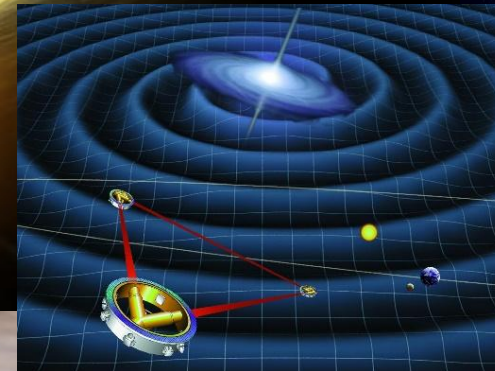
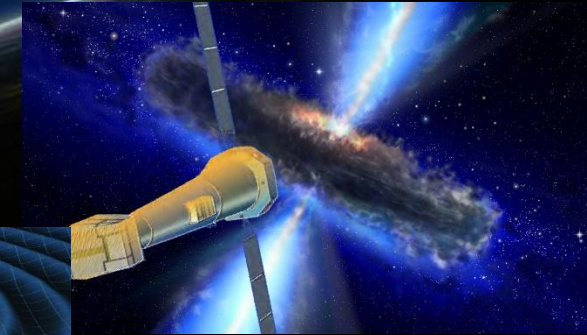


Strategy AV21 programme

Space for Humankind



STRATEGY AV21



Jiří Svoboda

Astronomical Institute of the Czech Academy of Sciences
Academia & Industry in Space Projects III
Institute of Scientific Instruments, Brno, 13th May 2026

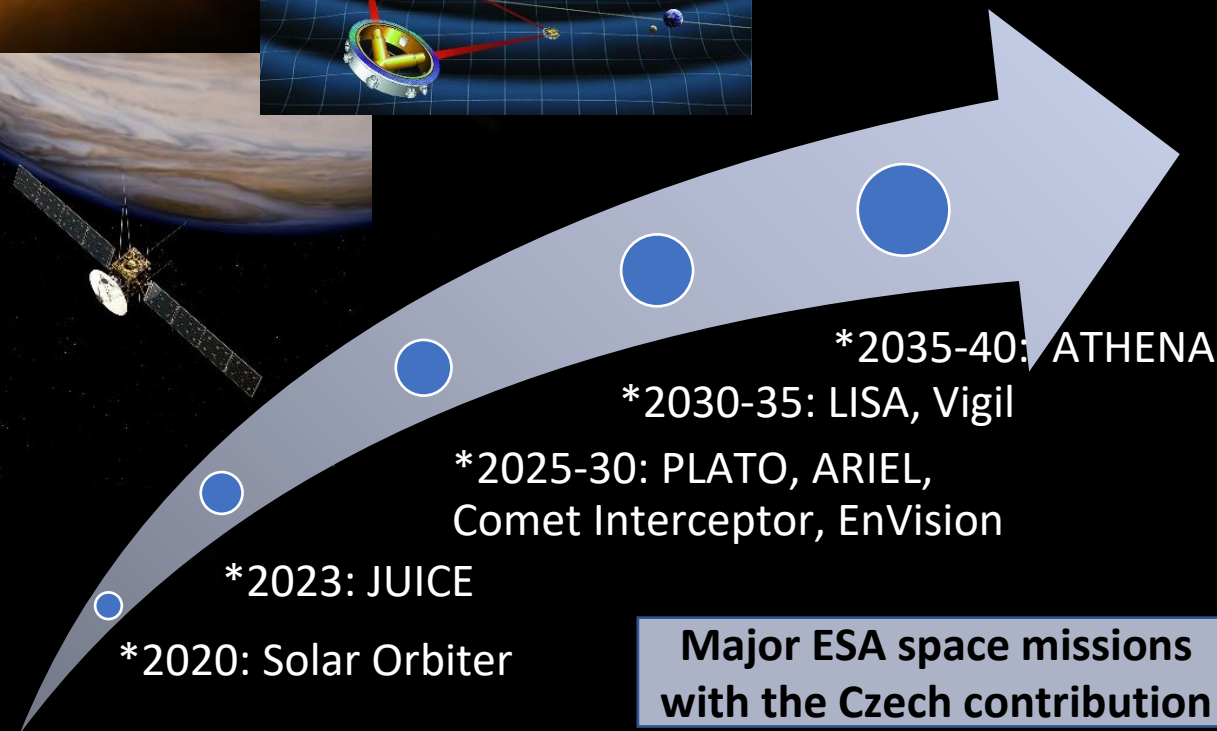
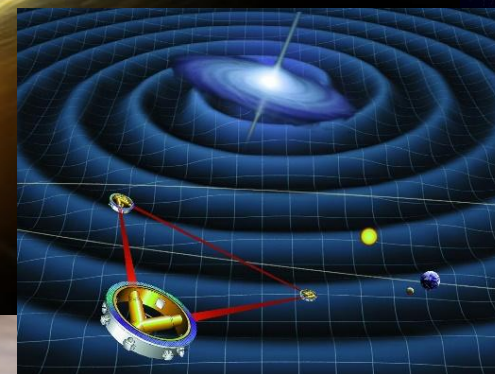
Czech involvement in international scientific space projects

