and a running figure. A blue banner with white text is superimposed across the center.

→ YOUR BUSINESS POWERED BY SPACE

Doing business with ESA

- esa-star Publication
- Open Space Innovation Platform (OSIP)
- Business Incubation Center (BIC)





esa-star

Welcome to the esa-star Publication System

All

News

- 932 - Industry Day for ESTRACK NOC service
- 931 - Industry Day - External Cloud services for the Earth Observatio...
- 929 - ESA EO Data Management and Operations Framework (EOF) Wo...
- 924 - Presentation of new activities at the Spaceport: 16-17 April 2024

All News >

ESA Tender Actions

- 1000033837 - EVAPORATION MODELLING FOR LONG LIFE MECHANI...
- 1000036684 - HIGH LINEARITY LOW NOISE AMPLIFIER FOR V-BAN...
- 1000036794 - HANDOVER, DATA ROUTING AND RADIO RESOURCE M...
- 1000037063 - AUTONOMOUS LASER SAFETY SYSTEM FOR OPTICAL F...

All ESA Tender Actions >

Non ESA Tender Actions

- 24.0GAL.002 - EU Flat Flexible Harness Phase 1 & 2
- 24.THFR.003 - ExoMars - Rosalind Franklin Mission (EXM-RFM) BSS V...
- 24.BAES.011 - TRUTHS PHASE B2 - OPTICS SCRAMBLER
- 24.BAES.010 - TRUTHS PHASE B2 - OPTICS SLIT

All Non ESA Tender Actions >

ESA Interacts

- Interact_42 - Update 2 - Information for potential Sub-Contractors - ...
- Interact_34 - DYNAMIC PURCHASING SYSTEM (DPS) FOR COPERNIC...
- Interact_31 - DYNAMIC PURCHASING SYSTEM (DPS) FOR COPERNIC...
- Interact_20 - DYNAMIC PURCHASING SYSTEM (DPS) FOR COPERNIC...

All ESA Interacts >

▼ Open Competition

Intended

Issued

All by Status

► Call for Proposals

Tender Actions - Open Competition

► Filters



Results: 1020 Items Found

Last Update On

Z-A

10

« « 1 2 3 4 5 ... 102 » »

1-12305

1000040194

Intended

POC2 PREPARATORY PHASE

Preparatory Phase studies of In-Space transportation PoC-2 on long duration cryogenic propellant storage and in-orbit refilling. Conceptual design of the PoC-2 Demonstrator mission, with a focus on the enabling building-blocks:-Functional chains for long duration cryogenic propellant storage and conditioning in microgravity, -Cryogenic fluid coupling interfaces,-Flow control elements for active fluid transfer

Open Competition

Announcement Date: 22/03/2024

1-12108

1000039279

Issued

ESA-DTE-B-01-LEAD DTCS DEVELOPMENT ACTIONS AND ESA-DTE-B-02 EARLY DTCS DEVELOPMENT ACTIONS

Latest advances in EO science and research activities are opening the door to the development of a wide variety of novel EO products, innovative EO multi-variate datasets and scientific results that have significantly enhanced our capacity to observe, understand and characterise our planet and its complex and inter-connected processes with remarkable accuracies and resolutions in space and time. Those developments together with new advances in sectorial modelling, computing capabilities, AI and digital technologies offer excellent building blocks to realise novel EO-based Digital Twin Components (EO DTCS) that may contribute and maximise the impact of EO satellite technology in the design and implementation of future Digital Twins ecosystems. With This ITT ESA aims at developing and demonstrating, up to a ...

Open Competition

Announcement Date: 12/12/2023

Open Date: 05/02/2024

Closing Date: 15/04/2024

1-11303

1000034324

Awarded

NEW EARTH OBSERVATION MISSION IDEAS (NEOMI) - EXPRO+

NEOMI is a new element addressing the scientific preparation of new mission ideas at a very early stage before entering Phase 0. Its primary goals are to scientifically mature novel and early mission ideas, and to prepare scientists to get involved in the definition, design, and implementation of future space missions. Within the framework of this activity up to three individual contracts (of 250 kEuro each) are awarded to develop ideas for an EO mission and to mature the science. The scientific developments comprise: Identifying a scientific problem or a societal challenge that can be addressed by a satellite mission, establishing a scientific objective for the future space mission, drafting a specific mission objective and outlining the related observational requirements. Finally, a measurement concept shall be ...

Open Competition

Announcement Date: 18/03/2022

Open Date: 23/05/2022

Closing Date: 29/07/2022

Results: 9 Items Found

SORT BY

Z-A

10

1-11182

EVAPORATION MODELLING FOR LONG LIFE MECHANISMS USED IN GEOSTATIONARY SATELLITES (ARTES AT 4E.087)

ESA Tender Action

Intended

ISSUE 2

The objective of the activity is to develop and correlate an evaporation software model for long life (15 years and above) mechanisms (e.g. solar array drive mechanism, reaction wheels, electric propulsion and antenna pointing mechanisms) as needed for geostationary spacecraft. The developed evaporation software model will be validated through testing of mechanism test-vehicles. Targeted Improvements:- increase the accuracy of the current analysis by at least 30%- improved mechanism lifetime by at least 30%- reduced excessive lubricant use and evaporation by at least 20%. Description: Lubrication losses occur in space mechanisms over time due to evaporation under environmental thermal vacuum conditions. Lubrication efficiency of long-life mechanisms for telecommunication satellites is of paramount importance to maintain functional performances at the expected level until end-of-life. Current modelling tools in use by industry (e.g. CABARET) use ...

Open Competition

Announcement Date: 28/03/2024



1-12307

HANDOVER ENGINE AND TESTBED FOR SATELLITE-BASED 5G NON-TERRESTRIAL NETWORKS (NTNS) (ARTES 4.0 SPL 5G/6G 3F.015)

ESA Tender Action

Intended

The objective of this activity is to develop a machine learning (ML) engine that optimises handover between two different 5G networks, where at least one of them is a satellite-based non-terrestrial network (NTN). The activity will also provide the testbed to assess the handover key performance indicators in a laboratory environment. Targeted Improvements: Identify and avoid higher risk handovers improving thus the handover success rate to reach at least 95%. Description: The coverage extension promised by the integration of terrestrial and non-terrestrial 5G networks comes with technical challenges. Ubiquitous network access requires 5G user equipment capable to connect to both terrestrial and non-terrestrial networks directly. Handheld devices with omni-directional antennas operating in lower frequency bands is expected to support dual connectivity. Such devices will need to handover 5G connections between terrestrial and non-terrestrial networks. ...

Open Competition

Announcement Date: 22/03/2024



1-12177

LARGE ROTATION RANGE, FLEXIBLE PIVOT WITH HOLLOW INNER SHAFT (ARTES 4.0 SL SPL 5B.221) - EXPRO PLUS (ON REQUEST)

ESA Tender Action

Intended

The objective of the activity is to develop a breadboard of a flexible pivot with large range of rotation angle (goal 90 degrees), which features a hollow inner shaft to route an optical beam for optical communications or cables/waveguide in other applications. Targeted Improvements: One order of magnitude improvement in operating lifetime of coarse pointing mechanisms in optical communication terminals compared to ball bearing mechanisms, and also applicable to antenna pointing mechanisms to route cables and waveguides. Description: Coarse pointing mechanisms for optical communication terminals as well as conventional antenna pointing mechanisms would benefit from a longer life and lower torque noise by replacing ball bearings by flexible pivots. However, existing flexible pivots do not allow for routing of e.g. optical beams or waveguides through them. This activity aims to develop a large-range flexible pivot (approximately 90-degree rotation range) with a ...

Open Competition

Announcement Date: 09/02/2024



1-12162

DUST RESISTANT ROTARY ACTUATOR TECHNOLOGY - EXPRO PLUS

ESA Tender Action

Intended

Actuator design is intrinsically sensitive to particle contamination due to harsh and dusty environment, due to the presence of tribological surfaces (bearings, gears) and low clearances between moving parts (e.g. motors airgaps). Specific technologies exist which could prevent or limit the entrance of dust inside the actuator housing, however their use is not fully proven for space applications. In view of future exploration mission, and particularly for lunar surface, a consolidation of such technology is required. The activity aims at consolidating existing technologies for mechanisms actuator suitable to be used in dusty environment, in view of future exploration missions. Mechanisms and actuators in particular suffer from particulate contamination due to presence of dust in the surrounding of their operational environment. In particular, tribological surfaces like those in the ball bearings or in the gears, as well as small clearances between moving parts, like in ...

