

Powered by the



Space @ Leicester

Prof. Martin Barstow



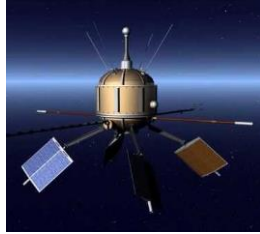
More than 60 years of Space Innovation



1960s



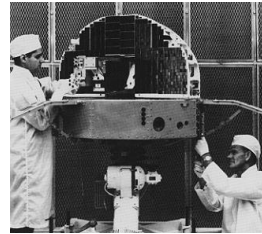
SKYLARK



ARIEL-1



ESRO 2

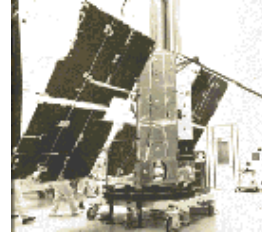


OSO-4

1970s



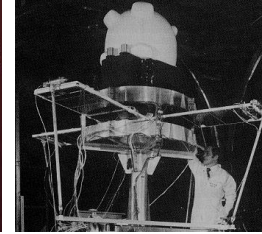
OSO-5



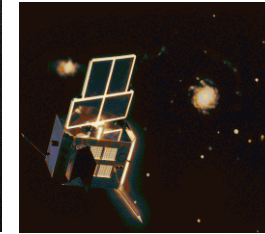
COPERNICUS



ARIEL-5



ARIEL-6



EXOSAT

1990s



GINGA



ROSAT



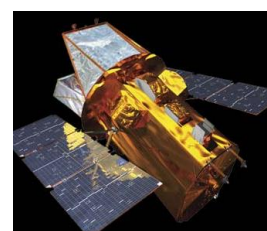
XMM NEWTON



CHANDRA



METEOSAT



SWIFT



BEAGLE 2



ASTROSAT



BEPI COLOMBO

2000s

2020s



JAMES WEBB



JUICE



EINSTEIN PROBE

MISSIONS
TO BE
LAUNCHED



SVOM



SMILE



EXOMARS



More than 60 years of Space Innovation

1960

Space at Leicester established
Now 300+ researchers

Record

>90 missions, 10 operational instruments now, >1 active in orbit every year since 1967

Skills

Largest concentration of space-focused expertise in space education from school pupils to PhDs

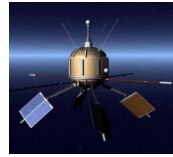
End-to-End capability

From science concept to operational mission

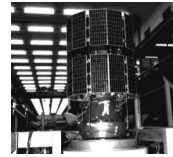
1960s



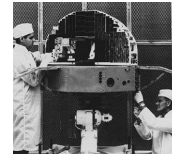
SKYLARK



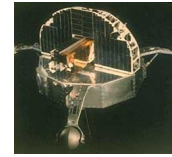
ARIEL-1



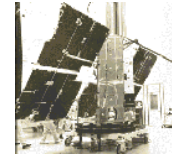
ESRO 2



OSO-4



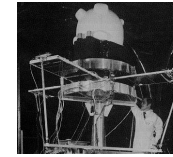
OSO-5



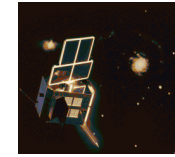
COPERNICUS



ARIEL-5



ARIEL-6



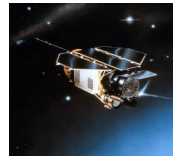
EXOSAT

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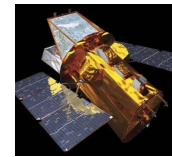
XMM
NEWTON



CHANDRA



METEOSAT



SWIFT



BEAGLE 2



ASTROSAT



BEPI
COLOMBO

2000s

2010s

2020s



JAMES
WEBB



JUICE



EINSTEIN
PROBE

SVOM SMILE EXOMARS

MISSIONS TO BE LAUNCHED

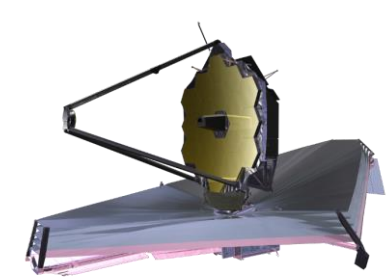
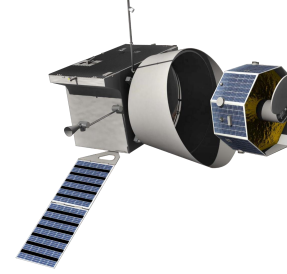
A UK leader in space science & Earth observation



