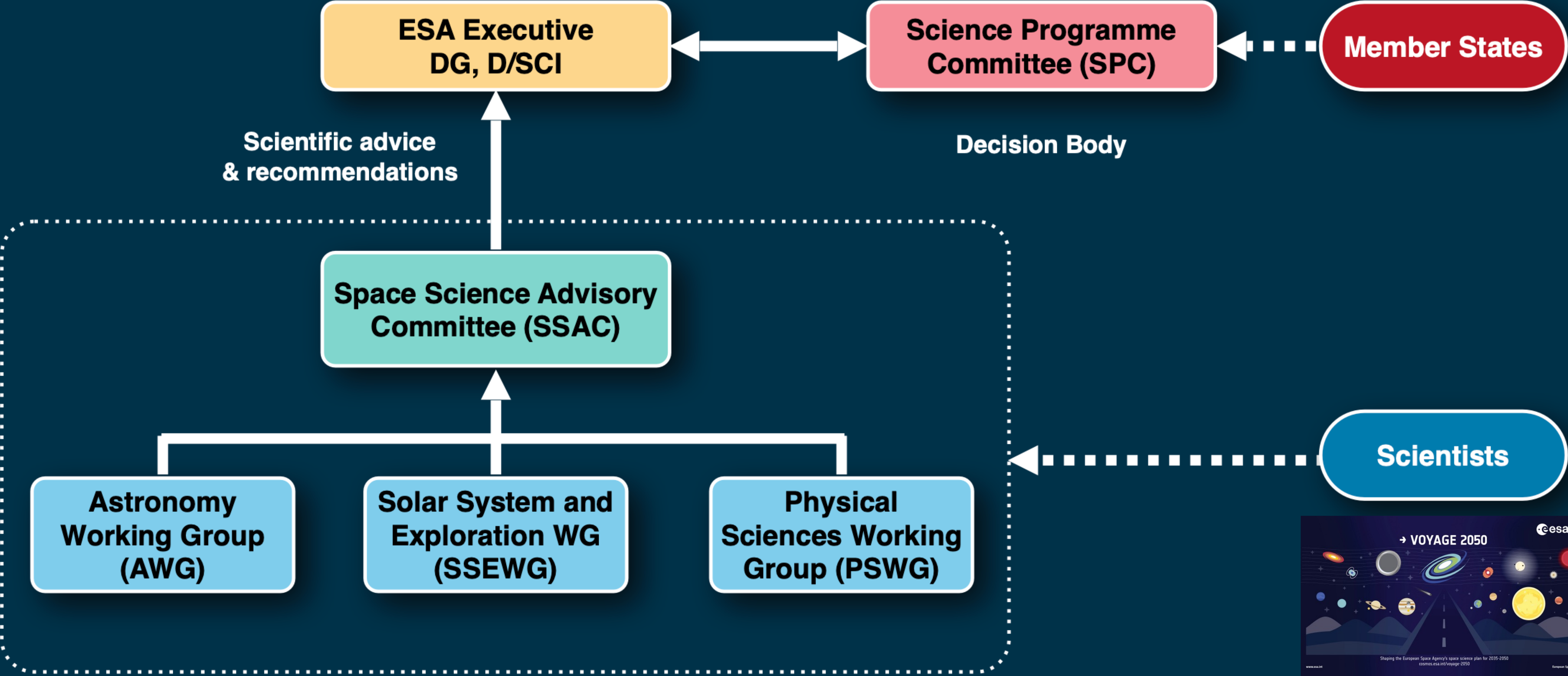


The role of the Advisory Structure and its