

UK Space Agency presentation to RAS Forum

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01 November 2023

Internal update

- Agency new structure
- CSR planning
- Early technology raising
- Conference

ESA

- LISA/EnVision
- Athena reformulation
- Visit of ESA Director to UKSA
- LTIP for Science and planning for CMin 2025
- M7 Selection of candidates for Phase A
- Habitable Worlds Observatory workshop

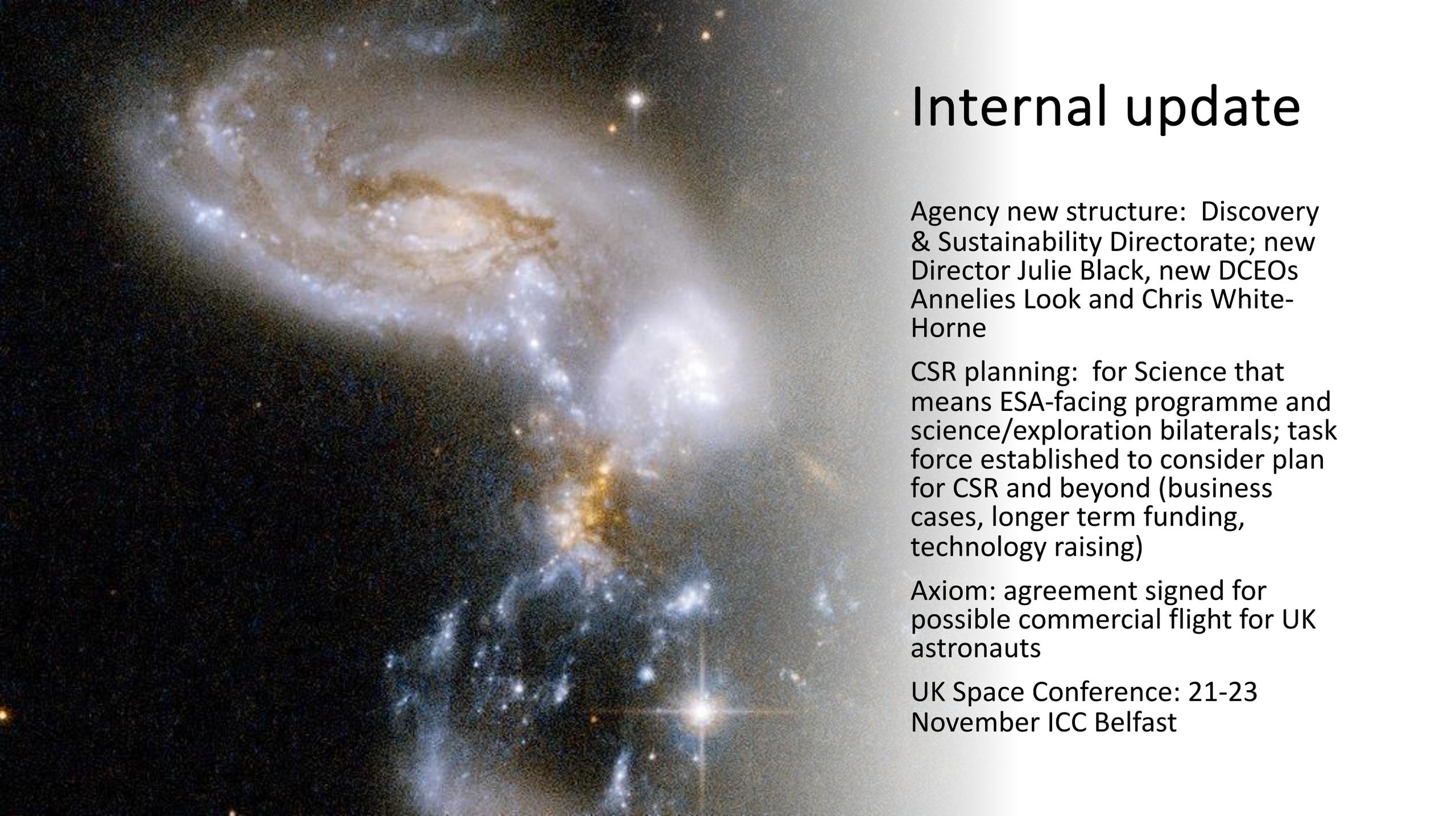
Bilaterals

- Helioswarm, LEAP, LiteBIRD and CASTOR
- New studies, Call 2 and 3
- NASA/JPL/Ames and JAXA visits
- Atlantic Declaration

