

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Future Space Transportation Systems Verification and In-Flight Experimentation (6)

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THE PRIDE-ISV PROJECT: THE EUROPEAN AMBITION TO AUTONOMOUS RE-ENTRY
CAPABILITY FROM LEO TO CONVENTIONAL LANDING

Abstract

A co-primership consortium between CIRA (Italian Aerospace Research Centre) and TAS-I (Thales Alenia Space Italy) has been set-up for the accomplishment of the Phase A/B development of the ISV re-entry vehicle (Intermediate Space Vehicle) in the framework of the European Space Agency program PRIDE (Program for Reusable Intermediate Demonstrator for Europe) . PRIDE-ISV initiative is the natural evolution of IXV and relies to the European ambition to concretize a fundamental part of Europe's Space Access Strategy through the settling of an autonomous capability of re-entry from LEO. The current common vision is to realize a prototype orbital spacecraft to be considered as a "system demonstrator" by maximizing the so-far developed technologies and know-how in the field of re-entry, mainly in the frame of other projects such as IXV, EXPERT and USV. The system demonstrator shall be able to be put in orbit by the VEGA LV and perform at a glance in-orbit operations and autonomous re-entry up to conventional landing. This paper describes the PRIDE-ISV project scope and objectives, with the aim to provide the up-to-date status along with the main technical and programmatic results. A focus will be given on the feasibility consolidation, the preliminary design outcomes and the main hints of development and acquisition process.