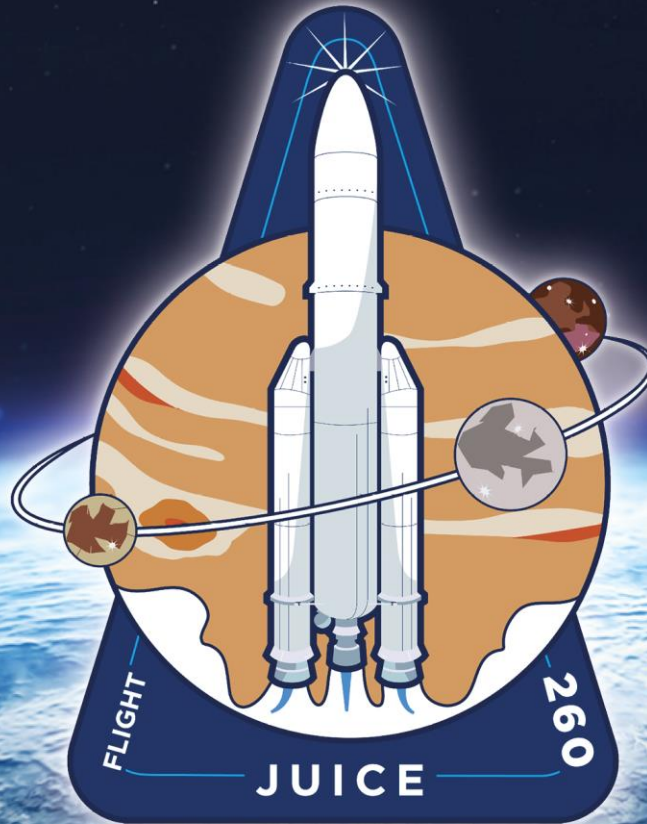


April 2023
LAUNCH KIT
VA260



www.arianespace.com



www.ariane.group/en/

MISSION DESCRIPTION

Arianespace will launch the Jupiter ICy moons Explorer (JUICE) space probe for the European Space Agency (ESA) on board its **first Ariane 5 mission of the year**. The launcher will be carrying a total payload of approximately **6058 kg**.

The launch will be performed in **Kourou, French Guiana**.



MISSION DURATION

The nominal duration of the mission (from liftoff to separation of the satellite) is: **27 minutes and 45 seconds**.



SATELLITE

- Satellite: JUICE
- Customer: ESA



TARGETED ORBIT

- Liberation's orbit
- Infinite velocity: 2.5km/s
- Declination: -2.95°



DATE AND TIME

Liftoff is planned on **Thursday, April 13, 2023**:

- 08:15 a.m. Washington, D.C. time,
- 09:15 a.m. Kourou time,
- 12:15 p.m. Universal time (UTC),
- 02:15 p.m. Paris time,
- 12:15 a.m., April 14, Tokyo time.



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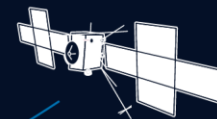
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Ignition of upper cryogenic stage

Injection into orbit

JUICE separation

Liftoff and ascent phase



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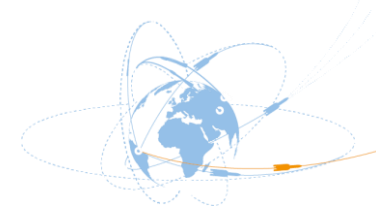
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JUICE – Unlocking Mysteries

Destination Jupiter



DID YOU KNOW?

Flight VA260 will launch JUICE, Europe's first mission to Jupiter. It will spend at least three years making detailed observations of its icy moons: Europa, Ganymede and Callisto.

It will study the moons as potential habitats for life, addressing two key questions: what are the conditions for planet formation and the emergence of life, and how does the Solar System work?



