

Abstract Submitted
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The Search for Neutron Oscillations at Super-Kamiokande MARK GREGG, California State University, Dominguez Hills/Particle Physics/Foundation — Neutron oscillations are predicted by theories that attempt to unify the fundamental forces of nature. This knowledge along with the enhanced sensitivity of the detectors used to observe neutron oscillations has increased interest in a search for this phenomenon. I, Mark Gregg, will be presenting research that is being conducted at California State University, Dominguez Hills involving the Super-Kamiokande nucleon decay detector and neutrino observatory and collaboration under the supervision of Dr. Kenneth Ganezer. This research consists of the work I have conducted along with my colleagues on the Monte Carlo program that simulates the physical events expected to be seen in the detector as a result of neutron oscillations. I will also describe the overall experiment and the latest results obtained by this experiment for lifespan and oscillation time lower limits of neutrons bound in oxygen nuclei and free neutrons, respectively.

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