Highlights

- JUICE, Euclid launches
- Gaia impact survey
- JWST data





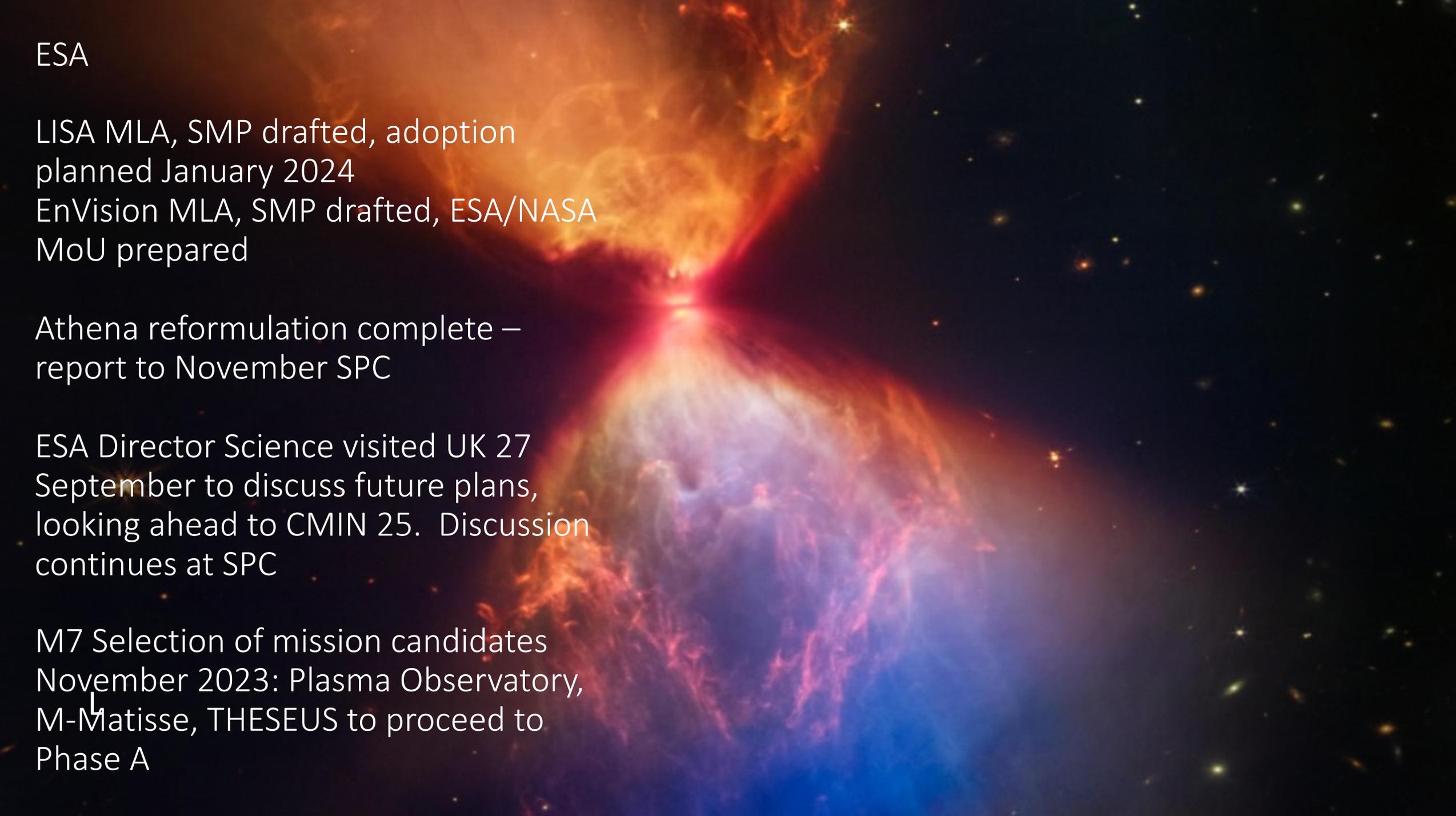
Internal update

Agency new structure: Discovery & Sustainability Directorate; new Director Julie Black, new DCEOs Annelies Look and Chris White-Horne

CSR planning: for Science that means ESA-facing programme and science/exploration bilaterals; task force established to consider plan for CSR and beyond (business cases, longer term funding, technology raising)

Axiom: agreement signed for possible commercial flight for UK astronauts

UK Space Conference: 21-23 November ICC Belfast



ESA

LISA MLA, SMP drafted, adoption
planned January 2024

EnVision MLA, SMP drafted, ESA/NASA
MoU prepared

Athena reformulation complete –
report to November SPC

ESA Director Science visited UK 27
September to discuss future plans,
looking ahead to CMIN 25. Discussion
continues at SPC

M7 Selection of mission candidates
November 2023: Plasma Observatory,
M-Matisse, THESEUS to proceed to
Phase A

Habitable Worlds Observatory

- NASA's Astro 2020 prioritized an IR/O/UV observatory optimized for exoplanet observations/spectroscopy for 2040s
- NASA is forming a Science & Technology Architecture Review Team (START) to identify science objectives, observations and capabilities
- UKSA has advised NASA HQ of strong UK interest and capability to participate in HWO and in the START
- European involvement in START is coordinated by ESA; AO for ESA representatives closes 30 November (electronic LoI required by 1 November)
- UK community coordination led by Prof Martin Barstow (Leicester); workshop 7 November



Science & Exploration Bilaterals:

