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KDAR Neutrino Measurements with JSNS2

The J-PARC Sterile Neutrino Search at the J-PARC Spallation Neutron Source (JSNS2) experiment will begin collecting data this year. The physics program of JSNS2 consists of a variety of measurements using decay-atrest neutrinos produced by the interactions of 3 GeV protons with a mercury target at the J-PARC Material and Life Science Experimental Facility (MLF). In particular, the MLF is the world's most intense source of monoenergetic muon neutrinos from kaon decay at rest (KDAR) which can be used to make neutrino cross section measurements using known-energy neutrinos. JSNS2 is located 24 m from the target and hence is exposed to a large flux of KDAR neutrinos, enabling a rich program of neutrino interaction physics. In this poster, I will describe the status and prospects for KDAR neutrino measurements in JSNS2.

Mini-abstract

Neutrino interaction physics with known-energy neutrinos in the JSNS2 experiment

Experiment/Collaboration

JSNS2

Primary author: JORDAN, Johnathon (University of Michigan)Presenter: JORDAN, Johnathon (University of Michigan)Session Classification: Poster Session 2