# Press release

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# Reusable launchers
## CNES and ONERA working together

**Scientific partners since the start of the space endeavour in France and Europe, CNES and ONERA, the French aeronautics, space and defence research laboratory, have decided to join forces to work on a reusable launcher first stage and begin looking at key technical aspects such as recovery, return and maintenance.**

This decision is the subject of a letter of intent to establish closer cooperation signed by CNES and ONERA, under the terms of the framework agreement of 30 March 2015. The study will cover two aspects: first, analysis of the launch system during the first stage recovery phase; and second, numerical aerothermodynamics simulations. A preliminary study phase is already underway.

The study started by CNES and ONERA aims to propose engineering solutions for a first launcher stage capable of returning to its launch base. This study will call on CNES and ONERA's expertise in designing launchers and hypersonic and subsonic vehicles.

ONERA's benchmark CEDRE software simulation platform for energy and propulsion studies, funded partly by CNES, will be used extensively to evaluate heat flows and aerodynamic forces on the stage during its return phase.

The joint study could become a programme of shared interest as provided for in the framework agreement between the two agencies. The aim is to propose that this collaboration be put on a formal footing during the course of next year.

On this occasion, ONERA Chairman & CEO Bruno Sainjon said: "This initiative, for which ONERA will be engaging its cross-cutting expertise alongside CNES to help define and evaluate the aerospace vehicles and systems of the future, embodies the closer ties that our two agencies are working to forge."

CNES President Jean-Yves Le Gall commented: "In these fiercely competitive times, CNES and ONERA have decided to combine their expertise and get maximum leverage from the cooperation between our two agencies to look at the feasibility of future reusable launchers."


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