Open Competition

Announcement Date: 07/02/2024



- My Favourite Tenders
- My Views
- All Active ESA Tender Actions
- Open Competition
 - Intended 53 new 21 updated
 - Issued 2 new 31 updated
 - All by Status 55 new ...
- Restricted Competition
- Direct Negotiation
- Call for Proposals
- Call for Proposals Open to Preselected Entities

COMPACT TRIBOLOGY-FREE POINTING MECHANISM (ARTES AT 4E.094)

Tender Action Number: 1-12267 – Activity Number: 1000040080

Intended	Issued	Tender Opening in Progress	Evaluation 1 – Tender Evaluation Board	Evaluation 2 – Recommendation & Endorsement	Awarded
----------	--------	----------------------------	--	---	---------

Clarification Request Deadline	Closing Date Extension Request Deadline	Announcement Date	Last Update On	Update Reason
N/A	N/A	08/03/2024	08/03/2024 14:22 CET	New Tender Action

The objective of the activity is to design, manufacture and test a tribology-free mechanism breadboard for both platform and payload pointing applications on telecom satellites. The lifetime of the developed mechanism shall be assessed, and endurance testing shall be carried out. Targeted Improvements: Enabling a European source of compact, tribology-free pointing mechanisms with no backlash or friction hysteresis effects. Description: Today pointing mechanisms are used for antenna/reflector pointing, intersatellite links(RF and optical) and directional propulsion thrusters. There are significant challenges in the design of these mechanisms including high number of actuators, stringent performance requirements over temperature, high reliability and accuracy requirements in particular for telecom constellation applications. Advance manufacturing techniques (e.g. additive manufacturing) present new opportunities to develop frictionless mechanisms. Recent studies on the development of compliant mechanisms have shown feasibility of tribology-free type of mechanisms with outstanding reliability... [Read more](#)

Directorate	Dir. of Connectivity Secure Comm.
Establishment	ESTEC
Open Date	N/A
Closing Date	N/A
ECOS Required	No
Classified	No
Price Range	> 500 KEURO

Responsible	David Gomez Otero
Initiating Service	CSC-ST5
IP Measure	C2
Prog. Reference	E/0534-01I - CC - Adv Tech 4.0.2

Tender Type	Open Competition
Open To Tenderers From	AT+BE+CA+CZ+DE+DK+GR+ES+FI+FR+GB+HU+CH+IE+IT+LU+NL+NO+PL+PT+RO+SE
Technology Keywords	15-A-I-Actuator Technologies
Products Keywords	2-D-1.1-b-Motors: Brushed DC, Brushless DC, Piezo-electric, Stepper, Voice Coil,...

Tender Action Package (0) [Clarifications \(0\)](#)

No data available

🔍 Find Business Partners in esa-match
🔔 Other Interested Entities
👉 Express Interest

- My Favourite Tenders
- My Views
- All Active ESA Tender Actions
- Open Competition
 - Intended 53 new 21 updated
 - Issued 2 new 31 updated
 - All by Status 55 new ...
- Restricted Competition
- Direct Negotiation
- Call for Proposals
- Call for Proposals Open to Preselected Entities

Clarification Request Deadline	Closing Date Extension Request Deadline	Announcement Date	Last Update On	Update Reason
N/A	N/A	28/03/2024	28/03/2024 07:52 CET	New Tender Action

The objective of the activity is to develop and correlate an evaporation software model for long life (15 years and above) mechanisms (e.g. solar array drive mechanism, reaction wheels, electric propulsion and antenna pointing mechanisms) as needed for geostationary spacecraft. The developed evaporation software model will be validated through testing of mechanism test-vehicles. Targeted Improvements:- increase the accuracy of the current analysis by at least 30%- improved mechanism lifetime by at least 30%- reduced excessive lubricant use and evaporation by at least 20%. Description: Lubrication losses occur in space mechanisms over time due to evaporation under environmental thermal vacuum conditions. Lubrication efficiency of long-life mechanisms for telecommunication satellites is of paramount importance to maintain functional performances at the expected level until end-of-life. Current modelling tools in use by industry (e.g. CABARET) use basic parameters for modelling lubricant loss for ball bearing assemblies. However, these models, used to estimate the total amount of lubricant... Read more

Express Interest

For which role do you want to express interest?

- Prime Contractor
- Sub-Contractor
- Either

Do you wish to submit your expression of interest publicly? ?

YES

Additional Comments (optional):

Type max 200 characters

Last Update On: 31/03/2024 16:12 CET
Last Update By: Josef Pouzar

- Save
- Withdraw

Products Keywords

- 24-C-II-Control of Molecular Contamination
- 24-E-II-Modelling of Thermomechanical Processes of Materials including Lifetime Predictions
- 2-C-2-Non-metallic
- 2-D-1-a-Deployment (SADM, SADE,...)
- 2-D-1.1.1-a-Lubricant (dry, fluid), etc

- Find Business Partners in esa-match
- Other Interested Entities
- Express Interest

- My Favourite Tenders
- My Views
- All Active ESA Tender Actions
- Open Competition
 - Intended 53 new 21 updated
 - Issued 2 new 31 updated
 - All by Status 55 new ...
- Restricted Competition
- Direct Negotiation
- Call for Proposals
- Call for Proposals Open to Preselected Entities

Clarification Request Deadline	Closing Date Extension Request Deadline	Announcement Date	Last Update On	Update Reason
N/A	N/A	28/03/2024	28/03/2024 07:52 CET	New Tender Action

Other Interested Entities

Preferred Role (Prime/Subco)	Entity Code	Business Unit Code	Legal Entity Name	BU Name	Additional Comments	Entity Type	SME Status	Address	Entity Contact Point
Either	1000035867	8000041312	Jacobs U.K. Limited			Company	No	Cottons Centre, Cottons Lane - NA SE1 2QG - London GB-United Kingdom	
Prime Contractor	1000000675	8000014284	ESR TECHNOLOGY LTD			Company	Yes	Cavendish Place, Birchwood Park - 202 WA3 6WU - GB- WARRINGTON WA3 6WU GB-United Kingdom	
Prime Contractor	1000034283	8000039336	yoursciencebc LTD			Company	No	Lynton House Station Approach - 1 GU227PY - Woking GB-United Kingdom	
Prime Contractor	1000010454	8000010324	BRNO UNIVERSITY OF TECHNOLOGY	BRNO - FACULTY OF MECHANICAL ENGINEERING (FME)		Research organization	No	Technická - 2896/2 616 69 - Brno CZ-Czech Republic	

2-D-1-a-Deployment (SADM, SADE,...)
2-D-1.1.1-a-Lubricant (dry, fluid), etc

Find Business Partners in esa-match

Other Interested Entities

Express Interest

esa-match

Welcome to the European Space Agency's industry matchmaking portal

	Company Profiles	15152
	SME Profiles	2605
	Products	537
	Certifications, Labels & Patents	180
	Skills	93716
	Facilities	213

11 April 2024	<ul style="list-style-type: none"> Webinar with ESA's Industrial Ombudsman online Industry Day for ESTRACK NOC service ESA/ESOC + o... <p>Show More</p>
16 April 2024	<ul style="list-style-type: none"> Compliant Industrial Rates for ESA Projects online
18 April 2024	<ul style="list-style-type: none"> Compliant PSS-A Forms for ESA Projects online Industry Day - External Cloud services for the Earth Observation Flight... ESA/ESOC + o... <p>Show More</p>
06 May 2024	<ul style="list-style-type: none"> PECS / AM / NMS Education Conference 2024 ESA/ESAC



Space Industry Directory



My Entity Profile



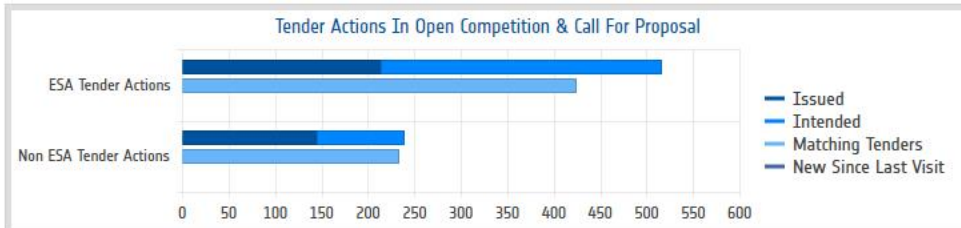
Opportunities



Search Area



B2B



Type text to search... 

