

GEOSAT's Contribution to EarthNet

Living Planet 2022 – 24.05.22

About us

GEOSAT

GEOSAT is a geoinformation company unlocking earth observation's full potential to understand our planet and transform it for the better.



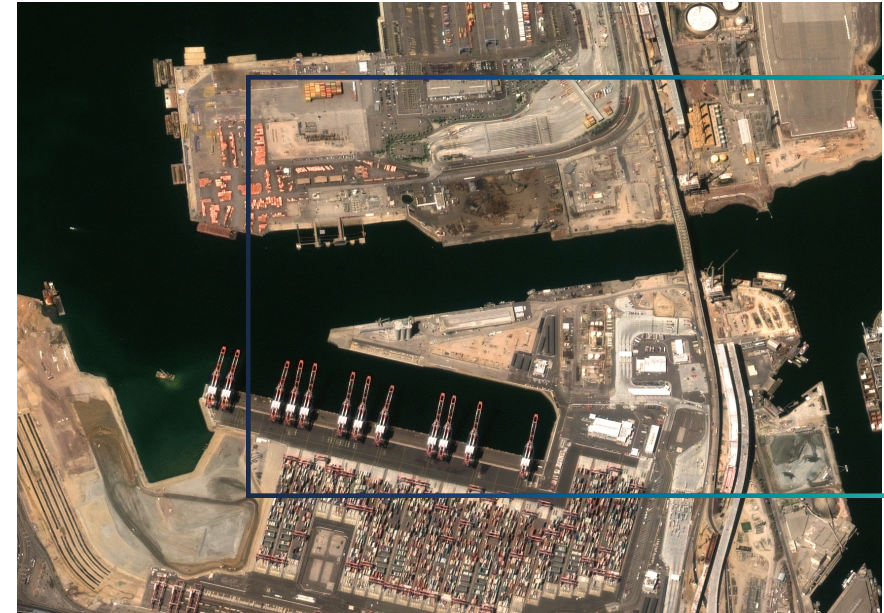
GEOSAT 1

Captures 22m-resolution imagery with a very wide 650 km swath. Specifically designed to cover large areas very frequently.



GEOSAT 2

A very-high-resolution, agile & cost-effective satellite that provides 75cm/pixel pan-sharpened imagery with a 12km swath.



What we do?

Tipping & Cueing

**Worldwide
operations – No
restrictions**

**Fully private
European
VHR Optical data
provider**

**Experienced team
NRT satellite
operations since
2009**

**Tailored customer
services & image
processing**

**Best-in-class
services for
vertical markets**

Products & Services

Tipping & Cueing

GEOSAT 1 for detection



GEOSAT 2 for identification

Integrated Operations

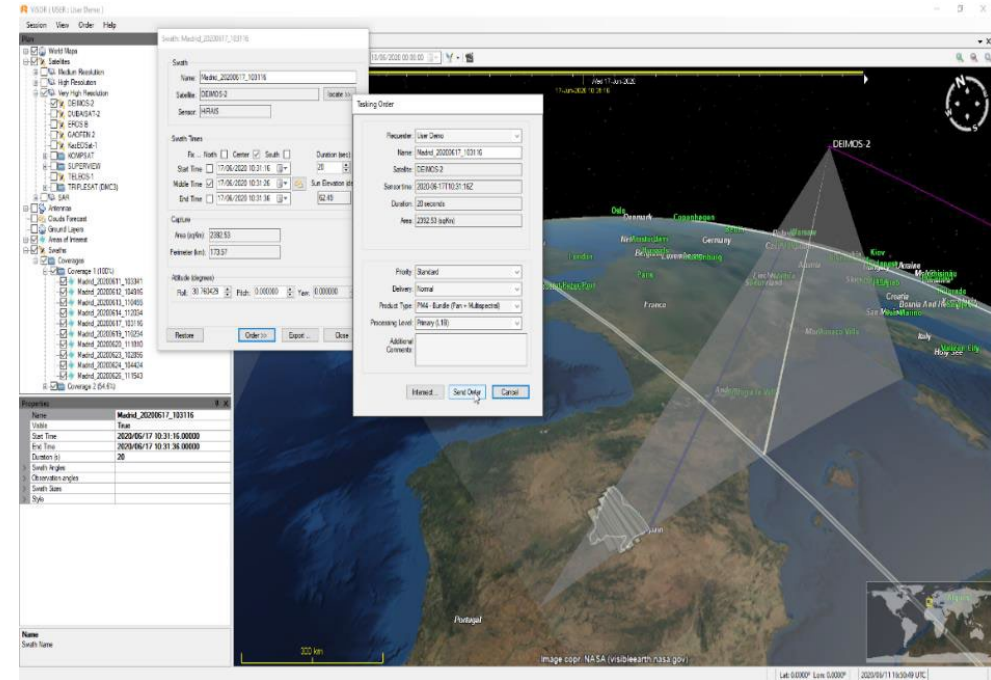
- HR => VHR i.e. GEOSAT-1 & GEOSAT-2
- SAR => OPTICAL i.e. RADARSAT & GEOSAT-2

