Abstract Submitted for the APR07 Meeting of The American Physical Society

The Search for Muon Neutrinos from Gamma-Ray Bursts with AMANDA KYLER KUEHN, University of California-Irvine, ICECUBE COLLABORATION, INTERPLANETARY NETWORK COLLABORATION — Since 1997, AMANDA has been searching the sky for neutrino signatures from astrophysical sources, both discrete and diffuse. Here we present the results of the search for Gamma-Ray Burst neutrinos from over 500 Northern Hemisphere bursts observed with BATSE, HETE, and other instruments of the InterPlanetary Network from 1997-2003. Our observations result in the most stringent limit on a muon neutrino flux to date; implications for several models of GRB neutrino emission are addressed. We also briefly discuss the future potential for GRB searches with km-scale detectors, such as IceCube.

Kyler Kuehn University of California-Irvine

Date submitted: 12 Jan 2007 Electronic form version 1.4