Filters: 

 Reset  Apply



My Favourite Entities

Country(ies) 





Select all  Clear selection

- AT-Austria
- BE-Belgium
- BG-Bulgaria
- [Show more](#)

Entity(ies) 

- SME 
- LSI 
















Entity Labels

- ESA Technology Brokers 
- ESA Ambassadors 
- ESA BIC Incubatees And Alumni 
- Supported By ESA ScaleUp 

Facility Type

Select all  Clear selection

- Test facility/Laboratory
- Cleanroom
- Manufacturing facility

	<p>TEVEL TECHNIEK B.V. (ENDUTEQ)</p>	<p>Entity Code: 1000032748 Business Unit Code: 8000037466 SME Status: No LSI: No Nationality: NL-Netherlands   Entity Website: https://www.enduteq.com Mollevite 6931 KG, WESTERVOORT NL-Netherlands</p>
	<p>1ST1 Technology Group Limited</p> <p>Satellite Applications, Drones, IoT, AI, Blockchain and Quantum Technologies.Innovation Sectors :Blue Economy Smart Cities</p>	<p>Entity Code: 1000043786 Business Unit Code: 8000050892 SME Status: No LSI: No Nationality: GB-United Kingdom   Entity Website: <i>Not Available</i> Unit 106812 W1A 6US, London GB-United Kingdom</p>
	<p>UNIVERSITY OF TARTU - Tartu Observatory</p>	<p>Entity Code: 1000013774 Business Unit Code: 8000051777 SME Status: No LSI: No Nationality: EE-Estonia   Legal Entity Code: 1000013774 Legal Entity Name: UNIVERSITY OF TARTU - UT Entity Website: http://kosmos.ut.ee Observatooriumi 1 61602, Tõravere EE-Estonia</p>
	<p>Future Strategic Solutions Ltd</p>	<p>Entity Code: 1000044574 Business Unit Code: 8000051820 SME Status: No LSI: No Nationality: GB-United Kingdom   Entity Website: <i>Not Available</i> Basing Hill NW11 8TH , London GB-United Kingdom</p>
	<p>Satraka Ltd</p>	<p>Entity Code: 1000041893 Business Unit Code: 8000048611 SME Status: Yes LSI: No Nationality: GB-United Kingdom   Entity Website: http://www.Satraka.com Rutherford Avoletton Laboratory, Harwell Campus</p>

- My Favourite Tenders
- My Views
- All Active ESA Tender Actions
- Open Competition
 - Intended 53 new 21 updated
 - Issued 2 new 31 updated
 - All by Status 55 new ...
- Restricted Competition
- Direct Negotiation
- Call for Proposals
- Call for Proposals Open to Preselected Entities

COARSE POINTING MECHANISM (CPM) WITH 250MM APERTURE DIAMETER (ARTES 4.0 SL SPL 5B.222) (ON-REQUEST)

Tender Action Number: 1-12238 – Activity Number: 1000038607

Intended	Issued	Tender Opening in Progress	Evaluation 1 – Tender Evaluation Board	Evaluation 2 – Recommendation & Endorsement	Awarded				
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Clarification Request Deadline</th> <th style="width: 50%;">Closing Date Extension Request Deadline</th> </tr> </thead> <tbody> <tr> <td>30/05/2024 13:00 CET</td> <td>30/05/2024 13:00 CET</td> </tr> </tbody> </table>		Clarification Request Deadline	Closing Date Extension Request Deadline	30/05/2024 13:00 CET	30/05/2024 13:00 CET	Announcement Date	Last Update On	Update Reason	
Clarification Request Deadline	Closing Date Extension Request Deadline								
30/05/2024 13:00 CET	30/05/2024 13:00 CET								
		08/03/2024	27/03/2024 11:52 CET	Tender Action Issued					

The objective of the activity is to design, develop and test an engineering model (EM) of a Coarse Pointing Mechanism (CPM) featuring 250 mm free optical aperture diameter and pointing/tracking capabilities compatible with GEO-LEO, GEO-MEO, GEO-GEO, GEO-Moon, and GEO-ground optical links. Targeted Improvements: Increasing the apertures of space based optical communication systems from 135mm(EDRS) to 250mm improves the link budget by >10dB (i.e. 10x data rate). Flexible pointing capability allows re-using the same mechanism for different link scenarios (GEO-LEO, GEO-MEO, GEO-GEO and GEO-ground) Description: Laser Communication Terminals (LCT) for medium/long distance Optical inter-satellite links (OISL) and optical ground-space links (OSGL) are currently targeting data rates up to 10 Gbps with apertures up to 135 mm. There is an ongoing telescope development by ADS (France) called TOP-M for optical communication terminals with 250 mm aperture, but its coarse pointing mechanism is only compatible with GEO to GND and for GEO to LEO optical links. The... [Read more](#)

Directorate	
Establishment	ESTEC
Open Date	27/03/2024 11:49 CET
Closing Date	13/06/2024 13:00 CET
ECOS Required	No
Classified	No
Price Range	> 500 KEURO

Authorised Contact Person	Adriana Lucas
Initiating Service	CSC-SQ
IP Measure	N/A
Prog. Reference	E/0534-05A - OP-Other Act. Prod.

Tender Type	Open Competition
Open To Tenderers From	AT+BE+CA+CZ+DE+EE+GR+ES+FI+FR+GB+HU+CH+IE+IT+LT+LU+NL+PL+PT+RO+SE
Technology Keywords	17-D-Optical Communications Technologies
Products Keywords	2-G-1.1-g-Tracking,(fine) Pointing and Stabilization mechanisms

Tender Action Package (4)	Clarifications (0)
Name	Type
<input type="checkbox"/> 12238eli.pdf	Letter of Invitation
<input type="checkbox"/> 12238...	Statement of Work

My Favourite Tenders

My Views

All Active ESA Tender Actions

Open Competition

Intended 53 new 21 updated

Issued 2 new 31 updated

All by Status 55 new ...

Restricted Competition

Direct Negotiation

Call for Proposals

Call for Proposals Open to Preselected Entities

30/05/2024 13:00 CET

30/05/2024 13:00 CET

08/03/2024

27/03/2024 11:52 CET

Tender Action Issued

The objective of the activity is to design, develop and test an engineering model (EM) of a Coarse Pointing Mechanism (CPM) featuring 250 mm free optical aperture diameter and pointing/tracking capabilities compatible with GEO-LEO, GEO-MEO, GEO-GEO, GEO-Moon, and GEO-ground optical links. Targeted Improvements: Increasing the apertures of space based optical communication systems from 135mm (EDRS) to 250mm improves the link budget by >10dB (i.e. 10x data rate). Flexible pointing capability allows re-using the same mechanism for different link scenarios (GEO-LEO, GEO-MEO, GEO-GEO and GEO-ground). Description: Laser Communication Terminals (LCT) for medium/long distance Optical inter-satellite links (OISL) and optical ground-space links (OSGL) are currently targeting data rates up to 10 Gbps with apertures up to 135 mm. There is an ongoing telescope development by ADS (France) called TOP-M for optical communication terminals with 250 mm aperture, but its coarse pointing mechanism is only compatible with GEO to GND and for GEO to LEO optical links. The... [Read more](#)

Directorate	
Establishment	ESTEC
Open Date	27/03/2024 11:49 CET
Closing Date	13/06/2024 13:00 CET
ECOS Required	No
Classified	No
Price Range	> 500 KEURO

Authorised Contact Person	Adriana Lucas
Initiating Service	CSC-SQ
IP Measure	N/A
Prog. Reference	E/0534-05A - OP-Other Act. Prod.

