

Controls for Type-A seismic attenuation system for KAGRA

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Abstract

Mirrors for a ground-based gravitational wave detector are suspended to isolate the mirror from seismic vibration. In KAGRA [1], the four test masses are suspended by so-called Type-A seismic attenuation systems (SASs). Type-A SAS consists of 9-stage pendulum and the lower 4-stages is to be operated in a cryogenic temperature. We use active control system in order to calm down the pendulum system and to suppress the RMS of the mirror fluctuation. In this poster, we present the status of the implementation of the control system for the type-A seismic attenuation systems.

References

- [1] Y. Aso et al. Interferometer design of the kagra gravitational wave detector. *Phys. Rev. D*, 88:043007, Aug 2013. doi: 10.1103/PhysRevD.88.043007. URL <https://link.aps.org/doi/10.1103/PhysRevD.88.043007>.