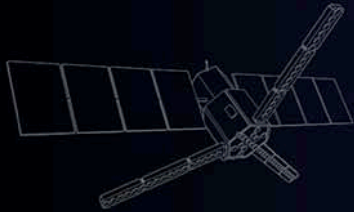


The CEOS logo, featuring the letters 'CEOS' in a bold, sans-serif font with a small globe icon integrated into the letter 'O'.The ESA logo, consisting of a stylized 'e' inside a circle followed by the lowercase letters 'esa'.

**→ CEOS WORKING GROUP ON CALIBRATION  
AND VALIDATION PLENARY “WGCV-37”**

**Henri Laur**

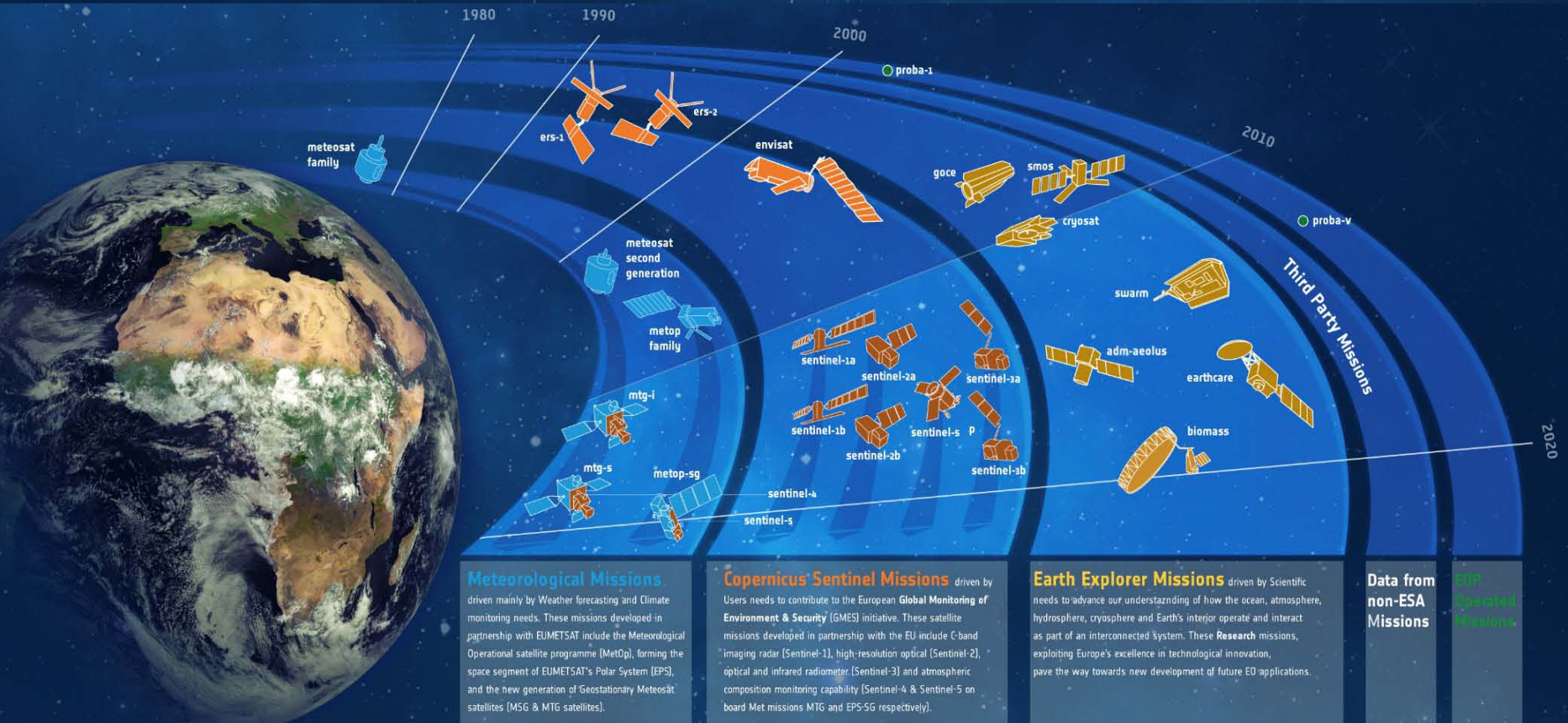
*Head, EO Mission Management Division*

*Directorate of Earth Observation Programmes*

*European Space Agency*

# A changing environment:

- in data availability:
  - from the **pioneering** missions (ERS, Envisat, SPOT) ... to the **Sentinel** missions
- in programmatic and financial environment:
  - **operations** budget from European Commission for the Sentinels
  - **innovation** with ESA (e.g. ESA EO Envelope Programme) and ESA Member States
- in Information and Communication Technology enabling:
  - new data flow architecture
  - new collaboration schemes



## Meteorological Missions

driven mainly by Weather forecasting and Climate monitoring needs. These missions developed in partnership with EUMETSAT include the Meteorological Operational satellite programme (MetOp), forming the space segment of EUMETSAT's Polar System (EPS), and the new generation of Geostationary Meteosat satellites (MSG & MTG satellites).

## Copernicus Sentinel Missions

driven by Users needs to contribute to the European **Global Monitoring of Environment & Security** (GMES) initiative. These satellite missions developed in partnership with the EU include C-band imaging radar [Sentinel-1], high-resolution optical [Sentinel-2], optical and infrared radiometer [Sentinel-3] and atmospheric composition monitoring capability [Sentinel-4 & Sentinel-5 on board Met missions MTG and EPS-SG respectively].