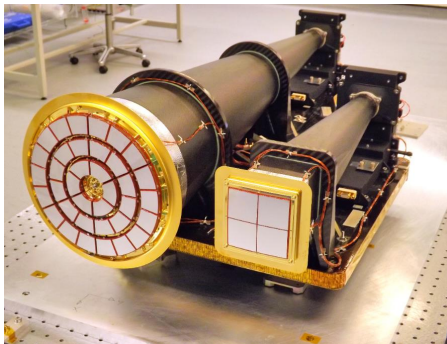
- Unique skills, space education and training offer
 - Undergraduate, Masters and PhD
 - Space Apprenticeships
 - Continuing Professional Development
- Strong links to National Space Centre
- Lead Midlands Innovation Space Group (>900 space scientists)
- Headquarters of the National Centre for Earth Observation
 - Provides national capability in Earth observation science
 - Monitoring health of our planet through satellite instruments
 - World-class capability in interpreting these data



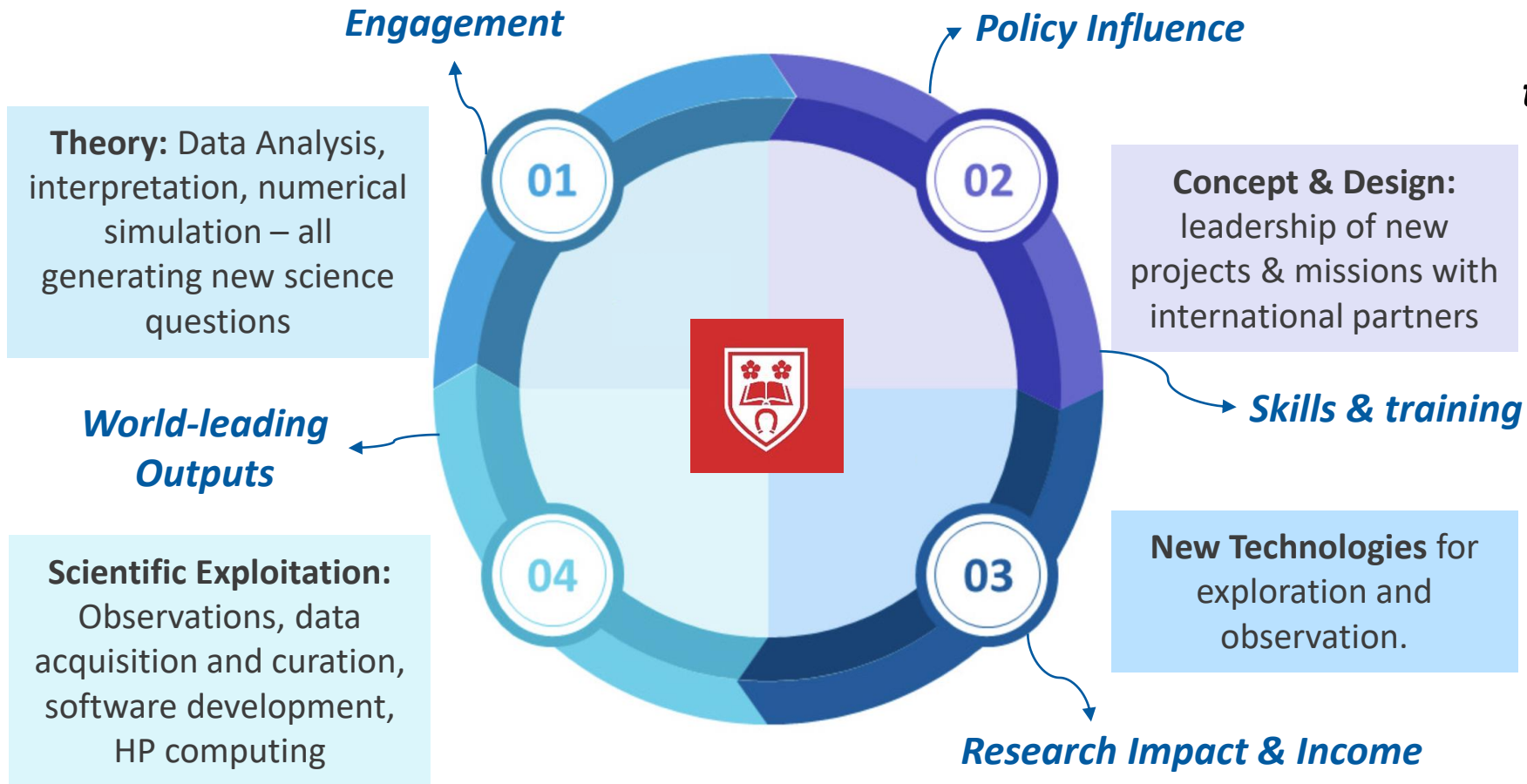
Breadth of Research



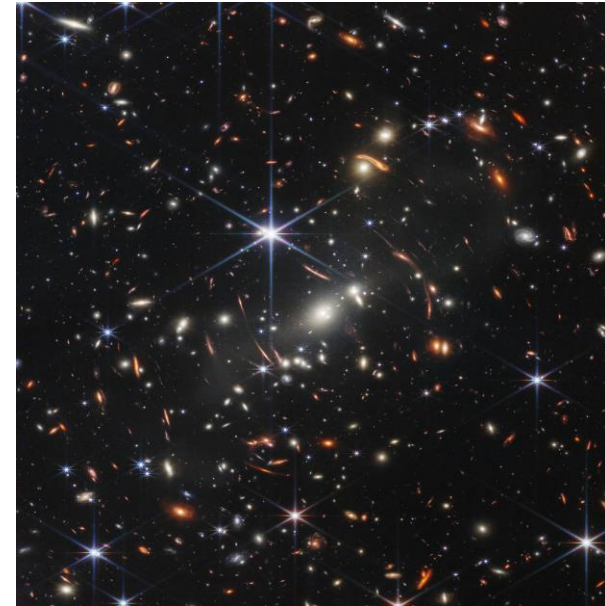
- **End-to-end research in space science, technologies and techniques**
 - Astrophysics, planetary science, Earth observation, Sun-Earth connection, exploration and engineering
 - Complete mission lifecycle from concept to next generation
 - Strong innovation, knowledge transfer and impact record



