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Neutrinoless Double Beta Decay of Atomic Nuclei

Monday, May 27, 2019 11:00 AM (30 minutes)

Neutrinos are elusive particles interacting weekly with the atomic nuclei and electron plasma. Most of the atomic nuclei that are stable from the strong interaction point of view can decay emitting neutrinos or antineutrinos. The properties of weak interaction are essential for the understanding of the fundamental symmetries that constrain the Standard Model of particle physics. Neutrinoless double beta decay, if observed, would signal physics beyond the Standard Model (BSM). In my talk I will analyze the neutrino physics relevant for the double beta decay of the atomic nuclei. Contributions to the decay rate from different terms in the BSM Lagrangian will be presented, and their relevance for the analysis of the experimental data will be discussed.

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Session Classification: Session (Chair: O. Civitarese)