

THIRD PARTY MISSIONS PROGRAMME



INTRODUCTION

ESA's TPM arrangement has been operating for over 45 years, providing EO data to users in Europe and worldwide for research and pre-operational applications development.

Currently including over 60 instruments on more than 50 missions, **Third Party Missions consist of Earth Observation satellites** that are owned by commercial and public organisations around the world.

The datasets are distributed by these third parties, and ESA has specific agreements with the organisations to promote the availability of their data.

> 60
INSTRUMENTS

50+
MISSIONS

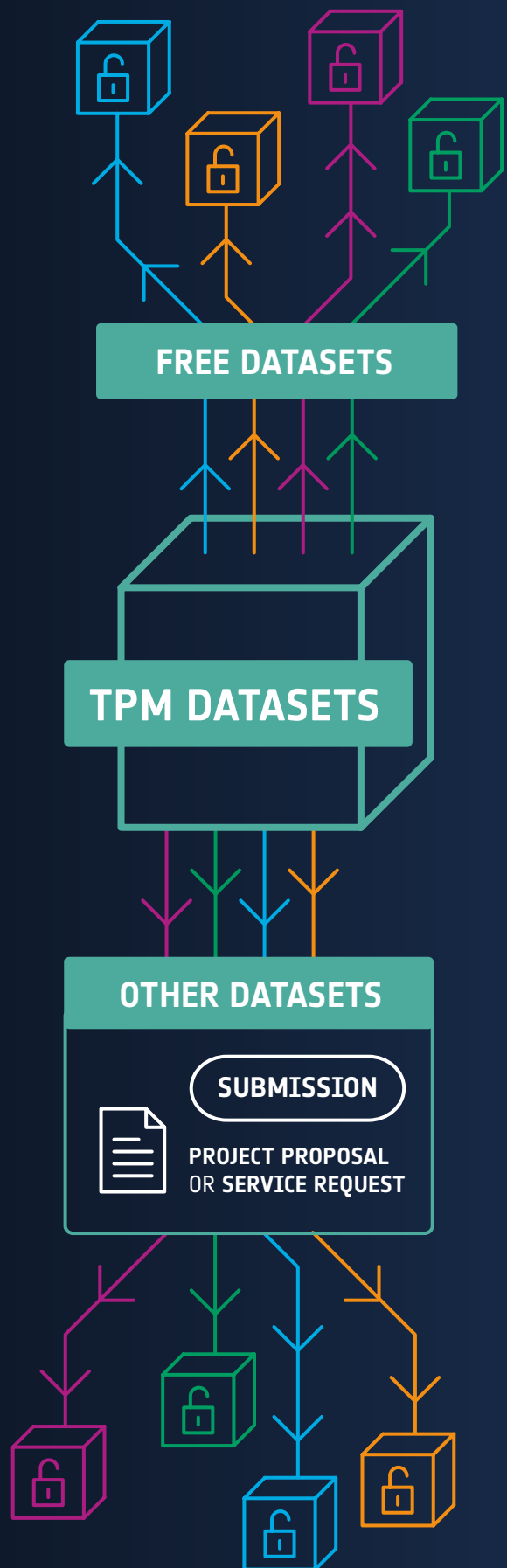
Some sets are available under the free dataset policy, requiring only a fast registration, others are part of a restrained dataset and require the submission of a project proposal or service request.

For most missions, ESA performs a project selection process, to assess feasibility of providing the data.

Data are offered from a large number of international missions through a single programme.

One of the criteria for selecting new missions is that they utilise instruments that offer similar data to those acquired by ESA missions, contributing to a wide range of data that may be used together. Other criteria include degree of innovation, opportunity for new international collaboration and experience to be gained for future missions.

The Earthnet programme acts as an early anchor customer for European NewSpace missions. Companies that provide data of interest to the scientific community are given a high priority in the selection process.



