

The future of European Space Policy

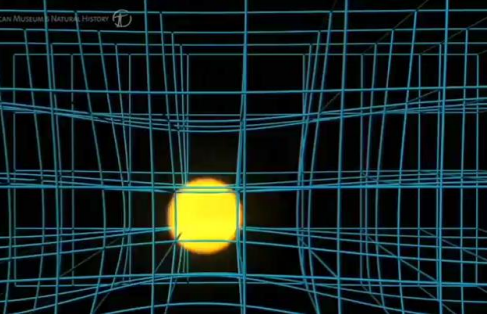
Foundation for Science & Technology event at the Royal Society
15 September 2021

Josef Aschbacher
Director General

ESA is Europe's gateway to space



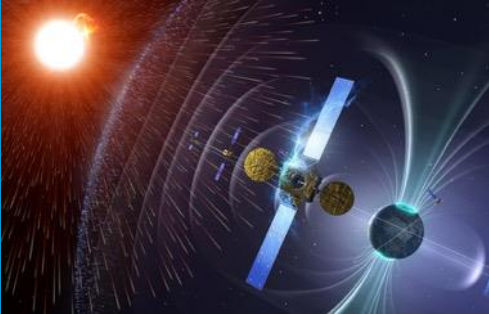
SCIENCE AND EXPLORATION



APPLICATIONS



SAFETY AND SECURITY



ENABLING AND SUPPORT

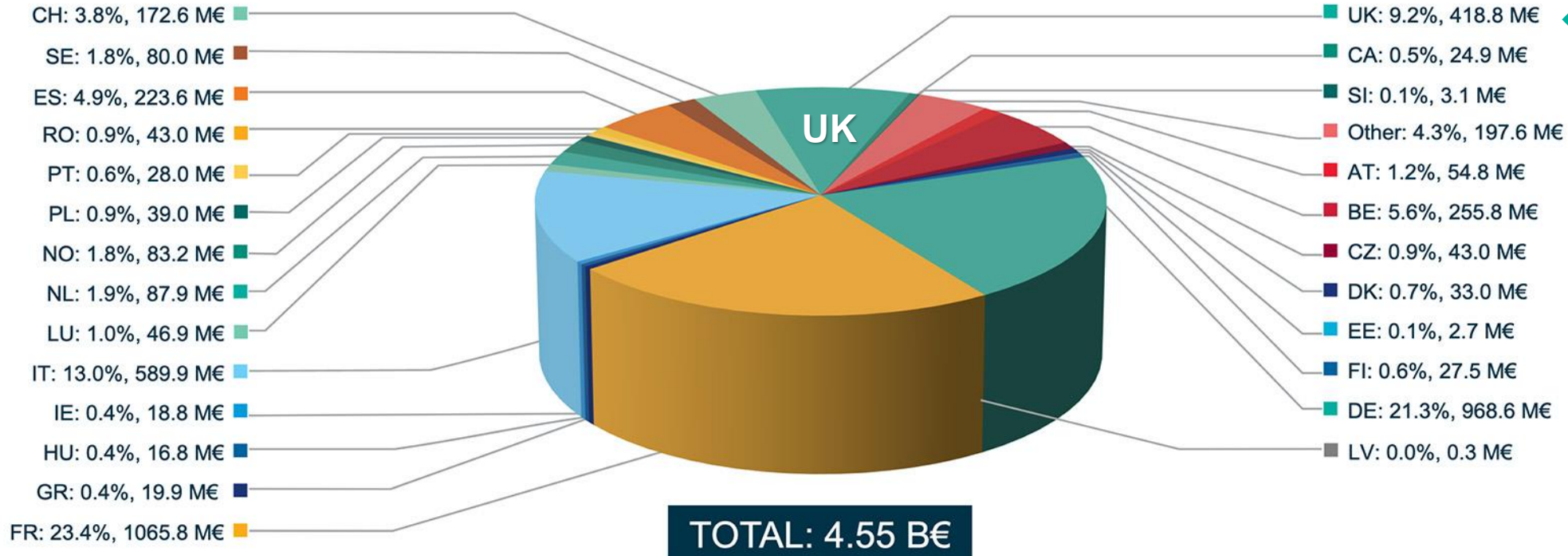


BUDGET 2021