Products & Services

Near Real Time operations

- Tasking plan updates 4 h before acquisition
- Ortho product delivery in less than 30 min

**Experienced team
NRT satellite
operations since
2009**



Contributing Missions



About GEOSAT-2



What

Part of ESA's Third Party Missions Programme, **GEOSAT-2 is an Earth-imaging satellite in the GEOSAT series of missions.** It is the first European satellite owned by a private company capable of providing sub-metric multispectral imagery worldwide

When

Launched on



Launched on 19 June 2014, from Yasny Cosmodrome in Russia

Built By

Built by the Satrec Initiative for Elecnor Deimos in Spain, GEOSAT-2 is now owned and operated by GEOSAT

Objectives

Along with the GEOSAT-1 mission, GEOSAT-2 forms the **GEOSAT Earth Observation system.** The objective of the GEOSAT series is to provide very-high-resolution data, carry out commercially-focused operational imaging missions, supporting rapid-response and large-area mapping for a range of applications



High-Resolution Advanced Imaging System **HIRAIS**



Coverage

150,000km²/day 40cm

With an expected mission lifetime of at least seven years, GEOSAT-2 has a collection capacity of more than 150,000 km²/day with a two-day average revisit time worldwide - one day at mid-latitudes. It provides mid-resolution, very-wide-swath imagery, carrying a **High-Resolution Advanced Imaging System (HiRAIS).**

HiRAIS is a 75 cm pan-sharpened multispectral optical instrument, with a very-high resolution camera of five spectral channels (1 panchromatic, 4 multispectral). Using advanced artificial intelligence techniques, up to 40 cm high-definition products are also available

Applications

GEOSAT-2 supports activities in the following areas:

- Sustainable development in agriculture
- Maritime
- Land administration & mapping
- Defence & security
- Civil protection
- Oil & gas
- Climate change monitoring
- Forestry & environment
- Emergency & disaster management

Data and Users

500,000

GEOSAT-2 has captured over half a million images since it was launched in 2014. From 2006, GEOSAT's satellites have delivered EO products and services to customers such as the European Maritime Safety Agency (EMSA), U.S. Department of Agriculture (USDA), Brazilian Air Force (BACE), GEOSYS, ESA and many others

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

Innovative solutions

Product level	Name	Description
Ortho-ready	L1B	Native GSD
Orthorectified	L1C	75cm – 1m
Enhanced Ortho	L1D	40cm – 50cm