impact on decisions

Prof Olivier Grasset
SSAC Chair

D/SCI Science Advisory Structure

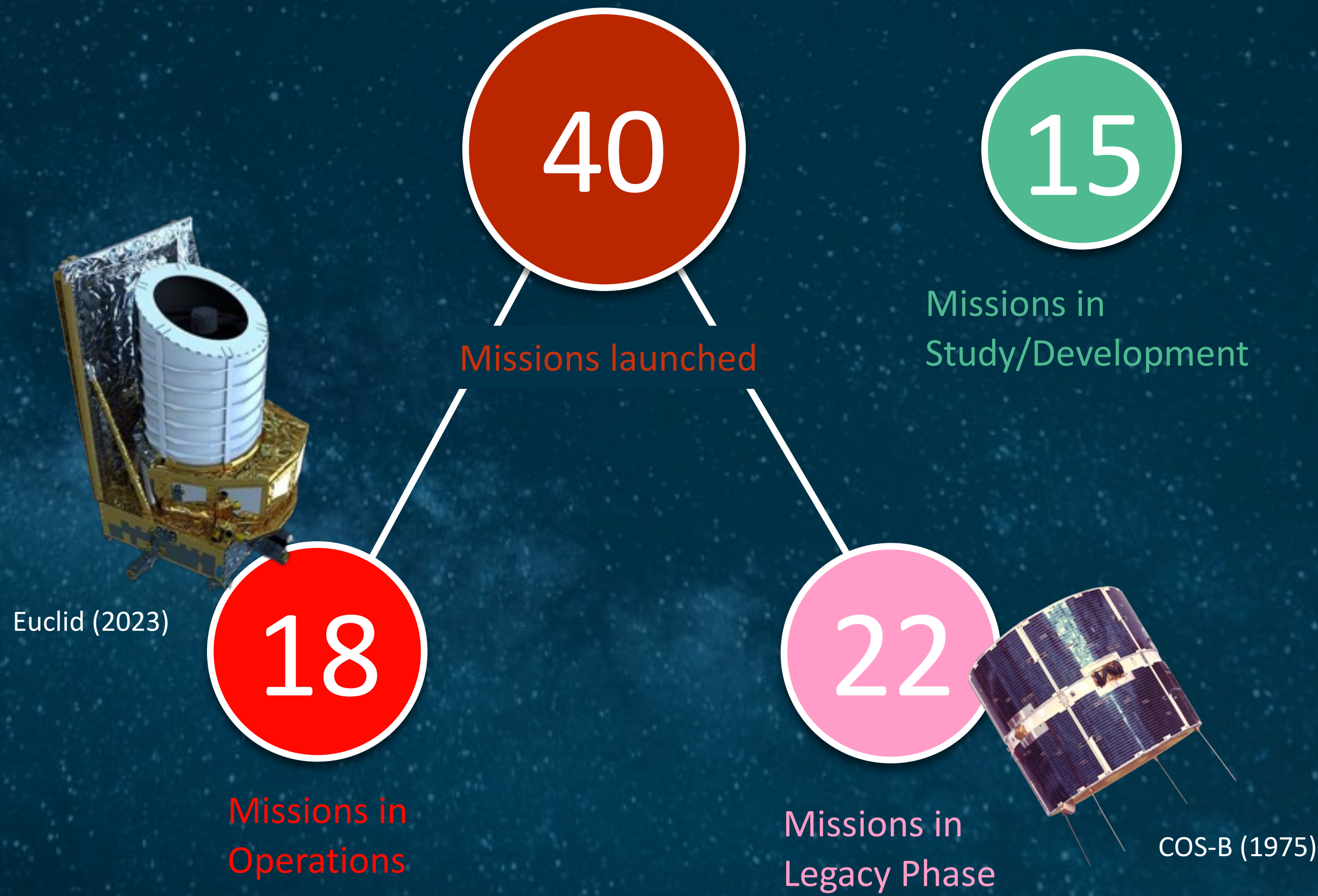
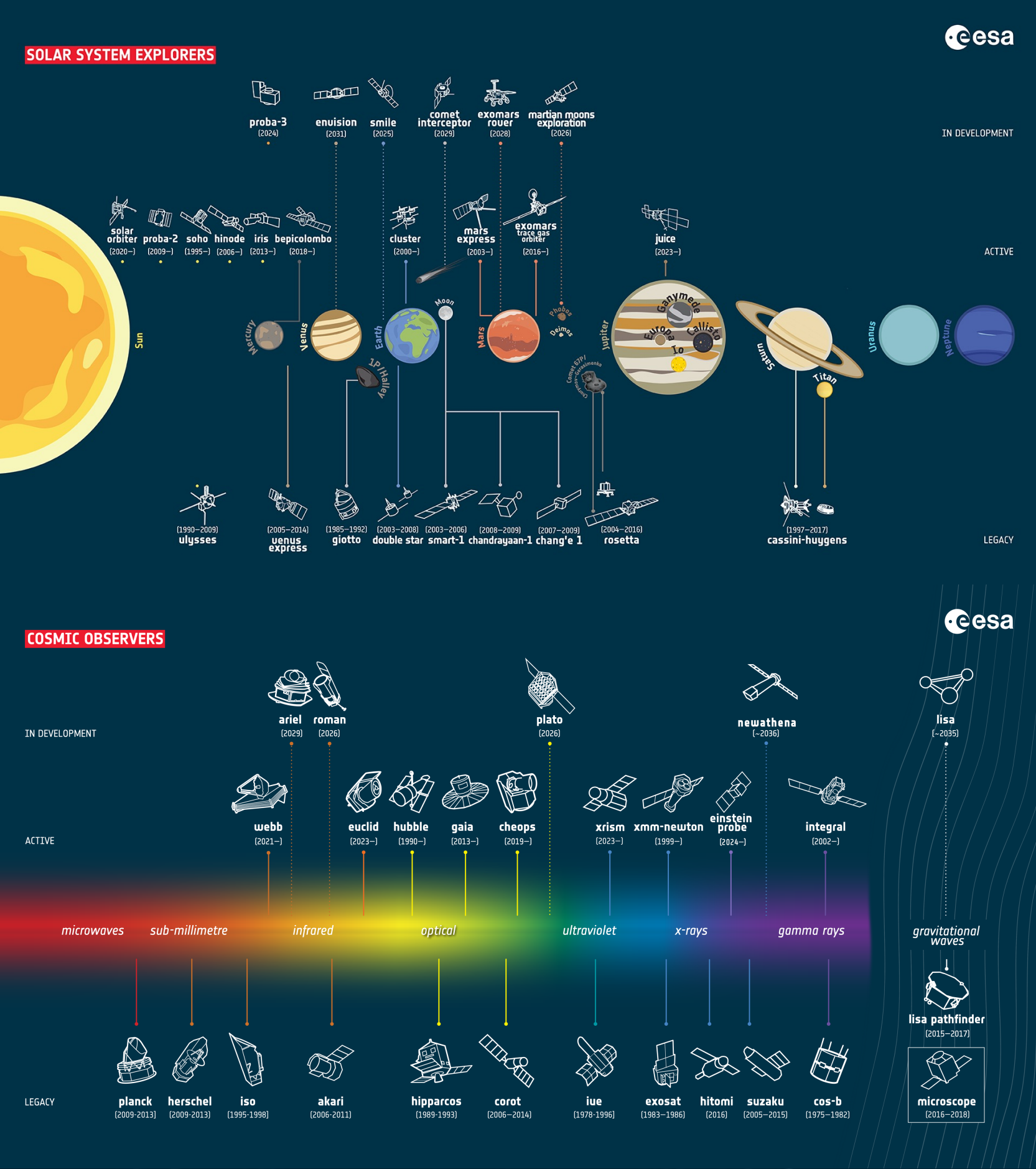


