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LISA Pathfinder: picometers and femtoNewtons in space

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On December 3rd at 04:04 UTC, The European Space Agency launched the LISA Pathfinder satellite on board a VEGA rocket from Kourou in French Guiana. After a series of orbit raising manoeuvres and a 2 month long transfer orbit, LISA Pathfinder arrived at L1. Following a period of commissioning, the science operations commenced at the start of March, beginning the demonstration of technologies and methodologies which pave the way for a future large-scale gravitational wave observatory in space. This talk will present the scientific goals of the mission, discuss the technologies being tested, elucidate the link to a future space-based observatory, such as LISA, and present preliminary results from the in-orbit operations and experiments.