SATELLITE	JUICE
CUSTOMER	European Space Agency (ESA)
MANUFACTURER	Airbus Defence and Space
MISSION	Science
MASS AT LAUNCH	5963 kg (max)
PLATFORM	Specific to JUICE
COVERAGE AREA	Jupiter System
LIFETIME	12 years (end of the mission in September 2035)

JUICE, ESA's **Jupiter Icy moons Explorer**, is the first 'large-class' mission of the Cosmic Vision science program. The mission will make detailed observations of the giant gas planet and its three large ocean-bearing moons – Ganymede, Callisto and Europa – with a suite of remote sensing, geophysical and in situ instruments.

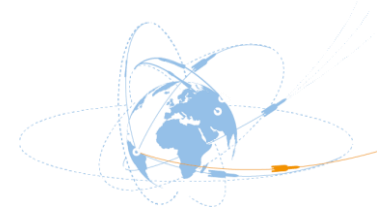
The mission will characterize these moons as both planetary objects and possible habitats, explore Jupiter's complex environment in depth, and study the wider Jupiter system as an archetype for gas giants across the Universe.

After an 8-years cruise toward Jupiter, which includes gravitational assists from Earth and Venus, the spacecraft will enter in orbit around the giant planet in 2031.

JUICE will carry the most powerful scientific payload ever flown to the outer Solar System. It consists of 10 state-of-the-art instruments plus one science experiment that uses the spacecraft telecommunication system with ground-based radio telescopes.

- Flight VA260 will be the first European mission to Jupiter and its icy moons and 30th scientific mission operated by Arianespace.
- JUICE will be the 86th spacecraft to be launched by Arianespace for the benefits of ESA.
- JUICE will be the 140th satellite built by Airbus Defence and Space to be launched by Arianespace.

ARIANE 5 LAUNCHER



Fairing

(Beyond Gravity Schweiz AG)
Height: 17 m.

Vehicle equipment bay

Height: 1.13 m.

HM-7B engine

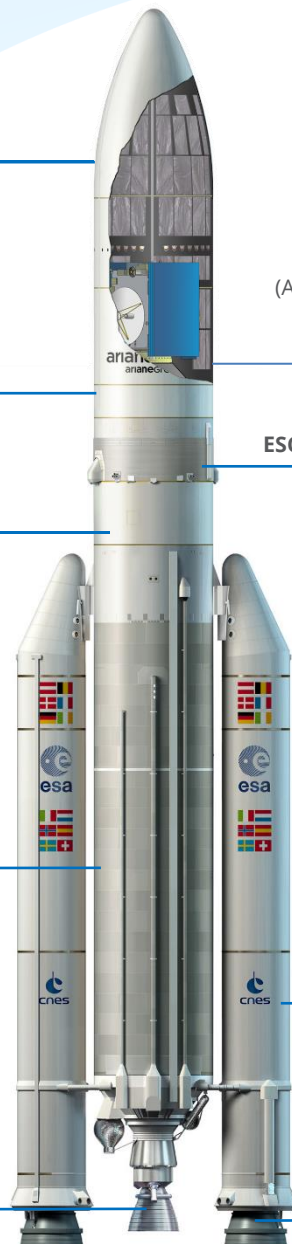
Thrust: 67 kN. (in vacuum)

EPC – Cryogenic main stage

Height: 31 m.

Vulcain 2 engine

Thrust: 1,410 kN. (in vacuum)



PA – Payload adaptor

(Airbus Defence and Space - ASE)
(RUAG Space AB)

ESC-D – Cryotechnic upper stage

Height: 4.71 m.

EAP – Solid rocket boosters

Height: 31.6 m.

