

# TRACEABLE RADIOMETRY UNDERPINNING TERRESTRIAL- AND HELIO STUDIES (TRUTHS) MISSION

## PROJECT OVERVIEW

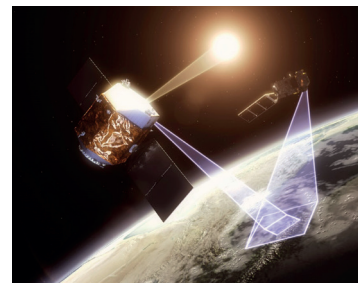
Telespazio UK is helping to challenge climate change through the TRUTHS mission, which will develop a satellite to establish an SI-traceable space-based climate and calibration observing system to improve confidence in climate change forecasts. It will use a hyper-spectral imager to measure incoming solar radiation and outgoing reflected radiation.

The TRUTHS mission will gather extremely accurate measurements of energy coming into the Earth from the Sun and light reflected off the surface of the Earth, in order to help understand both the changes that cause global warming, and humanity's impact on the planet, which will ultimately support faster and better decision-making on climate strategies.

Telespazio UK's role in the project is to support the Ground Segment study team in defining the requirements and necessary architecture for the mission. In particular, the Telespazio UK team is responsible for the Flight Operations Segment,

encompassing the Mission Control System and Telemetry, Tracking and Control (TT&C) Ground Stations, tasked with monitoring and controlling the satellite, flight dynamics, mission planning and mission operations simulation functions.

The European Space Agency (ESA) funds the TRUTHS Earth Watch mission and Telespazio UK is part of a large UK-centred consortium; a team from Airbus Defence and Space leads the mission, which was conceived by the UK's National Physical Laboratory (NPL).



Artist's impression of TRUTHS collecting calibration data for another satellite [UKSA/NPL]