ESA Activities and Programmes

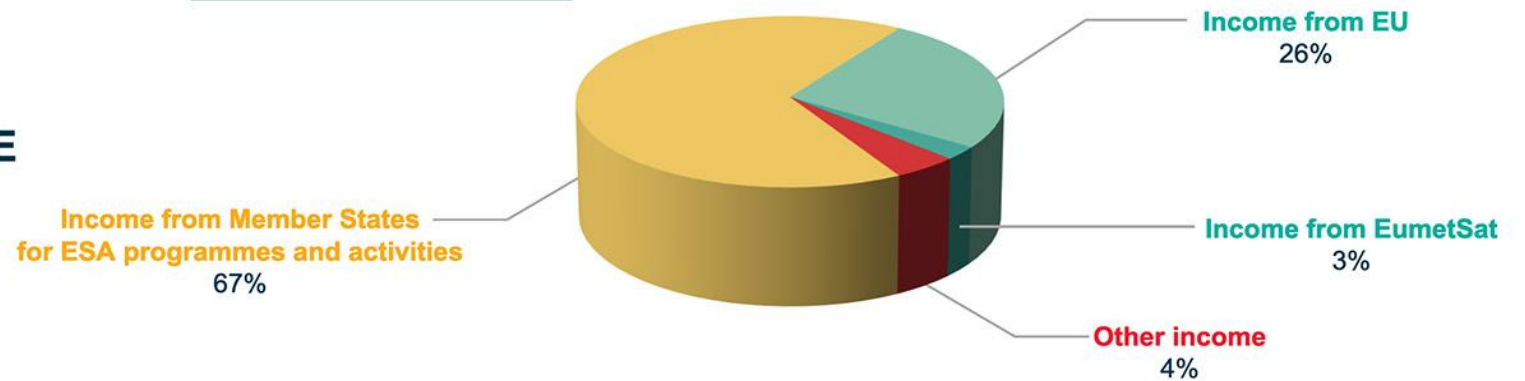


UK
418.8 M€
9.2%



BUDGET 2021 BY FUNDING SOURCE

TOTAL: 6.49 B€



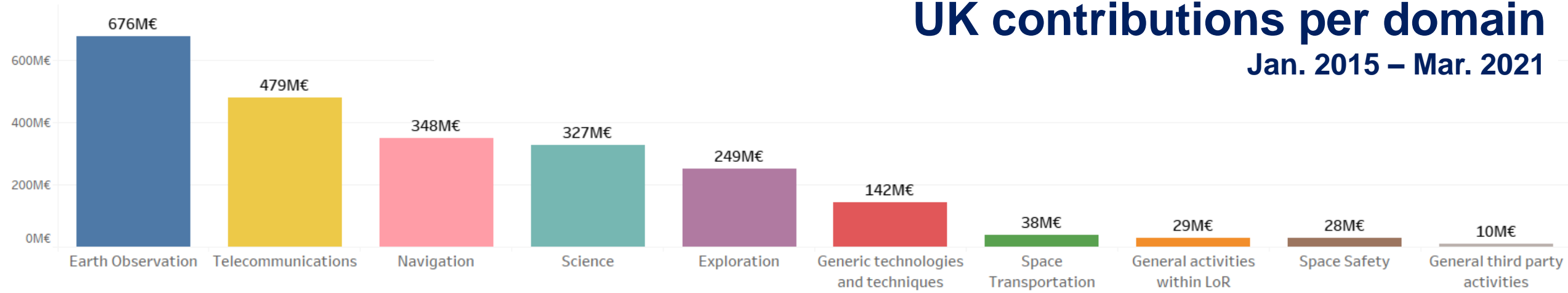
The United Kingdom and ESA



- 4th largest ESA contributor
- UK subscribed 1.66 B€ at Space19+
- ESA facilitates UK reaching out to **global opportunities**



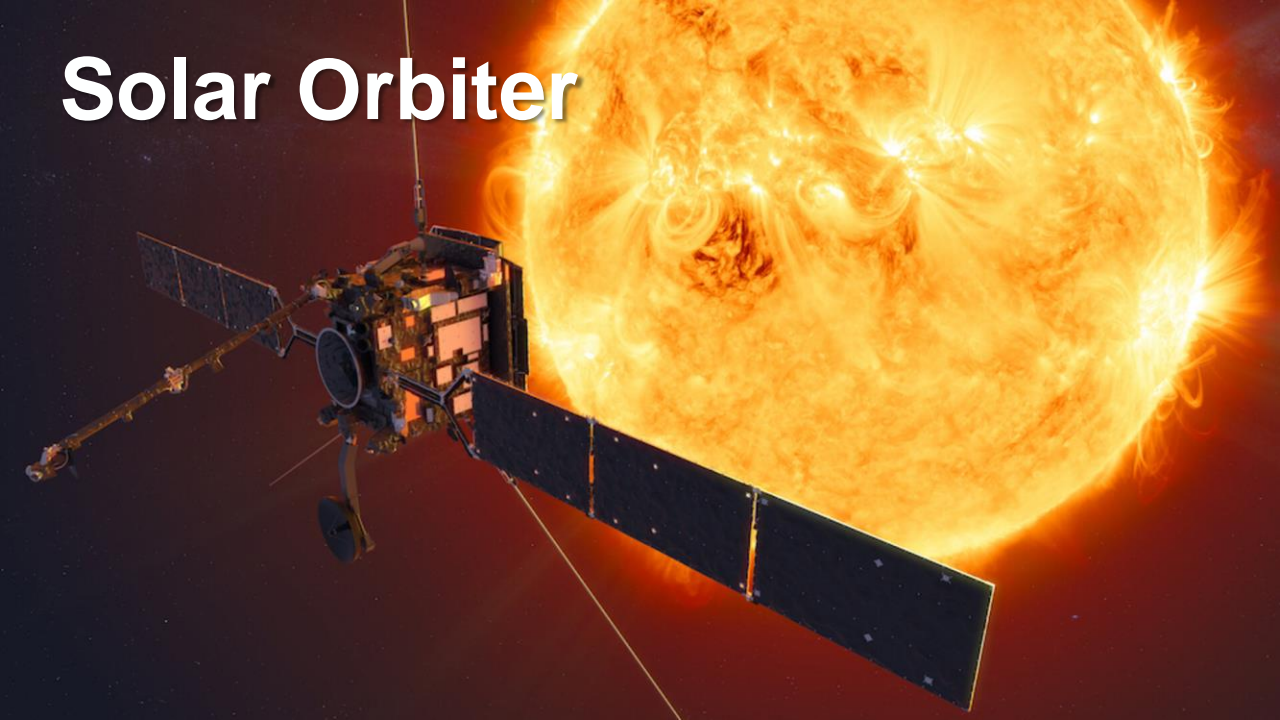
UK contributions per domain Jan. 2015 – Mar. 2021