In 2018, ESA changed the agreements with the commercial TPM data providers in order to also include start-ups and entrepreneurs in incubators, to access the data. This greatly supports **ESA BIC and Technology Broker Network**

**+1200
START-UPS
SUPPORTED**

**200
START-UPS
YEARLY**



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ICEYE, the World's First SAR New
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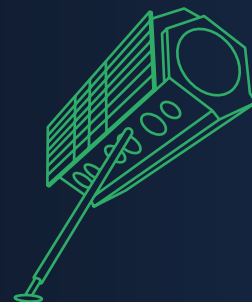
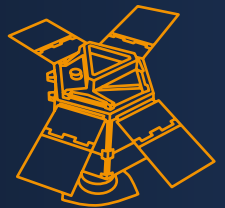
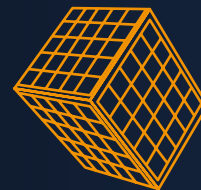
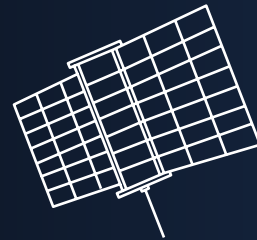
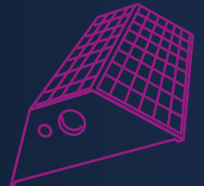
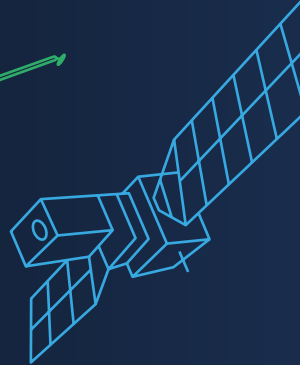
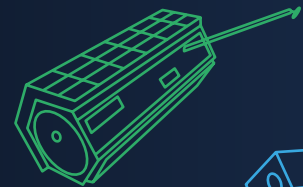
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The Earthnet Programme: 40 years of
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These infographics provide an introduction to only a small selection of the Third Party Missions.

They highlight the different capabilities of the missions, with radar and optical satellites supporting many applications.

About ICEYE

What? ICEYE enables the persistent monitoring of large and small areas from orbit - a variety of sea, land, and air - in any weather.

When? First satellite launched in 2018. World's first SAR satellite under construction.

How? From tracking sea-ice melting depths like rivers, lakes and floodplains, to monitoring urban sprawl, ICEYE's persistent monitoring capability provides precise changes of the environment and further analysis.

Built By? Designed, manufactured and operated by ICEYE - Finland based global company.

Applications: Disaster Change Detection, Oil Spills Detection, Natural Catastrophe Response, Air Recovery, Agricultural Monitoring, Gas for Monitoring.

Data and Users? Data is used by governmental, commercial and academic users worldwide, to solve real-world problems by providing timely and reliable satellite imagery.

Innovations? 10,000km² coverage, 25cm resolution. With its wide area imaging up to 100km long and high resolution up to 25cm, ICEYE can track changes of any location on a daily basis.

What's next? 14 satellites planned for 2021. Further satellite launches will allow daily, with even greater coverage of the sky.

Data Access: www.iceye.com

About PLEIADES

What? Designed as a dual-constellation system, the Pleiades programme (P101 and P102) features three optical satellites, followed by the SPOT progressive satellite series, incorporating advanced technologies for each generation.

When? P101 and P102 launched in 2011 and 2012 respectively.

Where? The first satellite provides coverage of 60% of the Earth's surface. P102, with its higher resolution and four satellites, will provide 100% coverage.

Applications? For applications such as forestry, porting and marine assessment, and using its optical design, Pleiades can also be used for a wide range of civilian and commercial purposes.

Benefits? 50cm resolution. Pleiades was the first European mission offering very high resolution imagery at 50 cm resolution. The optical constellation has daily repeat coverage, ensuring frequent monitoring of Earth resources.

Data and Users? Pleiades has the first European mission offering very high resolution imagery at 50 cm resolution. The optical constellation has daily repeat coverage, ensuring frequent monitoring of Earth resources.

What's next? Pleiades Neo. The next launch of Pleiades Neo, a constellation of four satellites, will provide 100% coverage of the Earth's surface with 30 cm resolution. The satellites have data up to 100km long and 30cm resolution.

Data Access: www.esa.int/ESA/missions/pleiades

About GEOSAT-2

What? Part of ESA's Third Party Missions Programme, GEOSAT-2 is an Earth-orbiting satellite owned by a private company, operated by the Russian Space Agency.

When? Launched on 13 June 2014, from Vostochny Cosmodrome in Russia.

Built By? Built by the Russian Satellite for Space Station in Space. GEOSAT-2 is a new satellite operated by GEOSAT.

Applications: GEOSAT-2 supports activities in the following areas:

- Coastline development and agriculture
- Maritime
- Land administration & mapping
- Disaster recovery
- Oil & gas
- Climate change monitoring
- Forestry & environment
- Emergency & disaster management

Data and Users? GEOSAT-2 has captured over half a million images which it was launched in 2014. From 2016, GEOSAT-2's satellites have delivered 80 products and images to customers from the European Maritime Safety Agency (EMSA), the Department of Agriculture (DAP), Russian Air Force (VKS), DOD, USA, and many others.

