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IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
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Author: Mr. Julio Aprea
European Space Agency (ESA), France

THE ARIANE 6 LAUNCH SYSTEM DEVELOPMENT, STATUS AND PERSPECTIVES

Abstract

In December 2014, the ESA Council at Ministers level in Luxemburg decided the start of the Ariane 6 / VEGA-C programme development. The project is composed of: - Launcher System, with ArianeGroup as Prime Contractor - Launch Base, with CNES as Prime Contractor - The motor P120C, a common element between Ariane 6 and Vega C projects that is jointly developed by ASL and ELV (VEGA Prime Contractor). ESA has the role of Procuring entity and Launch System Architect. The architecture is composed of the following elements: - LOX/LH2 Main Stage (LLPM) loaded with 140 tons and with a Vulcain 2.1 engine - LOX/LH2 Upper Stage (ULPM) loaded with about 32 tons and with the Vinci engine - Upper stage compliant with single and dual launch capability and fairing - P120C common solid rocket motor in the class of 130 tons Launcher modularity is achieved by modifying the number of SRMs (two or four). The A-62 configuration is sized to launch 4.5 tons in SSO and 5 tons in GTO. The A-64 configuration is sized to launch 9.5 tons net P/L in GTO. A new Launch Complex ELA-4 is under development. The operational scenario consists of: - The integration of the Main Core (ULPM+LLPM) in a dedicated building (BAL) that is transported to the Launch Pad under a Mobile gantry - The integration of the SRM's and upper part is performed under the Mobile Gantry on the Launch Pad. The maiden flight is planned in 2020 and a full operational capability in 2023. This paper will present the current status on the above-mentioned topics at Launch System level.