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Current status and future of Sterile Neutrino searches

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A number of anomalous results in short-baseline oscillation may hint at the existence of one or more light sterile neutrino states in the eV mass range and have triggered a wave of new experimental efforts to search for a definite signature of oscillations between active and sterile neutrino states. This new neutrino would have to be a Standard Model gauge singlet, thus it is referred to as sterile. The discovery (or exclusion) of the sterile neutrino associated with these anomalies would be groundbreaking, and would have profound implications not only for particle physics but also for astrophysics and cosmology. In this talk, I will give an overview of our present understanding of the experimental neutrino anomalies and future plan to search for the sterile neutrino in addressing the anomalies.

Session

Neutrino Physics

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