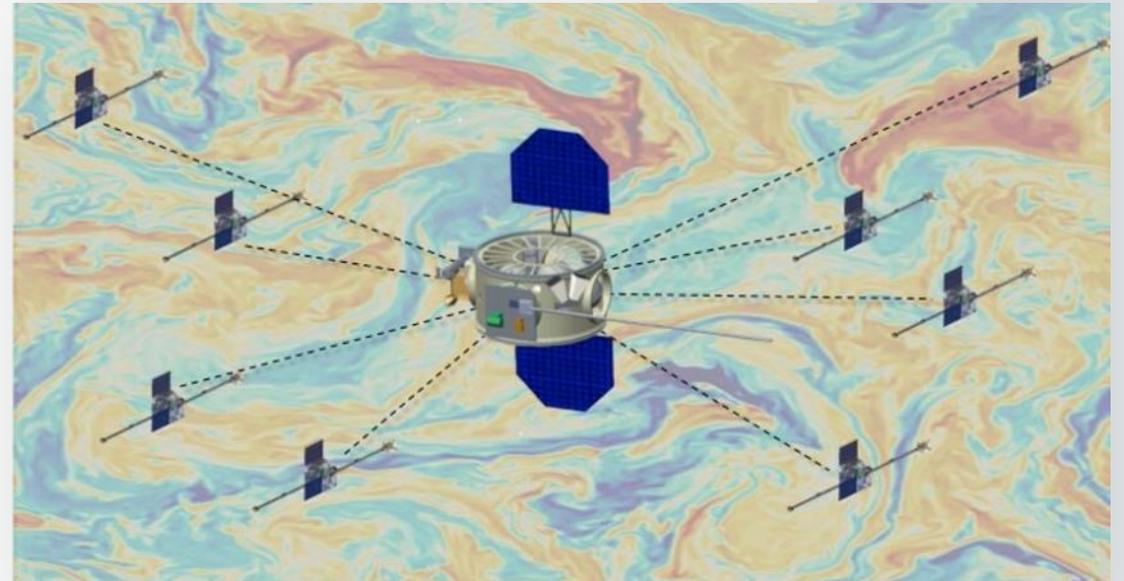
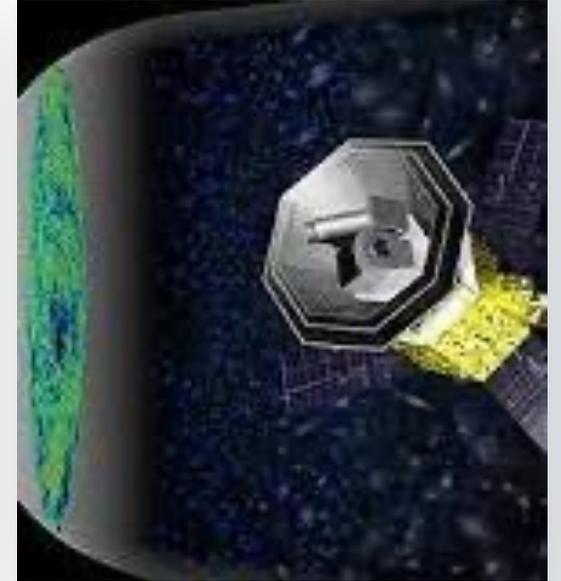
Call 1 selected Helioswarm, LEAP, LiteBIRD, CASTOR, plus 7 studies and funding for 2 UK Concurrent Design Facilities

UKSA/academic visits to JPL, Ames June 2023; further visit to NASA labs is proposed for 2024