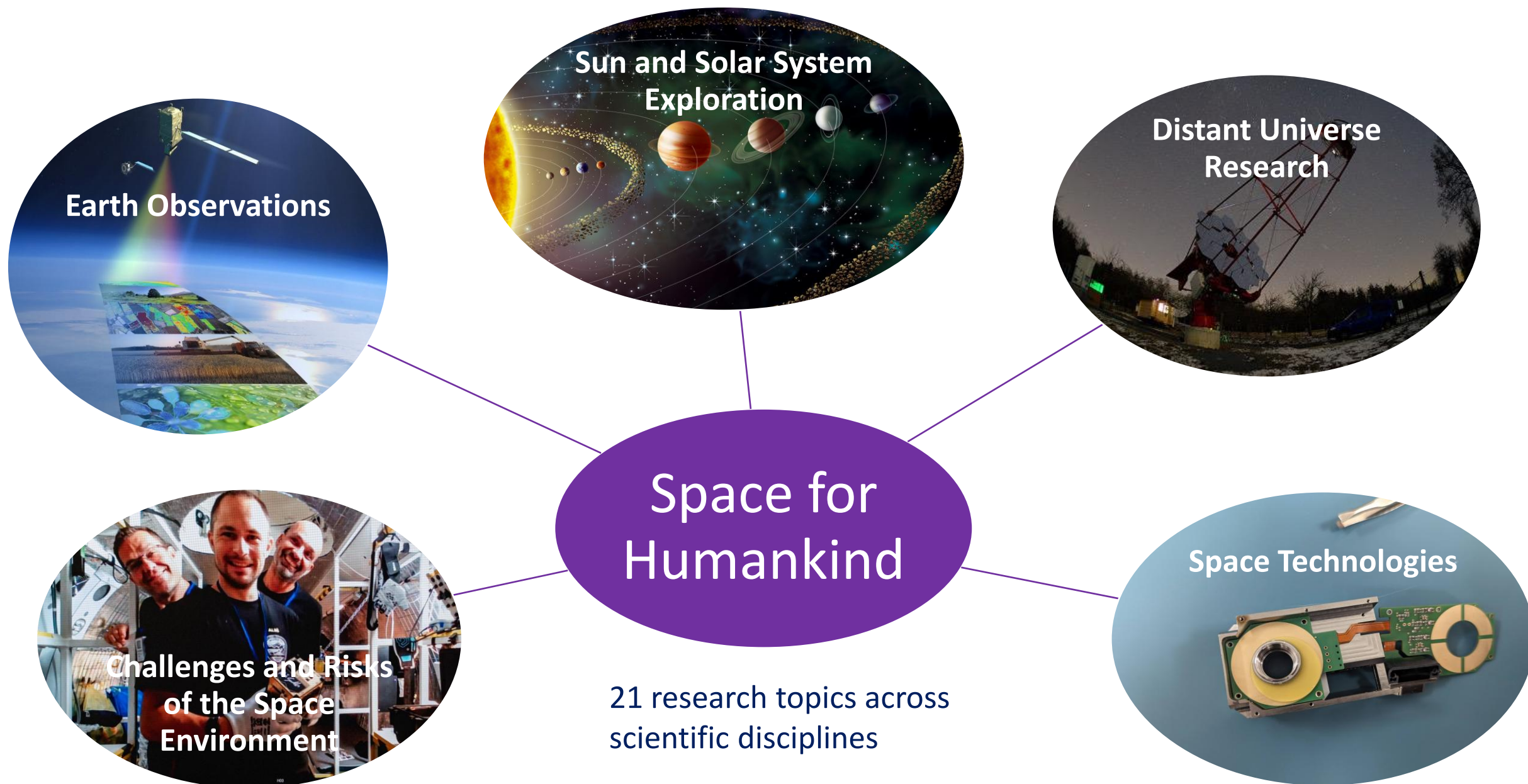
- Czechia - part of the **European Space Agency (ESA)**
- we are involved in all major current and planned scientific space missions by ESA
- one of the Strategy research topics of CAS: **Space for Humankind**

21 research topics

15 institutes of CAS

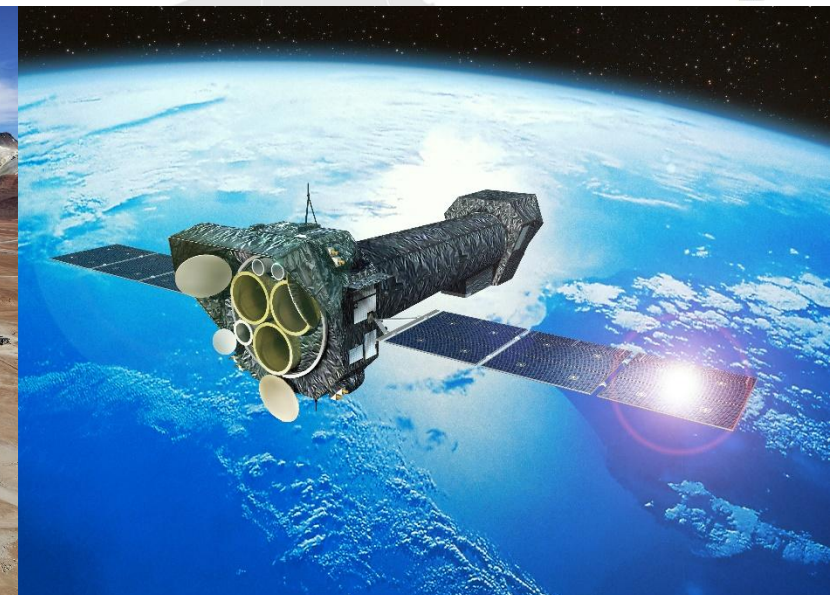
16 partners





International collaborations

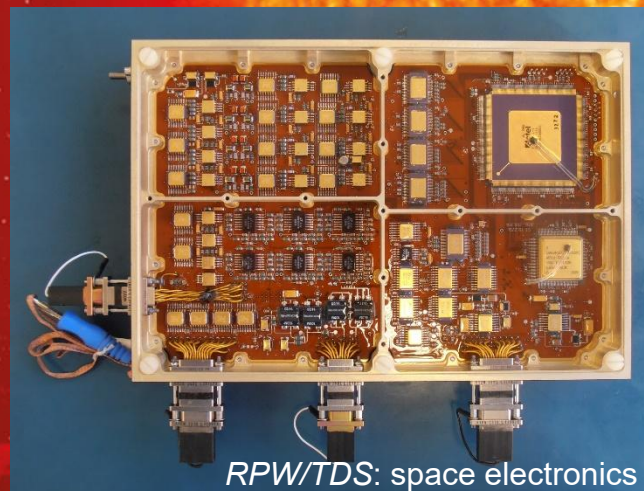
- **European Southern Observatory (ESO)**
 - ground-based observatories in Chile
- **European Space Agency (ESA)**
 - space missions
 - support for the development of the scientific instruments – PRODEX



Solar Orbiter

– Czech contribution

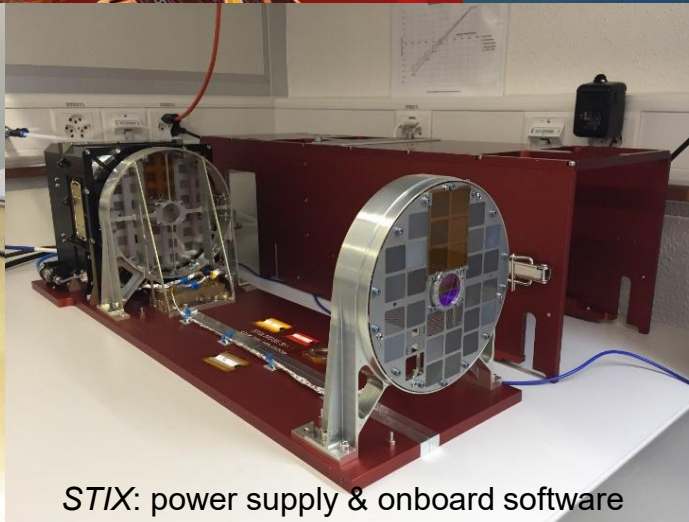
- hardware contribution to 4 scientific instruments
- electronics, precise mechanics, on-board software, precise optics



