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CNES at DLR's Industrial Day Are Europe's R&D Efforts in Space Propulsion Sufficient?

Wednesday 9 March, CNES took part in the Industrial Day organized by DLR (Deutsches Zentrum für Luft und Raumfahrt), the German space agency, at its Lampoldshausen field centre. This year's event bringing together the sector's main players was devoted to space propulsion R&D.

For this fourth Industrial Day, DLR's event devoted to space propulsion, the focus was on research and development efforts pursued by European nations, in particular for the future Ariane 6 and Vega-C launchers and their successors.

Jean-Marc Astorg, CNES's Director of Launch Vehicles, spoke at the event after Pascale Ehrenfreund, Chair of DLR's Executive Board, and Johann-Dietrich Wörner, Director General of ESA. In his speech he addressed the challenges of operating the Ariane 5 and Vega launchers and the need to make them more competitive while expediting development of Ariane 6 and Vega-C to cut launch costs by half.

Jean-Marc Astorg explained how Ariane 6 is leveraging research and demonstrators developed by European agencies from the 2000s, confirming the value of upstream research. He noted that to develop leap-ahead technologies for the next generation of launchers and further reduce costs, Europe must pursue exploratory technological and conceptual work to stay ahead in space. The only way to achieve the required cost reductions is to develop new, low-cost reusable engines using the latest technologies and to evaluate the economics of reuse launchers through system flight demonstrators.

He then thanked DLR for its support and hailed the new cooperation agreement he had signed in the morning with Professor Hansjörg Dittus, DLR's Executive Board Member for Space Research and Technology. This cooperation will focus on reusable launchers and related propulsion systems, notably liquid-oxygen and liquid-methane propulsion, seeking to achieve a further factor-of-two reduction in launch costs. This objective was put forward at the meeting of the strategic committee set up under the DLR-CNES framework agreement signed on 12 February 2002, where the two agencies expressed their interest in working together, in addition to developing Ariane 6, to define a joint roadmap guiding research into promising future launcher technologies.

After the signing of the agreement, Jean-Marc Astorg commented: "The Ariane 6 launcher we are currently developing for a first flight in 2020 incorporates technologies developed in the 2000s that are helping us to bring down launch costs. We now need to work on the concepts and technologies that will enable us to halve these costs again. That is the goal we have set ourselves at CNES and DLR for the research we are going to pursue together."

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