Abstract Submitted
for the APR11 Meeting of
The American Physical Society

**N-16 Capture to Differentiate Between Neutrinos and Antineutrinos in Super-Kamiokande** ASHLEY JONES, Duke University, SUPER KAMIOKANDE COLLABORATION — Super-Kamiokande is a large water Cherenkov neutrino detector in Japan. Without a magnetic field, the difference between neutrinos and antineutrinos is not apparent. The difference can be observed, however, through the decay of nitrogen-16. Negative muons capture on oxygen nuclei, and oxygen-16 becomes nitrogen-16, which beta decays. Looking for the decay after low energy events within detector samples can signify neutrino events as opposed to prevalent antineutrino events.

Ashley Jones
Duke University

Date submitted: 13 Jan 2011 Electronic form version 1.4