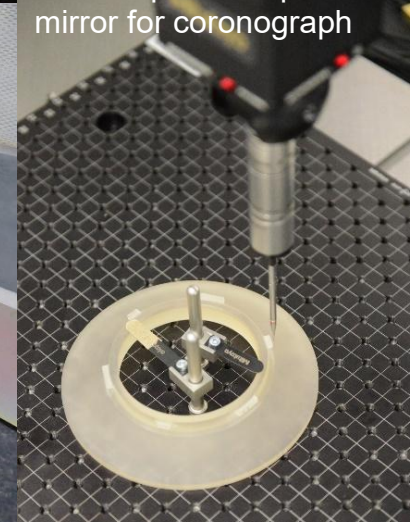
RPW/TDS: space electronics



METIS: precise optics – mirror for coronagraph



STIX: power supply & onboard software

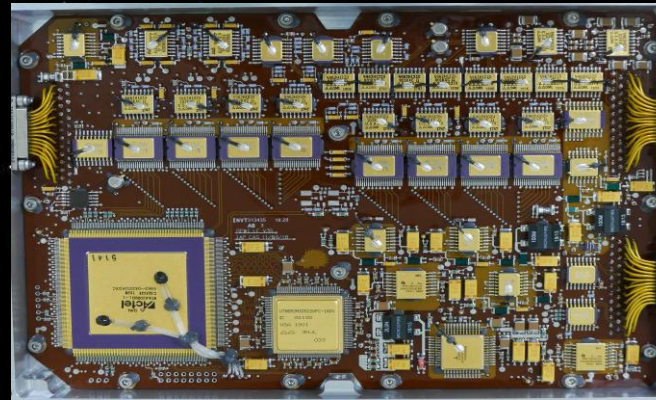


JUICE



Low-Frequency Receiver

Low-Voltage Power Supply

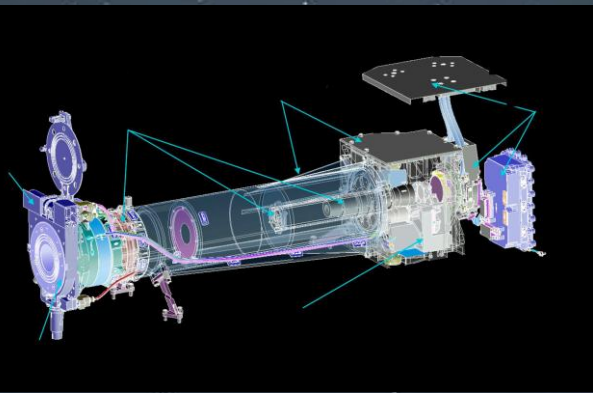




First image from the coronagraph
June 2025

PROBA-3

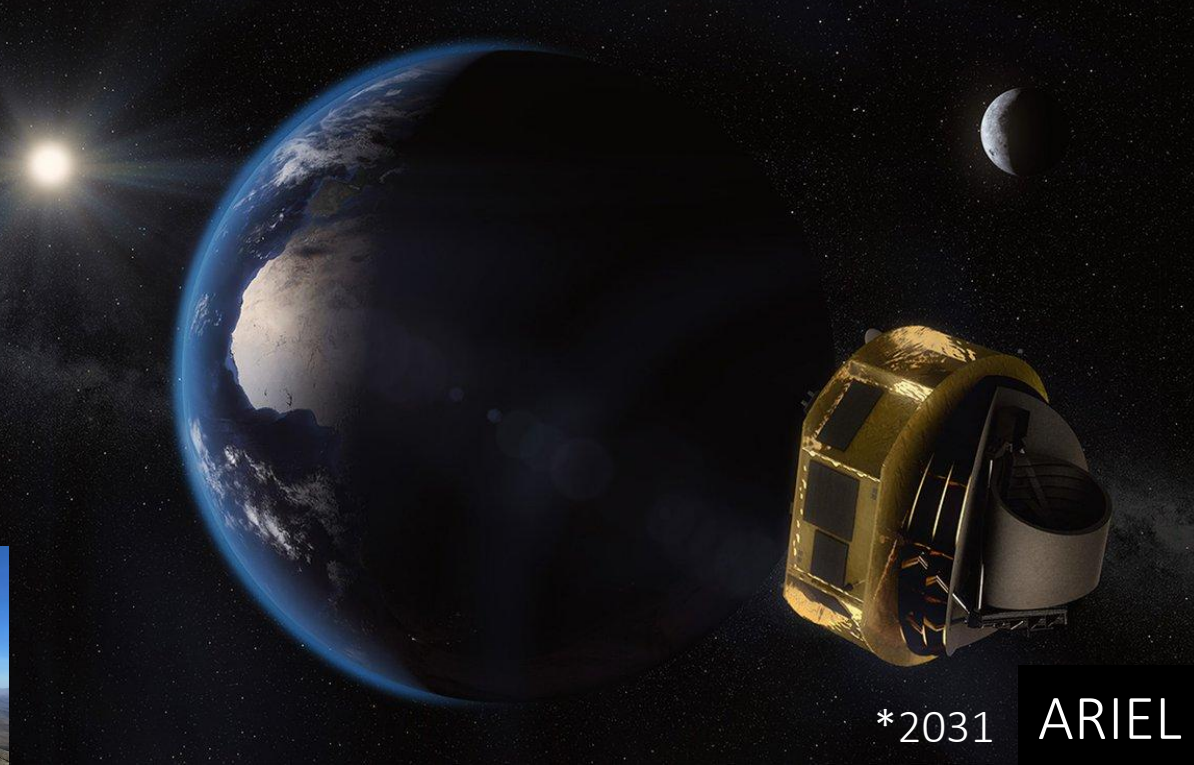
Coronograf ASPIICS (CZE: mirrors, door)
launched 5th Dec 2024



