

December 2022
LAUNCH KIT
VA259



www.arianespace.com



www.ariane.group/en/

MISSION DESCRIPTION

Arianespace's fourth launch of 2022 with the third Ariane 5 of the year will place its satellite passengers into geostationary transfer orbit. The launcher will be carrying a total payload of approximately 10,972 kg.

The launch will be performed in Kourou, French Guiana.



DATE AND TIME

Liftoff is planned on **Tuesday, December 13, 2022**, as early as possible within the following launch window:

- Between 03:30 p.m. and 05:16 p.m. Washington, D.C. time,
- Between 05:30 p.m. and 07:16 p.m. Kourou time,
- Between 08:30 p.m. and 10:16 p.m. Universal time (UTC),
- Between 09:30 p.m. and 11:16 p.m. Paris time,
- Between 05:30 a.m. and 07:16 a.m. December 14 Tokyo time.



MISSION DURATION

The nominal duration of the mission (from liftoff to separation of the last satellite) is: **34 minutes and 37 seconds**.



SATELLITES

- Satellites: MTG-I1
- Customer: EUMETSAT

- Satellite: GALAXY 35 and 36
- Customer: Intelsat

TARGETED ORBIT

For MTG-I1:

- Perigee altitude: 251.8 km
- Apogee altitude: 35830.2 km



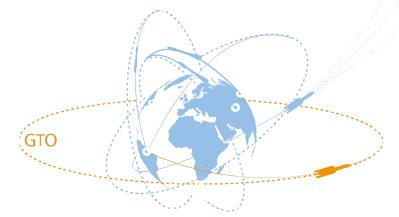
For Galaxy 35:

- Perigee altitude: 250.6 km.
- Apogee altitude: 35915.2km

For Galaxy 36:

- Perigee altitude: 251.2 km
- Apogee altitude: 35836.5 km

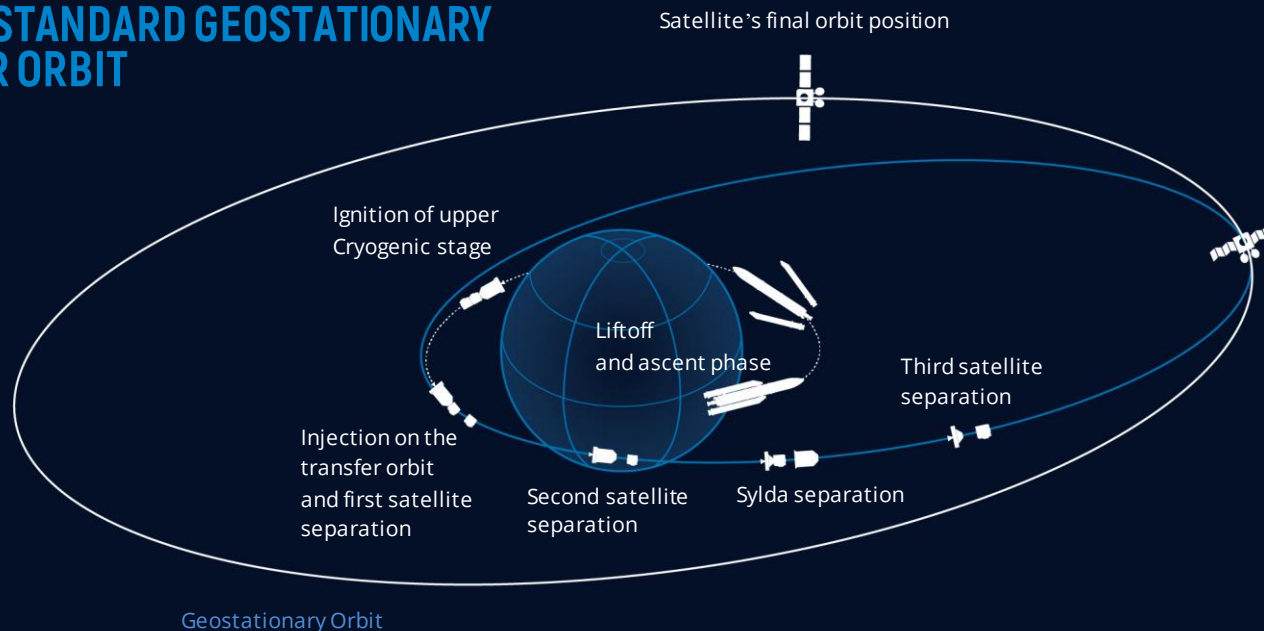
- Inclination of 6° degrees for all three satellites



