

Welcome to ESAC

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(Head/Operations Div./ESA Dir. Science)

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**ESA Science
Operations &
Data Centre**

INTA - Satellite
tracking

Earth
Observation
(SMOS Spanish
National Centre)

CSIC: Centre for
AstroBiology

Galileo
Navigation:
Science Office

Space
Situational
Awareness

Education
(CESAR)

ESA
Communication
& Outreach

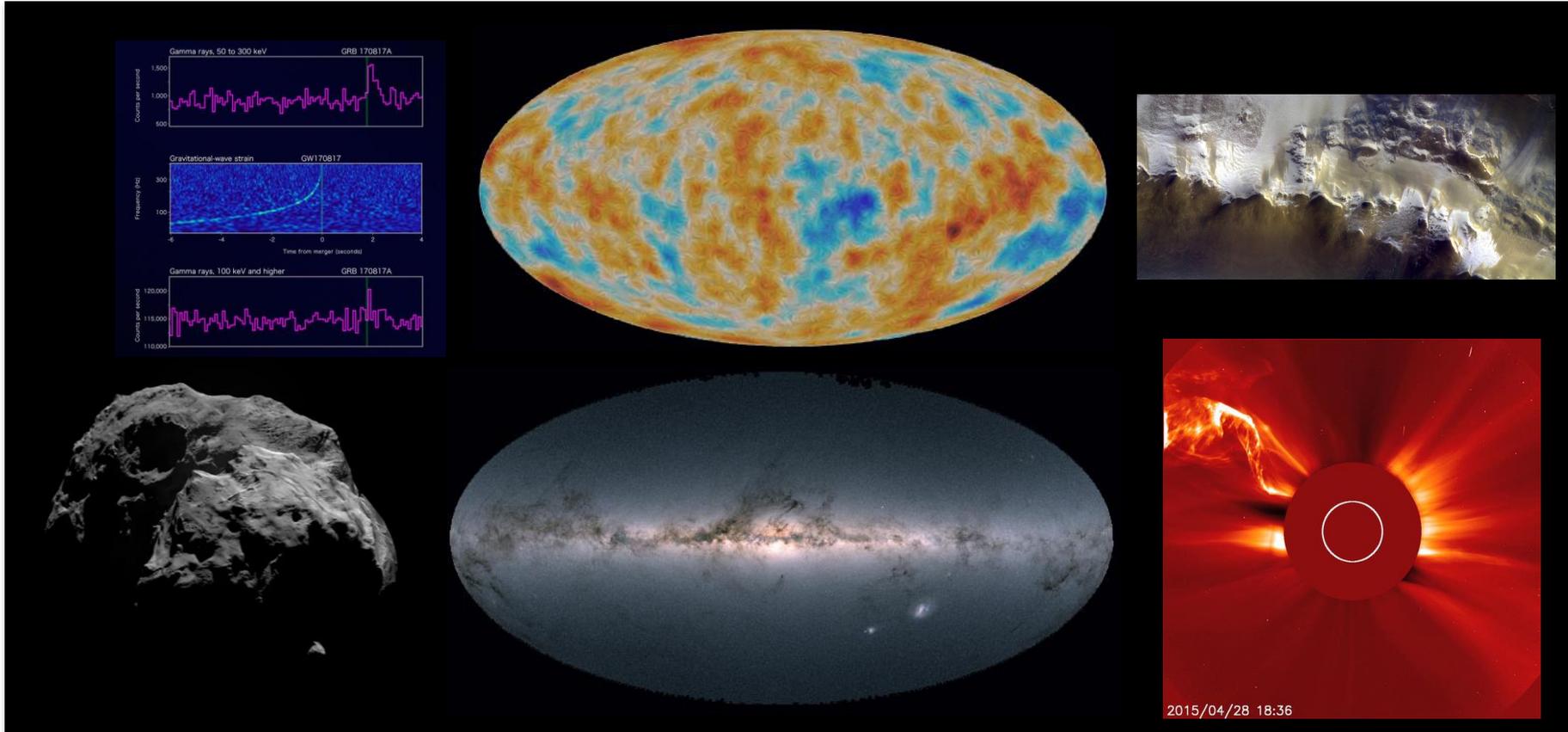
Directorate of Science: Operations Department



- Overall management of ESA's operational space science missions.
- Science Operations Centres (SOCs) for
 - Astronomy,
 - Heliospheric, and
 - Planetary missions.
- Science Data Centre (ESDC)
 - Enabling discovery & long-term access
- Involved in ~25 missions/studies.
- Over 200 scientists, engineers, etc



Enabling Science for Europe...



