

Abstract Submitted
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Acceleration Noise Measurements for LISA STEPHAN SCHLAMMINGER, CENPA University of Washington, JENS GUNDLACH, CHARLES HAGEDORN, BLAYNE HECKEL, MICHAEL NICKERSON, BRAXTON OSTING, CHRISTOPHER SPITZER, CENPA University of Washington — The close spacing between the proof mass and the housing in the LISA (Laser Interferometer Space Antenna) spacecraft has been a concern as there may be spurious feeble forces. Such forces may limit the performance of the gravity wave detector at frequencies below 3 mHz and must be studied experimentally. We are performing ultra sensitive torsion balance tests to investigate such effects. Our torsion pendulum and a nearby plate are designed to simulate the LISA proof mass with its adjacent housing surface. We study torque noise on the pendulum as a function of separation between the surfaces. In order to exceed the LISA requirement we are probing the acceleration noise at much closer separations, than those planned for LISA. We have taken data at separations as small as 0.15 mm.

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