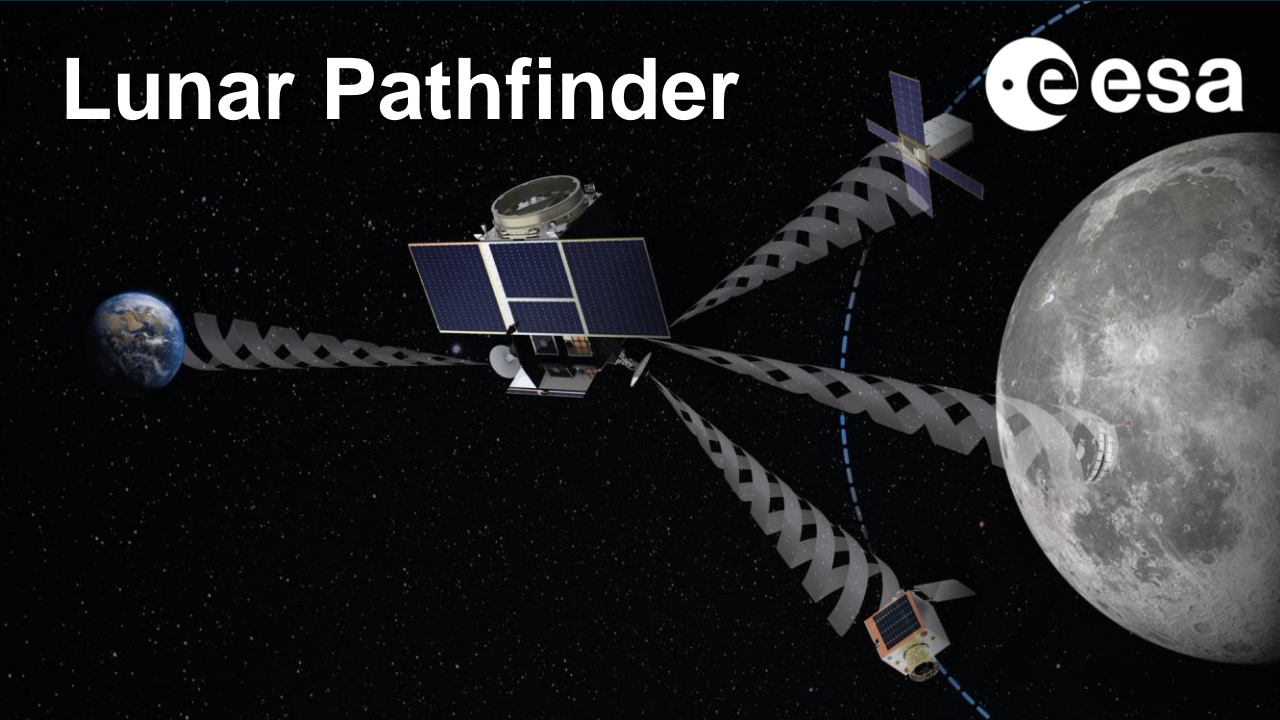
UK successes and future growth paths in space



