Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Searches for Point Sources of Astrophysical Neutrinos with the IceCube Neutrino Telescope JACOB FEINTZEIG, University of Wisconsin-Madison, ICECUBE COLLABORATION — IceCube, a cubic kilometer cherenkov detector at the South Pole, has recently found evidence for a diffuse flux of astrophysical neutrinos in the TeV - PeV energy range. These neutrinos are likely produced in high-energy cosmic ray interactions near their acceleration sites. To elucidate the sources of these cosmic rays, we search for point-like emission of astrophysical neutrinos. Results from searches using four years of throughgoing muon data, including data from the first year of the completed detector, will be shown. We will also describe point source analyses using contained-vertex events. These analyses more effectively reduce the atmospheric muon background, lowering the energy threshold in the southern hemisphere to below $\sim$ 100 TeV.

Jacob Feintzeig
University of Wisconsin-Madison

Date submitted: 10 Jan 2014 Electronic form version 1.4