

Physics beyond neutrinoless double-beta decay with a tonne-scale germanium experiment

Wednesday, September 11, 2013 7:30 PM (2h 30m)

This talk will discuss the other physics opportunities that might be possible with a tonne-scale enriched germanium neutrinoless double-beta decay experiment. These include direct searches for light WIMP dark matter, solar axions, coherent neutrino-nuclear scattering, electron decay, Pauli-exclusion principle violation, fractionally charged particles in cosmic-rays, and other processes. We will discuss these in the context of the Majorana Demonstrator and GERDA experiments that are working toward the detection of the neutrinoless double-beta decay of the Ge76 isotope using enriched germanium detectors. The collaborations intend to join to pursue a tonne-scale germanium experiment, combining the best technologies from both experiments.

Primary author: HENNING, Reyco (U. of North Carolina at Chapel Hill)

Presenter: HENNING, Reyco (U. of North Carolina at Chapel Hill)

Session Classification: Poster Session

Track Classification: Double Beta Decay