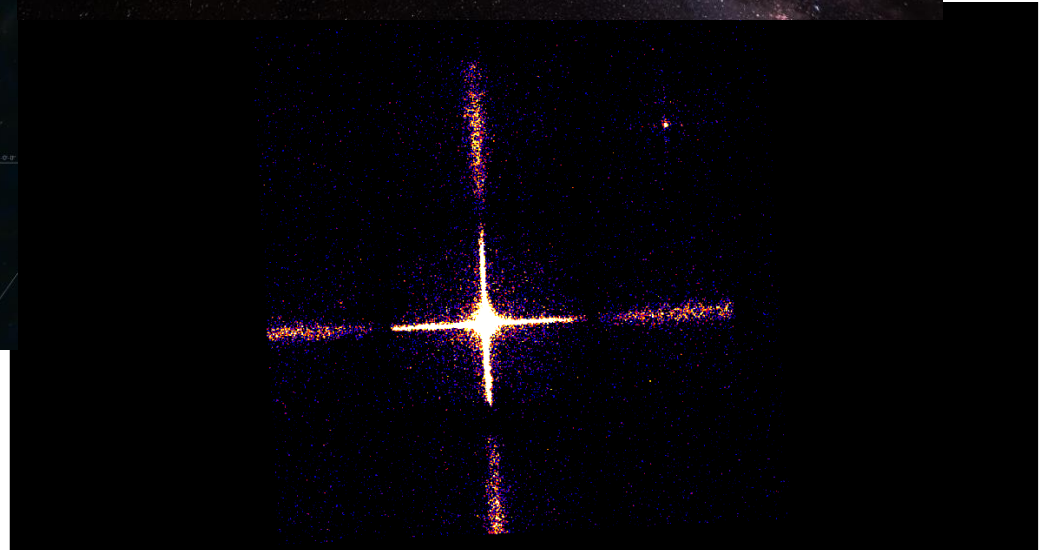
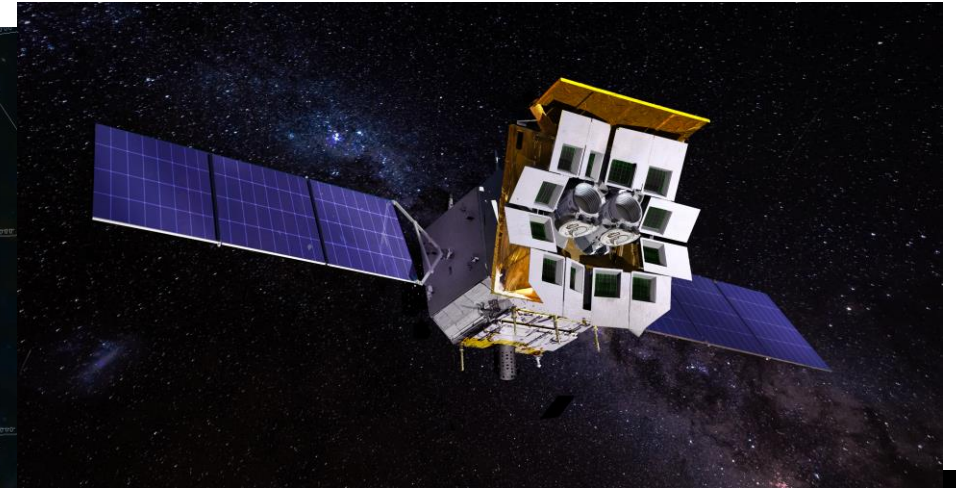
