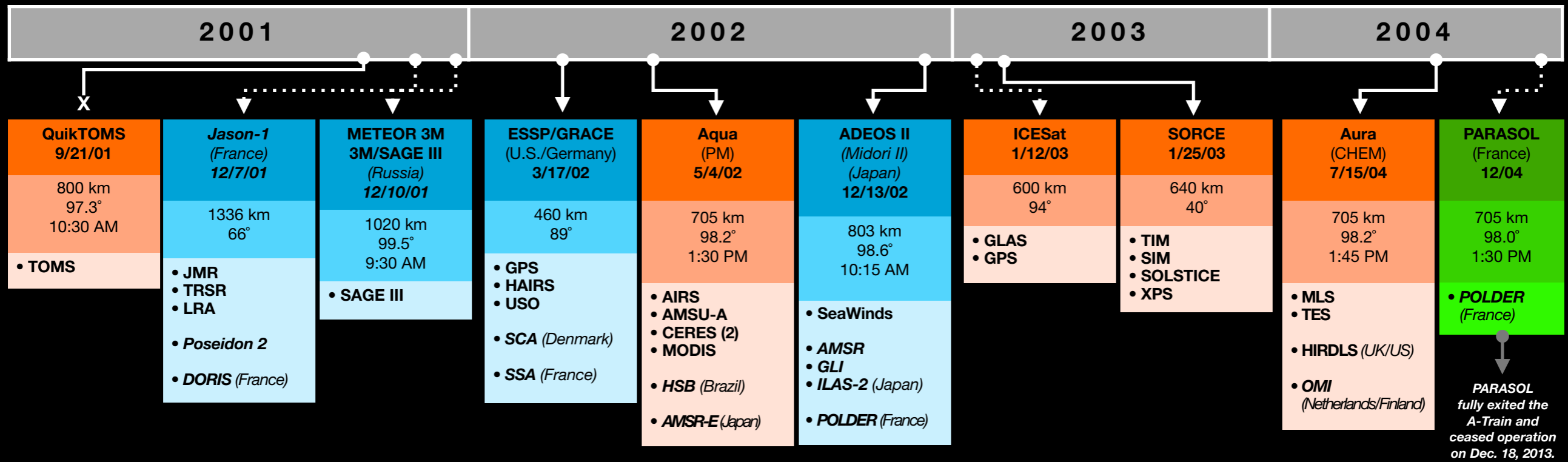
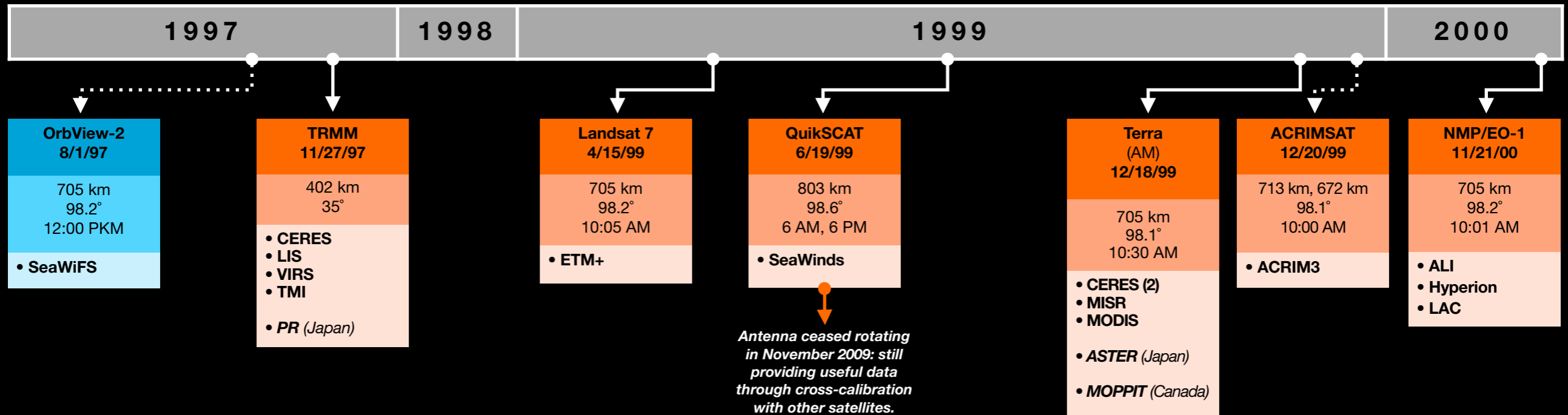


Earth Science Mission Profile 1997 - 2004

Revised:
August 27, 2014



Click the mission name below for a detailed description.