Solar Orbiter



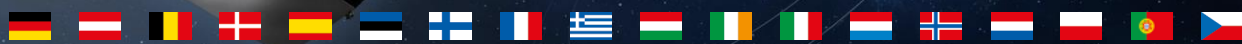
Lunar Pathfinder



PLATO: looking for other habitable planets



ExoMars 2022



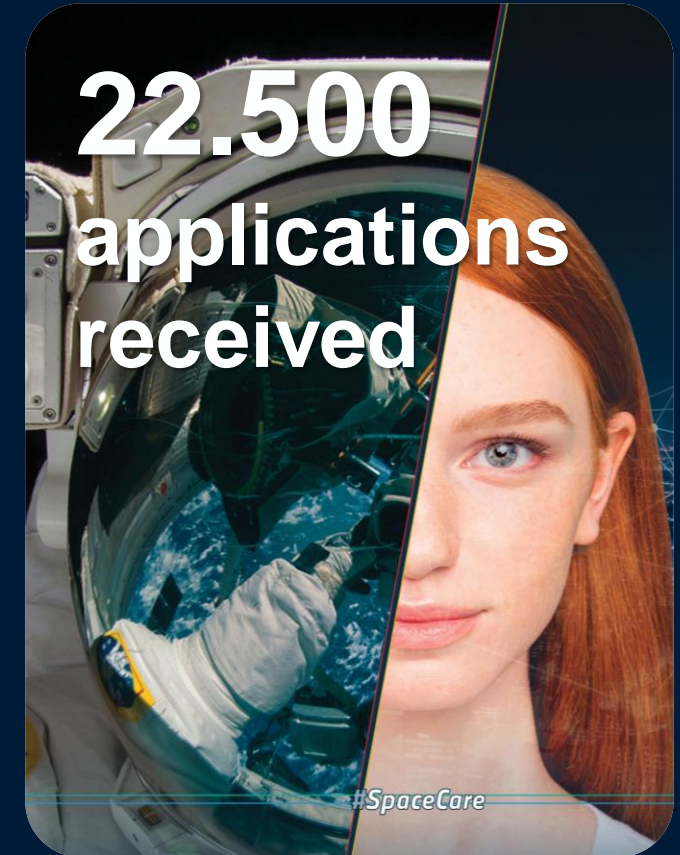
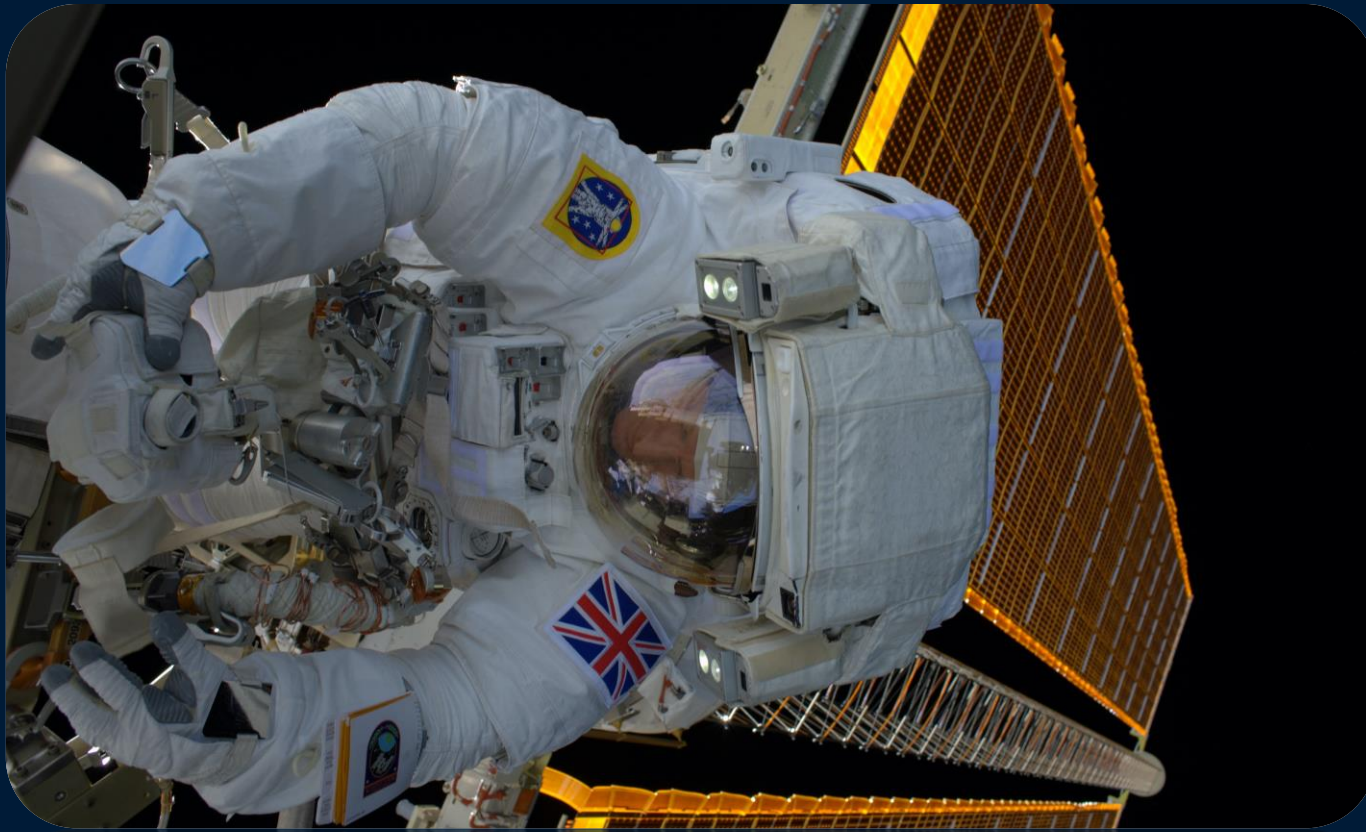
→ THE EUROPEAN SPACE AGENCY

European Astronauts



Tim Peake's mission to the ISS
January 2016

ESA astronaut
selection 2021



ESA AGENDA 2025

Common European Space Vision for 2035+ 5 priorities with targets for 2025



- Commercialisation
- Safety & security
- Programme challenges
- ESA transformation
- ESA-EU relations

**ESA is launching
3 lines of action:**



Key Actions

- ESA as first buyer / anchor customer
- ESA as technical adviser in VC setting
- Simplified access to ESA programmes
- Use of prizes and grants
- Faster time-to-contract <1M€
- Network of ϕ -labs across Europe
- More spending and faster development of game-changing tech.