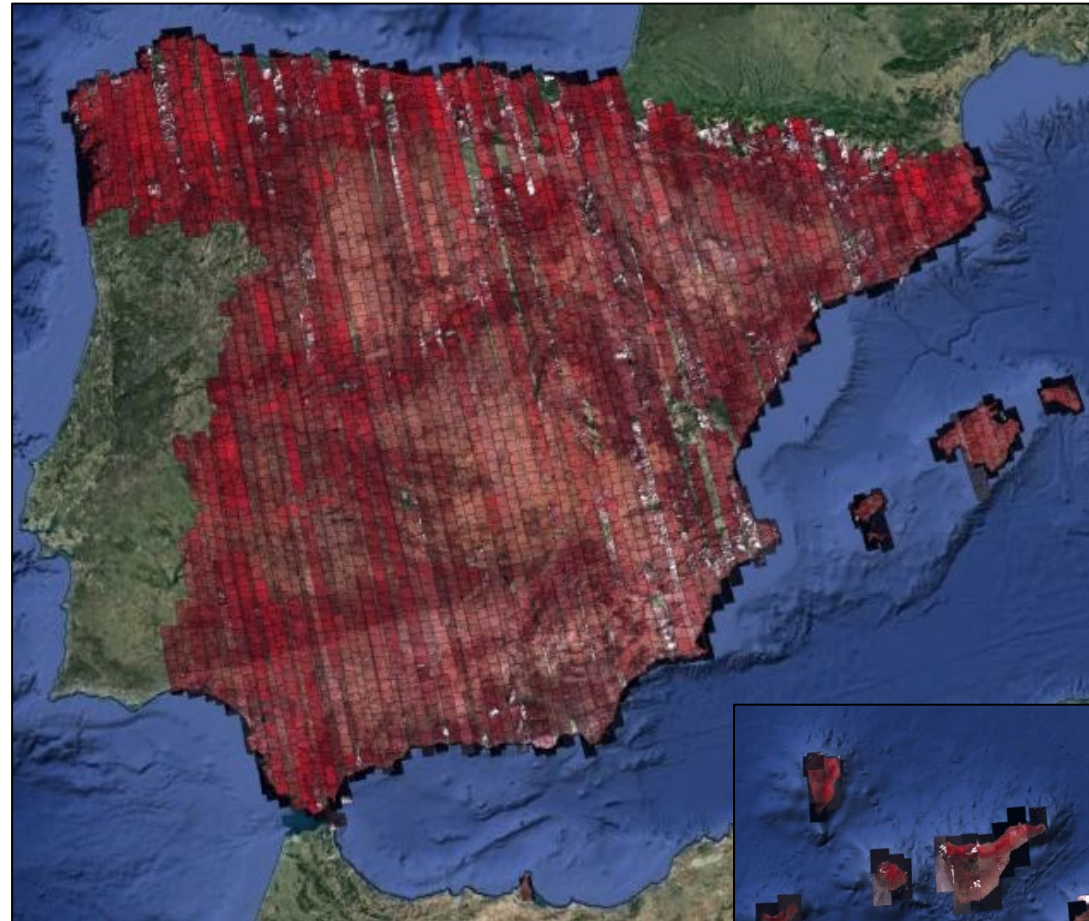
Product quality
verified by CQC

Spain Coverage (2021)