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ARIANE 5 STANDARD GEOSTATIONARY TRANSFER ORBIT



PRESS CONTACTS

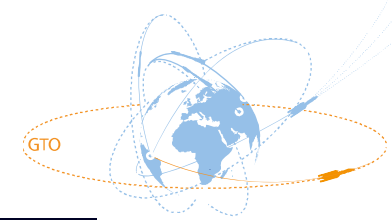
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Meteosat Third Generation-Imager 1

Revolutionising weather forecasting



DID YOU KNOW?

Meteosat Third Generation-Imager 1 (MTG-I1) is the first satellite in a new system that will produce about 50 times more data for weather forecasters than its second-generation siblings. The result? Faster, more precise information about weather events.



SATELLITE	Meteosat Third Generation-Imager 1
CUSTOMER	EUMETSAT
MANUFACTURER	Thales Alenia Space
MISSION	Meteorology
MASS AT LAUNCH	3.76 tonnes
PLATFORM	MTG
COVERAGE AREA	Europe and Africa
LIFETIME	8.5 years

The Meteosat Third Generation (MTG) system will help meteorologists meet one of their main challenges – the rapid detection and forecasting of severe weather events – so that timely warnings can be given to citizens, civil authorities and first responders. The data from **Meteosat Third Generation-Imager 1 (MTG-I1)** will have a wide range of uses, from enabling aircraft to avoid storms and for earlier alerts of flooding, through to more precise monitoring of fires and fog. It will help to protect lives, property and infrastructure and bring economic benefits to Europe and Africa.

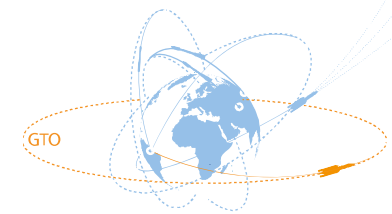
The MTG system is the most complex and innovative geostationary meteorological satellite system ever built. When fully deployed, European meteorologists will be able, for the first time, to monitor the full life cycle of storms – from initial instability in the atmosphere through to lightning strikes. **MTG-I1** will produce images of Europe and Africa every 10 minutes from the Flexible Combined Imager's 16 spectral channels. The Lightning Imager will continuously map lightning flashes between clouds and from clouds to the ground. Higher resolution imagery will be available more quickly, in a significant advance for forecasting of rapidly developing severe weather events.

The MTG mission is a cooperation between EUMETSAT and the European Space Agency (ESA). The MTG satellites are developed and procured in cooperation with the European Space Agency by an industrial consortium led by Thales Alenia Space in cooperation with OHB. The satellites are developed according to the requirements defined by EUMETSAT after consultation with the users of its meteorological data.

- Meteosat Third Generation-Imager 1 will be the 14th EUMETSAT satellite to be launched by Arianespace.
- It will be the 167th satellite manufactured by Thales Alenia Space to be launched by Arianespace.

Galaxy 35 and Galaxy 36

Providing dedicated capacity for Live Sports and News



DID YOU KNOW?

- Solar array wingspan is 12m fully deployed.
- Satellite height is 7.2m on-orbit, fully deployed.
- Reflectors are 2.6m diameter.