## Earth Explorer Missions

driven by Scientific needs to advance our understanding of how the ocean, atmosphere, hydrosphere, cryosphere and Earth's interior operate and interact as part of an interconnected system. These **Research** missions, exploiting Europe's excellence in technological innovation, pave the way towards new development of future EO applications.

## Data from non-ESA Missions

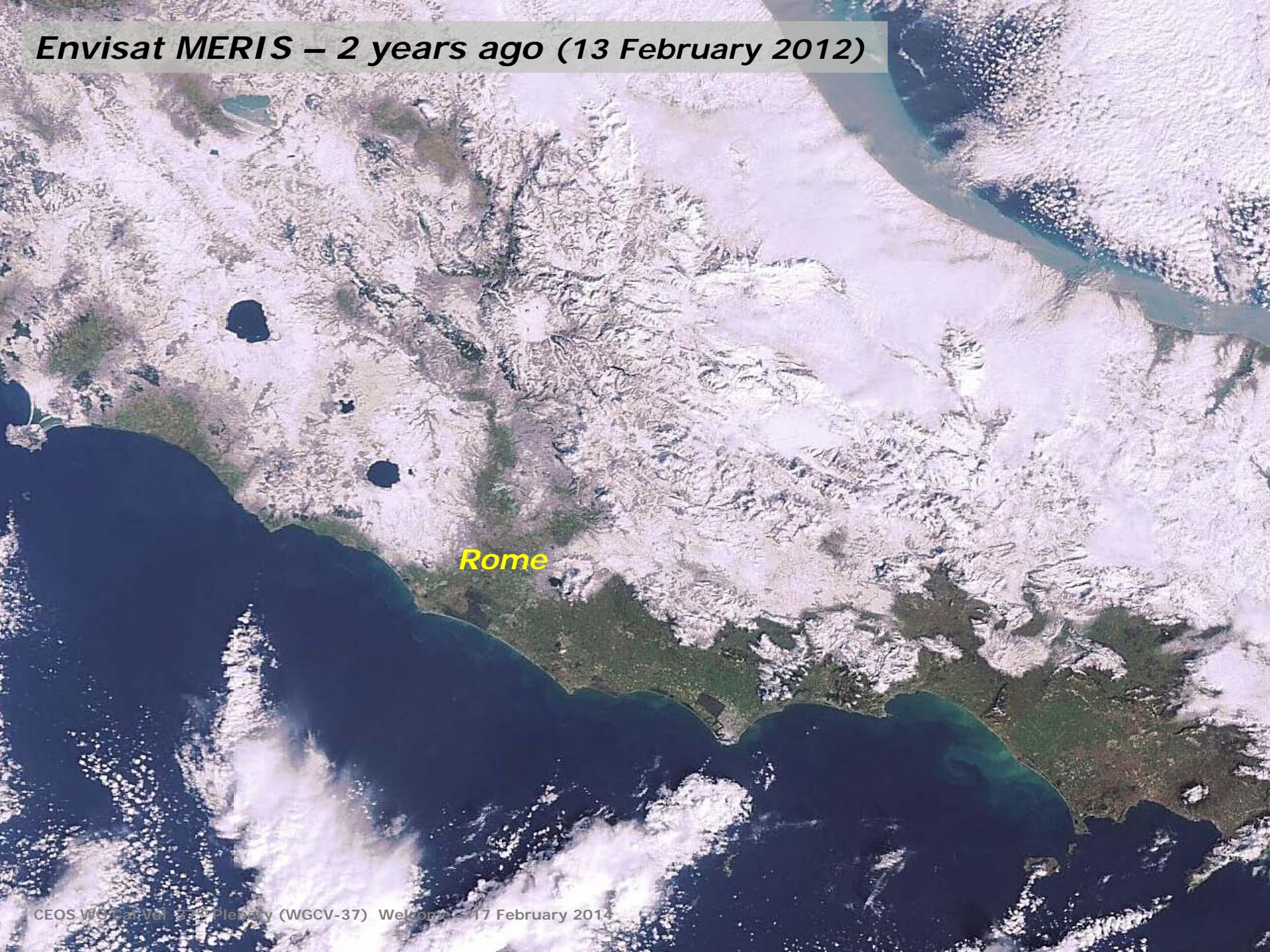
## ESA Special Missions

***... but the necessity to maintain an high level of expertise for Cal/Val activities and for product algorithm evolution***

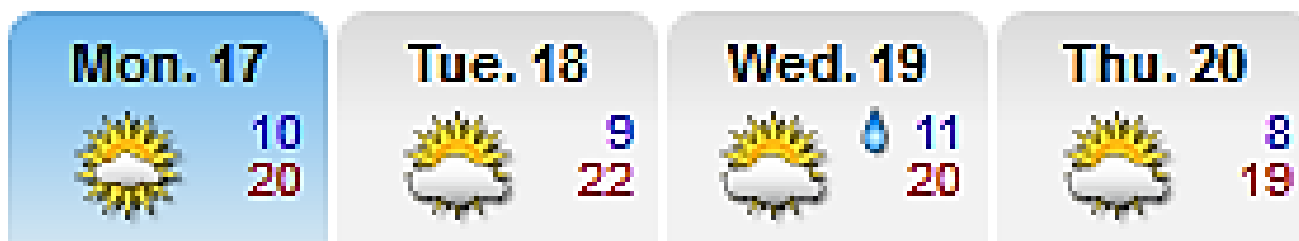
- ✓ More than 20 years of experience with many type of EO sensors
- ✓ Vibrant, mature and competitive European EO R&D communities
- ✓ Strong institutional support for product algorithm development
- ✓ Increased IT processing/storage capabilities (as compared to a decade ago)



***Envisat MERIS – 2 years ago (13 February 2012)***



## Rome weather forecast this week



***Enjoy a productive WGCV-37 meeting***