PLATO

*2027

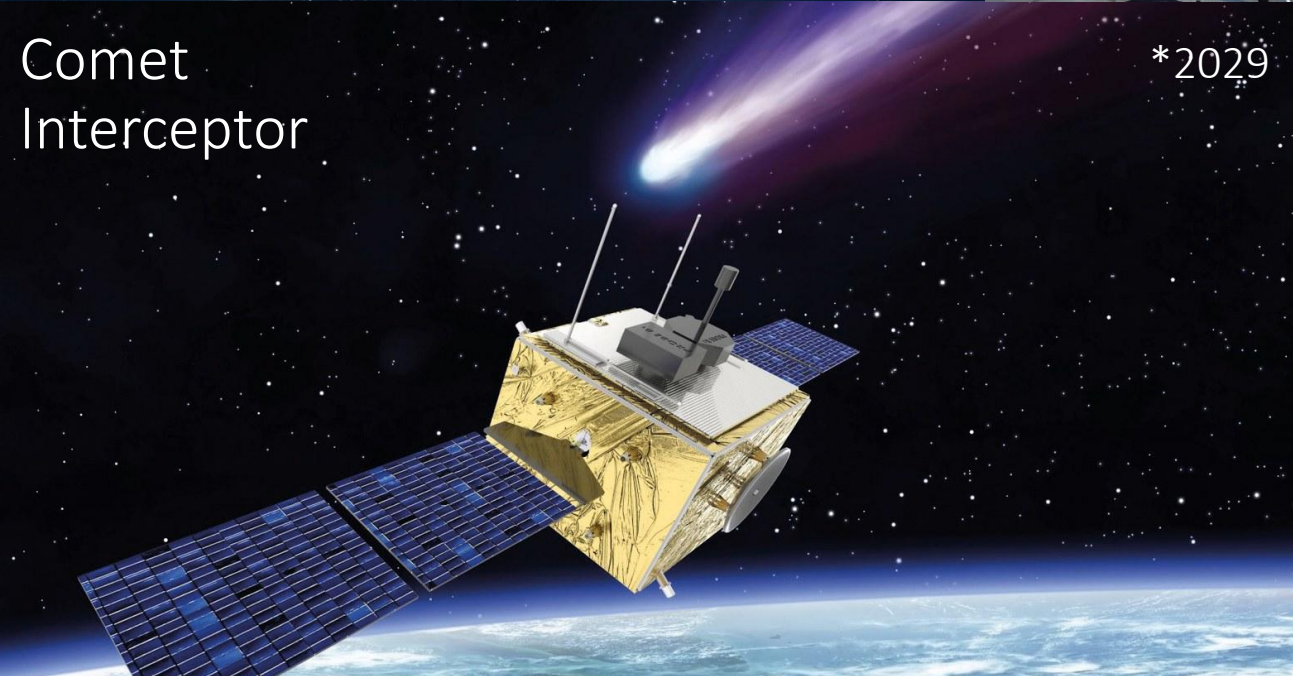
PLATOSpec, renovated
telescope at ESO, Chile



*2031 ARIEL

Comet
Interceptor

*2029



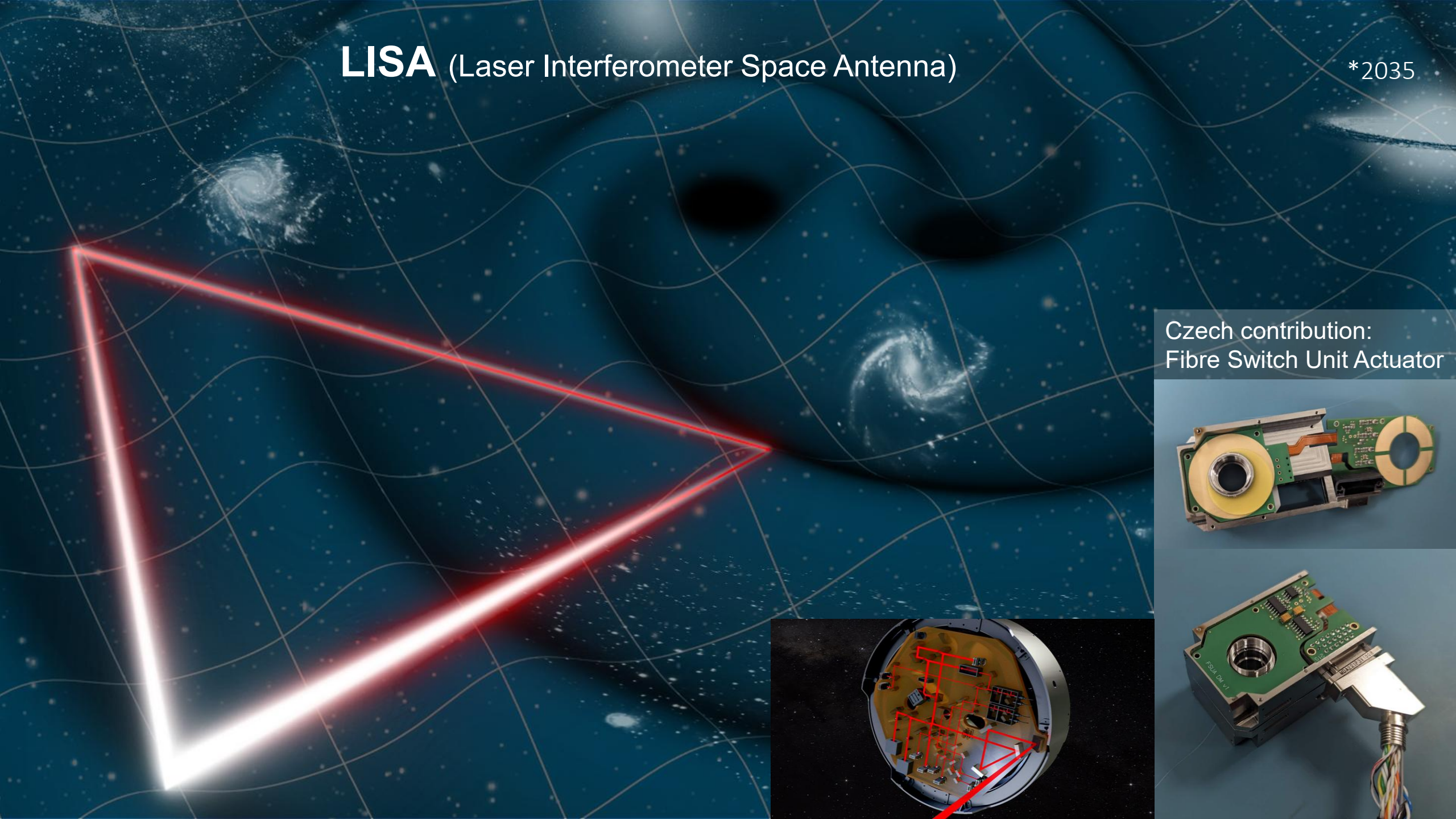
EnVision

*2031

LISA (Laser Interferometer Space Antenna)