SATELLITES	Galaxy 35 and 36
CUSTOMER	Intelsat
MANUFACTURER	Maxar
MISSION	Telecommunication and data connectivity
MASS AT LAUNCH	6.3 tonnes
PLATFORM	1300s
COVERAGE AREA	North America
LIFETIME	15 years

Galaxy 35 and Galaxy 36 are geosynchronous communications satellites that will provide dedicated North American links to broadcasters allowing them to air live events and programs including sports, entertainment and breaking news coverage. Additionally, the satellites also offer in-orbit protection for select customers in the broadcast arc serving North America.

Galaxy 35 will replace Galaxy 3C and **Galaxy 36** will replace Galaxy 28.

Today's launch continues Intelsat's Galaxy fleet refresh plan that started with Galaxy 30 in 2020 and carries the fifth and sixth out of seven new Intelsat satellites launching in the coming months.

- Galaxy 35 and Galaxy 36 will be the 63rd and 64th satellites to be launched by Arianespace for Intelsat.
- The two satellites will be the 69th and 70th satellites manufactured by Maxar to be launched by Arianespace

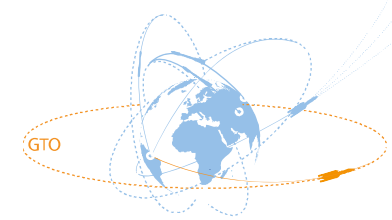
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ARIANE 5 LAUNCHER



Fairing

(RUAG Schweiz AG)

PA – Payload adaptors

SYLDA – Internal structure

Vehicle equipment bay

Height: 1.13 m.

ESC-D – Cryotechnic upper stage

Height: 4.71 m.

HM-7B engine

Thrust: 67 kN. (in vacuum)

EPC – Cryogenic main stage

EAP – Solid rocket boosters

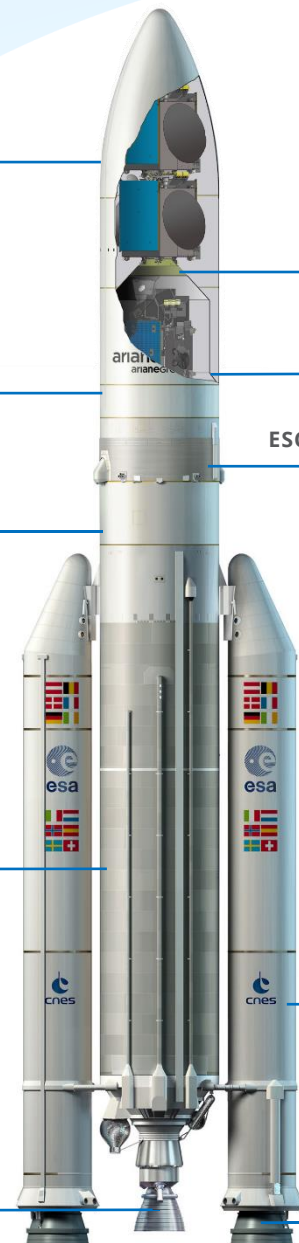
Height: 31.6 m.

Vulcain 2 engine

Thrust: 1,410 kN. (in vacuum)

MPS – Solid rocket motor

Average thrust: 5,060 kN.
Max thrust: 7,080 kN. (in vacuum)



13,000 kN. at liftoff (at T+7.3 sec)

DID YOU KNOW?



ArianeGroup, as prime contractor for Ariane 5, leads a number of European companies in launcher production, including management of upgrades and the flight software for each mission. This team effort underpins the success of Ariane 5.