Spacecraft not provided by NASA Non NASA A-Train constellation member

Items in italics not funded by NASA.

¹ OrbView-2 is not provided or operated by NASA but is a data buy.

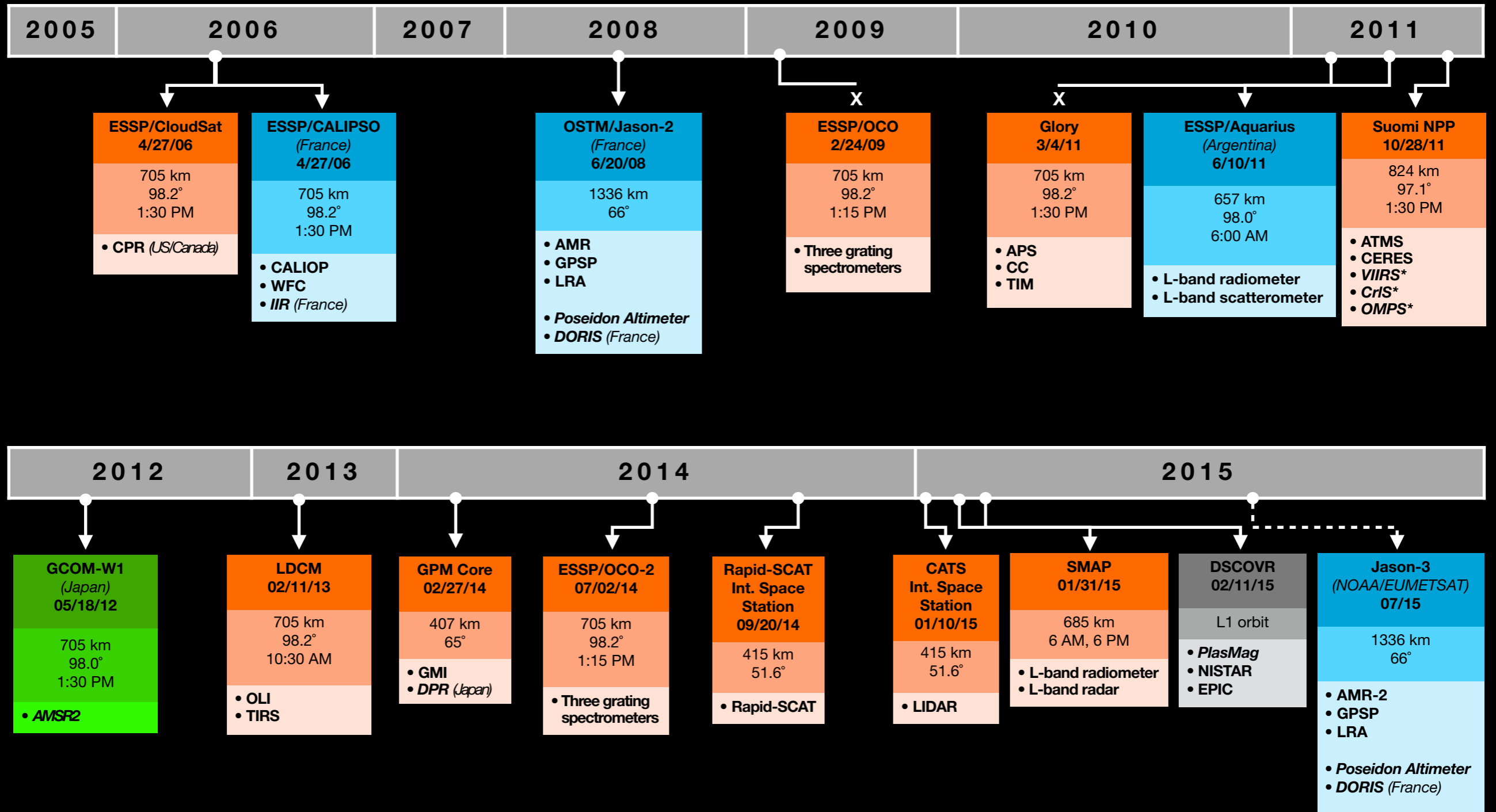


Earth Science Mission Profile 2005 - 2015

Revised:
March 27, 2015



Click the mission name below for a detailed description.