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)

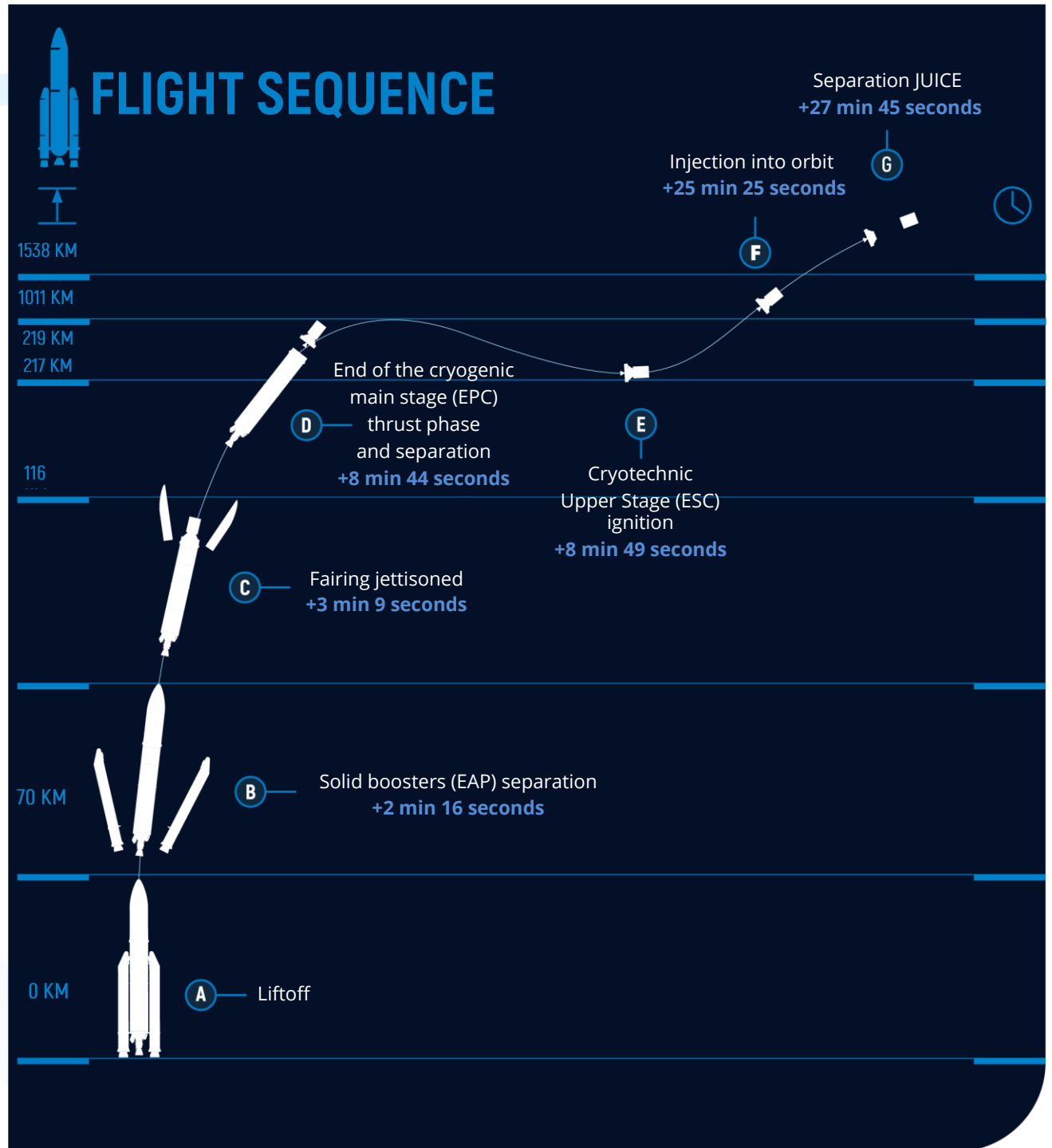
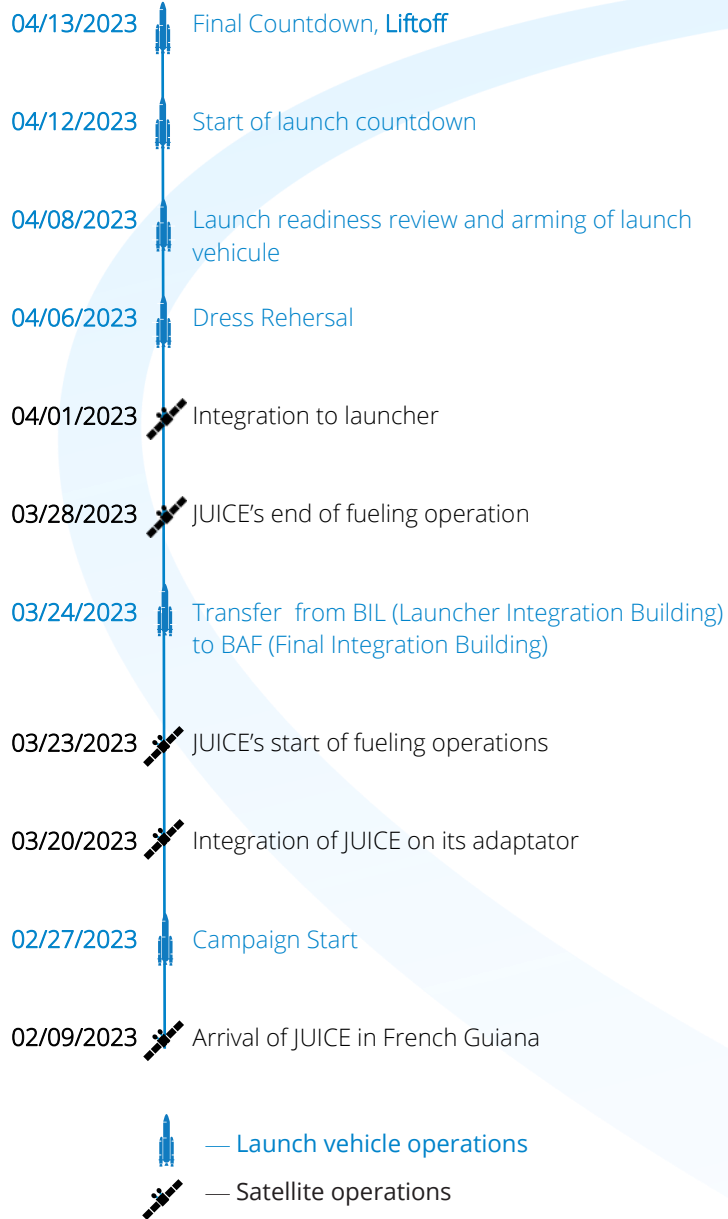
DID YOU KNOW?