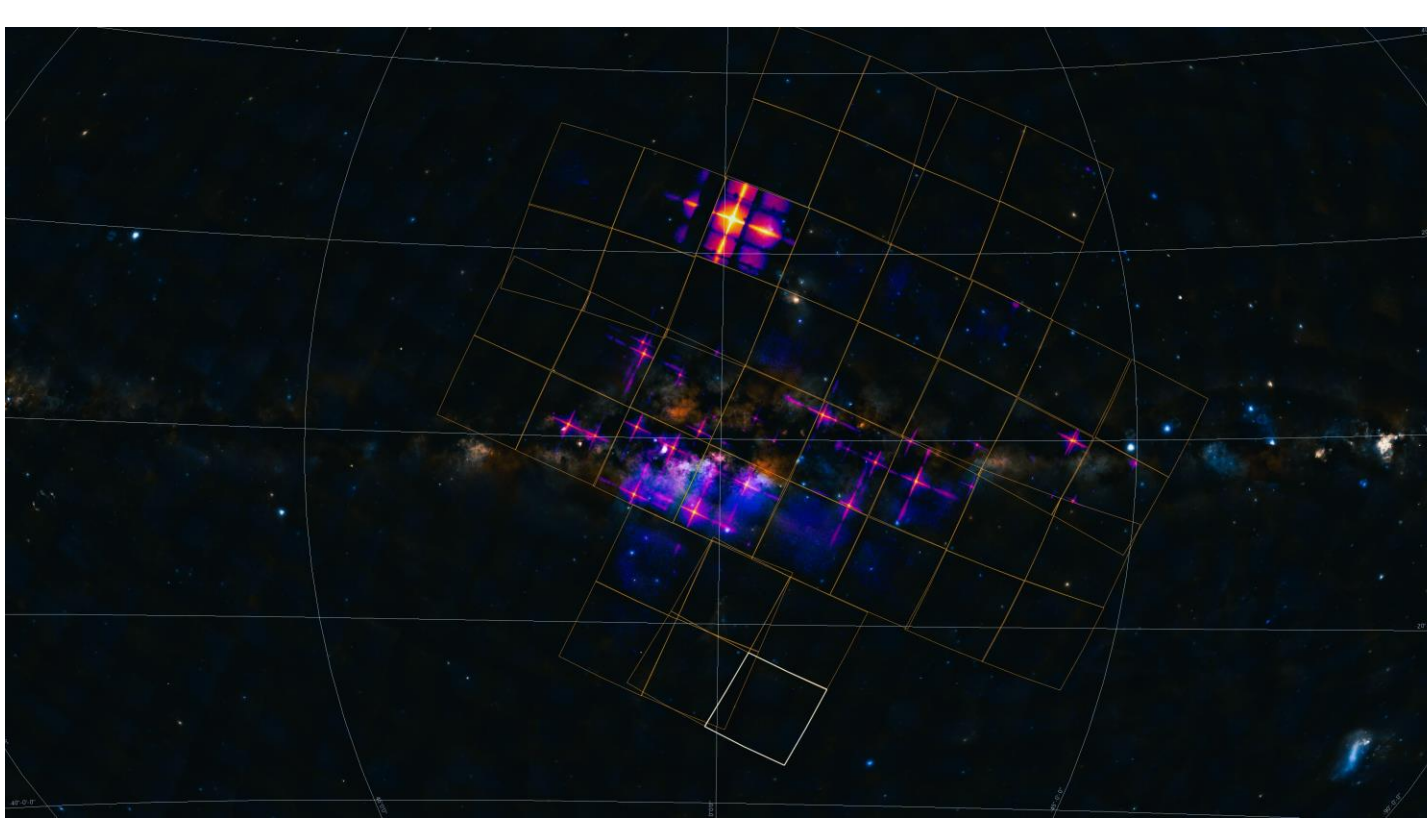
End-to-end Life Cycle