Spacecraft not provided by NASA

Non NASA A-Train constellation member

Other agency spacecraft of interest

Currently in Operation

Future Mission

Launch Failure

No Longer in Science Operation

Items in italics not funded by NASA.

* Instrument provided jointly with the Integrated Program Office (IPO)

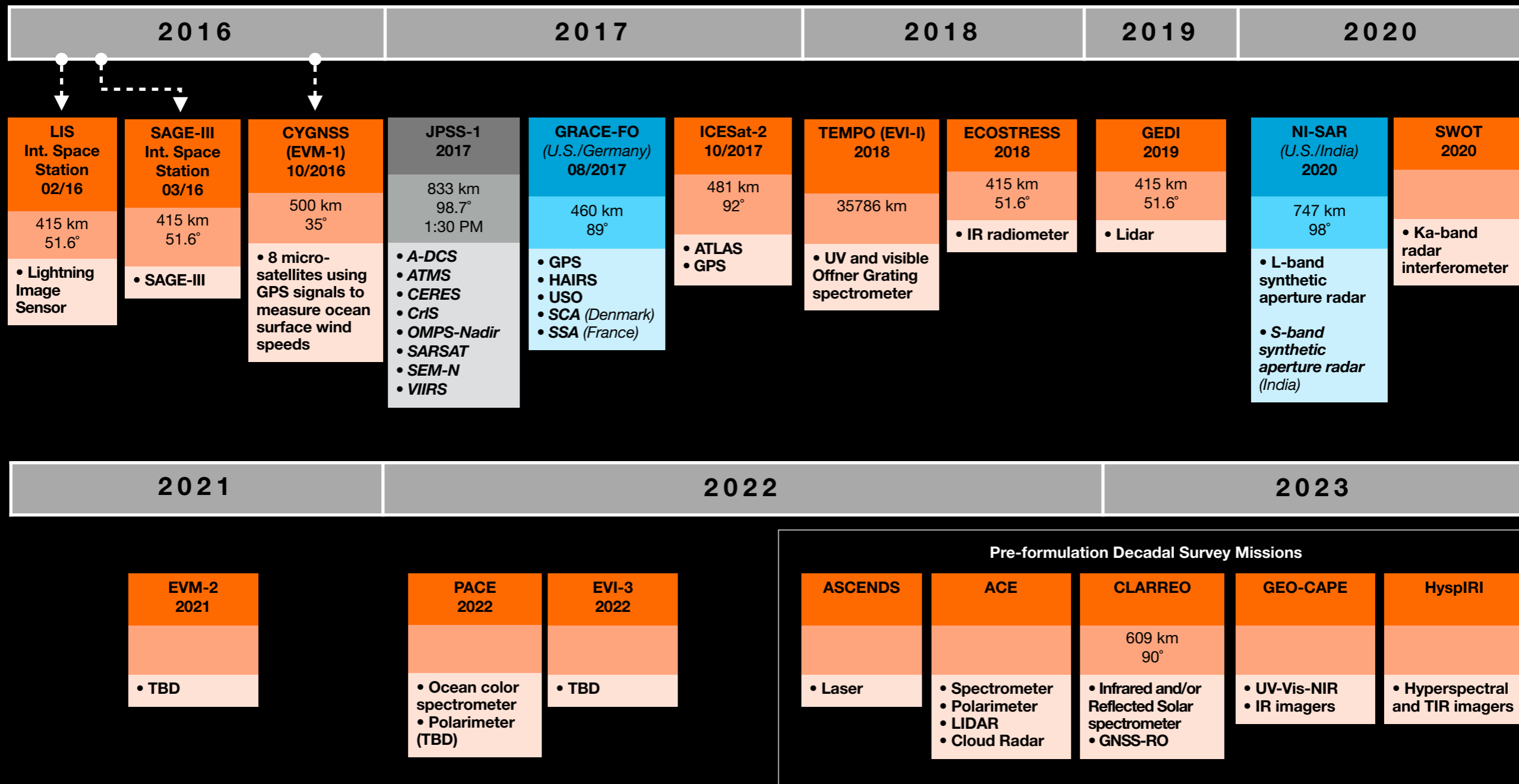
While we make every attempt to keep current the status of these missions, launch dates can evolve quickly.

Earth Science Mission Profile 2016 - 2023

Revised:
October 22, 2014



Click the mission name below for a detailed description.



Spacecraft not provided by NASA

Other agency spacecraft of interest

Items in italics not funded by NASA.

While we make every attempt to keep current the status of these missions, launch dates can evolve quickly.