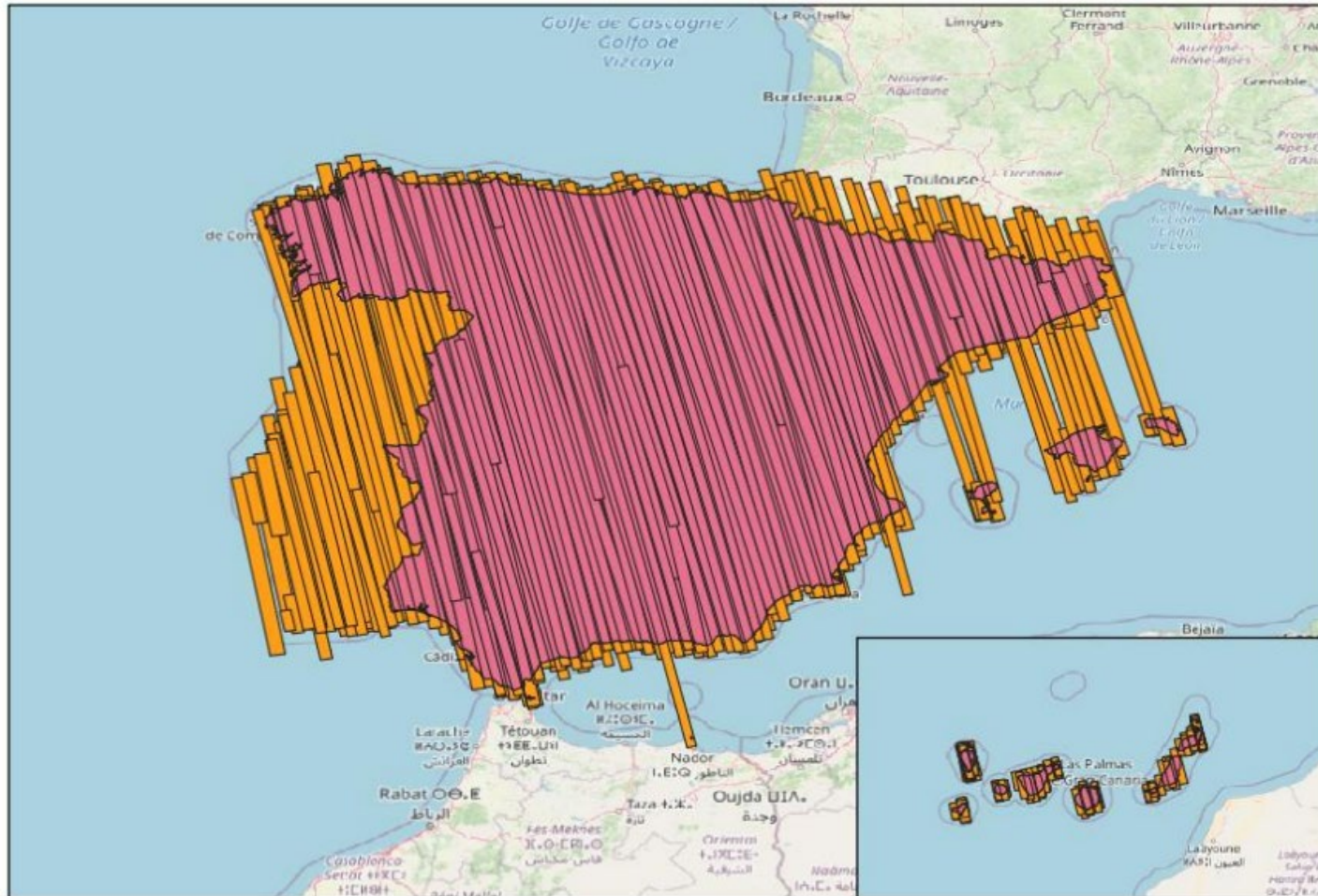


Coverage >90% cloud-free

- Bundle & Pansharp Ortho
- Geometric accuracy <4m CE90
- PNOA's DEM @ 5m & Base
- 844,000 km² delivered



Spain Coverage (2021)



Iberian Peninsula campaign

+ 70% below 15° ONA

+ 450 opportunities

+ 9800 scenes

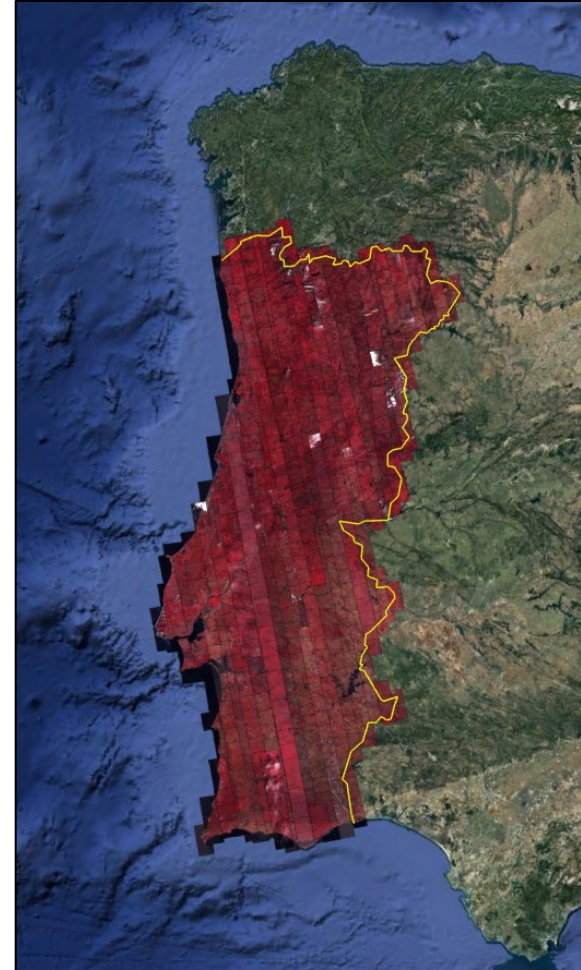
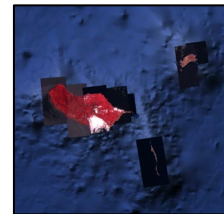
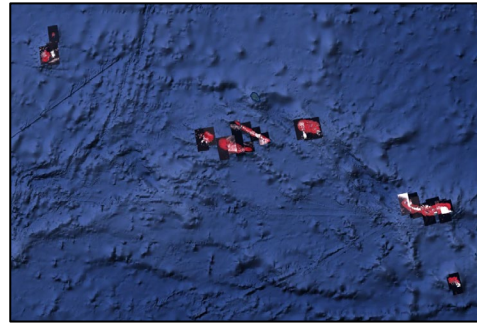
+ 1,8M km2 acquired