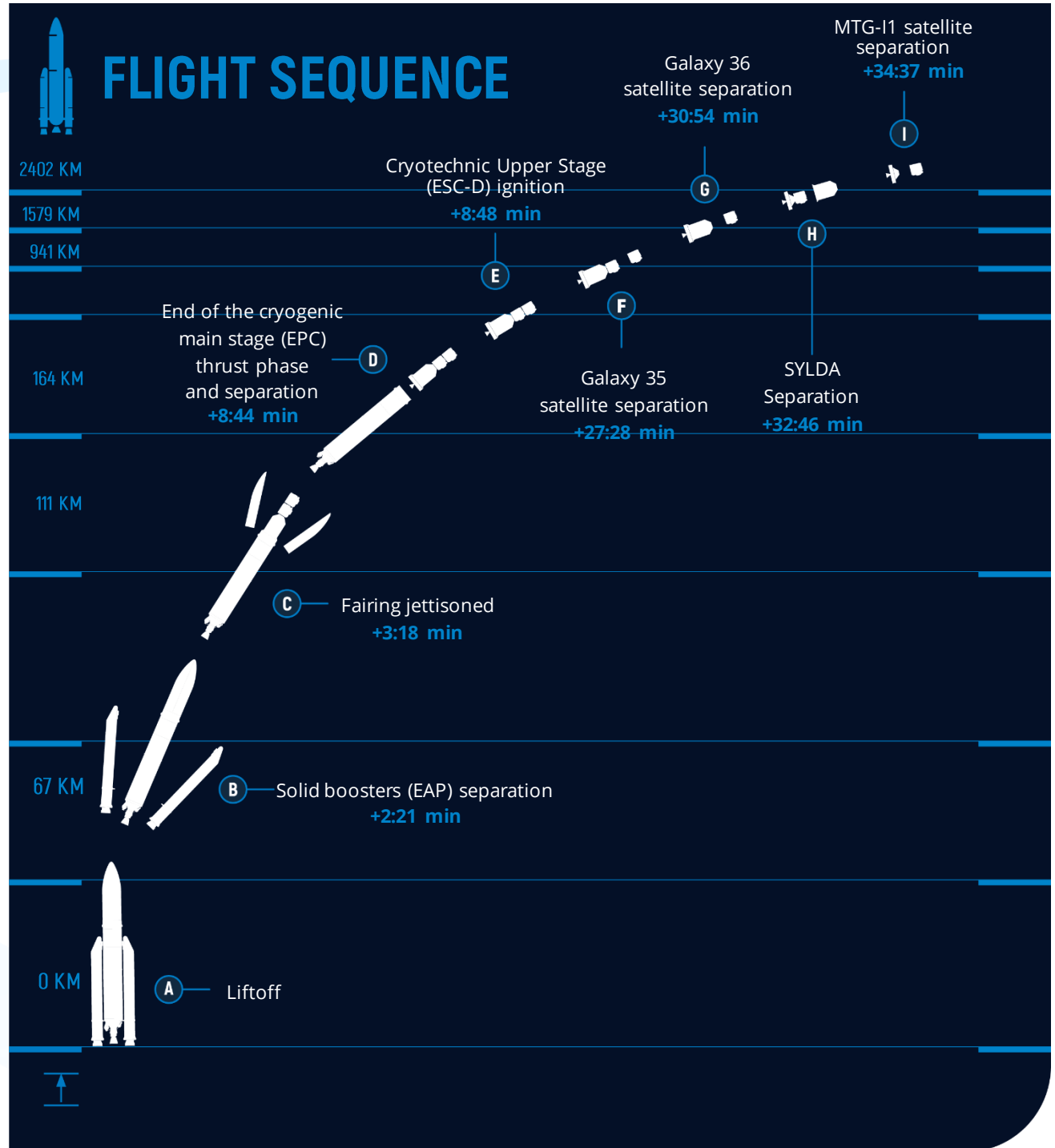
ArianeGroup's responsibilities on Ariane 5 include structures and equipment, propulsion systems, integration of the different stages and integration of the launcher at the Guiana Space Center in French Guiana. It coordinates more than 600 European companies contributing to the launcher, including some 350 small and medium-size enterprises.

We continuously improve the competitiveness of the Ariane 5 system, while also ensuring that it benefits from the production improvements developed on the Ariane 6 program.

