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PRESS RELEASE

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Metop-SGA1 Satellite Launched: Telespazio Successfully Leads Orbit Insertion Operations

- **Telespazio, a company controlled by the Leonardo Group, took over operational control of the satellite from the Fucino Space Centre, leading the critical phases of orbit insertion**
- **The first signal acquisition from Earth, solar array deployment, and Earth-pointing have been successfully completed. Orbital manoeuvres are currently underway, along with preparations for the handover to EUMETSAT, scheduled between August 15 and 16**

The Metop-SGA1 satellite — the first in the second generation of meteorological satellites developed by EUMETSAT and ESA — was successfully launched on the night of August 13 at 00:37:49 UTC from Europe's Spaceport in Kourou, aboard an Ariane 62 launcher.

At 01:30:57 UTC, the Yatharagga ground station in Australia received the satellite's first signal, enabling monitoring of its separation from the launcher — which occurred at 01:42:40 UTC — and initial operations such as the deployment of solar arrays.

From that point on, Telespazio assumed control of the mission, initiating the LEOP (Launch and Early Orbit Phase) from the Fucino Space Centre — the most delicate operational phase that guides the satellite through its first orbits around Earth.

In the hours following the launch, key milestones were achieved: onboard systems were successfully initialized, the propulsion system activated, and the satellite was correctly oriented. Around 07:20 UTC, the satellite achieved Earth-pointing — a fundamental condition for stabilisation and the start of the orbital manoeuvres planned for the coming hours.

The nominal duration of the LEOP is approximately three days. Orbital manoeuvres will continue until the satellite is fully inserted into its designated orbit, expected within two and a half days after launch. The operational handover to EUMETSAT's control centre is planned for the night of August 15–16.

The Telespazio team involved in the mission includes around 40 professionals, supported by a Project Support Team with personnel from ESA and Airbus, and the customer team from EUMETSAT. The close cooperation among all stakeholders and constant supervision of mission activities are ensuring smooth progress in line with the mission's operational requirements.

The launch of Metop-SGA1 follows just one month after the successful launch of another EUMETSAT satellite, MTG-S1 — a tight and particularly demanding schedule that underlines the central role played by Telespazio's team in Europe's most complex and strategic missions.

Leonardo Group's Contribution

Leonardo, through its joint ventures Telespazio and Thales Alenia Space, has long been a key partner in ESA and EUMETSAT's MetOp programmes as well as in the European Copernicus constellation.

Leonardo is involved in both the MetOp-SG A1 mission and the Copernicus Sentinel-5 instrument, which is hosted on the same satellite. For both missions, the company has supplied electro-optical instruments developed at its Campi Bisenzio site (near Florence), designed to support air quality monitoring and climate change studies.

Telespazio, from the Fucino Space Centre, is managing the initial flight operations of the satellite.

Thales Alenia Space, based in Spain, has developed key equipment for data transmission. Specifically for MetOp-SG A1, Leonardo developed the 3MI (Multi-viewing, Multi-channel, Multi-polarization Imager), a single instrument that combines three different observation modes within two "fish-eye" telescopes, each capable of scanning the Earth with a field of view of up to 110 degrees. This innovative system will collect around 25 GB of data per orbit, providing crucial insights into how particles form and move in the atmosphere, how harmful greenhouse gases develop, and the composition of certain types of clouds.

For Sentinel-5, part of the Copernicus programme, Leonardo also developed the SWIR subsystem — a spectrometer with ultra-high spectral resolution, capable of measuring atmospheric gases and aerosols such as CO_2, ozone and methane, which directly affect air quality.

The EPS-SG Programme

The EPS-SG programme —EUMETSAT Polar System – Second Generation — continues the legacy of the original Metop satellites series and is vital for ensuring long-term meteorological and climate observations from polar orbit. The system consists of six operational satellites, arranged in three pairs (series A and B), with complementary objectives.
Series A satellites, such as Metop-SGA1, carry instruments for optical, infrared and microwave imaging, aerosol monitoring, atmospheric trace gas tracking, and radio occultation. Series B focuses on scatterometry, microwave imaging, cloud ice sensitivity, and includes the Argos 4 system for environmental data collection.

The ground segment includes fully integrated systems for mission control and operations, as well as for payload data acquisition and processing. This infrastructure enables rapid global distribution of processed data via networks like EUMETCast, with the goal of delivering usable products within approximately 70 minutes of observation.

This new generation of satellites will operate in sun-synchronous polar orbit at an altitude of roughly 830–840 km, with a nominal operational life of 7 to 7.5 years per satellite. They will ensure continuity of the data provided by the first Metop series, playing a key role in improving weather forecasts up to ten days ahead, advancing climate monitoring, and enhancing global environmental observation.