

Double Beta Decay and Nature of Neutrinos

WEDNESDAY

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4:00 P.M.

RM 118 NSH

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Produced in copious amounts in nuclear reactions and radioactive decays, neutrinos play key roles in the state of the early universe, in cosmology and astrophysics, and in nuclear and particle physics. But many crucial questions about neutrinos remain unanswered. What is their mass? Are they responsible for the excess of matter over antimatter in the universe? Are the neutrino and anti-neutrino the same particle, or distinct? All of these questions may be addressed by searching for neutrinoless double beta decay. The current status of such searches will be reviewed, together with the prospects for large-scale future experiments.