Tender Type	Open Competition
Open To Tenderers From	AT+BE+CA+CZ+DE+EE+GR+ES+FI+FR+GB+HU+CH+IE+IT+LT+LU+NL+PL+PT+RO+SE
Technology Keywords	17-D-Optical Communications Technologies
Products Keywords	2-G-1.1-g-Tracking,(fine) Pointing and Stabilization mechanisms

Tender Action Package (4)		Clarifications (0)
	Name	Type
<input type="checkbox"/>	12238eli.pdf	Letter of Invitation
<input type="checkbox"/>	12238ews.pdf	Statement of Work
<input type="checkbox"/>	12238ecc.pdf	Contract Conditions
<input type="checkbox"/>	12238etc.pdf	Tender Conditions

[Download](#)

- [Find Business Partners in esa-match](#)
- [Other Interested Entities](#)
- [Express Interest](#)
- [Create Bidder Restricted Area](#)

- My Tenders**
- My Contract Changes
- Non ESA Tender Action Requests
- My Non ESA Tender Actions
- Reference Documents

[Home](#)
▶
[My Tenders](#)

Search... 

Find an item 

✓	PROPOSAL	TYPE	TA NUMBER	AO NUMBER	TENDER TITLE	STATUS	CLOSING DATE
	Miniaturised Heat Switch - Design Evolution	Bidder Restricted Area	1000024984	3-16288	MINIATURISED HEAT SWITCH - DESIGN EVOLUTION - EXPRO	Submitted	04/12/2019 13:00
	Ball bearings labyrinths modelling and testing	Bidder Restricted Area	1000034243	1-11294	BALL BEARINGS LABYRINTHS MODELLING AND TESTING - EXPRO PLUS	Submitted	01/02/2023 13:00
	New Proposal	Bidder Restricted Area	1000033837_v1	1-11182	EVAPORATION MODELLING FOR LONG LIFE MECHANISMS USED IN GEOSTATIONARY SATELLITES (ARTES AT 4E.087)	New	29/02/2024 13:00

1-11294 - BALL BEARINGS LABYRINTHS MODELLING AND TESTING - EXPRO PLUS

PROPOSAL TITLE: Ball bearings labyrinths modelling and testing

STATUS: Submitted

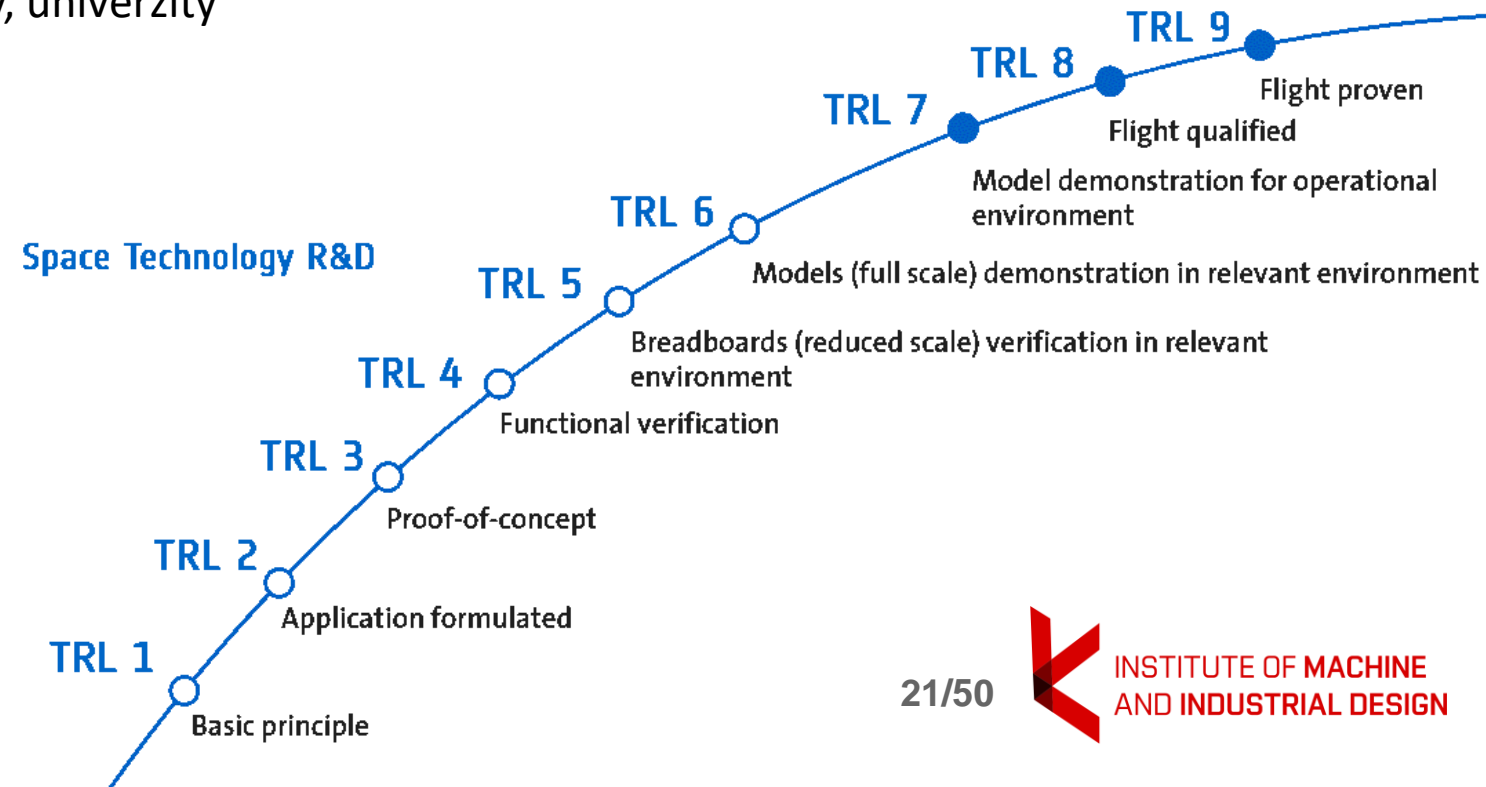
- Dashboard**
- Summary

Declaration of Compliance	Completed
Key Acceptance Factors	Completed
Consortium Structure	Completed
Cover Letter/Response Letter	Uploaded
Technical Proposal	Uploaded
Management and Administrative Proposal	Uploaded
Implementation Proposal	Uploaded
Financial Proposal	Uploaded
Contractual Proposal	Uploaded
Other	Uploaded

Doing business with ESA

Míra financování ze strany ESA

- 100 % - Projekty s konkrétním zadáním ESA
 - Pro projekty do TRL 4
 - Akademické pracoviště, výzkumné ústavy, univerzity
- 80 % - Projekty navrhované žadatelem
 - Pro malé a střední firmy, TRL 1-9
- 50 % - Projekty navrhované žadatelem
 - Pro velké firmy, všechny TRL 1-9





OSIP

OPEN SPACE INNOVATION PLATFORM

The main title 'OSIP' is rendered in a large, bold, white, sans-serif font. The letters 'O' and 'S' are partially obscured by a white graphic element that resembles a satellite or a stylized orbital path. Below the main title, the full name 'OPEN SPACE INNOVATION PLATFORM' is written in a smaller, white, uppercase, sans-serif font. The background of this section is a dark blue space filled with a grid of glowing blue lines and dots, representing a digital or data network.

Open Discovery Ideas Channel

Innovation Area: Discovery

Submit Your Idea

Description

Do you need help?

Background Information

Submit

Overview

Discussions

Selected Ideas

Activity

Ideas 274

Team



ESA Director General
Sponsor

190 Followers

Follow Channel



Do you have a novel idea for an activity (early technology development, study, co-sponsored research)? This call for idea channel is for you.

