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Status of the LISA Pathfinder Mission JACOB SLUTSKY, University of Maryland, Baltimore County, THE LISA PATHFINDER TEAM — LISA Pathfinder is a technology demonstration space mission for the Laser Interferometer Space Antenna (LISA), a space-based observatory for gravitational waves in the milli-Hertz band. Though the formal partnership between NASA and ESA to pursue LISA was dissolved in the Spring of 2011, ESA has recently selected the Gravitational Universe theme for its third Large-class mission (L3), to be fulfilled by a space-borne gravitational wave observatory. Any such mission will take advantage of the significant technology development efforts that have already been made, especially those of the LISA Pathfinder mission, which is being led and built by ESA, with significant NASA contributions. The mission will place two test masses in drag-free flight and measure the relative acceleration between them, in order to validate a number of technologies that are critical to LISA-like gravitational wave instruments. These include the sensing and control of the test masses, drag-free control laws, microNewton thrusters, and picometer-level laser metrology. With a launch date in the summer of 2015, LISA Pathfinder is currently in the late stages of integration. This talk presents the current status of the LISA Pathfinder mission and associated activities.

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