

A new success for Ariane 5, equipped with an extended upper stage

Kourou, 6 August 2019

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- **For its third launch of the year, Ariane 5 placed the Intelsat 39 and EDRS-C telecommunications satellites in orbit**
 - **The payload capacity of Ariane 5 for this flight was increased by 90 kg, through an extension of the upper stage**
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For its third launch of the year, Ariane 5 placed two satellites in geostationary transfer orbit (GTO) from the European spaceport in Kourou, French Guiana: the Intelsat 39 telecommunications satellite and the EDRS-C communications satellite destined for the European Data Relay System.

The total performance required of the launcher was 10,661 kg, with the two satellites accounting for 9,786 kg. The payloads were injected into an optimized orbit inclined 4.5° to the equator.

The payload capacity was increased by 90 kg with the use, for the first time, of an extended upper stage housing expanded liquid hydrogen and oxygen tanks providing a total increased propellant storage capacity of 360 kg. With this upper stage extension of nearly 4 centimeters, Ariane 5 has once again achieved a significant performance boost as part of its continuous improvement program.

“This new payload capacity for Ariane 5 is one more step in our process of continuously improving the performance and thus the competitiveness of Ariane 5. ArianeGroup and the Ariane program partners are working tirelessly on new innovations to optimize our products for the market, and all the efforts made on Ariane 5 will be of benefit for Ariane 6,” said André-Hubert Roussel, CEO of ArianeGroup. *“I would like to thank the teams at ArianeGroup and Arianespace, as well as all of our partners, for the success of this collaboration. My thanks also go to the European Space Agency and the French space agency CNES for their continued confidence and support.”*

The next step will be to merge the vehicle equipment bay (VEB) and payload adapter structures to further increase payload capacity. Work on the “Performance and Competitiveness Improvement” project, financed by the European Space Agency (ESA), was conducted collaboratively by the ArianeGroup sites in Bremen, Les Mureaux and Vernon, together with EuroCryospace, Air Liquide, and MT Aerospace companies, Ariane program partner companies.

This Ariane 5 launcher bore on its fairing the coat of arms of the town of Vernon in Normandy, a tribute to Vernon’s role in the first flight of Ariane 1 40 years ago, and a reference to its membership of the Community of Ariane Cities (CVA). It is at its Vernon site that ArianeGroup integrates and tests the HM7 and Vulcain 2 engines for Ariane 5, and the Vulcain 2.1 and Vinci engines for Ariane 6.

ArianeGroup is the industrial lead contractor for the development and operation of Ariane 5 and Ariane 6 launchers, coordinating an industrial network of more than 600 companies (including 350 SMEs) in 13 European countries. ArianeGroup oversees the entire industrial supply chain, from

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performance optimization and the corresponding studies associated with the 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 finally launcher integration in French Guiana.

Ariane Flight 249 in figures:

- 105th launch of an Ariane 5
- 80th consecutive nominal ignition of the Vulcain® 2 engine
- 105th consecutive nominal ignition of the EAP solid propellant boosters
- 145th consecutive nominal ignition of the HM7B engine

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About ArianeGroup

ArianeGroup develops and supplies innovative and competitive solutions for civil and military space launchers, with expertise in all aspects of state-of-the-art propulsion technologies. ArianeGroup is lead contractor for Europe's Ariane 5 and Ariane 6 launcher families, responsible for both design and the entire production chain, up to and including marketing by its Arianespace subsidiary, as well as for the missiles of the French oceanic deterrent force. ArianeGroup and its subsidiaries enjoy a global reputation as specialists in the field of equipment and propulsion for space applications, while their expertise also benefits other industrial sectors. The group is a joint venture equally owned by Airbus and Safran, and employs approximately 9,000 highly qualified staff in France and Germany. Its 2018 revenues amounted to 3.6 billion euros.

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