« The SSAC is the main interpreter of the views and needs of the European scientific community as regards access to space experimentation and data exploitation in the mandatory science programme ».

The mandatory science programme



The Space Science Advisory Committee (SSAC) is the senior advisory body to the Director of Science on all matters concerning space science included in the mandatory science programme of ESA.



Its main tasks are to advise and/or make recommendations on

(« *all matters concerning space science included in the mandatory science programme* »):

- The needs of the scientific community for access to space for research;
- scientific activities during the definition, implementation and exploitation of the approved projects of ESA's mandatory science programme
- the formulation and updating of medium and long term space science policy in Europe in regard to the interests of the scientific community;
- the priorities of the scientific community in the selection and formulation of future space science missions;
- the scientific studies and activities required to lay the foundations for future missions, taking account of the recommendations of the Working Groups.
- the selection of new scientific projects.

The SSAC also has the highest-level advisory capacity, through the Director of Science for matters to be treated at the level of the Science Programme Committee (SPC) , which may also request advice on particular issues of a scientific nature.

Terms for Reference for AWG & SSEWG



The **main tasks of AWG and SSEWG are to provide assessments** on

(« all matters concerning space science included in the mandatory science programme ») :

- needs of the scientific community for access to space for their research;
- scientific activities during the definition, implementation, operations and post operations of the projects of ESA's mandatory science programme;
- interests of the scientific community;
- science case and formulation of future space science missions and projects;
- scientific studies and activities required for future missions.

The AWG and SSEWG **provide advice and/or make recommendations on items of scientific relevance**, referred to them by the Director of Science. **Members of the AWG and/or SSEWG may however raise issues they wish to discuss.**

In addition to the WGs/SSAC, **ad-hoc committees may be convened by the Director of Science** with a specific task

- e.g. review and prioritisation of new mission proposals

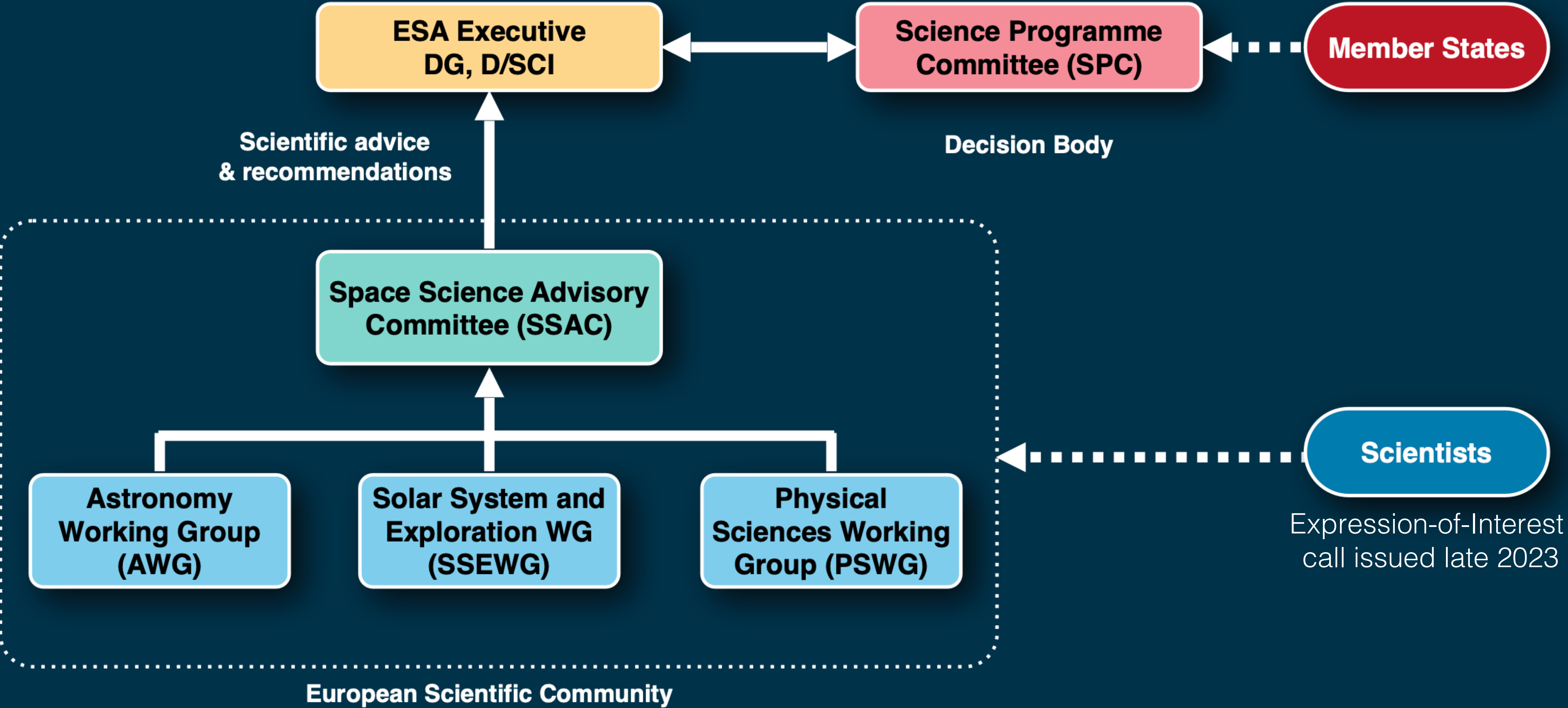
Ad-hoc committees primarily comprise members of the AWG/SSEWG and SSAC