Green digitalisation: new Eurostar Neo product line



UK telecommunication capabilities and services in space are world-class and are key for its competitiveness



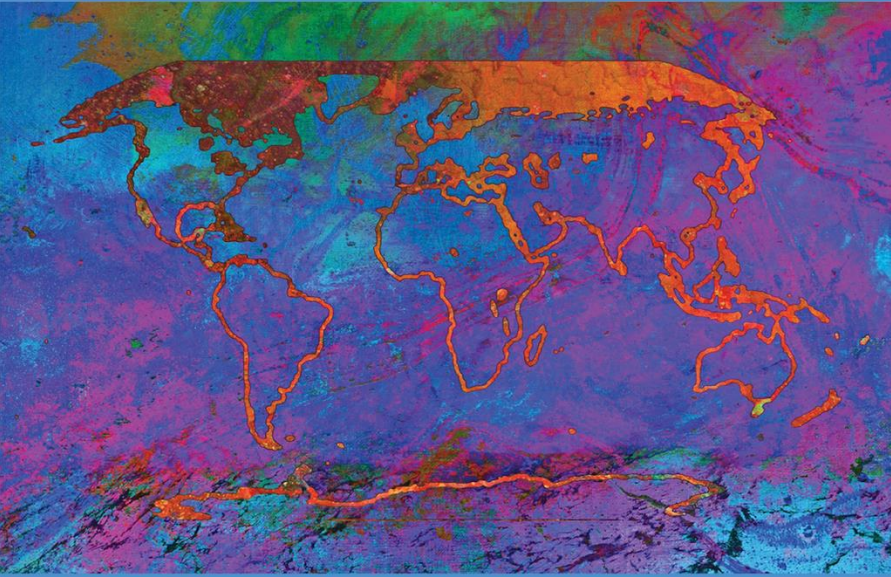
Climate change is widespread, rapid and intensifying



ipcc
INTERGOVERNMENTAL PANEL ON climate change


Climate Change 2021 The Physical Science Basis

Summary for Policymakers



Working Group I contribution to the
Sixth Assessment Report of the
Intergovernmental Panel on Climate Change

WGI



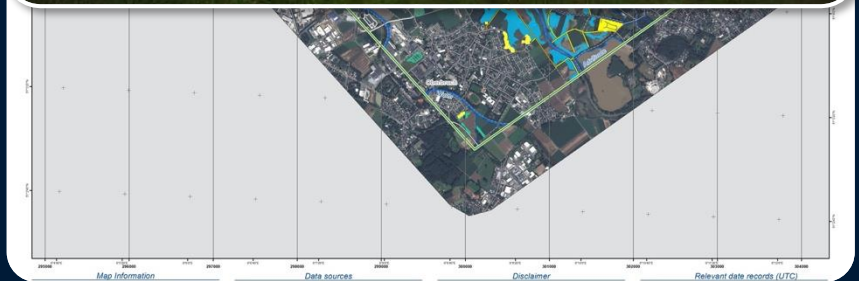
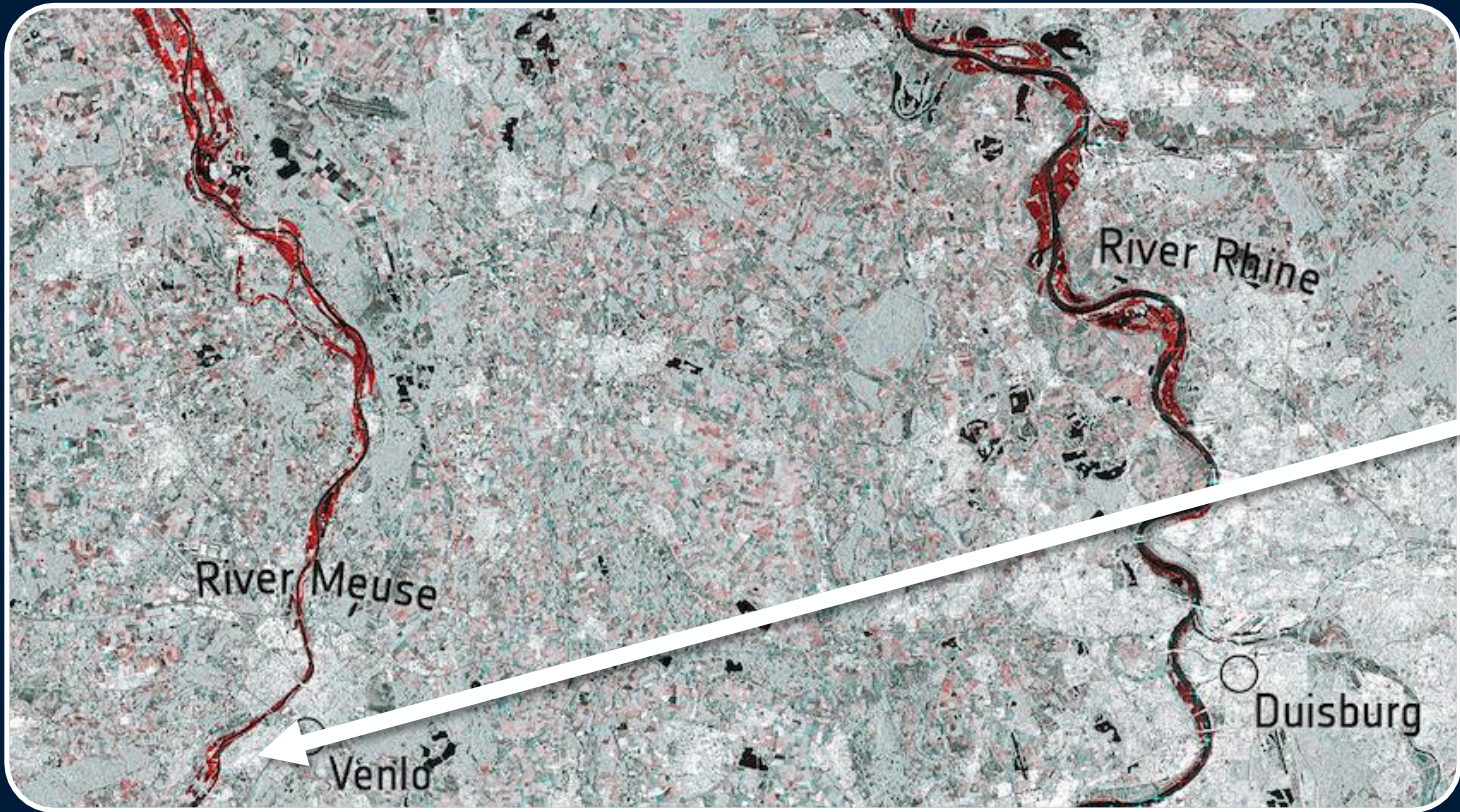
31 OCT - 12 NOV 2021
GLASGOW

