SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Launch Vehicles in Service or in Development (1)

Author: Mr. Yasunobu SEGAWA
IHI Aerospace Co, Ltd., Japan, yasunobu-segawa@iac.ihi.co.jp

Mr. Masahiro Yanagisawa
IHI Aerospace Co, Ltd., Japan, masahiro-yanagisawa@iac.ihi.co.jp
Mr. Kazuhiro Yagi
IHI Aerospace Co, Ltd., Japan, k-yagi@iac.ihi.co.jp
Prof. Yasuhiro Morita
Japan Aerospace Exploration Agency (JAXA), ISAS, Japan, morita.yasuhiro@jaxa.jp
Mr. Takayuki Imoto
Japan Aerospace Exploration Agency (JAXA), Japan, imoto.takayuki@jaxa.jp

EPSILON LAUNCH VEHICLE FIRST FLIGHT RESULTS AND ITS EVOLUTIONS

Abstract

The first Epsilon launch vehicle was successfully launched from Uchinoura Space Center (USC) on the September 14th, 2013. Epsilon has achieved full mission success injecting SPRINT-A into planned orbit with high accuracy and transmitting engineering data to the Masuda grand station after Collision and Contamination Avoidance Maneuver (CCAM). Epsilon is now ready to provide launch opportunities for small payloads to the Low Earth Orbit (LEO) and Sun Synchronous Orbit (SSO). First, this paper describes the main features of the Epsilon launch vehicle, mission outline and results of analysis of the flight data. After maiden flight, Epsilon have been required more payload capability in order to achieve a wide range of small payload missions. Therefore, the short-term perspective and development plan are presented in accordance with the main role of Epsilon and its market. Finally a development path of Epsilon program will be shown, including design evolutions, customer service improvement, and flexibility of the vehicle.