

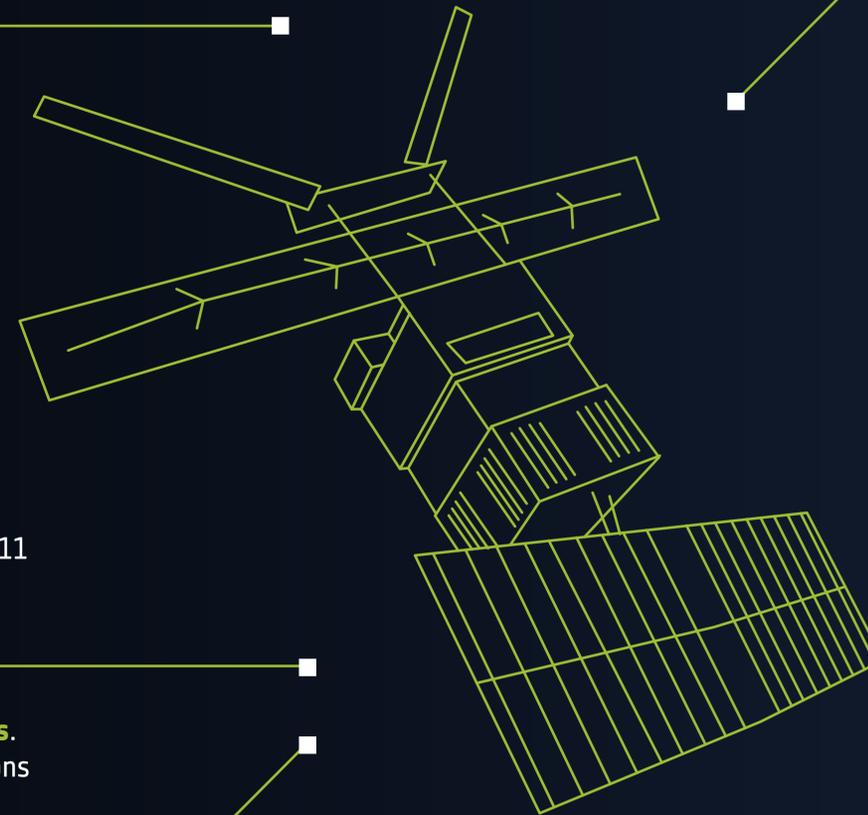
Highlighting ERS-2 achievements

The spacecraft

Launched on

17 JUL 1991 ERS-1	21 APR 1995 ERS-2

ERS-2 (European Remote Sensing satellite) was launched from French Guiana on an Ariane 4 rocket. Along with its predecessor ERS-1, it formed part of a trailblazing European remote sensing programme that transformed how the planet is continuously monitored from space. The ERS-2 mission ended on 5 September 2011



Heritage Value

Both satellites far exceeded their design life of **three years**. ERS paved the way for Envisat, MetOp and Sentinel missions

Data

ERS data supported over 5,000 projects producing some 4000 scientific publications. Archived heritage data still provide a wealth of information and are today accessible and enhanced as part of the **Heritage Space Programme**, enabling scientists to piece together datasets that detail the long-term changes impacting the planet

Innovation

A tandem mission was implemented following the launch of ERS-2, which enabled an accurate, three-dimensional digital map of Earth's land surfaces (Digital Elevation Model) also allowing detection of small changes on Earth's surface with a range precision of 1 cm, opening new fields of applications

three-dimensional digital map of Earth's land surfaces
(Digital Elevation Model)

Contributions to various applications



Floods

ERS-2 was often used in the context of the International Charter on Space and Major Disasters, as in the cases of floods for post flood analysis and to study flood patterns



Extreme Weather

ERS-2 carried a C-band scatterometer, capable of measuring ocean surface wind fields even in the fiercest of weathers. The instrument served to improve weather forecasting



Rainforest Deforestation

Deforestation and illegal logging activities were identified owing to the thermal imaging from ERS-2's Along Track Scanning Radiometer (ATSR)



Ozone Monitoring

The GOME (Global Ozone Monitoring Experiment) instrument on ERS-2 provided the first European trace gas measurements from space, enabling observations of high latitude 'ozone holes' at both latitudes



Sea and Land Surface Temperature

ERS Along Track Scanning Radiometer (ATSR) was used to track water and land surface temperatures, which are crucial for climate change monitoring



Ocean Wave Height

ERS-2's synthetic aperture radar sensor in Wave Mode was used to derive average ocean wave height



Land Cover Classification and Change Detection

ERS SAR data allowed the generation of large-scale land cover maps featuring seasonal variation of vegetation in support of forestry, agriculture monitoring and planning, and urban mapping applications



Ice Monitoring

ERS has allowed the tracking of changes in arctic sea-ice extent and the tracking of calving fronts in Greenland's largest ice streams