## High-resolution optical images improve geological mapping in remote geothermal areas

29 March 2022

A group of researchers from the Centro de Geociencias (CGEO) at the National Autonomous University of Mexico (UNAM), in collaboration with the Istituto di Geologia Ambientale e Geoingenieria (IGAG) of the Italian National Research Centre (CNR), carried out a study on integrating remote sensing analysis with geological and geophysical fieldwork, over the Cerro Domuyo mountain in Patagonia—this led to the use of GeoEye-1 data, which proved to be invaluable, highly improving their understanding of the magmatic and tectonic evolution of this geothermal volcanic area.

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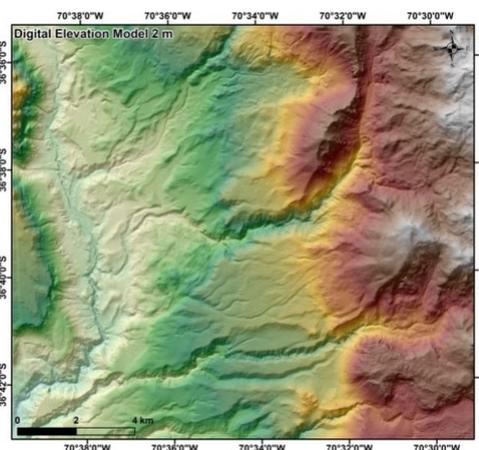
Cerro Domuyo is the highest mountain in Patagonia. Since the 1980s, a geothermal reservoir was established on its western slope due to the presence of thermal springs with boiling fluids, silicic domes and pyroclastic deposits.

Satellite data central to ocean monitoring

31 March 2022

Over 95% of Earth's water is found in our oceans, and yet sadly, oceans are under stress from climate change and pollution. Monitoring our oceans is vital for Earth's survival and satellites are the primary means of long-term and independent observation of our vast ocean bodies and their associated coastal zones.

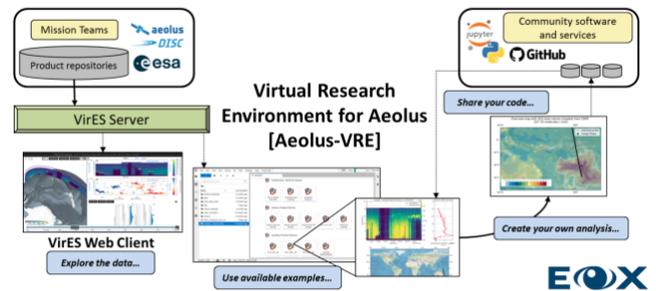READ MORE
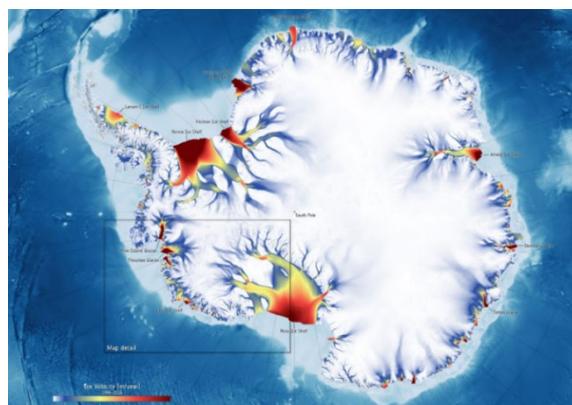
Highlight on:

Launch of Aeolus VRE

23 March 2022

The Aeolus Virtual Research Environment (VRE) is a cloud service, which provides users with a web-based development environment in the form of a JupyterLab workspace.

It is the latest extension to the VirES for Aeolus service, allowing more direct and in-depth data exploitation of the Aeolus mission.

This Virtual Research Environment has been tailored and configured in collaboration with ESA, DLR and LMU (Ludwig Maximilians University), to provide a ready-to-go environment with all relevant tools and configurations, removing the necessity for scientists to setup and maintain their own local development environment.

A dedicated Python package (viresclient) has been developed that provides powerful data access capabilities, such as filtering for an area of interest or requesting specific parameters of the product. The client on the VRE interfaces directly with the VirES service, so that the data can be analysed without needing to transfer it to your machine.

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Focus on: Data access

How to find GeoEye-1 data

GeoEye-1 acquires high resolution optical images, which are offered by Maxar as panchromatic and multispectral products. Panchromatic products are available at up to 40 cm resolution, and multispectral products at up to 1.65 m resolution.

The imagery offers highly accurate observations of locations, such as those used in the Cerro Domuyo Mountain study (see our lead article in this issue), and can revisit any point on Earth in three days, supporting many applications.

GeoEye-1 is part of ESA's Third Party Missions programme, in which ESA has an agreement to promote the availability of products from data providers.

[Discover the products available for GeoEye-1](#)
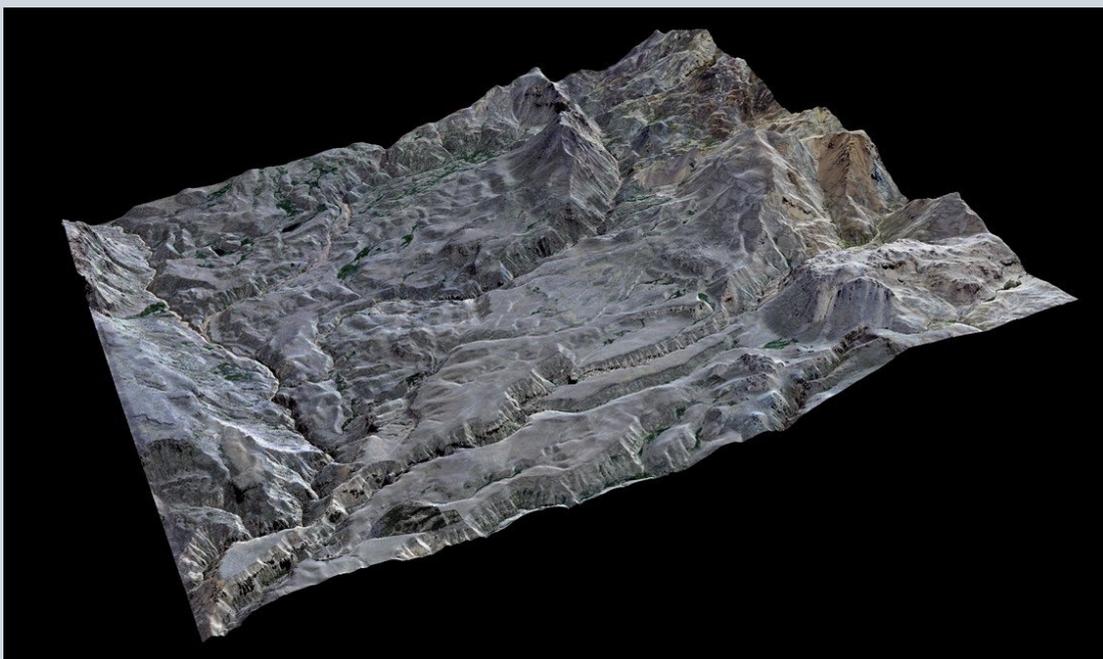
Orthoimage of Cerro Domuyo Mountain, using modified GeoEye-1 data and a 2 m resolution DEM/Processed by CGEO-UNAM and IGAG-CNR

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