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Mechanical Dissipation in Maraging Steel at Room Temperature and Very Low Frequency

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Seismic attenuation in gravitational wave detectors relies on materials that show very small creep. Maraging steel has now been used since almost thirty years but systematic data about dissipation at low frequency haven't been collected yet. We present measurements at room temperature of mechanical oscillation damping in a purpose-built maraging steel cantilever spring at low frequency under stress conditions usually found in gravitational wave detectors. Results obtained could be relevant in the assessment of mirror suspension thermal noise.

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