Game-changing end-to-end research in space science, technologies and techniques



Einstein Probe – launch 9 Jan 2024



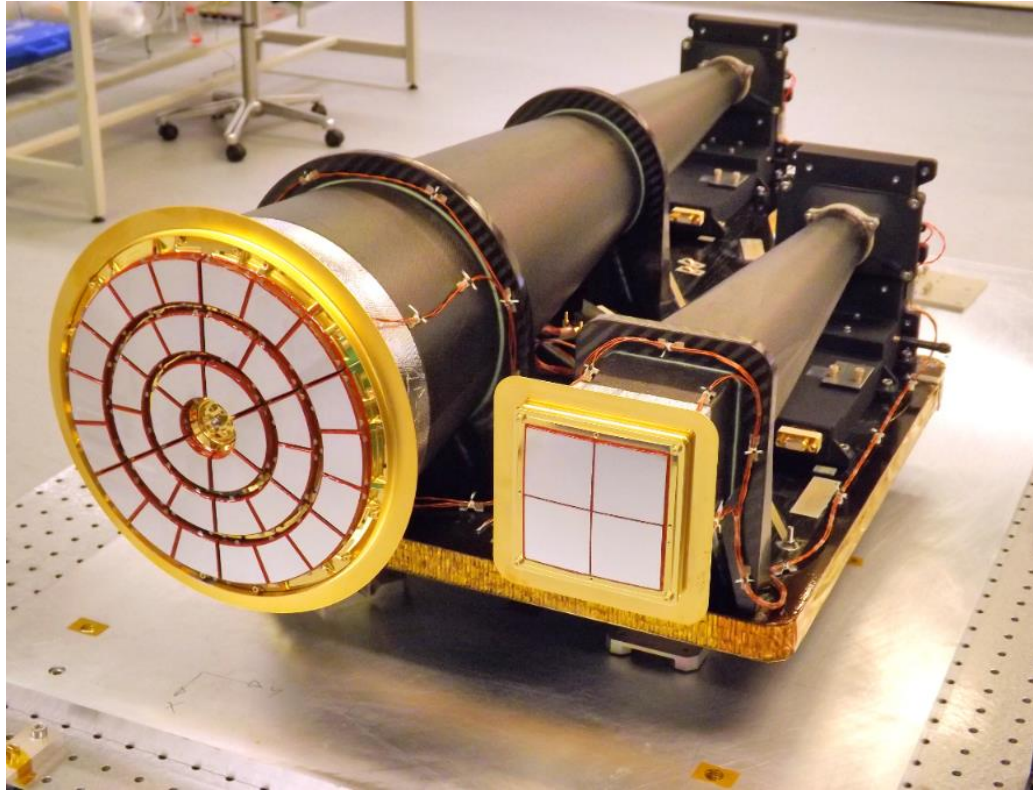
Imaging Wide-field X-ray Telescope has ~ 3600 sq. deg FoV
Uses X-ray MPOs and CMOS tested and calibrated by UoL (ESA)



