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PRESS
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17TH VEGA FLIGHT TO LAUNCH SEOSAT-INGENIO SATELLITE FOR ESA AND TARANIS MISSION FOR CNES

On the night of 16 to 17 November, Vega will lift off from Europe's spaceport at the Guiana Space Centre (CSG) carrying the SEOSAT-Ingenio satellite for ESA on behalf of CDTI, the Spanish government agency with responsibility for space, and Taranis for CNES, developed in partnership with CEA, the French atomic energy and alternative energies commission, and CNRS, the French national scientific research centre. The launch will be the fifth this year from the CSG and the second for Vega, which will be making its 17th flight since entering service at the launch base in 2012.

With a launch mass of 750 kilograms, SEOSAT-Ingenio is a high-resolution optical imaging satellite and the flagship mission of Spain's strategic space plan. It will provide uniform coverage of regions of interest for Spain and supply multispectral high-resolution imagery of land surfaces to numerous user communities thanks to its extensive operational capabilities. It will also help to support and boost development of remote-sensing applications in Spain. The mission's overarching goal is to deliver data for applications in mapping, land management, urban planning, water resource management, environmental monitoring, disaster management and security. With its off-track viewing capability, SEOSAT-Ingenio will be able to acquire imagery of any point on the globe within three days and will help to map natural disasters like floods, wildfires and earthquakes, as well as aiding efforts to tackle one of the biggest challenges facing humanity: understanding and responding to climate change. The satellite is the first to be built by an industrial consortium of Spanish space sector firms led by Airbus Defence & Space. Its estimated lifetime is seven years.

With a launch mass of 175 kilograms, TARANIS (Tool for the Analysis of RAdiation from lightNIng and Sprites) is the first satellite designed to observe electromagnetic, radiative and luminous phenomena occurring at altitudes of 20 to 100 kilometres above storms. Discovered 20 years ago, these transient luminous events or TLEs—which go by the names of red sprites, blue jets, elves and halos—remain a mystery. They are sometimes accompanied by terrestrial gamma-ray flashes (TGFs). How TLEs and TGFs are related is just one of the scientific questions to which the TARANIS mission is hoping to find answers. The microsatellite will fly over more than a thousand TLEs and TGFs during its mission lasting at least four years, and will be capable of detecting these phenomena and recording their light and radiation signatures at fine resolution, as well as the electromagnetic disturbances they generate in the upper layers of Earth's atmosphere. The payload comprises a suite of detectors to sense TLEs and acquire in-situ measurements of disturbances to the local plasma (fields, waves and particles).

The TARANIS mission's three main goals are to:

- Gain new insights into the physics linking TLEs and TGFs in the regions of the atmosphere where they originate, as well as the environmental conditions there (lightning activity, thermal plasma fluctuations, air showers, etc.).
- Identify the mechanisms that trigger TLEs and TGFs, particularly phenomena tied to wave fields and particles that fuel or stem from these mechanisms.
- Gauge the potential effects of TLEs, TGFs and impulsive electron bursts in Earth's atmosphere and radiation belts.

New communication events for the TARANIS mission!

Virtual space dedicated to TARANIS – Monday 16 November from 8.00 a.m. CET:

Go behind the scenes of the TARANIS mission and the launch campaign

Go [here](#)

[JOURNALISTS ONLY]

VV17 Media Centre – Monday 16 November from 4.30 to 6.30 p.m. CET:

Talk with the TARANIS mission team in a live chat window

Pre- and post-launch interviews can be arranged with the mission team

Wide range of resources about the mission

Go [here](#) for accreditation

Taranis media reel [here](#)

Taranis images [here](#)

CNESMAG: *Taranis, the hidden side of storms* [here](#)

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[CNES photo and video library](#)

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