Data Access: earth.esa.int/eogateway/catalog/geosat-2-full-archive-and-tasking

About SAOCOM

What? The SAOCOM Programme (Satellite Observations of Earth's Surface) consists of two Earth-orbiting satellites, SAOCOM-1A and SAOCOM-1B, which will provide high resolution optical imagery of the Earth's surface.

When? SAOCOM-1A launched on 17 October 2018. SAOCOM-1B is scheduled for launch in 2020.

Applications: SAOCOM-1A includes applications including:

- High resolution optical imagery
- High resolution SAR imagery
- High resolution SAR imagery
- High resolution SAR imagery

Objectives: The main objective of the mission is to provide an efficient Earth observation and disaster monitoring capability, with the use of optical, SAR, and SAR-Interferometry (InSAR) data for monitoring and disaster management.

Data Access: earth.esa.int/eogateway/catalog/saocom-data-products
 For more information visit: argentina.gov.ar/ciencia/conae/misiones-espaciales/saocom

About PAZ

What? PAZ is a Small Satellite System (SAS) mission, built by the Spanish Government, which includes civil applications.

When? Launched on 11 February 2018, from the Spanish Spaceport in Lanzarote (ESPA).

Built By? Designed and built by Airbus Defence and Space.

Applications: PAZ supports a wide range of civil applications:

- Disaster Monitoring
- Disaster Monitoring
- Disaster Monitoring
- Disaster Monitoring

Data and Users? PAZ Satellites can be acquired in several image modes with flexible resolutions from 25 cm to 42 m, and different scan rates.

Data Access: earth.esa.int/eogateway/catalog/paz-full-archive-and-new-tasking

About PlanetScope and SkySat

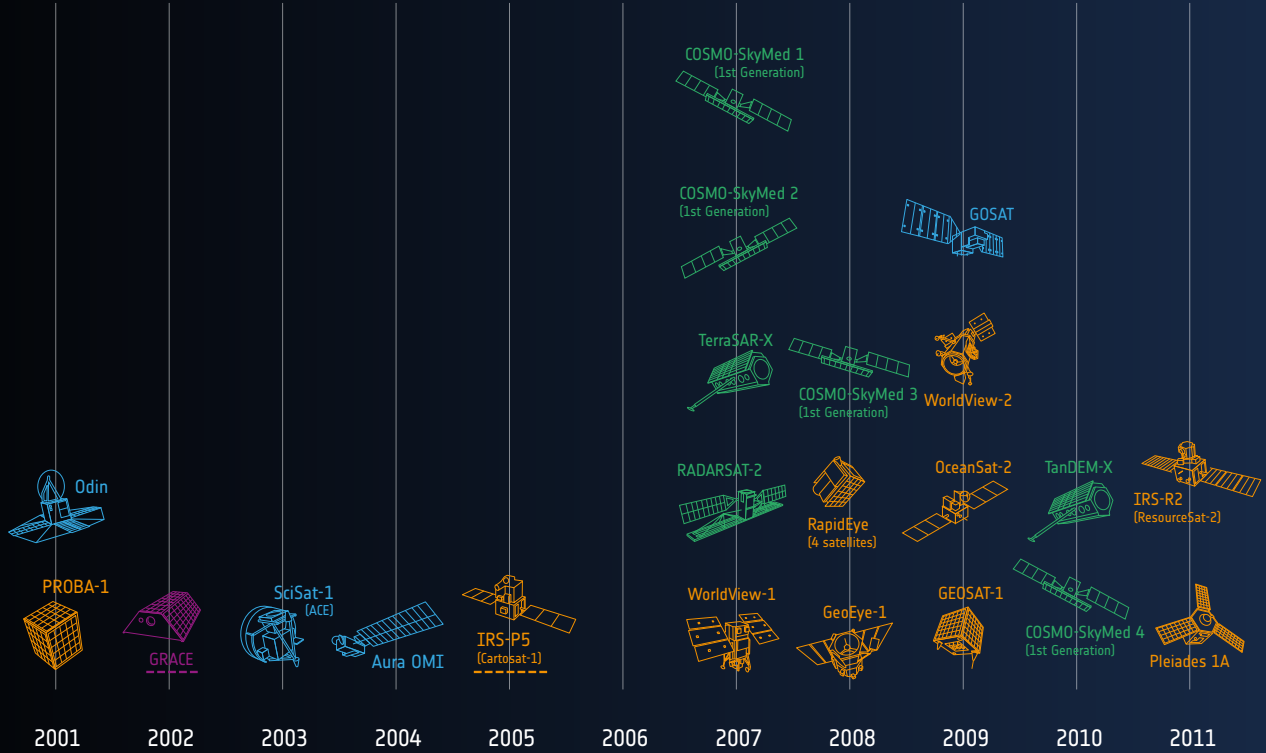
What? PlanetScope and SkySat are commercial Earth-orbiting satellites, providing high resolution optical imagery of the Earth's surface.