- However, before convening the body, we first check for any member who may have a *Conflict of Interest*
- Any member who is conflicted cannot participate in the review
- If needed, former members of the Science Advisory Structure are appointed to the review body
- If required, due to unavailability of specific scientific expertise, external scientists not related to the Advisory Structure, may be asked to participate in a committee
 - e.g. when all current and former members are conflicted

For example: **Selection of the M7 mission proposals** to enter Phase 0

- Science Assessment Review Panel (SARP) comprises current, and former, members of the AWG & SSEWG
- Senior Science Committee (SSC) comprises current, and former, members of the SSAC

D/SCI Science Advisory Structure



Astronomy Working Group (AWG) - Members



Prof. Elena Rossi (Chair)

Gravitational Waves

Leiden University, NL



Prof. David Hobbs

Astrometry

Lund Observatory, SE



Dr Nadine Neumayer

Galaxy Evolution

Max Planck Institute for Astronomy, DE



Dr Almudena Alonso-Herrero

Active Galaxies, Star Formation

CAB INTA, ES



Prof. Pascale Jablonka

Cosmology

EPFL LASTRO - Observatoire, CH



Dr Gabriel Pratt

Galaxies, Cosmology

CEA Saclay, FR



Dr Judith Croston

High Energy Astrophysics

The Open University, UK



Dr Ágnes Kóspál

Young Stars, Astrometry

Konkoly Observatory, HU



Dr Alberto Sesana

Gravitational Waves

University of Milano Bicocca, IT



Dr Luca Fossati

Exoplanets

Austrian Academy of Sciences, AT



Prof. Martin Kunz

Dark Energy

University of Geneva, CH



Prof. Piotr Życki

High Energy Astrophysics

Nicolaus Copernicus Astronomical Center, PL



Executive Secretary: Dr Nora Lützgendorf

27 new applications (call Nov. 23)

D/SCI Town Hall| 28 May 2024

Solar System and Exploration Working Group (SSEWG) - Members



Dr Zita Martins (Chair)
Instituto Superior Técnico (IST), PT

Prof Geraint Jones
MSSL, UK

Dr Gabriel Tobie
CNRS, FR

Dr Petr Brož
Czech Academy of Sciences, CZ

Dr Manish Patel
The Open University, UK

Prof. Francesco Valentini
University of Calabria, IT

Dr Thibaut Cavalié
LAB, FR

Dr Viviane Pierrard
BIRA-IASB, BE

Dr Audrey Vorburger
University of Bern, CH

Prof Catriona Jackman
DIAS, IE

Dr Ana-Catalina Plesa
DLR, DE


Executive Secretary: Dr Yannis Zouganelis

50 new applications (call Nov. 23)


Space Science Advisory Committee (SSAC)



