



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
**State Secretariat for Education,
Research and Innovation SERI**
Swiss Space Office

Meteosat Third Generation – Imaging Satellite (MTG-I)

Launch Date: 13/12/2022

Overview	<p>The Meteosat Third Generation (MTG) mission is a cooperation between ESA and <u>Eumetsat</u>. It builds on the long-standing partnership between ESA and Eumetsat and the success of both the first generation of Meteosat missions and the subsequent Meteosat Second Generation (MSG) series which are operational today. The MTG satellites will replace the current MSG operational system and ensure continuity of data for weather forecasting from geostationary orbit for the next two decades. It also offers increased resolution and sensitivity, new infrared sounding capability and real time lightning imaging for early detection of severe storms as they develop. Earlier detection of such phenomena will increase the available reaction time for issuing severe weather warnings and implementing the necessary measures to avoid potentially catastrophic impacts.</p> <p>To ensure continuity for at least 20 years, the full system consists of six satellites in total: four Imaging satellites (MTG-I) and two Sounding satellites (MTG-S). When fully deployed, two MTG-I satellites and one MTG-S satellite will fly at the same time.</p> <p>ESA is responsible for the definition and implementation of the MTG satellites and, on behalf of Eumetsat, the procurement of recurrent hardware, while Eumetsat is in charge of operating the spacecraft throughout its lifetime.</p> <p>On 13 December 2022, the first MTG-I satellite is scheduled to be launched. It will be followed by an MTG-S in 2024 and then the next MTG-I in 2025. The next three satellites will be launched around 10 years later to replace the first set, which have a nominal life of 8.5 years but sufficient fuel for more than 10.7 years.</p>
Payload objectives	<p>The MTG-I satellite carries two completely new instruments, a Flexible Combined Imager (FCI) and Europe's first Lightning Imager (LI), as well as a data collection system and a search and rescue relay system.</p> <p>Flexible Combined Imager (FCI): The FCI operates in 16 spectral channels from the visible to the infrared spectral bands. It has a spatial resolution of 1-2 km, delivering a full image of the Earth every 10 minutes. Additionally, it can operate in a "high spatial resolution fast imagery" mode which allows zooming in on smaller areas with four spectral channels, increased spatial resolution and delivering images of these areas every 2.5 minutes.</p>



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
**State Secretariat for Education,
Research and Innovation SERI**
Swiss Space Office

	Lightning Imager (LI): The LI operates in a narrow spectral band at 777 nanometers with a spatial resolution of around 10 km. The instrument comprises of four identical optical telescopes, which together cover 80% of the Earth disc. The LI will continuously monitor the Earth for lightning discharges, taking place either between clouds or between clouds and the ground. This allows for detecting severe storms in their early stages which will be key for issuing timely warnings.		
Scheduled Launch	MTG-I will be launched on 13 December at 21:30 (CET) from Europe's Spaceport in Kourou (French Guiana) on an Ariane 5 rocket to a geostationary orbit at 0 degree longitude & +/-1 degree inclination.		
Construction/ Collaboration	Thales Alenia Space leads the industrial consortium that is building the MTG family, with a major partner being OHB. Several Swiss industries contributed to the development of MTG-I.		
	Entity	Brief contribution name	Official PoC Name and contact email
Swiss Contributions:	APCO Technologies SA	<ul style="list-style-type: none"> - Flexible Combined Imager Instrument Main Baffle - Optical Bench for the Lightning Imager - Platform secondary structure panels - Assorted Mechanical Ground Support Equipment 	Romain Kerleau r.kerleau@apco-technologies.eu
	Beyond Gravity (former Ruag)	<ul style="list-style-type: none"> - Solar Array Drive Mechanism - Antenna Deployment and Pointing Mechanism - Radiation Monitoring Unit 	Eric Wiesmann eric.wiesmann@beyondgravity.com Holger Wentscher Holger.Wentscher@beyondgravity.com
	Micos	<ul style="list-style-type: none"> - Calibration Black Bodies for Flexible Combined Imager Instrument 	Roman Schönbächler roman.schoenbaechler@micos.ch
	Clemessy Switzerland	<ul style="list-style-type: none"> - Assorted Electrical Ground Support Equipment 	Pascal Conrath Pascal.CONRATH@eiffage.com



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
**State Secretariat for Education,
Research and Innovation SERI**
Swiss Space Office

CH Positioning or benefit for CH in the wider context	Relevant Swiss actors	Details & pointers to elaborate on	Contact
	MeteoSwiss	<p>As a member of EUMETSAT, Switzerland has full rights of use of the European weather satellites, i.e. access to all its data and products. Switzerland also benefits as a research and industrial partner as well as from technical and scientific synergies at an international level.</p> <p>The availability of new data not only ensures continuity but also contributes to improving meteorological forecasts for the benefit of the society.</p>	MeteoSwiss: media@meteoswiss.ch
Further information/links:	ESA media point of contact: Paul Blythe ESA, Meteosat Programme Manager, (Paul.Blythe@esa.int) Eumetsat media point of contact: Paul Counet (Paul.Counet@eumetsat.int)		