

Abstract Submitted
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LISA Pathfinder as a drag-free accelerometer powered thrust stand JACOB SLUTSKY, Univ of Maryland-Balt County, LISA PATHFINDER TEAM — The LISA Pathfinder (LPF) mission, launched to demonstrate technology for a future gravitational wave observatory in space, began in March 2016. ESA led, LPF is comprised of both European and NASA payloads, the LISA Technology Package (LTP) and Disturbance Reduction System (DRS), respectively. The LTP includes the two highest precision drag free accelerometers ever flown, as well as a high precision interferometer. DRS provides the Colloid Micro-Newton Thruster (CMNT) system, required to precisely maneuver the spacecraft. Additionally, DRS includes a complete Dynamic Control System (DCS) that maintains the drag free flight. While the LTP mission uses the residual of the differential acceleration between the accelerometers, each individual sensor provides an unparalleled measure of the full six-dimensional spacecraft motion. This talk will discuss the DRS experiments performed, and how this sensor data is analyzed to characterize the noise and performance of the CMNTs.

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