

Abstract Submitted
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A high precision mechanical ground rotation sensor VLADIMIR DERGACHEV, Caltech, LIGO COLLABORATION — The next generation of gravitational radiation detectors will employ sophisticated isolation systems to attenuate seismic noise and achieve usable sensitivity at frequencies as low as 10 Hz. This requires tight control of displacement at a sub-Hz level, which is difficult due to confusion between tilt and acceleration in linear seismometers and accelerometers. To aid in this effort we are developing a high sensitivity sensor capable of measuring ground tilt at or below $1e-9$ rad/sqrt(Hz). We will discuss tiltmeter design and present achieved sensitivity curves.

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