When? PlanetScope launched in 2013. SkySat launched in 2014.

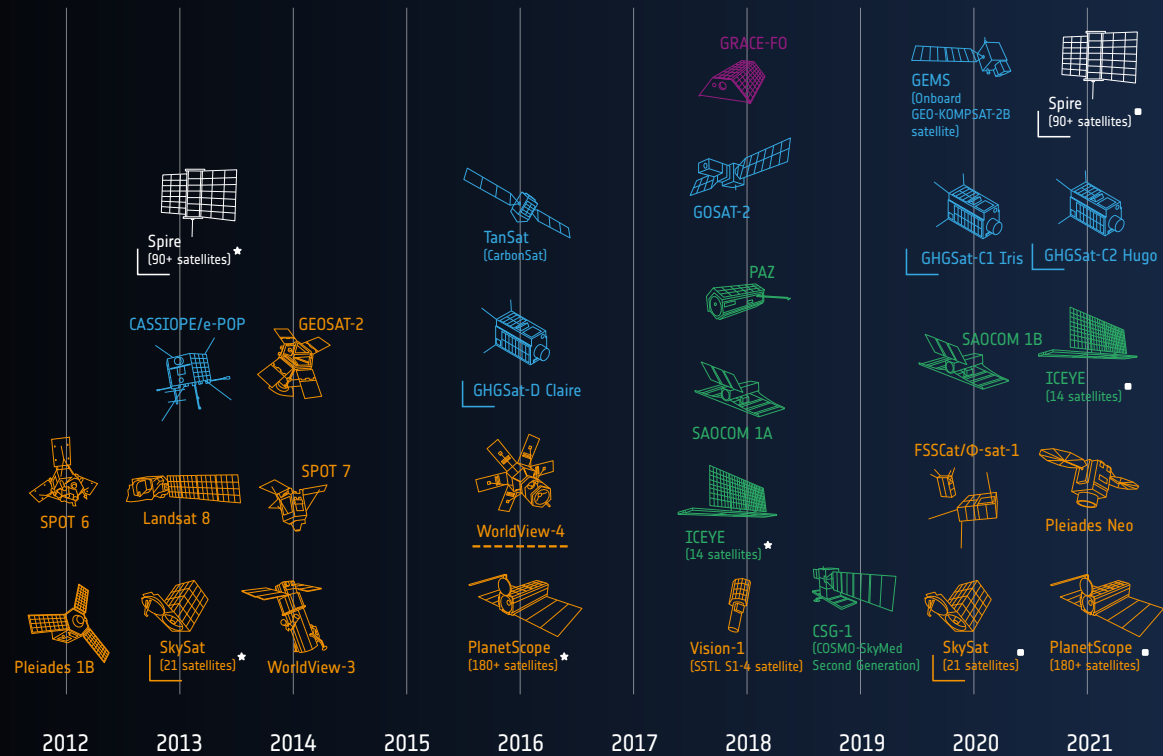
Applications: PlanetScope and SkySat data are used for a wide range of commercial and governmental applications. The data are available for 100% coverage of the Earth's surface.

Data Access: earth.esa.int/eogateway/catalog/planetoscope-full-archive | earth.esa.int/eogateway/catalog/skysat-full-archive-and-new-tasking

THIRD PARTY MISSIONS TIMELINE



2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011



2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

- Atmospheric
- Optical
- SAR
- Reflected Global Navigation Satellite System (GNSS-R) and Radio Occultation
- Gravity Field
- ★ First launch
- Latest launch
- └ TPM under assessment
- ▬ Completed missions

FIND OUT MORE ABOUT THE **THIRD PARTY MISSIONS** PROGRAMME ON EARTH ONLINE

earth.esa.int/eogateway/missions/third-party-missions



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