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The JSNS2 Neutrino Experiment[1] MIGUEL BOTRAN, Univ of Michigan - Ann Arbor, JSNS2 COLLABORATION — The J-PARC Sterile Neutrino Search at the J-PARC Spallation Neutron Source (JSNS2) experiment will search for evidence of neutrino oscillations with Δm^2 near 1 eV^2 using a Gd-doped liquid scintillator detector. The experiment will be conducted in Japan at the J-PARC Materials and Life Science Experimental Facility (MLF). The experiment will use inverse beta decay to search for oscillations of $\bar{\nu}_\mu$ into $\bar{\nu}_e$ over a 24 m baseline using muon decay at rest neutrinos originating from 3 GeV proton interactions with a mercury target. The ultimate purpose of JSNS2 is to test the LSND anomaly. In addition, JSNS2 will perform neutrino cross-section measurements relevant for our understanding of supernova explosions and nuclear physics. In early 2020, the commissioning phase of the experiment will begin collecting data with a 17-ton fiducial volume detector.

[1]Heising Simons Foundation

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