ACRIMSAT

- ACRIM3 - Active Cavity Radiometer Irradiance Monitor

ADEOS II (Midori II)

- AMSR - Advanced Microwave Scanning Radiometer
- GLI - Global Imager
- ILAS-2 - Improved Limb Atmospheric Spectrometer 2
- POLDER - Polarization and Directionality of the Earth's Reflectances

Aqua

- AIRS - Atmospheric Infrared Sounder
- AMSU-A - Advanced Microwave Sounding Unit-A
- CERES - Clouds and the Earth's Radiant Energy System
- MODIS - Moderate Resolution Imaging Spectroradiometer
- HSB - Humidity Sounder for Brazil
- AMSR-E - Advanced Microwave Scanning Radiometer for EOS

Aura

- HIRDLS - High Resolution Dynamics Limb Sounder
- MLS - Microwave Limb Sounder
- OMI - Ozone Monitoring Instrument
- TES - Tropospheric Emission Spectrometer

ESSP/GRACE***Earth System Science Pathfinder/Gravity Recovery And Climate Experiment***

- GPS - Black-Jack Global Positioning System Receiver
- HAIRS - High-Accuracy Inter-satellite Ranging System
- SCA - Star Camera Assembly
- SSA - SuperStar Accelerometer
- USO - Ultra Stable Oscillator

ICESat

- GLAS - Geoscience Laser Altimeter System
- GPS - Global Positioning System

Jason-1

- JMR - Jason Microwave Radiometer
- TRSR - Turbo Rogue Space Receiver
- LRA - Laser Retroreflector Array
- DORIS - Doppler Orbitography and Radiopositioning Integrated by Satellite
- Poseidon-2 Altimeter

Landsat 7

- ETM+ - Enhanced Thematic Mapper Plus

METEOR 3M/SAGE III

- SAGE III - Stratospheric Aerosol and Gas Experiment III

NMP/EO-1***New Millennium Program/Earth Observing-1***

- ALI - Advanced Land Imager
- Hyperion - Hyperspectral Instrument
- LAC - Linear Etalon Imaging Spectral Array (LEISA) Atmospheric Corrector

OrbView-2

- SeaWiFS - Sea-viewing Wide Field-of-view Sensor

PARASOL***Polarization & Anisotropy of Reflectances for Atmospheric Sciences coupled with Observations for a Lidar***

- POLDER - Polarization and Directionality of the Earth's Reflectance

QuikScat***Quick Scatterometer***

- SeaWinds

QuikTOMS

- TOMS - Total Ozone Mapping Spectrometer

SORCE***Solar Radiation and Climate Experiment***

- TIM - Total Irradiance Monitor
- SIM - Spectral Irradiance Monitor
- SOLSTICE - Solar Stellar Irradiance Comparison Experiment
- XPS - XUV Photometer System

Terra

- ASTER - Advanced Spaceborne Thermal Emission and Reflection Radiometer
- CERES - Clouds and the Earth's Radiant Energy System
- MISR - Multi-angle Imaging Spectroradiometer
- MODIS - Moderate Resolution Imaging Spectroradiometer
- MOPITT - Measurements of Pollution in the Troposphere

TRMM

Tropical Rainfall Measuring Mission

- CERES - Clouds and the Earth's Radiant Energy System
- LIS - Lightning Imaging Sensor
- VIRS - Visible and Infrared Scanner
- TMI - TRMM Microwave Imager
- PR - Precipitation Radar

CATS*Cloud-Aerosol Transport System*

- LIDAR

DSCOVR*Deep Space Climate Observatory*

- PlasMag - Plasma-Magnetometer
- NISTAR - National Institute of Standards and Technology Advanced Radiometer
- EPIC - Earth Polychromatic Imaging Camera

ESSP/Aquarius

- LBR - L-Band Radiometer
- LBS - L-Band Scatterometer

ESSP/CALIPSO*Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations*

- CALIOP - Cloud Aerosol Lidar with Orthogonal Polarization
- IIR - Imaging Infrared Radiometer
- WFC - Wide Field Camera

ESSP/CloudSat

- CPR - Cloud Profiling Radar

ESSP/OCO-2 (also ESSP/OCO)*Orbiting Carbon Observatory*

- Three high-resolution grating spectrometers

GCOM-W1*The Global Change Observation Mission-Water*

- AMSR2 - Advanced Microwave Scanning Radiometer

Glory

- APS - Aerosol Polarimetry Sensor
- CC - Cloud Camera
- TIM - Total Irradiance Monitor