Portugal Coverage (2021)

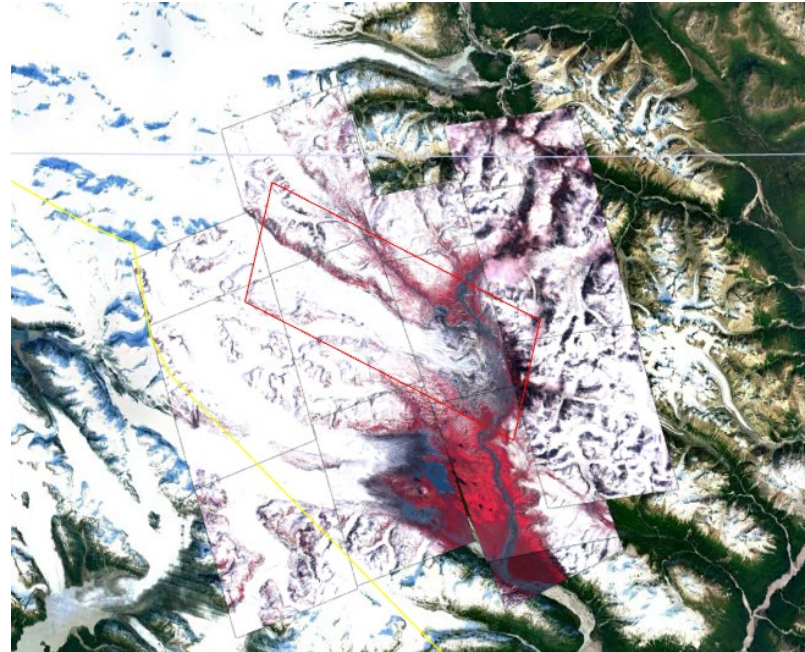


Coverage >95% cloud-free

- Bundle & Pansharp Ortho
- Geometric accuracy <6m CE90
- Copernicus DEM @ 10m
- 172,000 km² delivered

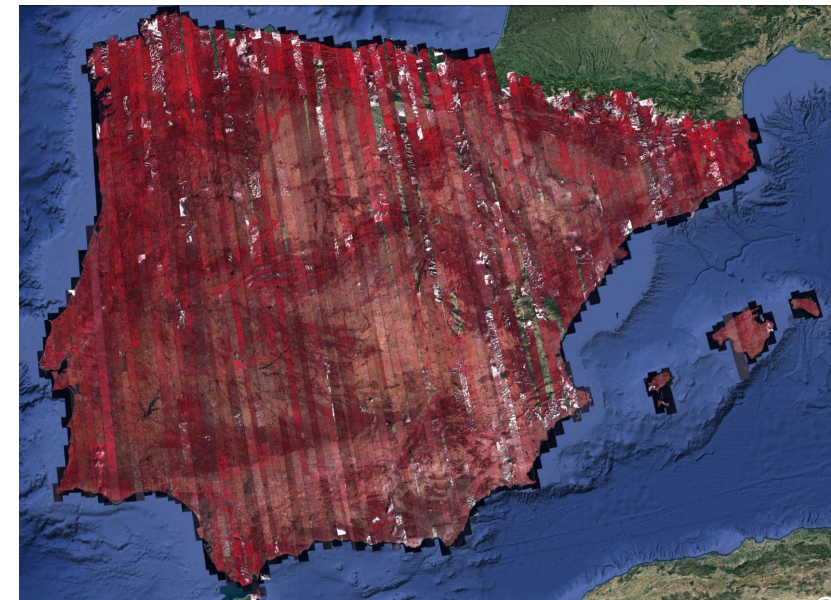


Ad-hoc campaigns



Delivering analysis ready-data over
punctual coverages...

... to wall-to-wall coverages





Thank you!

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www.geosat.space

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