Prof Olivier Grasset (C)
Planetary Science
Nantes Université, FR




Dr Jörn Helbert
Planetary Science
DLR, DE



Prof Pasquale Palumbo
Small Bodies
IAPS-INAF, IT




Dr David Berghmans
Solar Physics
Royal Observatory of Belgium, BE



Prof Luisa Lara
Planetary Science
Inst Astrofísica de Andalucía, ES




Prof Jonathan Rae
Magneto-physics
Northumbria University, UK




Prof Fabienne Casoli
Exoplanets/Astronomy
Observatoire de Paris, FR



Dr Zita Martins
Astrobiology
Instituto Superior Técnico, PT




Prof Elena Rossi
Gravitational Waves
Leiden Observatory, NL



Prof Matt Griffin
Far Infra-red astronomy
Cardiff University, UK



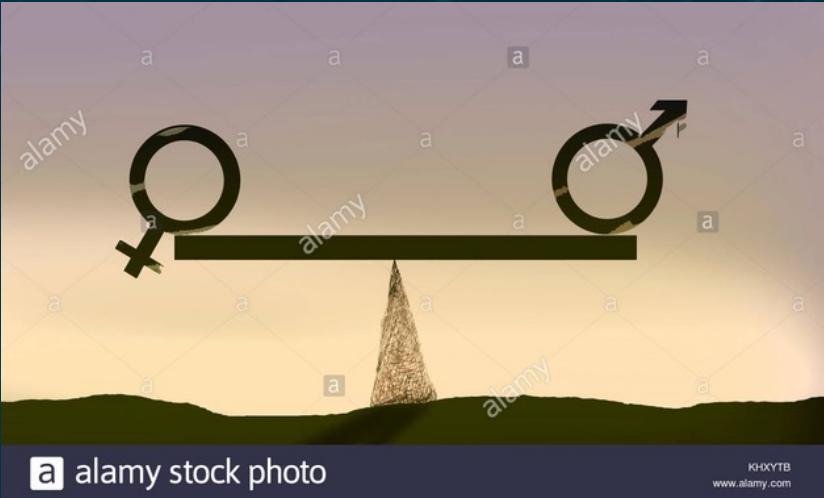
Prof Paolo Natoli
Cosmology
Università degli Studi di Ferrara, IT



Executive Secretary: Dr Paul McNamara

54 new applications (call Nov. 23)

- Solar and Space Plasma Physics
- Solar System / Planet. Evolution
- Planet, Star and Galaxy
- The Extreme Universe
- Cosmology, Astroparticle and Fundamental Physics



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Call for Expression of Interest to join the Science Advisory Structure



In the past the science coordinators have requested **inputs from the current members and ESA Study/Project Scientists** for proposals for members of the Science Advisory Structure