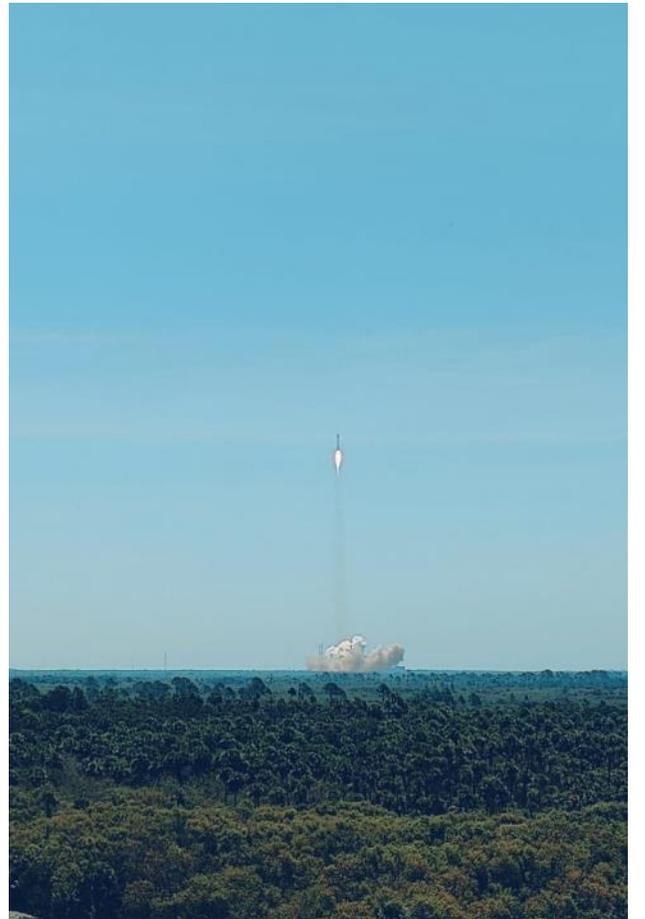
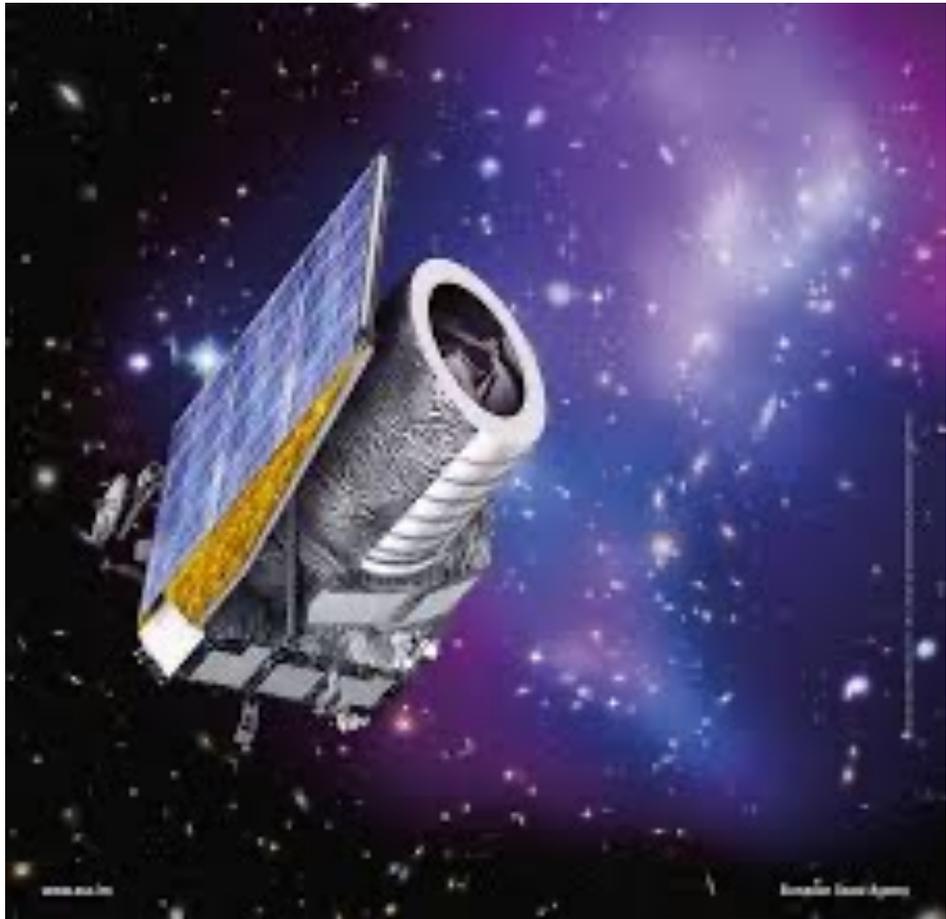
UKSA visit to CSA April 2023 to confirm UK roles on CASTOR (pending selection in Canada)

JAXA/UKSA Joint Committee in UK 6 November

Call 2 early 2024 (12-month studies); Next major call 2025 (subject to CSR)



Highlights: Euclid launch



Highlights: Juice launch





Highlights: Gaia impact evaluation

<https://www.gov.uk/government/news/report-highlights-impact-of-uk-contribution-to-the-gaia-mission>

- *“There can be little doubt that Gaia is a scientific success story. Our report highlights how UK funding has enabled the processing and release of high-quality data that is of huge value to the global scientific community, helping to advance the frontiers of human knowledge. The impact is also set to continue for years and decades to come.*
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- *“Our analysis also shows how funding has helped to expand the reach and reputation of the UK space sector, develop sought-after data skills, inspire the next generation, and lead to widespread ‘spillover’ benefits as new advanced statistical methods, algorithms and capabilities are applied elsewhere in the space sector and beyond.”*

