

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Small Launchers: Concepts and Operations (7)

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VEGA LAUNCHER AND ITS EVOLUTIONS

Abstract

Vega Launcher has successfully achieved its maiden flight on 13/02/2012 releasing in orbit with high accuracy LARES, ALMASat-1 and 7 CubeSats. Vega Launcher enhance the European Space Access completing the launch service menu of Arianespace fleet of launchers by providing satellite service operators with the capability to launch small and medium size satellites (300 2300 Kg) in Low Earth Orbits (300 1500 Km) with an inclination range between 5.2 degrees and Sun Synchronous Orbit. Considering current scenario of small satellites, much more capable and demanding in terms of performance and objectives, both technical and operational issues will be presented, including payload and mission capability, payload volume and accommodation, launcher interfaces, launch preparation and operations topics. Starting from the main characteristics of Vega launch vehicle and its performance map, the paper provides also an in depth on the organisation of the first production phase of five launchers (in the frame of the ESA VERTA Program) and the on-going and planned activities for customer service improvement, this in order to be capable to serve both consolidated and emerging satellite markets. Finally a development path of Vega program will be shown, including Vega launcher design evolutions which are the key to sustain different market segments, especially for small satellite applications.