Press release

First fully integrated Ariane 6 on its launch pad for combined tests

Kourou, October 17, 2022

- **The Ariane 6 upper composite dedicated to the Ariane 6 combined test campaign has now joined the rest of the launcher on its launch pad at Europe's Spaceport in French Guiana.**
- **This composite, installed on the upper stage at the top of the central core, consists of the fairing and a structural adapter on which a satellite mock-up is installed.**
- **The Ariane 6 launch vehicle dedicated to the combined tests is thus complete and ready for the electrical and fluid connections to the launch pad.**
- **The central core reached the launch zone on 11 July 2022, after assembly of the lower and upper stages in Kourou at the end of June.**

The upper composite of Ariane 6 is 20 meters long, with a diameter of 5.45 meters. It comprises two half-fairings and a structural adapter containing a satellite mock-up for the combined tests. On 13 October 2022, it was moved from the encapsulation hall of the final assembly building to the Ariane 6 launch pad. The operation was carried out at Europe's Spaceport under the responsibility of the European Space Agency (ESA), with the support of teams from ArianeGroup and the French space agency (CNES).

"We have reached a new milestone in the combined tests, with a fully integrated Ariane 6 now on its launch pad in French Guiana. Next up in the campaign will be the static hot-firing of the core stage on the launch pad. The upper stage successfully began its hot-fire test campaign with the first hot-firing on the German space agency (DLR) test bench in Lampoldshausen, Germany, on 5 October 2022; this test campaign continues," said André-Hubert Roussel, CEO of ArianeGroup*. "The construction and installation of this first upper composite confirms the industrial pertinence of the Ariane 6 final assembly process, ensuring efficiency and allowing the ramp up of Ariane 6 for the benefit of its customers."*

"Ariane 6 is now fully assembled and mated with its fairing, validating the systems required to implement it and the operational assembly sequence. This milestone marks another step towards qualifying this new launch system, which is the result of a collaboration that puts Europe among the world's leaders in access to space," said Philippe Baptiste, Chairman & CEO of CNES.

ESA Director of Space Transportation, Daniel Neuenschwander underscores the importance of Ariane 6 as successor to Ariane 5, which for more than a quarter century has provided Europe with reliable and independent access to space: "*Innovation is the key to maintaining Europe's capacity to reach space with a fully independent launch system that is competitive and versatile. With Ariane 6, we have Europe's best engineers developing new technologies and manufacturing methods to build on the success of one of the most reliable launch systems.*"

Once the two half-fairings were assembled around the satellite mock-up in the encapsulation hall, the upper composite was placed on its transfer vehicle, the Upper Composite Trailer (UCT), which was specifically developed for Ariane 6. The convoy travelled the 10 kilometers from the building to the Ariane 6 launch pad in the launch complex number 4 at an average speed of 5 km/h. Once it reached its destination, the upper part was hoisted up inside the mobile gantry with a bridge crane and then mated with the central core, placing the launcher in a complete Ariane 64 configuration on its launch pad for the first time. The mechanical, electrical, and fluid connection operations will be carried out over the course of the coming weeks.

The combined test campaign allows to test all the interfaces and a seamless communication between Ariane 6 and its launch pad. Testing will also be carried out on the flight software and the control bench software, as well as the tank filling and drainage operations, which are essential to guaranteeing that the launch sequence runs smoothly. Ariane 6 will then undergo a hot-fire test on the launch pad, serving as a test bench, with a series of different tests including the ignition of the main stage's Vulcain 2.1 engine, aborted firings and long firings with disconnection with interfaces.

At the same time, the hot fire tests of a complete Ariane 6 upper stage began successfully on 5 October 2022 on the DLR site in Lampoldshausen.

Ariane 6 is a programme of the European Space Agency (ESA), which is responsible for the architecture of the entire launch system. As lead contractor and design authority for the launcher and its construction and assembly facilities in Europe and French Guiana, ArianeGroup is in charge of development and production, along with its industrial partners and its subsidiary Arianespace, for marketing and operation. CNES is responsible for building launch complex number 4 for Ariane 6 in Kourou, French Guiana, in particular the launch pad and its mobile gantry.

About 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 around 7,000 highly qualified staff in France and Germany. Group revenues in 2021 amounted to €3.1 billion.

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About CNES

CNES (Centre National d'Etudes Spatiales) is the public establishment responsible for proposing French space policy to the Government and implementing it in Europe. It designs and puts satellites

in orbit and invents the space systems of tomorrow; it promotes the emergence of new services that are useful in everyday life. CNES, created in 1961, initiates major space projects, launchers and satellites and is the natural partner of industry for pushing innovation. CNES has nearly 2,400 employees, men and women who are passionate about space, which opens up infinite, innovative fields of application; it intervenes in five areas: the Ariane launcher, scientific research, observation, telecommunications and defence. CNES is a major player in technological innovation, economic development and industrial policy in France. It also establishes scientific partnerships and is involved in numerous international projects. France, represented by CNES, is one of the main contributors to the European Space Agency (ESA).

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About ESA

The European Space Agency (ESA) provides Europe's gateway to space. ESA is an intergovernmental organisation, created in 1975, 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. ESA has 22 Member States: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom. Latvia, Lithuania and Slovenia are Associate Members.

ESA has established formal cooperation with five Member States of the EU: Bulgaria, Croatia, Cyprus, Malta and Slovakia. Canada takes part in some ESA programmes under a Cooperation Agreement.

By coordinating the financial and intellectual resources of its members, ESA can undertake programmes and activities far beyond the scope of any single European country. It is working in particular with the EU on implementing the Galileo and Copernicus programmes as well as with Eumetsat for the development of meteorological missions.

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