"And in today walks already tomorrow"

Samuel Taylor Coleridge

Open Space Innovation Platform (OSIP)

- Platforma založená roku 2019
- Podpora konkurenceschopnosti evropského kosmického průmyslu
- Otevřené výzvy k předkládání nápadů na projekty
- OSIP nabízí dvě možnosti výzev
 1. **KANÁLY (channel)** – hledají nápady a spolupráci na obecnějších tématech, otevřený časový rámec
 2. **KAMPANĚ (campaign)** – hledají řešení konkrétních otázek, mají přesně vymezený časový rámec

<https://ideas.esa.int/>

The infographic illustrates the OSIP process flow through seven steps, each with an icon and a descriptive box:

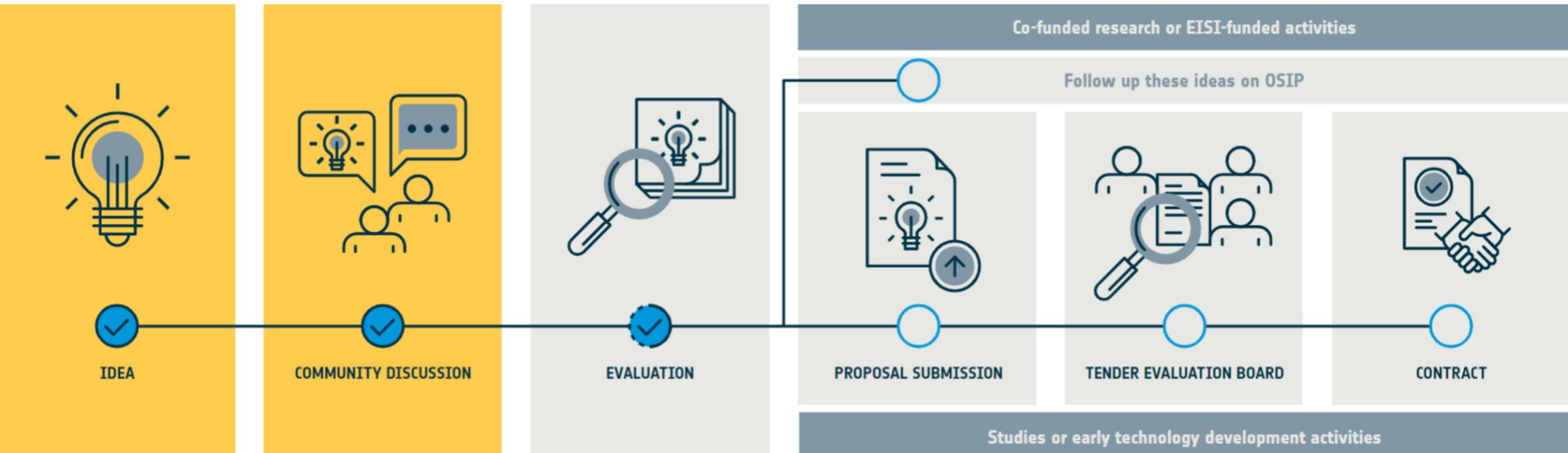
- REGISTER** (yellow box, laptop icon): as an OSIP user on ideas.esa.int and join our community
- EXPLORE** (yellow box, book icon): open ideas campaigns on different topics
- SUBMIT** (green box, lightbulb icon): an idea in response to a campaign or via an open channel
- DEVELOP** (green box, gears icon): your idea alone or with the OSIP community
- GET REVIEWED** (red box, group of people icon): by ESA experts, based on novelty, feasibility and suitability of idea
- GET INVITED** (red box, star icon): to a follow-up activity according to implementation plan
- IMPLEMENT** (blue box, handshake icon): your idea together with ESA*

* Restrictions exist for certain implementation paths, e.g. ESA procurement actions are restricted to entities eligible for doing business with ESA (see [OSIP](#)).

ideas.esa.int

OSIP – From Idea to Funding

- Závisí na daném programu – Kanál / Kampaň
- Obecně probíhá dvoukolové hodnocení návrhů



OSIP – IDEAS

Formy financování úspěšných projektů:

- System study (max. 100k€)
- Co-founded research / EISI agreement (max. 50%, 90k€)
- Early technology development (max. 175k€)
 - Proof of Concept, demonstration
- Commercial and technical maturation of ESA's inventions (max. 175k€)
 - PAT 537 Structure for Shielding An Antenna From Radio Interference
 - PAT 694 New Method for Improving the Passband Flatness in a Microwave Planar Filter
 - PAT 701 Signal Overlay Design and Detection for Satellite Communication Channels
 - PAT 754 Peak and Valley Current Mode Control Using Double Compensation Ramp
 - PAT 782 Compact Feed System with Developable Waveguide H-plane Directional Coupler
 - PAT 792 Transmit/receive multiple feed per beam single reflector antenna



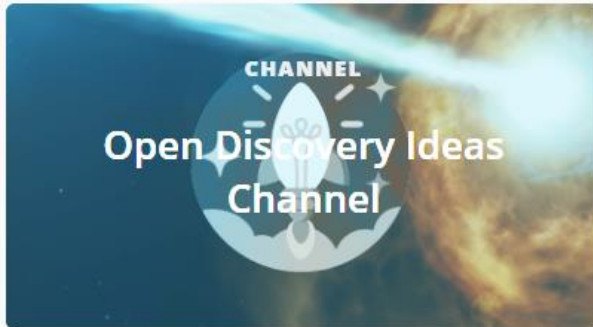
CHANNEL

SciSpace CORA - ISS
Human Research Exp...



CHANNEL

Open Discovery Ideas
Channel



CHANNEL

Preparation SysNova -
Proposal drafting phase



CHANNEL

ScaleUP INVEST
Element

Submission ends on Jul 4, 2023



CHANNEL

Study Activities -
Proposal drafting pha...



CHANNEL

Early Technology
Development - Propos...



CHANNEL

Civil Security from
Space programme - O...



CHANNEL

Competitiveness
Segment Space Safety



CHANNEL

ESA Business
Incubation Programme



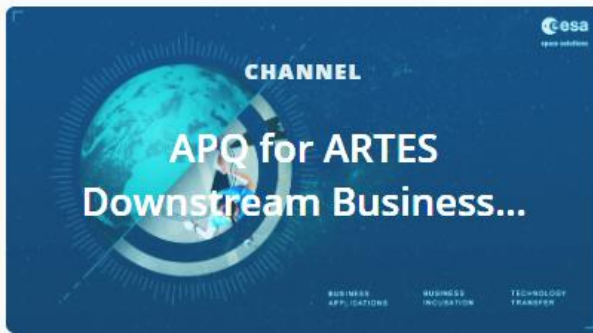
CHANNEL

Boost! 1: Commercial
Space Transportation ...



CHANNEL

APQ for ARTES
Downstream Business...



CHANNEL

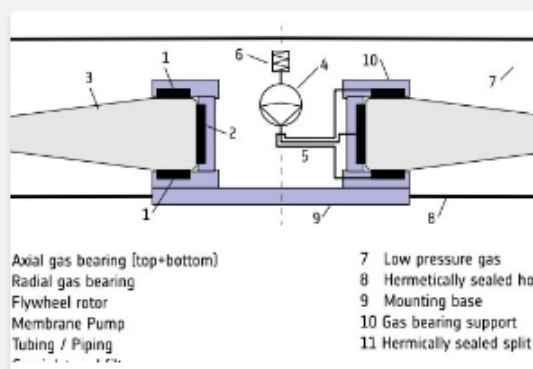
NAVISP Element 3:
Support Member States



OSIP

➤ Open Discovery Ideas Channel

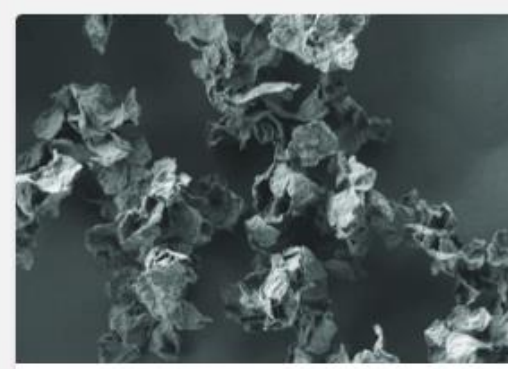
www.esa.int/Discovery



AirWheel – A reaction wheel with Gas Bearings supplied with ultrasonic pumps

By Mandy Zahradnik

✔ Implemented



Revolutionizing Space Lubrication: Elevating Tribological Excellence with...

