

MSG-3 set to ensure quality of Europe's weather service from geostationary orbit

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Carried on an Ariane 5, the latest weather satellite in Europe's highly successful Meteosat Second Generation series, MSG-3, lifted off from Europe's Spaceport in Kourou, French Guiana, on 5 July 2012. The launch of MSG-3 ensures the continuity of meteorological observations to improve weather forecasts from geostationary orbit 36 000 km above Earth. ESA has developed the series of weather satellites in close cooperation with the European Organisation for the Exploitation of Meteorological Satellites, Eumetsat. Credits: ESA/VNES/Arianespace/Optique Video du CSG

The latest weather satellite in Europe's highly successful Meteosat second-generation series is on its way after lifting off on an Ariane 5 at

21:36 GMT (23:36 CEST) on Thursday, 5 July from Europe's Spaceport at the Guiana Space Centre in Kourou, French Guiana.

The satellite's sensors will ensure that Europe and Africa continue to receive up-to-date weather coverage.

Some 34 minutes into flight, the third Meteosat Second Generation [satellite](#) was released into its targeted elliptical transfer orbit. It is now being controlled from ESA's European Space Operations Centre, in Darmstadt, Germany.

In ten days, once the initial operations are completed, MSG-3 will be handed over to the satellite's owner, the European Organisation for the Exploitation of Meteorological Satellites – EUMETSAT – to commission the payload.

After commissioning, when MSG-3 has become Meteosat-10, it will be stationed at 0° longitude, over the Gulf of Guinea on the Equator, in geostationary orbit, where its speed precisely matches Earth's rotation.

“Tonight's launch allows EUMETSAT and ESA to continue providing Europeans with high quality observations of weather from space, with MSG-3 being especially valuable in rapid detection and warning of extreme weather situations,” said ESA's Director General, Jean-Jacques Dordain.

“For more than three decades now, the exemplary cooperation between ESA and EUMETSAT has been the basis of the success of the Meteosat and EPS/Metop programmes.

“These programmes have ensured high-quality weather forecasts, the successive generations have improved these forecasts and they have brought tangible economic benefits for and improving the daily life of

every European. Two generations have now been developed by ESA and EUMETSAT.”

“MSG-3 ensures the continuity of the present service. Together with EUMETSAT, ESA is working on the development of the next series of weather satellites, Meteosat Third Generation”, said ESA’s Director of Earth Observation, Volker Liebig.

“Once operational at the end of this decade, this next generation will provide a quantum leap in terms of technology and performance, providing among others faster imaging, more spectral channels and an atmospheric sounding capability allowing for the measurements of trace gas profiles.”

ESA’s role in weather and climate watch is not limited to the Meteosat series of satellites. It has also developed the MetOp series of polar-orbiting weather satellites - also operated by EUMETSAT - planned to be followed by the MetOp Second Generation series– to be submitted to the ESA Ministerial Council in November for approval.

The second MetOp is at the Baikonur Cosmodrome, Kazakhstan, ready for launch on 19 September.

About Meteosat Second Generation

MSG is a joint program undertaken by ESA and EUMETSAT. ESA is responsible for the development of satellites fulfilling user and system requirements defined by EUMETSAT and of the procurement of recurrent satellites on its behalf. ESA also performs the Launch and Early Orbit Phase operations required to place the spacecraft in [geostationary orbit](#), before handing it over to EUMETSAT for exploitation.

EUMETSAT develops all ground systems required to deliver products and services to users and to respond to their evolving needs, procures launch services and operates the full system for the benefit of users.

MSG-3 is the third in a series of four satellites introduced in 2002. These spin-stabilised satellites carry the primary Spinning Enhanced Visible and Infrared Imager, or SEVIRI.

SEVIRI focuses on [Europe](#) and Africa to deliver enhanced weather coverage, in order to improve local forecasts, in particular for rapidly developing storms. It scans Earth's surface and atmosphere every 15 minutes in 12 different wavelengths, to track cloud development and measure temperatures.

SEVIRI can pick out features as small as a kilometre across in the visible bands, and three kilometers in the infrared.

In addition to its [weather](#)-watching mission and collection of climate records, MSG-3 has two secondary payloads.

The Global Earth Radiation Budget sensor will measure the amount of solar energy that is radiated back into space to determine how much energy is introduced into the climate system and to provide insights into the atmospheric circulation between the day and night sides. A Search & Rescue transponder will turn the satellite into a relay for distress signals from emergency beacons.

The MSG satellites were built in Cannes, France, by a European industrial team led by Thales Alenia Space, France. More than 50 subcontractors from 13 European countries are involved.

The last of the series, MSG-4, is planned for launch in 2015.

Provided by European Space Agency

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