

Newtonian noise measurement by Torsion-Bar Antenna

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Newtonian noise (NN) is local gravity fluctuation caused by seismic waves, atmospheric fluctuations, human activity and so on. NN is estimated to be a significant noise in low frequencies in future GW detectors. However, NN have been not measured for now, so its direct measurement is essential for reduction. Torsion-Bar Antenna (TOBA) is a GW detector using torsion pendulums. TOBA is also sensitive to NN and estimated to be feasible to measure NN directly less than 1 Hz. Currently we are developing a small scale prototype. Here we explain about the current status and future plans for TOBA.

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