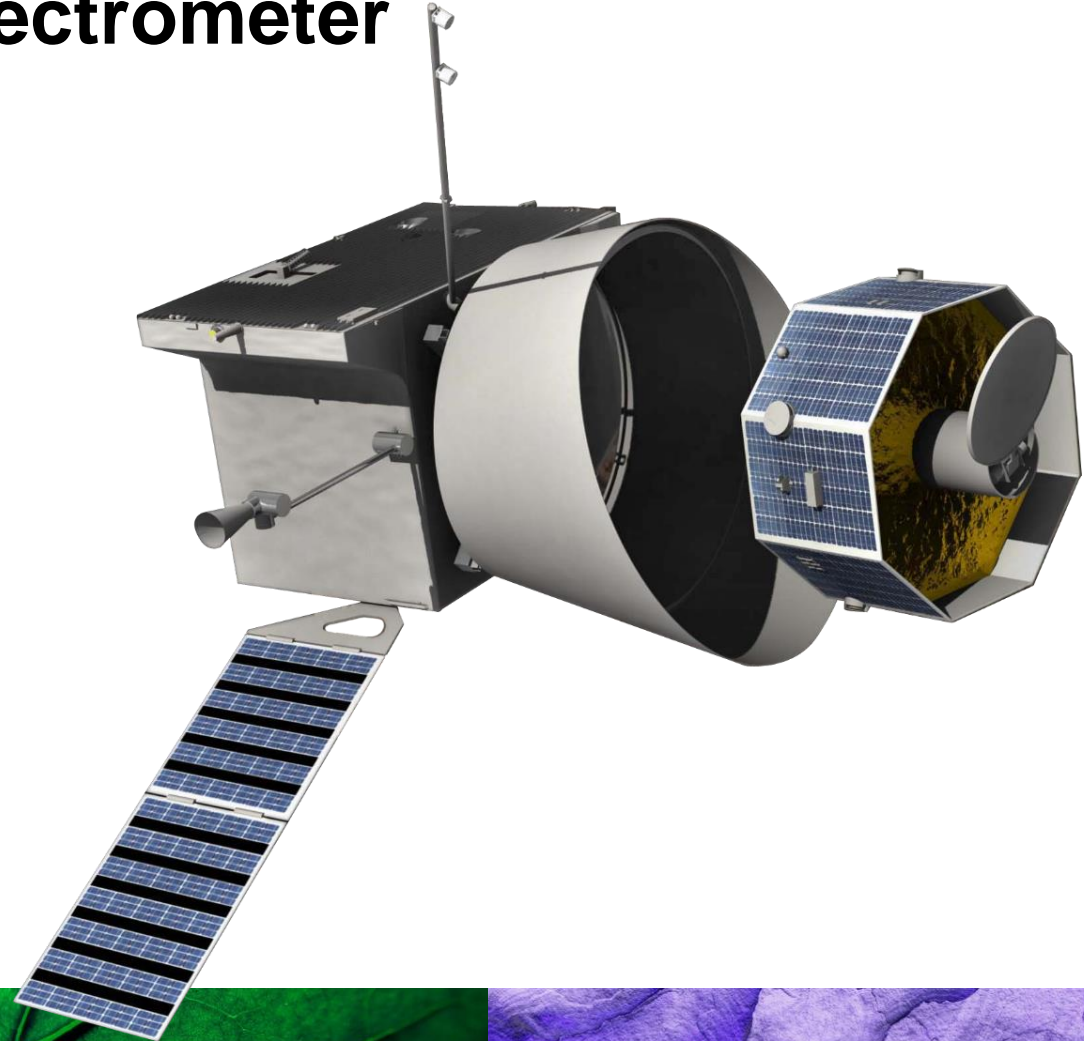
Bepi-Colombo – Arrives at Mercury in 2025



