Abstract Submitted for the APR16 Meeting of The American Physical Society

Testing gravity-induced collapse models with torsion pendulums BASSAM HELOU, Caltech, CHRISTOPHER WIPF, Calech, YANBEI CHEN, Caltech — Wavefunction collapse models have been proposed to resolve the measurement problem in QM. Some, , such as Diosi-Penrose model, are motivated by gravity. We first present the theory of such models, highlighting new results, such as fixing the only free paramater in the model. We then propose torsion pendulums as a promising optomechanical platform to test such models.

> Bassam Helou Caltech

Date submitted: 08 Jan 2016

Electronic form version 1.4