COP26

IN PARTNERSHIP WITH ITALY




ESA sees Climate Change in action: floods in Europe



Flooded areas (red) in the Netherlands and Germany
Copernicus Sentinel-1
16 July 2021

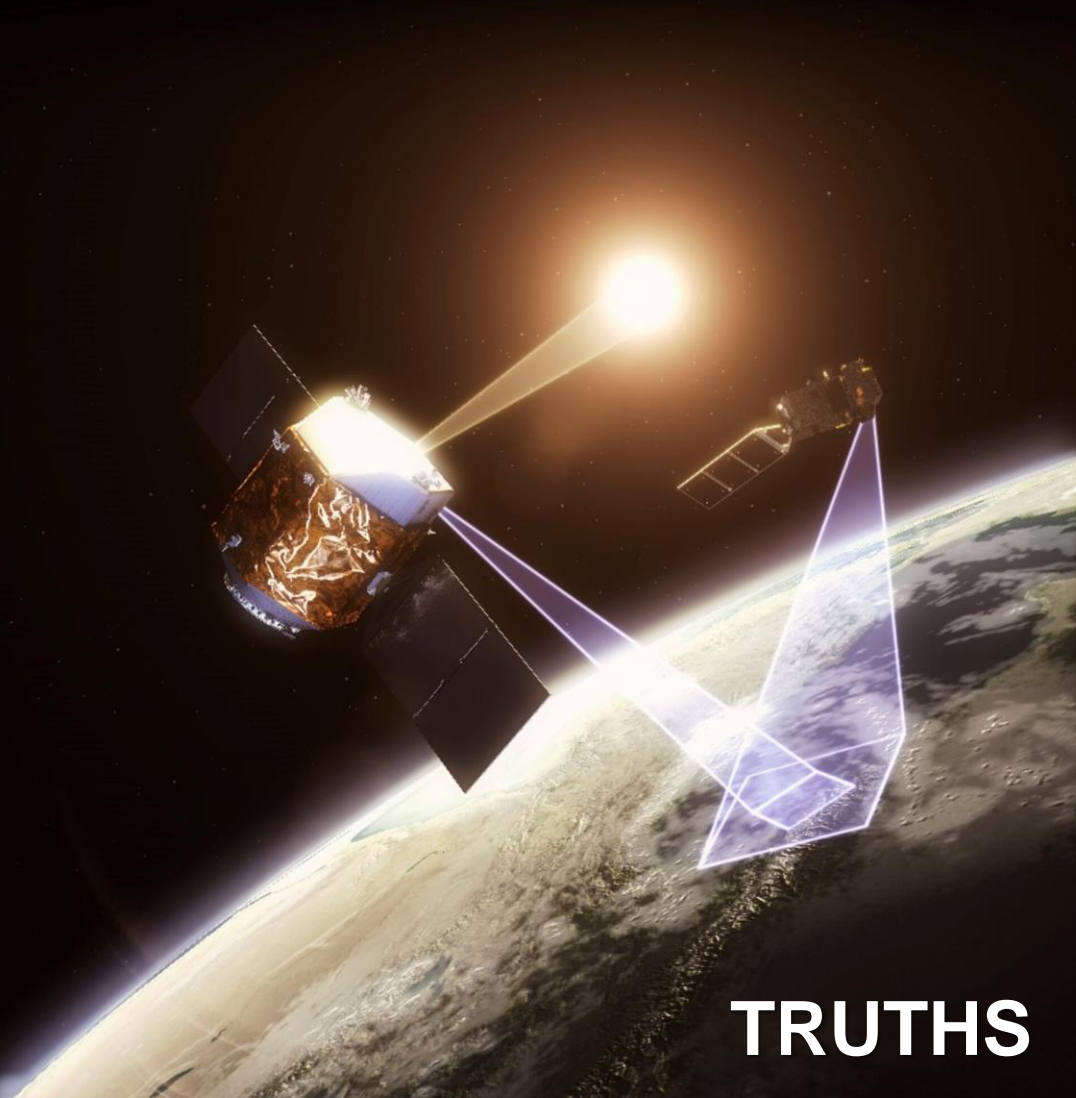


Drought

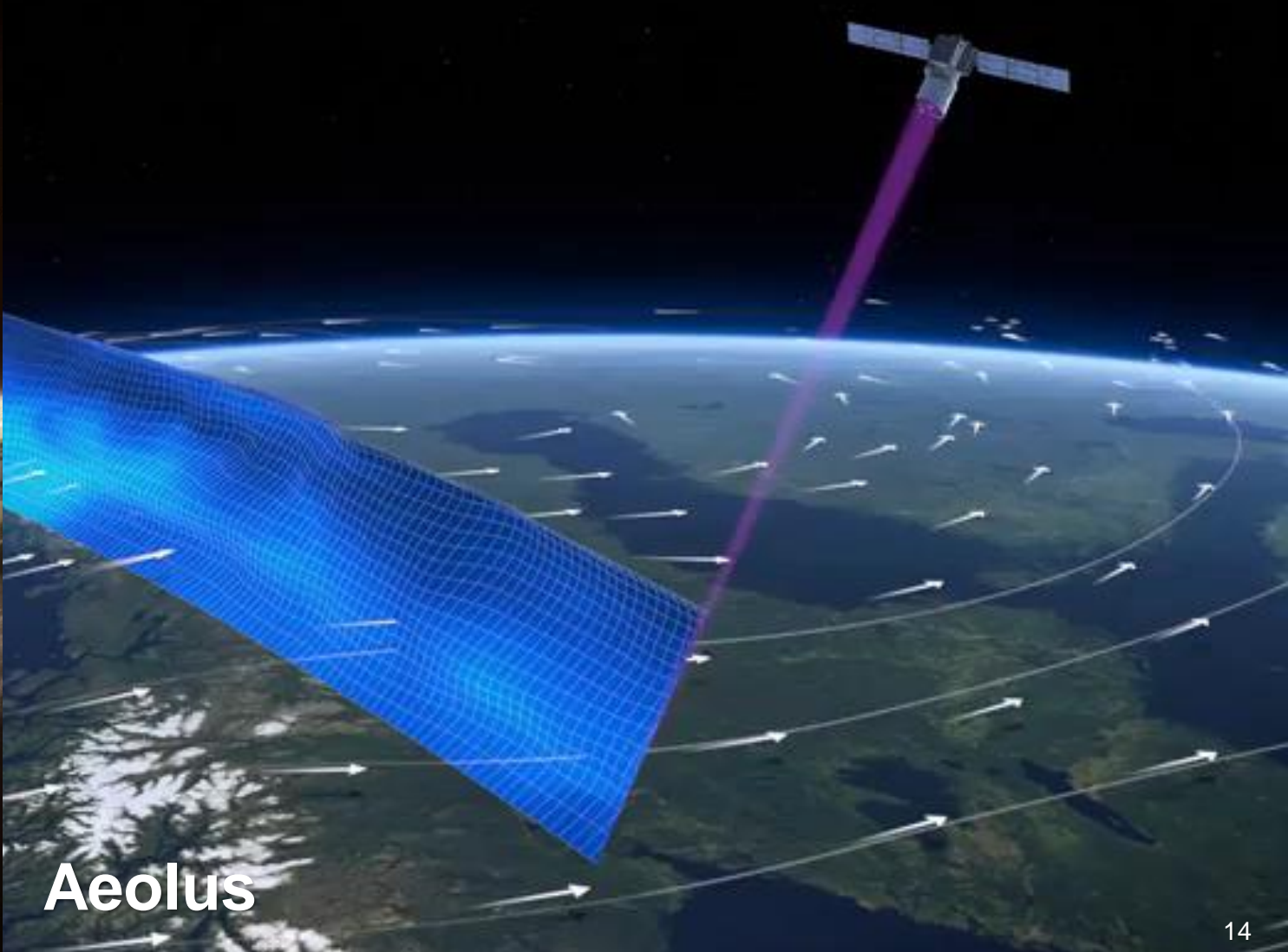
Western Europe (after)
25 July 2018
Copernicus Sentinel-3