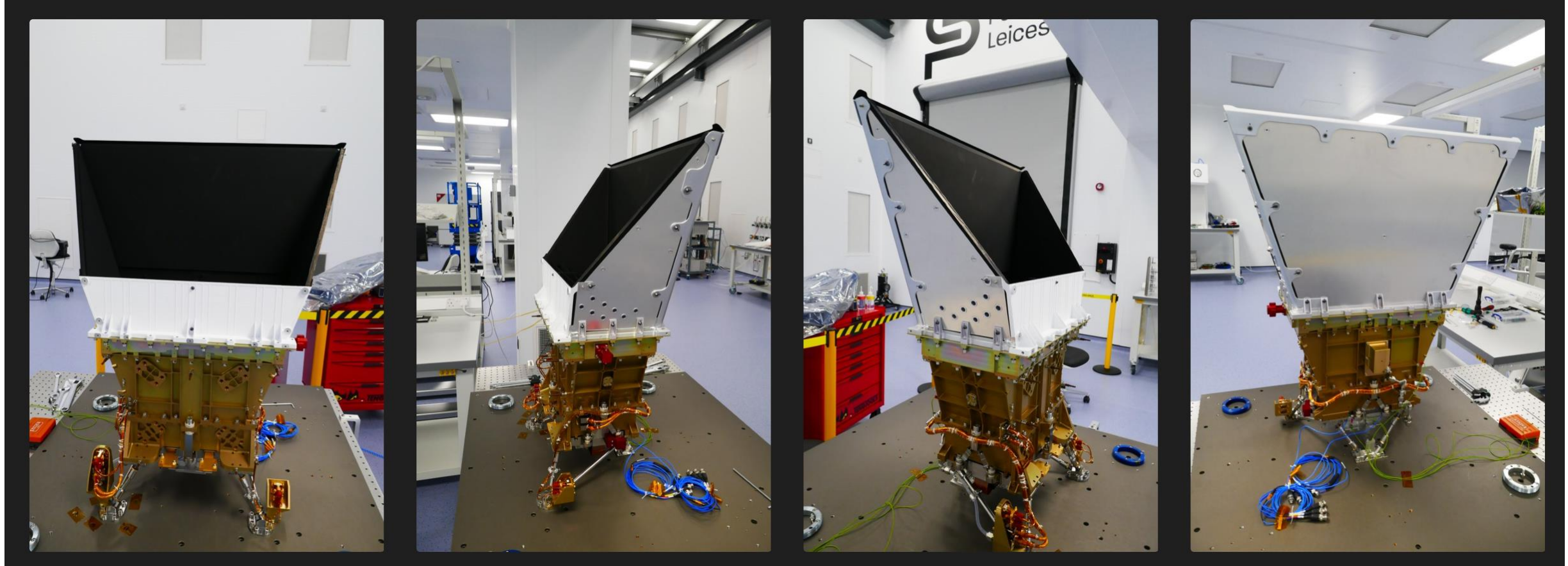
Mercury Imaging X-ray Spectrometer



Flight Model



SMILE – Studying Space Weather (2025)