*2035

Czech contribution:
Fibre Switch Unit Actuator

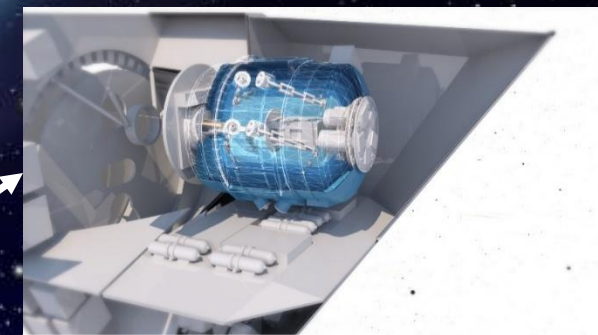


newATHENA

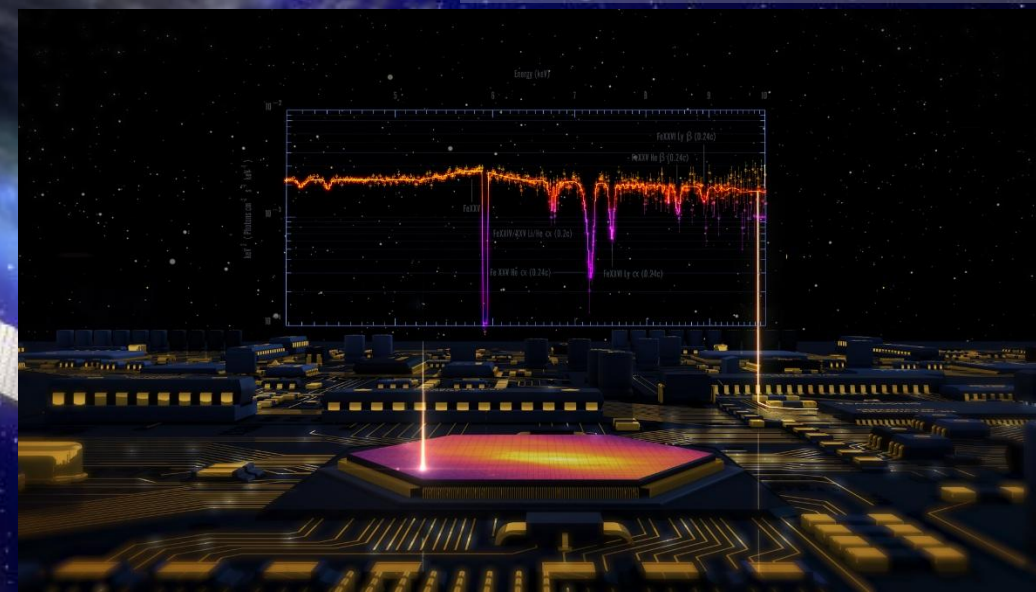
(Advanced Telescope for High Energy Astronomy)

