

Setting sail for ESA spaceplane recovery

October 7 2014



Nos Aries sets sail for IXV recovery. Credit: Neri - Livorno (I)

The boat that will lift ESA's unmanned IXV spaceplane out of the Pacific Ocean after the research flight next month set sail on Saturday from Genoa in Italy.

The Nos Aries received a special send-off at the 54th International boat show in Genoa as it began its long journey across the Mediterranean Sea and the Atlantic.

A team of mission engineers will board in Panama and from there sail through the Panama Canal and into the Pacific.

First, they will check the ship's antenna and telemetry receivers are working properly after the long journey. The autotracking of the antenna that will pick up the signals from the Intermediate eXperimental Vehicle on its flight back to Earth will be checked by following low-orbit satellites.

Although the team have already practised the tricky manoeuvre of lifting IXV out of the ocean, they will continue to hone their skills under a wide range of conditions.

Nos Ariès, the Mission Control Centre in Turin and ESA's Spaceport in Kourou, French Guiana will be linked up via Inmarsat satellite for IXV mission simulations using voice, data and video.

The crew will also take part in a dress rehearsal of the launch, three days before the actual liftoff.

The ship will reach its destination four days before the flight, slightly north of the equator, on a circle 25 km from the target landing spot. This distance guarantees the safety of the ship while allowing maximum telemetry reception and rapid access to IXV after splashdown.



Using recovery cranes on the Nos Aries, IXV will be carefully hoisted out of the Pacific Ocean after its experimental reentry mission mid-November 2014.
Credit: Neri - Livorno (I)

On flight day, the ship will release weather balloons to check the wind conditions over the Pacific to provide information on IXV's descent path.

If sea conditions allow the launch to go ahead, Nos Aries will receive the readings from IXV's 300 sensors during descent and then pick up the beacon signals to pinpoint the craft in the water.



Although the team have already practised the tricky manoeuvre of lifting IXV out of the ocean they will continue to hone their skills under a wide range of conditions on their journey to the Pacific Ocean. Credit: ESA

Divers in speedboats will approach the floating craft and then stand back as sniffer devices check for residual propellant fumes. On the all-clear, the recovery cranes will carefully hoist IXV to safety before the fuel tank is cleaned out for the journey home to Europe.

Lofted by a Vega rocket, IXV will test the technologies and critical systems for Europe's future automated reentry vehicles returning from low orbit.

Provided by European Space Agency

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