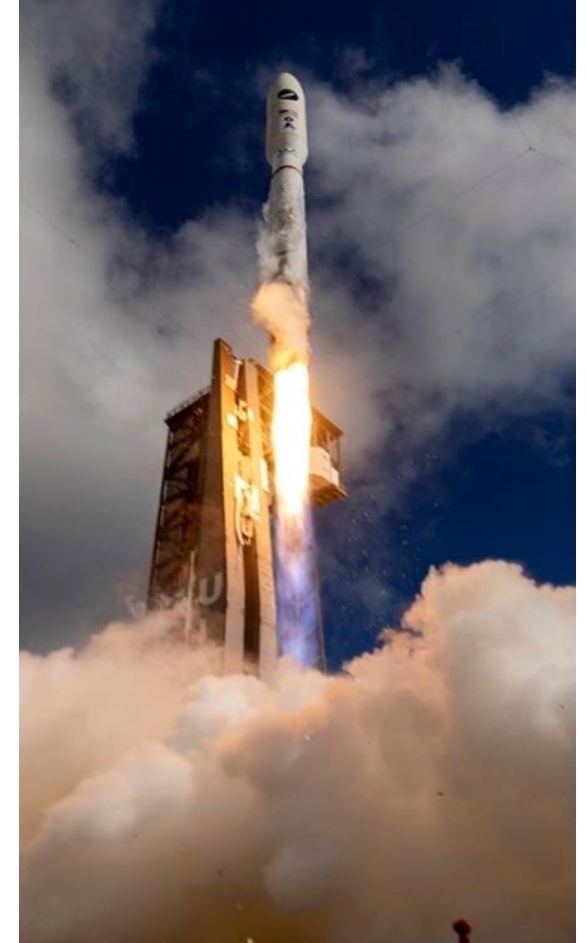


FLIGHT MODEL



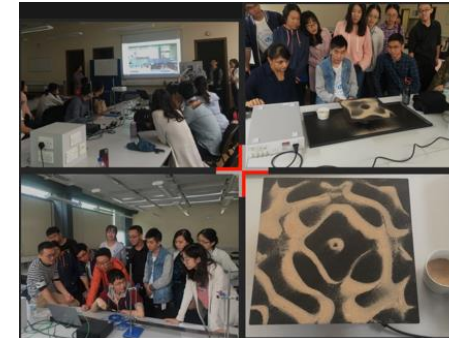
Solving the global issues of our time

- Tackling climate change
- Connecting the 3 billion 'unconnected' people
- Protecting the environment and wildlife
- Managing natural resources
- Monitoring health, disease, deforestation, and flooding
- ...but space activity must be sustainable



Unique skills, space education & training offer

- Undergraduate, Masters and PhD
 - MSc. Space Exploration Systems
 - MSc. Satellite Data Science (unique in UK)
- Space Degree Apprenticeships (Collaboration with Airbus)
- Continuing Professional Development
- Summer Schools (Space School UK)
- International graduate exchange programme with Italy, France and USA
- Internships & T-Level plans
- Expanded space engineering training



UNIVERSITY OF LEICESTER
www.l.ac.uk

The Politics of Space Security and Space Law CPD

Develop and expand your comprehension of global space politics and law

The University of Leicester has launched a new research-led and practitioner-informed Continuing Professional Development Course on the Politics of Space Security and Space Law led by experts in this emerging field.

The course is delivered online in one day, UK time, and is geared towards professionals of all levels in the space sector.

Course topics include:

- The rise of new military space powers
- UK, EU space politics and strategy
- International space institutions
- International and domestic space laws
- Global governance in space

EARTH INFORMATION SERVICES
a £20bn forecast market, delivering real-time global awareness, navigation, analytics and security for the advanced data economy
Image copyright: UK-DMC2 2014 Airbus DS

CONNECTIVITY SERVICES
a £40bn forecast market, delivering broadband and 5G for everyone – at home and on the move, on the road, in the air or at sea, anywhere around the Globe

IN-SPACE ROBOTICS
a nascent market potentially transforming the way we use and explore space, including all-new applications for science, enterprise and consumers
Image courtesy of MDA Space Infrastructure Services

LOW COST ACCESS TO SPACE
maximising the value of the UK's spaceports and launch from the UK, a £10bn forecast market, making the UK a home for low-cost launch services and developing platform technologies to promote even lower cost access to space
Image courtesy of the UK Space Agency



Leicester in Space

- +60 years of building and exploiting space missions
- End-to-end research in space science, technologies and techniques
 - Astrophysics, planetary science, Earth observation, Sun-Earth connection, exploration and engineering
 - Complete mission lifecycle from concept to next generation
- Strong education, innovation, knowledge transfer and impact record
 - Supporting UK space industry
 - Economic growth
 - Societal benefit