ESA planned large X-ray Observatory
to study **Hot and Energetic Universe**

*2039

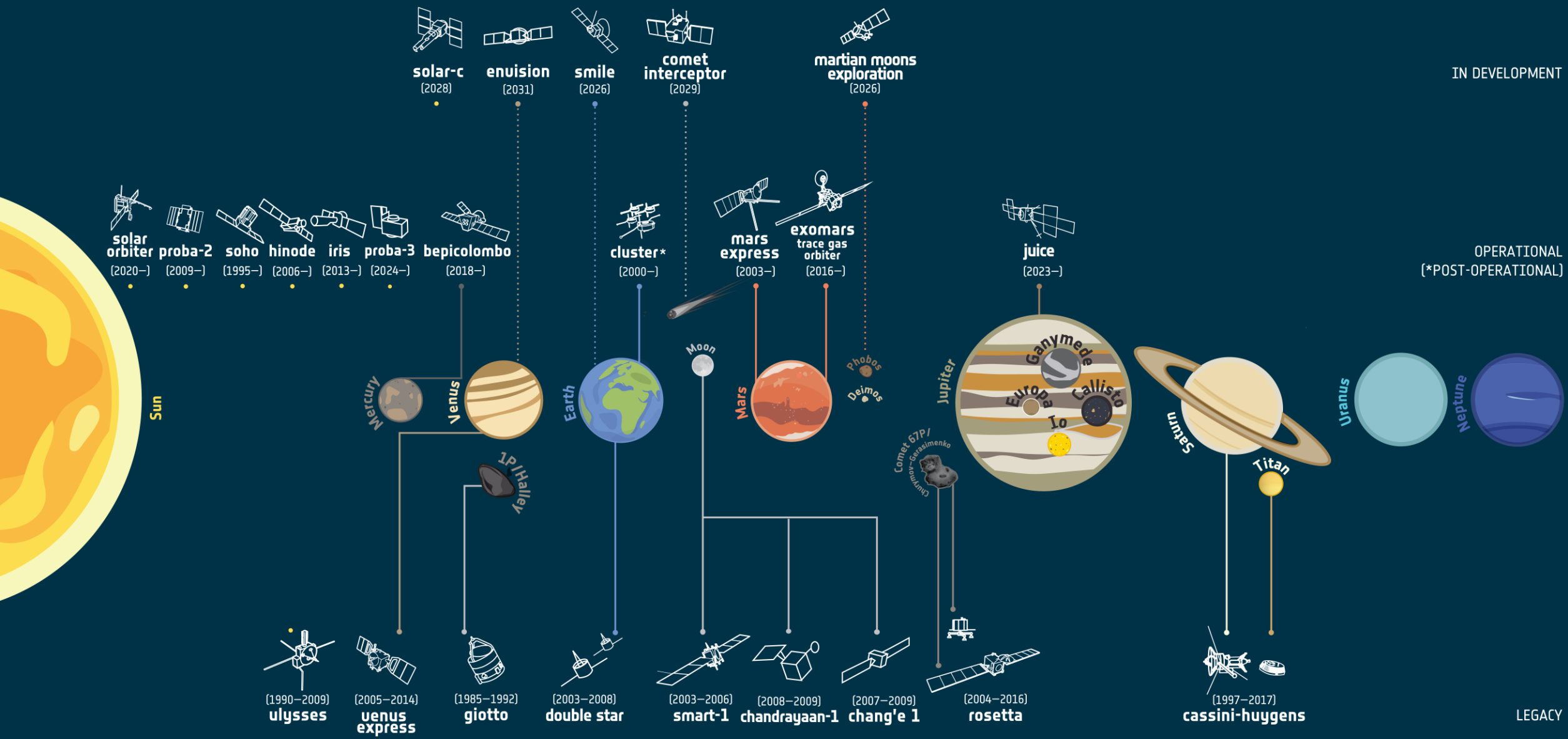


Instrument **X-ray Integral Field Unit (X-IFU)** for high-resolution X-ray spectroscopy