by Adrian Chlanda and 2 others

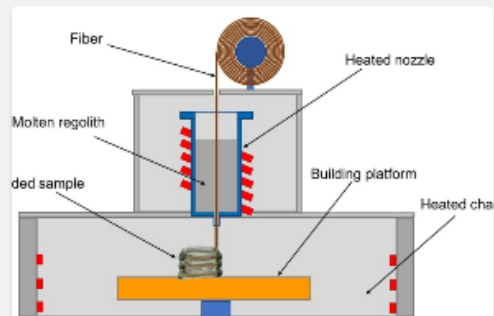
Selected



Triboelectric energy harvesting for mars exploration (HORACE)

by Borja Pozo and 1 other

✔ Implemented



Fused Fiber Layer Deposition (FFLD) of Lunar regolith

by Advenit Makaya and 3 others

✔ Implemented



Rhizome 2.0: Scaling-up Capability of Human-Robot Interaction Supported App...

by Henriette Bier and 1 other

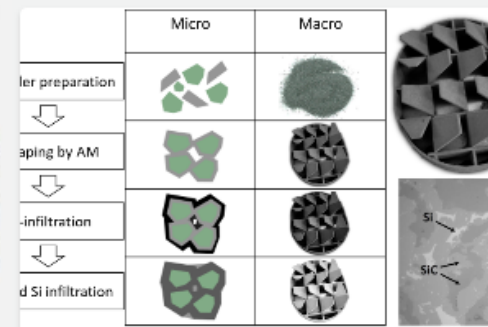
✔ Implemented



RAMMEC - Recycling enhanced additive manufacturing processes ...

by Sophie Gruber and 3 others

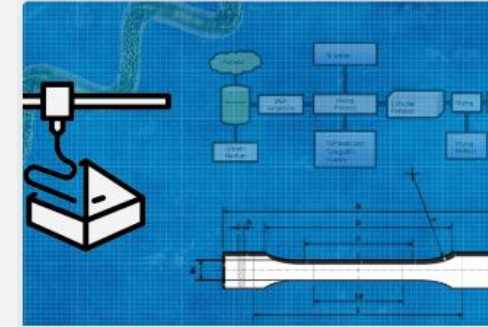
✔ Implemented



Additive manufacturing of intricate reaction bonded silicon carbide component...

by Laurent Pambaguian and 5 others

✔ Implemented



3D Printing with Spirulina and Regolith based materials

by Martin Cerff and 2 others

Selected

CAMPAIGN

SciSpace - Call for Research Proposals fo...

Submission ends on Jun 14



CAMPAIGN

DLR-ESA Joint Announcement of Op...

Submission ends on Apr 26



CAMPAIGN

Space for Sustainability Award 2024

Submission ends on Jun 27



CAMPAIGN

THRUST! Initiative (Technologies for Hig...



CAMPAIGN

Avionics and GNC for Future Space Transpo...

ESA FIRST!



CAMPAIGN

System Studies for the Circular Economy in S...



CAMPAIGN

Embodied Intelligence for Space Transportati...



CAMPAIGN

Mars Sample Return (MSR) Gas Extraction ...



CAMPAIGN

SciSpace - Call for Concordia Research ...



CAMPAIGN

Incubed + Maritime Thematic Call

Participate until Apr 26



CAMPAIGN

Sustainable Future: Advancing Circular Lif...



CAMPAIGN

SATLINK: The First End-to-End Implementatio...

ARGA SATLINK

CYSEC





**business
incubation
centre**
Czech Republic

SPACE YOUR BUSINESS...

ESA-BIC.CZ



ESA BUSINESS INCUBATION CENTRES

FUNDED by ESA and regional partners

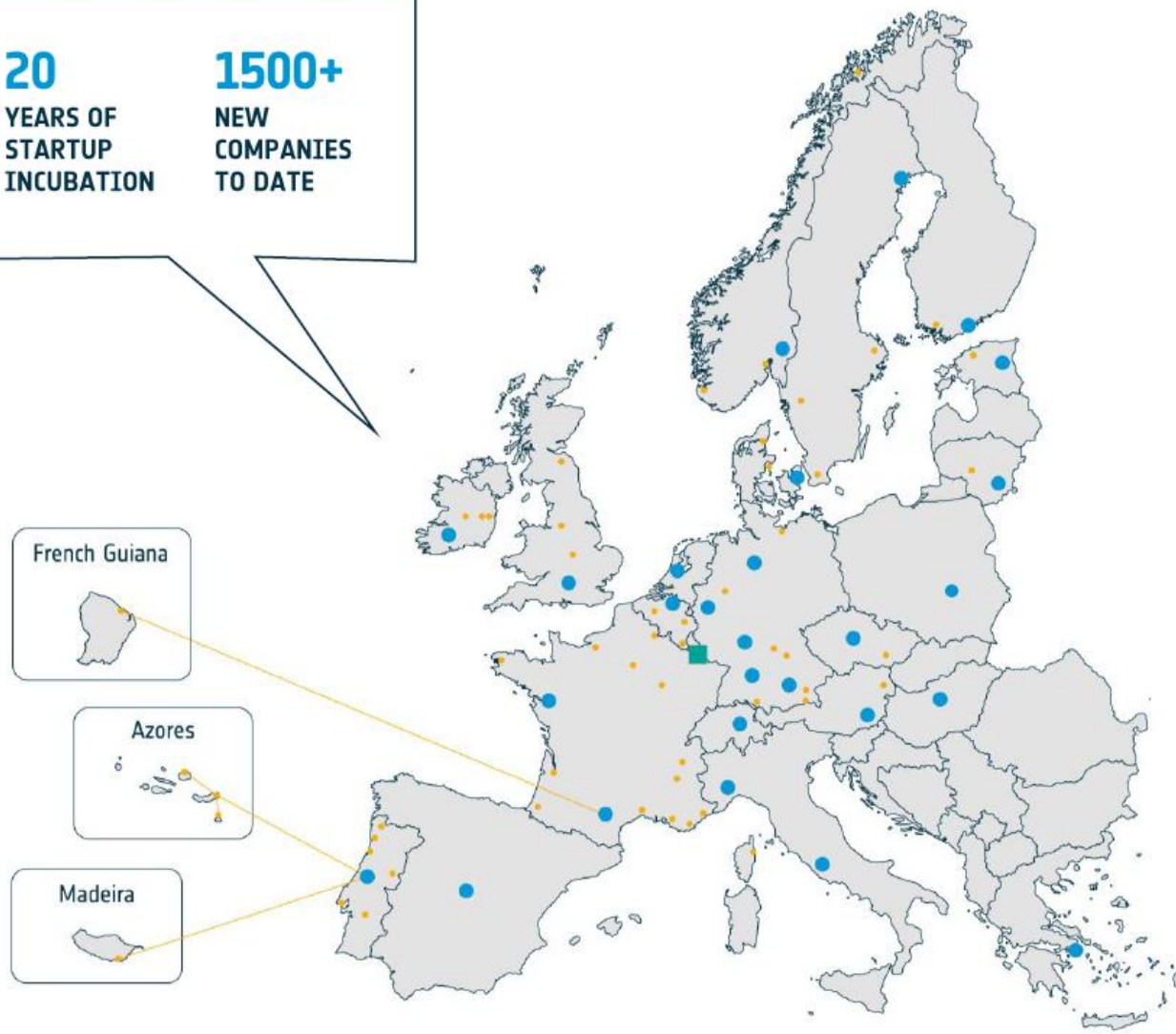
NETWORK all over Europe

ACCESS TO researchers, experts, and institutions

29
CENTRES
ACROSS
EUROPE

20
YEARS OF
STARTUP
INCUBATION

1500+
NEW
COMPANIES
TO DATE



SUMMARY

START-UPS: maximum **5 years** since the **establishment** of the company

REQUIRED: innovativeness, **space connection**, feasibility, scalability

INCUBATION: in **Prague** or **Brno**

OPEN FOR: students, **spin-offs**, innovators, entrepreneurs, etc.

