

Windchime: Gravitational Direct Detection of Dark Matter

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Recent theoretical calculations have shown that it is possible to attempt the direct detection of dark matter in the laboratory through its gravitational interaction alone. This is particularly relevant around the well-motivated Planck mass scale (22 micro-g or 10^{19} GeV). The Windchime collaboration is working on arrays of mechanical accelerometers with quantum-enhanced readout to ultimately achieve this goal. In this talk, I will present the idea of Windchime, our recent prototype setup, sensor development, and simulation and analysis frameworks.

Are you are a member of the APS Division of Particles and Fields?

No

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