Czech contribution to digital read-out electronics

SOLAR SYSTEM EXPLORERS

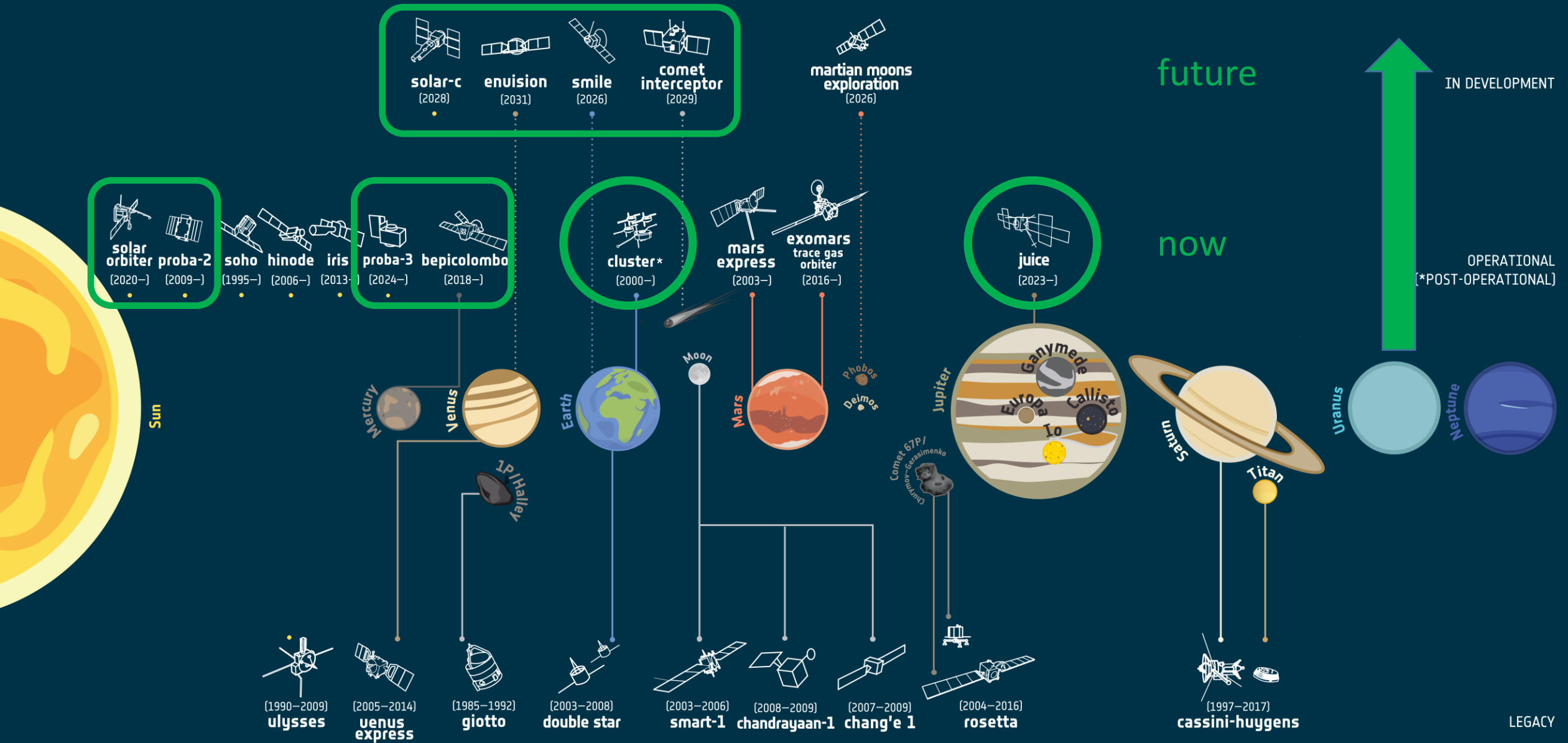


IN DEVELOPMENT

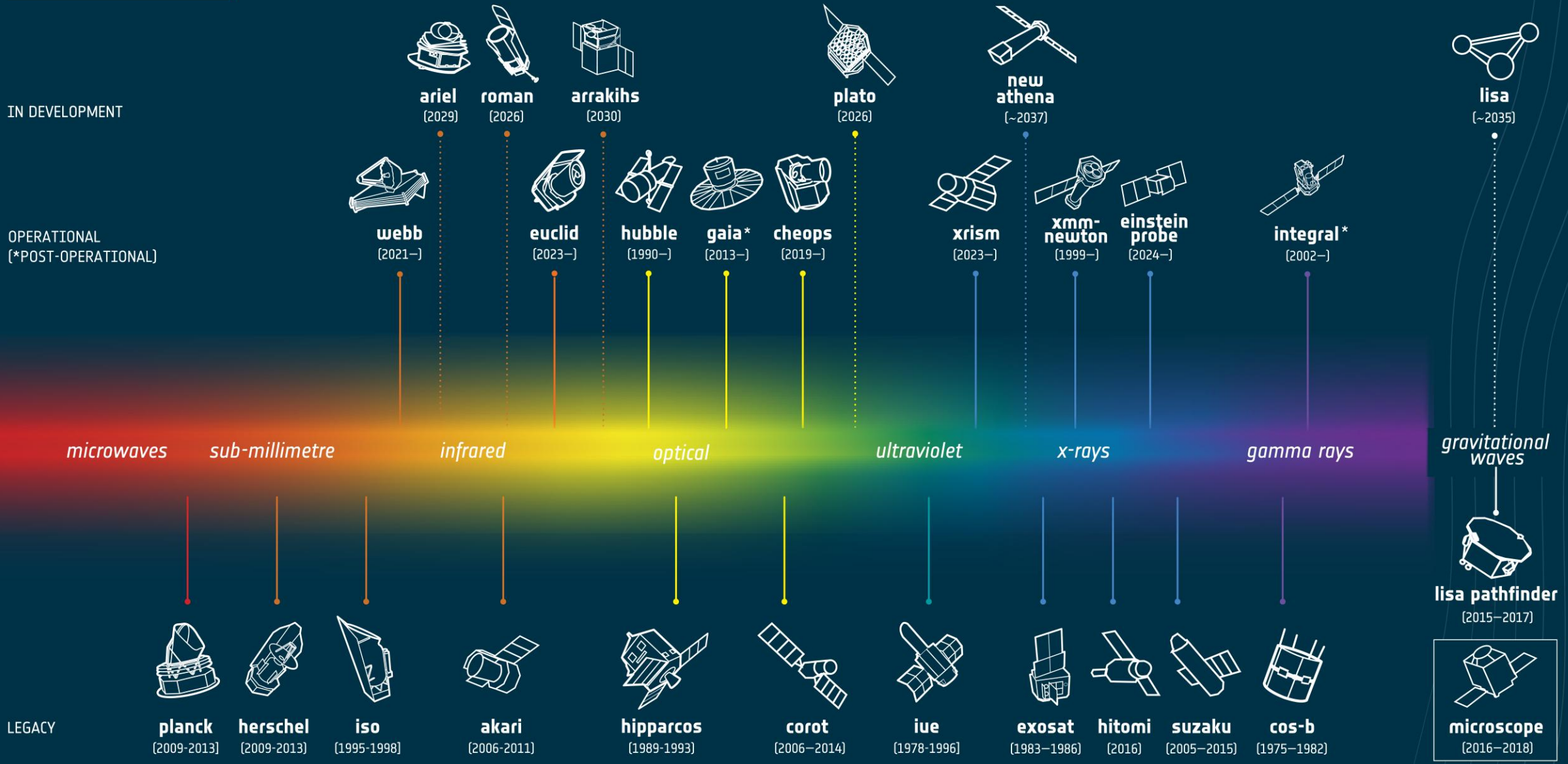
OPERATIONAL
(*POST-OPERATIONAL)

LEGACY

SOLAR SYSTEM EXPLORERS



COSMIC OBSERVERS



COSMIC OBSERVERS

future

IN DEVELOPMENT

OPERATIONAL
[*POST-OPERATIONAL]

now



microwaves

sub-millimetre

infrared

optical

ultraviolet

x-rays

gamma rays

gravitational waves

LEGACY

ariel
[2029]

roman
[2026]

arrakis
[2030]

plato
[2026]

new athena
[~2037]

lisa
[~2035]

webb
[2021-]

euclid
[2023-]

hubble
[1990-]

gaia*
[2013-]

cheops
[2019-]

xrism
[2023-]

xmm-newton
[1999-]

einstein probe
[2024-]

integral*
[2002-]

planck
[2009-2013]

herschel
[2009-2013]

iso
[1995-1998]

akari
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hipparcos
[1989-1993]

corot
[2006-2014]

iue
[1978-1996]

exosat
[1983-1986]

hitomi
[2016]

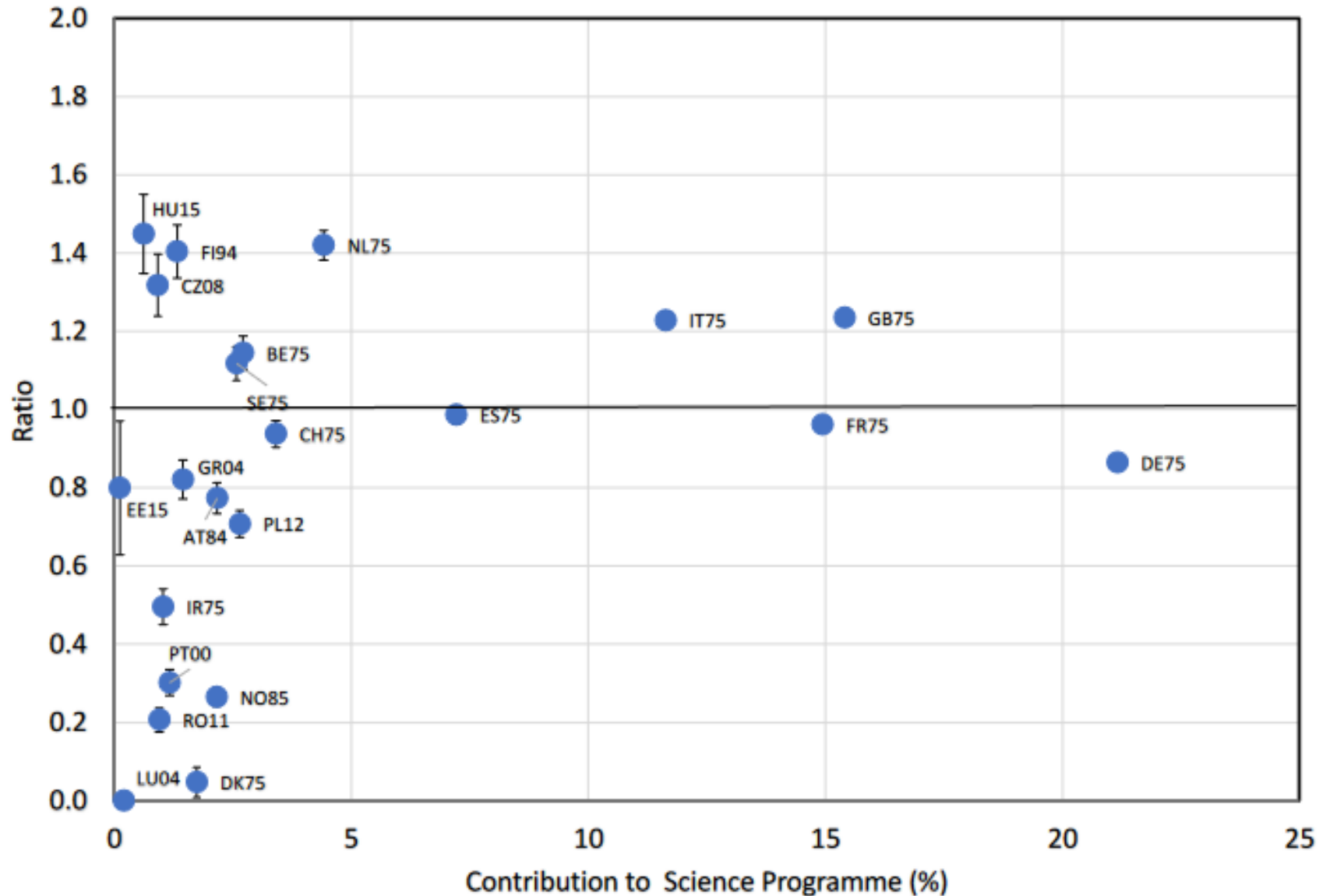
suzaku
[2005-2015]

