

Research Techniques Seminar

**The COBAND project for search for the cosmic
background neutrino decay**

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10:30 a.m.

Libra Conference Room (WH9SW)

We present the status and plan of a novel experiment for search for the COsmic BAcground Neutrino Decay (COBAND experiment). The cosmic background neutrino (CNB) is predicted to exist as a relic of the big bang in the standard cosmology. And the heaviest neutrino is expected to decay to lighter neutrinos with photons in the far-infrared (FIR) region. Neither the CNB nor the neutrino decay is, however, experimentally established. We, thus, measure the FIR photon spectrum to pursuit a faint contribution from the neutrino decays in the CNB. In this talk we discuss about the status of developments of FIR spectrometers based on the Superconducting Tunnel Junction (STJ) and the cryogenic per-amplifier based on the Silicon-on-Insulator (SOI) technology for the COBAND experiment.