

ESA rocket motor successfully tested

December 21 2005

The first firing test of the European Space Agency's Vega Zefiro 9 third-stage solid rocket motor was successful, ESA officials in Paris said Wednesday.

The Zefiro 9 motor, with a propellant mass of 10 tons, provides a maximum thrust of 67,100 pounds (305 kiloNewtons).

For the test at Salto de Quirra in southeast Sardinia, the nozzle was adapted for sea-level conditions by lowering the thrust to 61,600 pounds (280 kN). The motor was placed in a cage-like structure and fixed to the bench bastion, officials said, adding safety devices were put in place to destroy the motor in case of anomalous behavior.

A second test next September will be with combustion velocity at its upper limit.

When the Vega rocket makes its qualification flight at the end of 2007, Zefiro 9 will enable its payload to continue ascent into a low elliptical trajectory, bringing the spacecraft to Mach 13.3 -- the highest Mach number the launcher will reach, helped by the lack of gravity above the Earth's atmosphere.

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