cos-b
[1975-1982]

lisa pathfinder
[2015-2017]

microscope
[2016-2018]

Data Exploitation of ESA missions in scientific publications

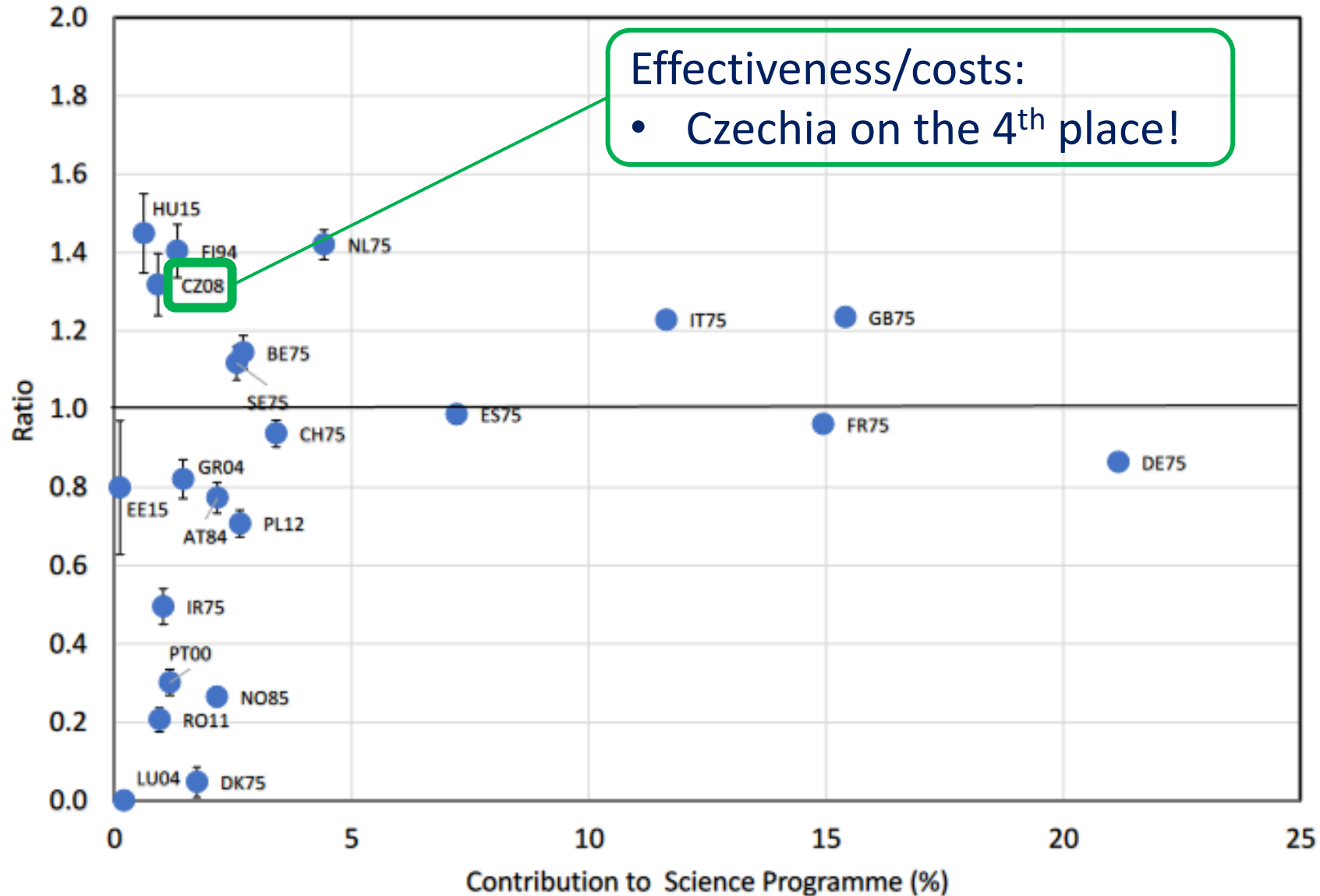


more publish / less pay



more pay and less publish

Data Exploitation of ESA missions in scientific publications



more publish / less pay



more pay and less publish



STRATEGIE AV21



Jiří Svoboda a kol.

Evropské kosmické mise s českou účastí

VÝZKUMNÝ PROGRAM

VESMÍR PRO LIDSTVO

Novinka
Nakladatelství
Academia



Jiří Svoboda a kol. Evropské kosmické mise s českou účastí

Publikace vznikla v rámci
výzkumného programu Strategie AV21
Vesmír pro lidstvo.

Tato knížka pojednává o jednotlivých kosmických misích Evropské kosmické agentury (European Space Agency, ESA) a českém příspěvku k nim. Představuje také mise budoucnosti – zkoumání planet mimo Sluneční soustavu a mise PLATO a Ariel, mise plánované k Venuši a v neposlední řadě také dvě velké plánované mise, které si kladou za cíl odhalit, jak vznikly superhmotné černé díry v centrech galaxií. Ve všech těchto projektech je Česká republika významně zastoupena.

Ke stažení
www.academia.cz/strategie-AV21/

<https://www.vesmirprolidstvo.cz>

Academia & Industry in Space Projects III



 **14th of May 2026**

 **Institute of Scientific Instruments
of the Czech Academy of Sciences**

Královopolská 147, 612 00
Brno-Královo Pole



STRATEGYAV21



- **Main goal of the meeting:** foster collaboration between academia and industry in the international space projects