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Vega launches successfully on sixth flight from Guiana Space Centre

Thursday 3 December, Vega accomplished a flawless launch from Europe's spaceport at the Guiana Space Centre (CSG) on its sixth successful mission since its maiden flight in 2012, orbiting LISA Pathfinder, a demonstrator for ESA's future mission to observe gravitational waves from space.

With a launch mass of 1.9 tonnes, the LISA Pathfinder demonstrator satellite was built by Airbus Defence and Space for ESA. It is part of the future L3 space mission of the agency's Cosmic Vision programme that will fly three satellites forming an optical interferometer designed to observe gravitational waves, the tiny ripples in the fabric of space-time predicted by Einstein's Theory of General Relativity.

The L3 mission will observe gravitational waves with three satellites forming a giant optical interferometer. The presence of these waves will be signalled by minute relative movements between two test masses in free fall at the end of each of the interferometer's three arms. LISA Pathfinder will test key technologies required to place the two test masses in perfect free-fall conditions and measure their relative movement with unprecedented precision. With its inertial sensors, laser metrology, drag-free control and ultra-precise micro-propulsion systems, L3 will truly be a ground-breaking mission.

Hailing this sixth successful launch for Vega, CNES President Jean-Yves Le Gall commented: "I would like to thank all the teams who helped to make this launch a success at ESA, ASI, Arianespace and Airbus Defence & Space, and of course CNES's teams at the Launch Vehicles Directorate, the Guiana Space Centre and the Toulouse Space Centre. Working as part of a French consortium, CNES and its partners are closely involved in the LISA Pathfinder mission, for which they are supplying an acousto-optical modulation system for the interferometer's optical bench and will be analysing science data from the orbiting satellite. This mission is a perfect illustration of how CNES's expertise is making a notable contribution to the success of Europe's space programmes."

See the special mission page on CNES's website at
<https://lisa-pathfinder.cnes.fr>

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