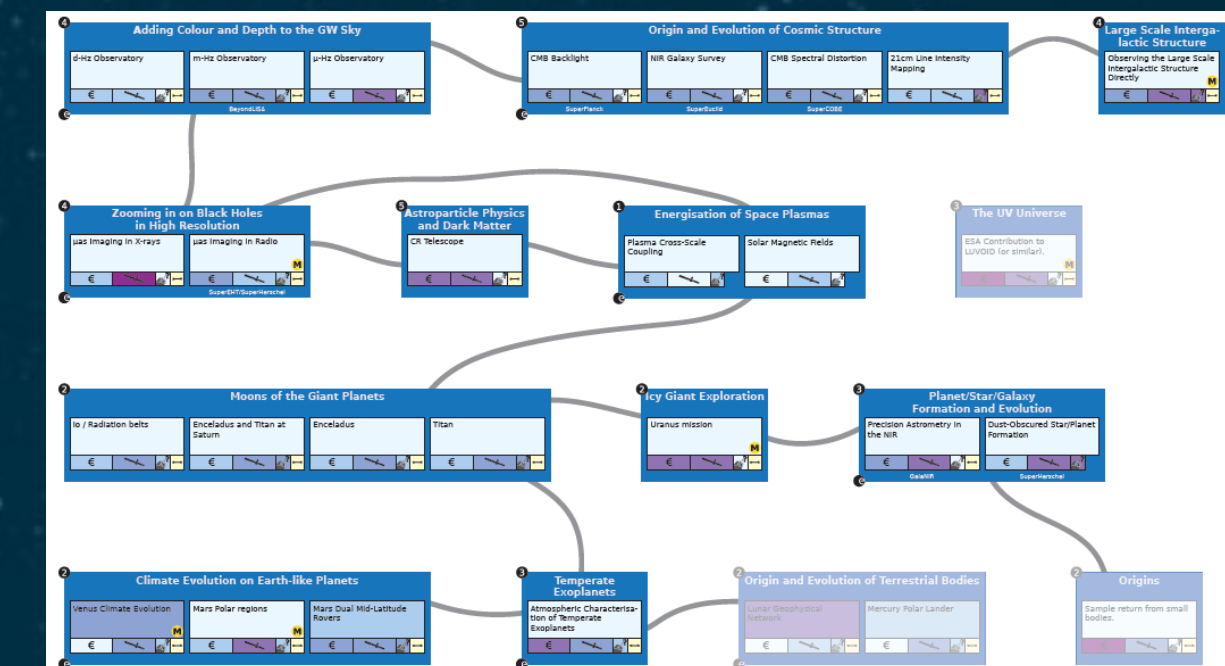
In order to improve transparency, **a call was issued to the European Science Community for Expressions of Interest to become members of the Advisory structure** (The first call was issued in November 2023)

- 100 proposals received
 - AWG: 27
 - SSEWG: 50
 - SSAC: 54

Future members will be selected from the pool of Expressions of Interest

- The first round of selections will take place after summer, to replace the outgoing AWG/SSEWG/SSAC members

- **The needs of the scientific community for access to space for research;**



Topical Team 1: Solar and Space Plasma Physics	<ul style="list-style-type: none"> • Magnetospheric Systems • Plasma Cross-scale Coupling • Solar Magnetic Fields • Solar Particle Acceleration • Solar Polar Science
Topical Team 2: Solar System and Planetary Evolution	<ul style="list-style-type: none"> • Venus Geology and Geophysics
Topical Team 3: Planet, Star and Galaxy Formation and Evolution; Astrochemistry and the ISM	<ul style="list-style-type: none"> • High Precision Astrometry • High Precision Asteroseismology • The Role of the Multiphase ISM in Star Formation and Galaxy Evolution
Topical Team 4: The Extreme Universe, Including Gravitational Waves, Black Holes, and Compact Objects	<ul style="list-style-type: none"> • Probing the Violent and Explosive Universe at High Energies: Accretion by Compact Objects and Astroparticle Physics • Space (Radio) Interferometry with Ground-based Telescopes for Probing the Physics of Black Holes
Topical Team 5: Cosmology, Astroparticle Physics and Fundamental Physics	<ul style="list-style-type: none"> • Mapping the Cosmic Structure in Dark Matter, Missing Baryons, and Atomic and Molecular Lines • Probing the Large Scale IGM in the Local Universe through Absorption Lines in the UV and X-rays • Quantum Mechanics and General Relativity

7 science themes worth an M-class contribution to an international mission

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An impact on decisions?



Baseline Scenario of the programme:

The Cosmic Vision programme can be completed, but much of Voyage2050 will be delayed.

The SSAC has debated on the scientific arguments to be considered for making the programme more in line with the scientific expectations. It will provide to SPC several arguments based on the following issues:

- Cadence of missions - to have periodic M and F calls at cadence of 3-4 years?
- The impact of the scenario on the interest of the scientific community to the ESA programme?
- The risk of loosing European leadership in several scientific fields e.g. astrometry (Gaia), CMB cosmology (Planck), cometary science (Rosetta, CI), Dark Energy (Euclid), Solar (SoHO), Outer SS (JUICE)



Voyage 2050 is yours – you can help the advisory structure and the D/Sci to ensure that it will satisfy the scientific needs for space science.