UK is strong in ESA Earth Observation



TRUTHS



Aeolus



Strengthen Space for Safety & Security

IN SPACE

- Space traffic management
- Debris removal & mitigation
- Space weather monitoring
- Space logistics
- Planetary defence
- Cyber security



FROM SPACE

Smallsats and HAPS

Secure

communication

Rapid response EO

Safety and Security: Space Weather Mission



Solve Critical Programme Challenges



TECHNOLOGY



EXPLORATION



SCIENCE



APPLICATIONS

OPERATIONS



LAUNCHERS



Launchers: ESA invests in different technologies

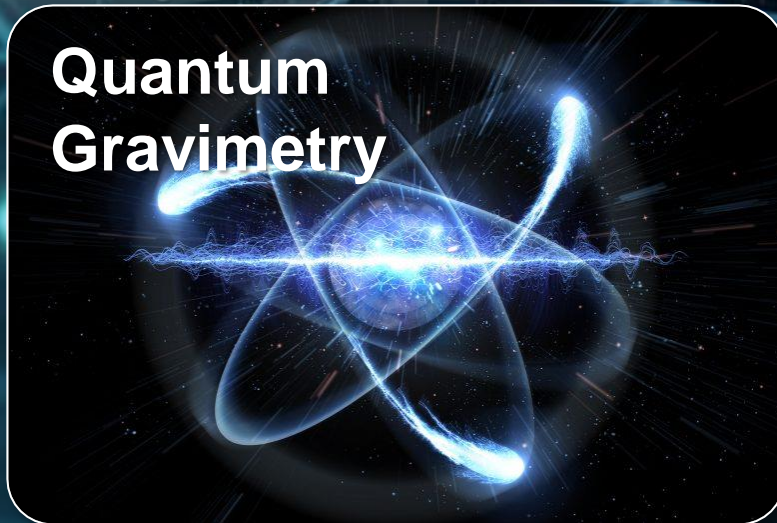
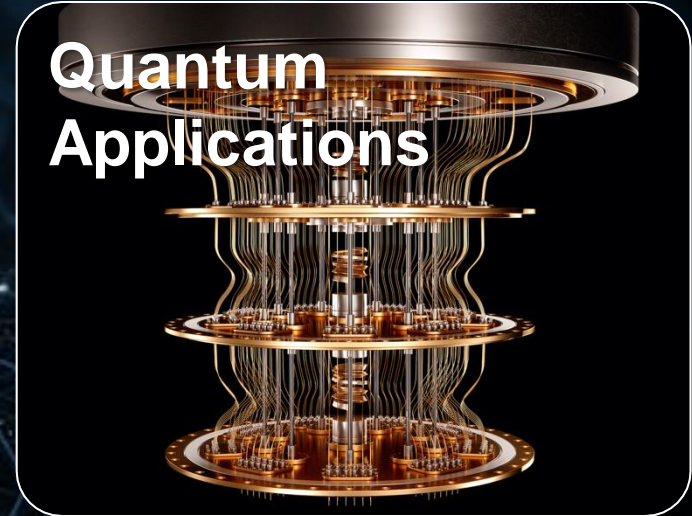
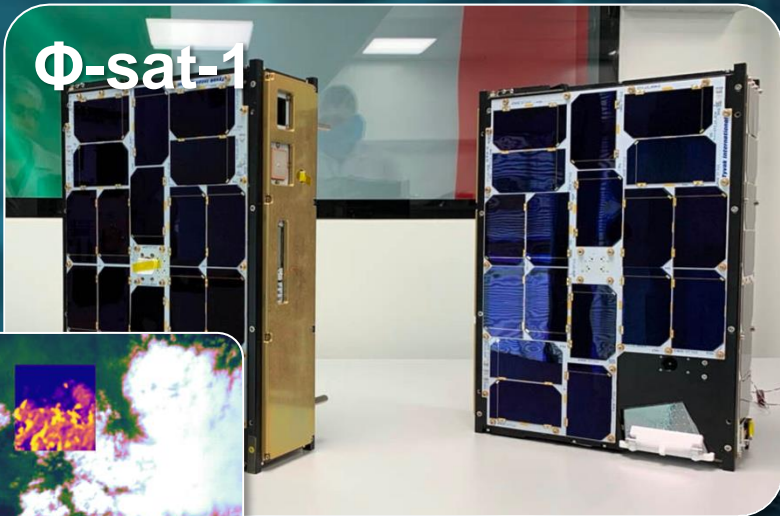


SABRE engines on the Skylon spaceplane

+ Micro-launcher initiatives



Technology: Artificial Intelligence and Quantum



Common European Space Vision for 2035+



Shaping the future of Europe in space

- New European leadership domains
- STEM excellence
- Sustainability
- Growth & industrial competitiveness
- Autonomy and non-dependence
- European diplomacy & status
- Security/defence gaps





#SpaceAmbition

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