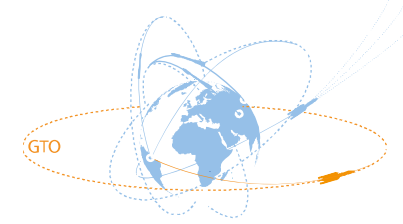
LAUNCH CAMPAIGN

- 12/13/2022  Start of launch countdown, cryogenic main stage and cryogenic upper stage filling with liquid oxygen and liquid hydrogen. **Liftoff.**
- 12/12/2022  Roll-out from BAF to the launch pad
- 12/09/2022  Launch readiness review and arming of launch vehicle
- 12/08/2022  Dress rehearsal
- 12/06/2022  MTG-I1 encapsulation
- 12/03/2022  Galaxy 35 & Galaxy 36 encapsulation
- 12/01/2022  Fairing integration on SYLDA
- 11/22/2022  Beginning of fueling operation for Galaxy 36 and MTG-I1
- 11/14/2022  Arrival of Galaxy 36 in French Guiana
- 11/08/2022  Beginning of Galaxy 35's fueling operations
- 10/27/2022  Arrival of Galaxy 35 in French Guiana
- 10/23/2022  Transfer from BIL (Launcher Integration Building) to BAF (Final Assembly Building)
- 10/19/2022  BIL Campaign start
- 10/11/2022  Arrival of MTG-I1 in French Guiana

-  — Launch vehicle operations
-  — Satellite operations



STAKEHOLDERS OF A LAUNCH



ARIANESPACE

Arianespace uses Space to make life better on Earth by providing launch services for all types of satellites into all orbits. It has orbited over 1,100 satellites since 1980.

Arianespace is responsible for operating the new-generation Ariane 6 and Vega C launchers, developed by ESA, with respectively ArianeGroup and Avio as industrial primes.

Arianespace is headquartered in Evry, near Paris, and has a technical facility at the Guiana Space Center in French Guiana, plus local offices in Washington, D.C., Tokyo and Singapore. Arianespace is a subsidiary of ArianeGroup, which holds 74% of its share capital, with the balance held by 15 other shareholders from the Ariane and Vega European launcher industry, and ESA and CNES as censors..

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ARIANEGROUP

ArianeGroup is the prime contractor for the development and production of Ariane 5 and Ariane 6 launchers. The company coordinates an industrial network of more than 600 companies (including 350 SMEs).

ArianeGroup oversees the entire industrial supply chain, from performance optimization and the corresponding studies associated with Ariane 5 to production, from the supply of mission-specific data and software to the marketing of the launcher through Arianespace. This chain includes equipment and structures, engine manufacturing, integration of the various stages, and launcher integration in French Guiana.

ArianeGroup delivers a flight-ready launcher on the launch pad to its subsidiary Arianespace, which operates the flight from lift-off, on behalf of its customers.

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ESA

The European Space Agency (ESA) is an intergovernmental organization with the mission to shape the development of Europe's space capability and ensure that investment in space delivers benefits to the citizens of Europe and the world. With 22 member states, ESA coordinates the financial and intellectual resources of its members, ESA can undertake programs and activities far beyond the scope of any single European country.

ESA has established formal cooperation with the European Union (EU) on implementing the Galileo and Copernicus programs as well as with Eumetsat for the development of meteorological missions.

ESA manages Europe's space transportation programs Ariane, Vega, Space Rider and Boost!.

Press contact: media@esa.int



CNES

French space agency CNES (Centre National d'Etudes Spatiales) defines national space policy and proposes it to public authorities. CNES oversees the application of this policy in five main areas: Ariane, science, observation, telecommunications and defense. ESA chose CNES as prime contractor for the Ariane 6 launch base in French Guiana, including the construction of a new launch pad. CNES also supports ESA, as the contracting authority, and ArianeGroup, as prime contractor for launcher development, and is responsible for applying the French law on space operations. As the owner of the Guiana Space Center (CSG), CNES has a dual mission: maintaining the operational condition of the CSG and modernizing its facilities in anticipation of the arrival of Ariane 6, Vega-C and other future vehicles. At the CSG, CNES manages operations at the launch base, the reception of satellites, launch vehicle monitoring and tracking, range security and environmental protection.

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