Paper ID: 18848
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SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Future Space Transportation Systems Verification and In-Flight Experimentation (6)

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THE PRIDE PROGRAMME: FROM THE IXV TO THE ISV

Abstract

The availability of a miniature robotic space-plane, capable to perform multiple in-orbit operations, returning to Earth from orbit by braking through the atmosphere and landing on a conventional runway, opens to future scenarios where access to space may be performed routinely and competitively in comparison to today's expendable solutions.

Therefore, with the birth of the ESA PRIDE (Programme for a Reusable In-orbit Demonstrator for Europe) at the ESA Council at Ministers level in 2012, the consolidation of the programmatic roadmap will continue to be pursued with the start of the ISV (Innovative Space Vehicle) mission definition. The design of the ISV will be conceived as the step forward with respect to the IXV, by increasing further the system performance and representing the demonstrator of a reusable operational system able to perform multiple robotic in-orbit operations. The ISV mission and system will be implementing development philosophies similar to the IXV, which have proven to be effective and efficient, securing industrial technological results while containing the programme cost-at-completion. With the objective to ensure the affordability of such a roadmap for Europe, the global planning of the IXV-ISV activities is being sized at a level of financial resources around 25-30 M per year, equivalent to less than 1

In line with the process followed for the IXV concept down-selection, a detailed industrial trade-off will be performed among all available concepts to down-select the most suitable one for the ISV baseline, ensuring once again a single harmonized product for Europe.

The 64th IAC presentation and article will provide the up-to-date status of the PRIDE-ISV industrial activities, including technical and programmatic achievements and challenges.