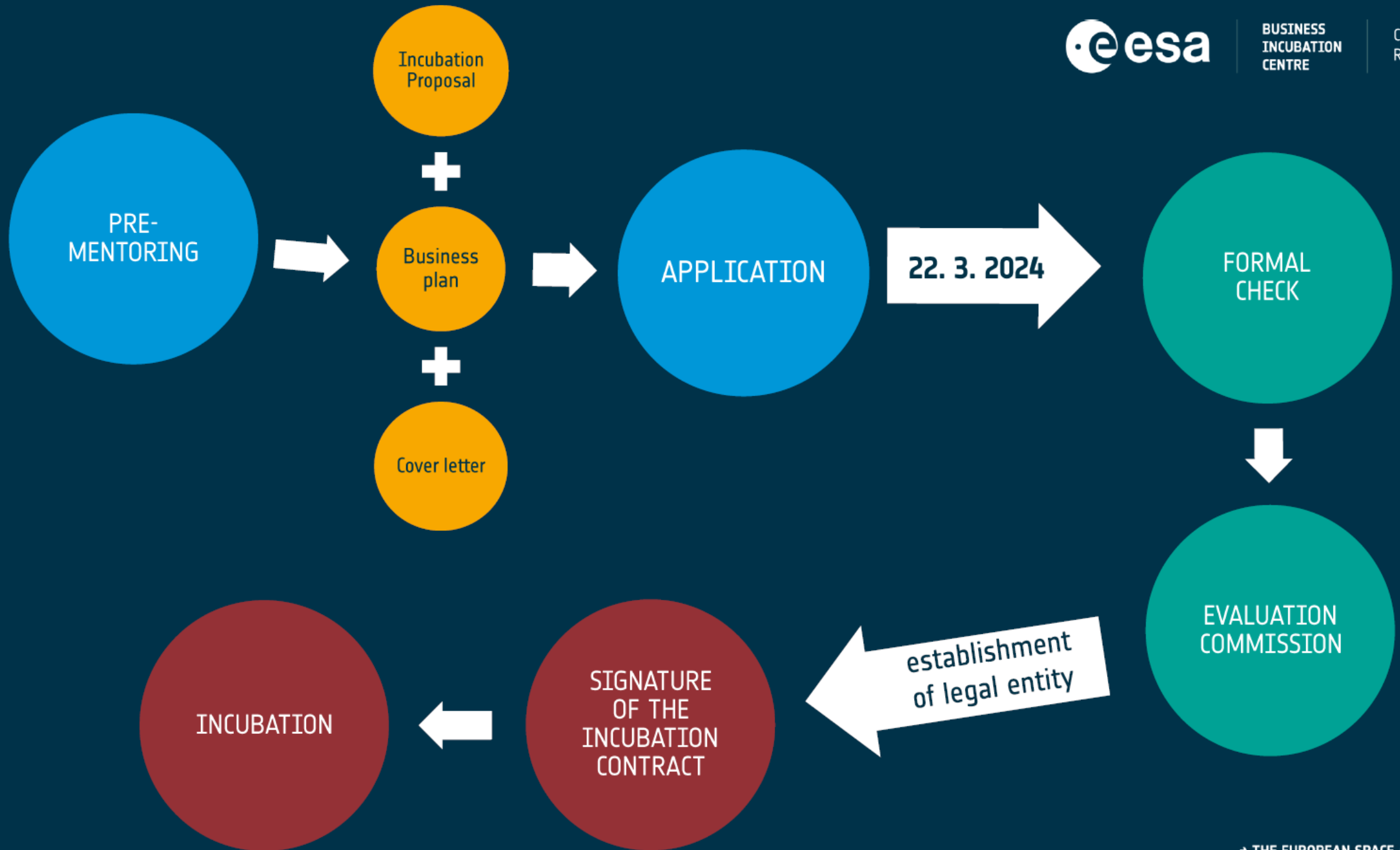
WE PROVIDE: up to **2 years in incubation** + aftercare services

RECEIVE: funding of equity-free **50.000 €** and possibly more from **investors** and **venture capital**

BENEFITS: ESA brand, **mentoring**, discounted rent, comprehensive consulting, **networking**, access to **space congresses, events** and **competitions**, special exhibitions, international PR and more

APPLICATION: via email, current open-call deadline is **22 March 2024, 23:59 CET**





→ ESA BIC PRAGUE | BRNO



→ Kde jsme teď



PRAHA
19 Startupů



BRNO
6 Startupů

13
Incubatees
aktuálně inkubované
startupy



12
Alumni
startupy, které již
inkubaci ukončily

16
České firmy



9
Zahraniční firmy
se sídlem v ČR
Slovensko, Švýcarsko,
Francie, Indie, Egypt

→ Startupy v ESA BIC Prague a Brno se zaměřují na



Pozorování
země
7



Družicová
navigace
5



Kosmické
technologie
4



Pokročilé materiály
a technologií
3



Drony
2



Simulační
software
4



21 Downstream
kosmické technologie použité na zemi



4 Upstream
použití technologií ve vesmíru



8 Hardware



17 Software

→ Přehled investic



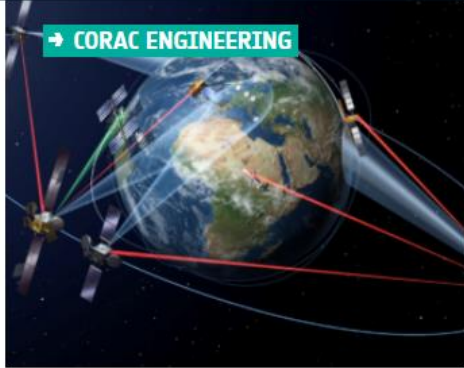
11 Startupů zainvestováno
(6x Angel investor, 4x VC, 1x Seed investice)

Hodnota investic více než **240 mil. Kč**

→ ADVASCOPE



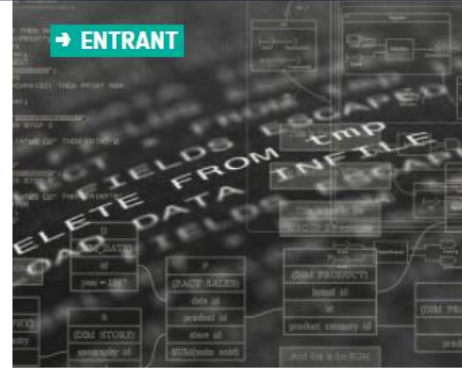
→ CORAC ENGINEERING



→ DARTSAT



→ ENTRANT



→ FESTKA



→ HYDRONAUT



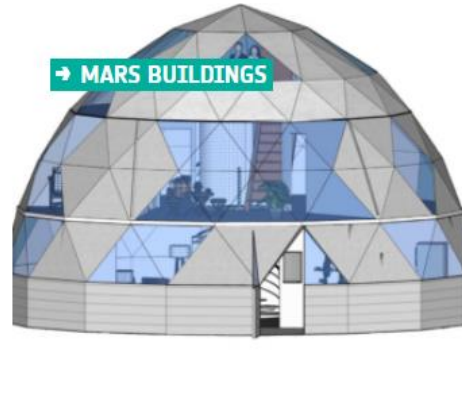
→ ICEE SPACE



→ INSIGHTART



→ MARS BUILDINGS



→ NEEDRONIX

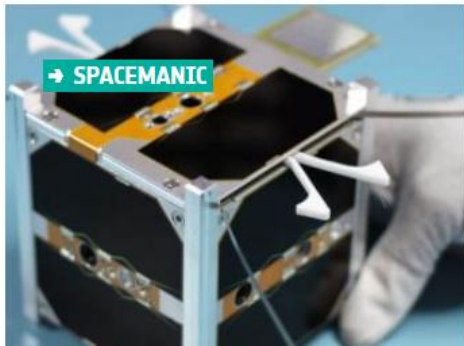


NXSS3V10

→ NEURON SOUNDWARE



→ SPACEMANIC



→ SPACERACE



→ STRATOSYST



→ SUBORBITALITY





@ESABIC CZ

www.esa-bic.cz



SPACE FOR EDUCATION

2030



ESA EDUCATION

STEM Learning and Inspiration programme (3 – 18 y/o)

- Learn with Space – Vzdělávací aktivita pro žáky a pedagogy
- Let Space Inspire You – Inspirativní aktivita pro děti a dospívající
- ESA ESERO – Národní rámcový program



[Pro výuku](#) [Akce a kurzy](#) [Školní projekty](#) [Aktuality](#) [O nás](#) [Kontakt](#)

Přeneste vesmír do výuky

Využijte výukové materiály a programy pro základní a střední školy

[Zobrazit výukové materiály](#)

[Naše poslání a vize](#)

Mimořádný úspěch českého týmu MRLB, který zvítězil v soutěži Moon Camp v kategorii Pioneers, více [zde](#)



ESA EDUCATION

ESA Academy (18+ y/o)

➤ ESA Academy Trainings

- Engineering, Medicine, Management, Technology transfer,..