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European Space Agency

CUBESAT ACTIVITIES @ ESAC

FERNANDO MARTIN-PORQUERAS



Cubesat activities at ESAC: Ground Station



Supervisors:
J. Gallegos, F. Martin,
X. Dupac

Ground station:
2016 – Emilio Martinez
2017 – Roger Cano

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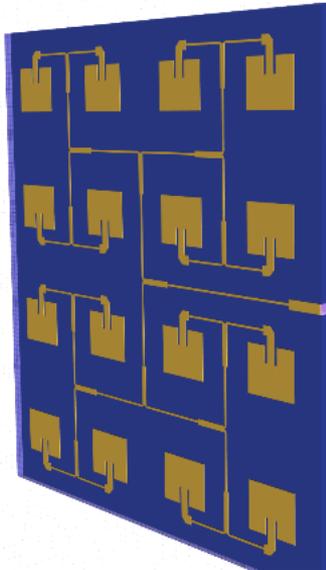


European Space Agency

Cubesat activities at ESAC: Scientific case study



➤ In-orbit radiotelescope calibrator



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EPI-Consolider



Planet Labs Inc.

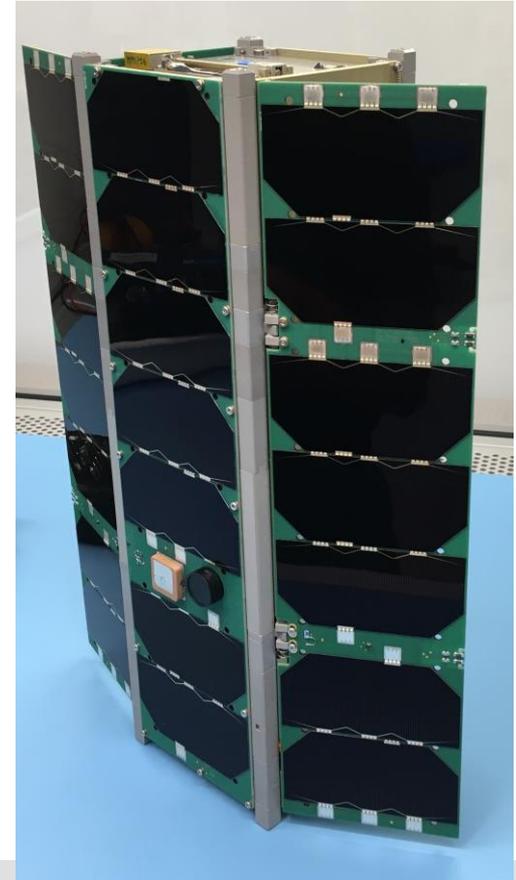
Supervisors: M. Lopez-Caniego, J. Fauste

Payload Preliminary study (2018) – Mansur Tisaev
Preliminary study (2018) – Jesus Mendia

Cubesat activities at ESAC: Cubesat Initiative for Galileo



- The Galileo Science Office has supported ETH university in the development of a GNSS in-orbit technology demonstrator for a cubesat (Astrocast). Launch expected between November 15-21 from Vandenberg, California. Rocket: Falcon 9.
- The Galileo Science Office together with the GNSS Scientific Advisory Committee is internally discussing to repeat this experience through a recurrent programme where universities and institutions could participate with proposals for GNSS in-orbit technology demonstrators using cubesats.



A large, oval-shaped map of the Cosmic Microwave Background (CMB) showing temperature fluctuations. The colors range from blue (cooler) to red (warmer), with a prominent horizontal band of higher temperature (red/orange) across the center. The background is filled with intricate, swirling patterns of these colors.

**WELCOME TO ESAC
&
HAVE A GREAT WORKSHOP!**