

LEPP Journal Club

Friday, November 18, 2011. 4:00 pm (3:45 refreshments)
301 Physical Sciences Building



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Neutrino Oscillations with MINOS -- and the Search for New Physics

MINOS is a long-baseline accelerator neutrino-oscillation experiment designed to precisely measure the neutrino-mixing parameters associated with the atmospheric mass-squared splitting. By studying ν_μ disappearance in the MINOS detector, both θ_{23} and the magnitude of mass-squared splitting are measured. Furthermore, by searching for ν_e appearance, measurements that are sensitive to θ_{13} , δ_{CP} , and the neutrino mass hierarchy are produced. Beyond studying the standard set of oscillation parameters, MINOS can also exploit its long baseline and control over the beam composition to search for new phenomena such as superluminal neutrinos and exotic neutrino-matter interactions.