GPM Core Observatory*Global Precipitation Measurement*

- DPR - Dual Frequency Precipitation Radar
- GMI - GPM Microwave Imager

Jason-3

- DORIS - Doppler Orbitography and Radio-positioning Integrated by Satellite
- TRSR - Turbo Rogue Space Receiver
- LRA - Laser Retroreflector Array
- Poseidon-3 Altimeter
- AMR-2 - Advanced Microwave Radiometer
- GPSP - Global Positioning System Payload

LDCM Landsat Data Continuity Mission (Landsat 8)

- OLI - Operational Land Imager
- TIRS - Thermal Infrared Sensor

OSTM/Jason-2*Ocean Surface Topography Mission/Jason-2*

- DORIS - Doppler Orbitography and Radio-positioning Integrated by Satellite
- TRSR - Turbo Rogue Space Receiver
- LRA - Laser Retroreflector Array
- Poseidon-3 Altimeter
- AMR - Advanced Microwave Radiometer
- GPSP - Global Positioning System Payload

Rapid-SCAT (International Space Station)

- Rapid Scatterometer

Suomi NPP*Suomi National Polar-orbiting Partnership*

- ATMS - Advanced Technology Microwave Sounder
- CERES - Clouds and the Earth's Radiant Energy System
- CrIS - Cross-Track Infrared Sounder
- OMPS-Nadir - Ozone Mapping and Profiler Suite
- VIIRS - Visible/Infrared Imager/Radiometer Suite

SAGE-III (International Space Station)

- Stratospheric Aerosol and Gas Experiment - III

SMAP*Soil Moisture Active Passive*

- L-Band Radiometer
- L-Band Radar

ACE***Aerosols-Clouds-Ecosystems***

- Spectrometer
- Polarimeter
- LIDAR
- Cloud Radar

ASCENDS***Active Sensing of CO₂ Emissions over Nights, Days, and Seasons***

- Laser

CLARREO***Climate Absolute Radiance & Refractivity Observatory***

- Infrared Spectrometer
- Three Reflected Solar Spectrometers
- GNSS-RO - Global Navigation Satellite Systems - Radio Occultation System

CYGNSS (EVM-1)***Cyclone Global Navigation Satellite System (Earth Venture-2)***

- 8 micro-satellites using GPS signals to measure ocean surface wind speeds

ECOSTRESS***ECOsysteM Spaceborne Thermal Radiometer Experiment on Space Station***

- Infrared radiometer

EVI-3***Earth Venture Instrument*****EVM-2*****Earth Venture Full Orbital Mission*****GEDI*****Global Ecosystem Dynamics Investigation***

- Lidar

GEO-CAPE

- Ultraviolet-visible-near-infrared
- Infrared imagers

GRACE-FO***Gravity Recovery And Climate Experiment-Follow-on***

- GPS - Black-Jack Global Positioning System Receiver
- HAIRS - High-Accuracy Inter-satellite Ranging System
- SCA - Star Camera Assembly
- SSA - SuperStar Accelerometer
- USO - Ultra Stable Oscillator

HyspIRI

- Hyperspectral and thermal infrared imagers

ICESat-2

- ATLAS - Advanced Topographic Laser Altimeter System
- GPS - Global Positioning System

LIS

- LIS - Lightning Image Sensor

NI-SAR

- InSAR - Interferometric Synthetic Aperture RADAR (Radio Detection and Ranging)

JPSS-1***Joint Polar Satellite System***

- ADCS-SARSAT - Advanced Data Collection System/Search and Rescue Satellite-Aided Tracking
- ATMS - Advanced Technology Microwave Sounder
- CERES - Clouds and the Earth's Radiant Energy System
- CrIS - Cross-Track Infrared Sounder
- MIS - Microwave Imager/Sounder
- OMPS-Nadir - Ozone Mapping and Profiler Suite
- SARSAT - Search and Rescue Satellite-Aided Tracking
- SEM-N - Space Environment Monitor-NPOESS
- TSIS - Total and Spectral Solar Irradiance Sensor
- VIIRS - Visible/Infrared Imager/Radiometer Suite

PACE (Pre-ACE)

Pre-Aerosol, Clouds, and ocean Ecosystem

- Ocean color/aerosol spectrometer
- Polarimeter (International partnership TBD)

SWOT

Surface Water Ocean Topography

- Ka-band radar interferometer

TEMPO

Tropospheric Emissions: Monitoring of Pollution

- UV and Visible Offner Grating Spectrometer