➤ ESA Academy Projects

- Fly Your Satellite!, Fly a Rocket!, REXUS/BEXUS

➤ ESA Academy Student Support

- Conference Sponsorship, Short Course Scholarship



Date of activity*	Programme	Deadline to apply	Type	Status
20-23 May 2024	Space Propulsion 2024	5 April 2024	Conference	Open
10-14 June 2024	Space Standards Training Course	10 April 2024, 23:59 CET	Training Session	Open
17-28 June 2024	ESA/ELGRA Gravity-Related Research Summer School	8 April 2024, 23:59 CEST	Summer School	Open
18-20 June 2024	2nd RAMS Conference	19 April 2024	Conference	Open
24-27 June 2024	International Conference on Space Robotics 2024 (iSpaRo'24)	Date to be announced	Conference	Coming soon
8-12 July 2024	Spacecraft Testing Workshop	26 April 2024, 23:59 CEST	Workshop	Open
15-19 July 2024	Earth Observation Remote Sensing Workshop	29 April 2024, 23:59 CEST	Workshop	Open
5-30 August 2024	CubeSat Summer School	15 April 2024, 23:59 CET	Summer School	Open
October 2024	Fly Your Satellite! Test Opportunities window	3 June 2024, 23:59 CET	Hands-on	On-hold



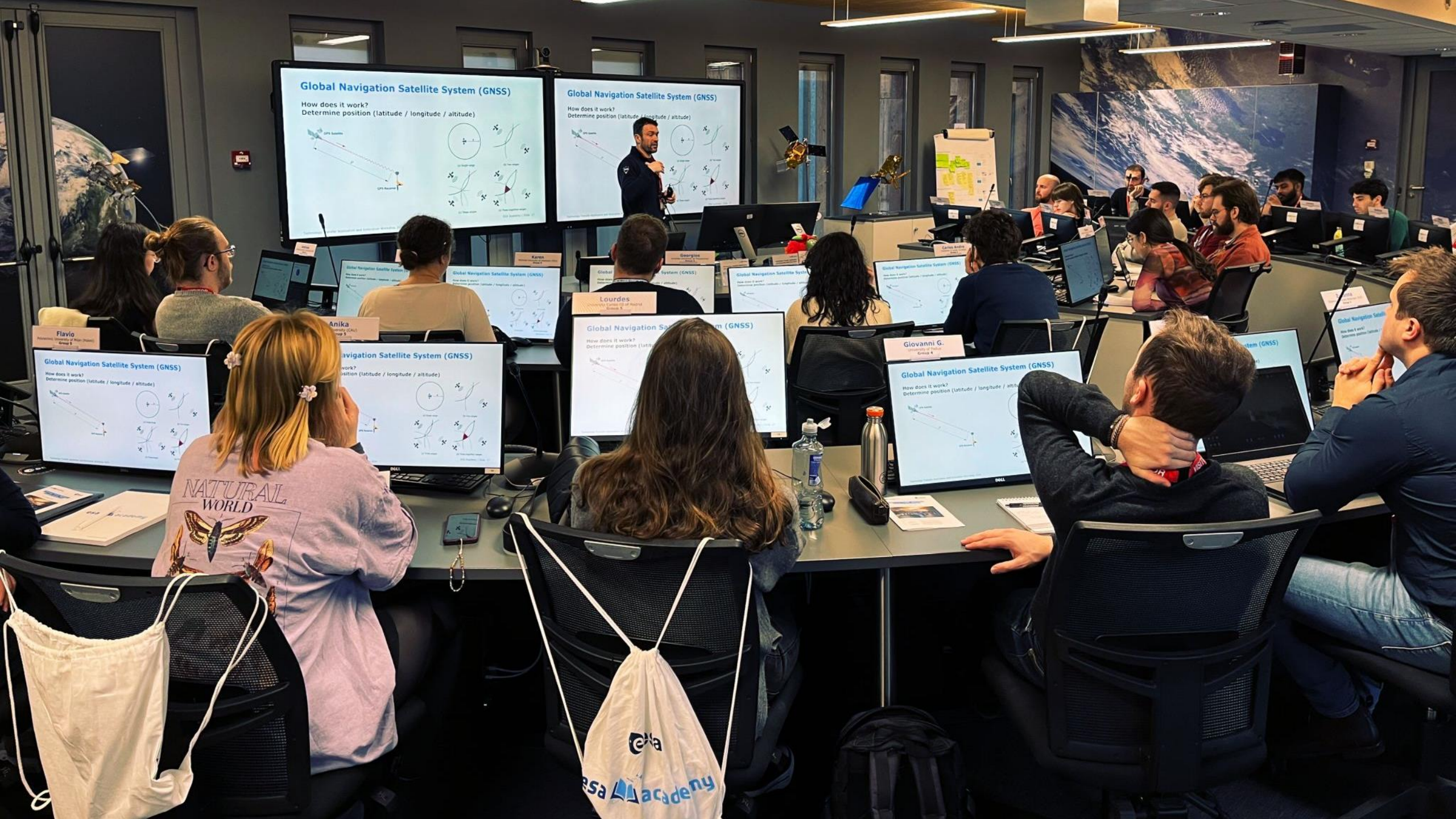


esa

educatio

training cen





Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



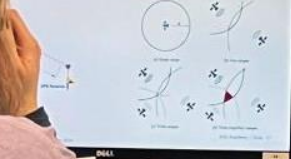
Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



Global Navigation Satellite System (GNSS)

How does it work?
Determine position (latitude / longitude / altitude)



NATURAL
WORLD

esa academy



esa
fly your satellite

esa
fly your satellite

esa
fly your satellite

esa
fly your satellite

Justrite
FLAMMABLE
INFLAMMABLE
INFLAMMABLE



esa

e-technology lab
space technology classroom

esa

esa

ESA EVENTS

- Seznam událostí: <https://atpi.eventsair.com/esamed/list-of-events>
- Workshopy
- Závěrečné prezentace projektů
- ESA Industry Day
- Konference



Home List of Events ▾ ESA Organisers ▾

ESA List of Events

Current and Future Conferences, Symposia & Workshops with ESA involvement, many organised/sponsored by ESA.

Last updated: 11 March 2024

ESA EVENTS – Workshops + Final Presentation days

ECSSMET 2024

European Conference on Spacecraft Structures Materials and Environmental Testing
ESTEC, Noordwijk, the Netherlands
23-27 September 2024



Space Mechanisms Workshop on Clean space

11 - 12 March 2024

Space Mechanisms Final Presentation Days

12 - 13 March 2024



- 2009 – WS#1 – Hold-Down and Release Mechanisms
- 2010 – WS#2 – Multi-Body simulation
- 2011 – WS#3 – Pyrotechnics
- 2012 – WS#4 – Tribology
- 2013 – WS#5 – Electromagnetic devices
- 2014 – WS#6 – Micro-vibrations
- 2015 – WS#7 – Ball-bearings
- 2016 – WS#8 – Gear technology
- 2017 – WS#9 – Workshop on Mechanisms Testing and Health Monitoring
- 2018 – WS#10 – Optical Mechanisms
- 2019 – WS#11 – Space Mechanisms Legacy from New ESA players
- 2020 – WS#12 – Pyrotechnics and Ball Bearing software (2 workshops in parallel)
- 2021 – WS#13 – Position Sensors
- 2022 – WS#14 – Mechanisms Microvibrations
- 2023 – WS#15 – Mechanisms for CubeSats and MicroSats
- 2024 – WS#16 – Mechanisms for CleanSpace, (11PM&12AM/03/2024)
- 2025 – WS#17 – Compliant Mechanisms (subject and date TBC)



(Participation limited to ESA member states and cooperating states)



INDUSTRY
SPACE DAYS
2024

SPACE
FOR BUSINESS
OPPORTUNITIES

18–19 September 2024

ESA/ESTEC (Noordwijk, The Netherlands)

EPFL

SPACE
INNOVATION

ALMATECH

csem

**esmats
2025**

24th – 26th September 2025
Lausanne Switzerland



École
polytechnique
fédérale
de Lausanne



CZECH SPACE WEEK

25. 11. - 02. 12. 2023



DĚKUJI VÁM ZA POZORNOST