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.

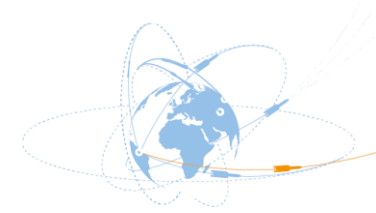
ArianeGroup's responsibilities on Ariane 5 include structures and equipment, propulsion systems, integration of the different stages and integration of the launcher at the Guiana Space Center in French Guiana. It coordinates more than 600 European companies contributing to the launcher, including some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



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 1,150 satellites since 1980.

Starting in 2022, Arianespace will operate the new-generation Ariane 6 and Vega C launchers, developed by ESA.

Arianespace is headquartered in Evry, near Paris, and has a technical facility at Europe's Spaceport 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 European launcher industry. ESA and CNES are advisory board members.

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ARIANEGROUP

ArianeGroup is lead contractor for civil and defense space launcher systems, responsible for the design and the entire production process of Europe's Ariane 5 and Ariane 6, including marketing and operation by its Arianespace subsidiary, as well as for the design, manufacture, and operational condition maintenance of the missiles of the French oceanic deterrent force. Internationally recognized for its innovative, competitive solutions, ArianeGroup has expertise in all aspects of state-of-the-art space propulsion technologies. ArianeGroup and its subsidiaries also offer their specialist skills in space equipment, services, space surveillance, and critical infrastructure to benefit other industrial sectors. ArianeGroup is a joint venture equally owned by Airbus and Safran, and employs more than 8,000 highly qualified staff in France and Germany. Group revenues in 2021 amounted to €3.1 billion.

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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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