



Poster session 4 – Friday 8 July

P4.088 Results from the search for eV-sterile neutrinos with IceCube

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The IceCube neutrino telescope at the South Pole has measured the atmospheric muon neutrino spectrum as a function of zenith angle and energy. Using IceCube's full detector configuration we have performed searches for eV-scale sterile neutrinos. Such a sterile neutrino, motivated by the anomalies in short-baseline experiments, is expected to have a significant effect on the $\bar{\nu}_\mu$ survival probability due to matter induced resonant effects for energies of order 1 TeV. This effect makes this search unique and sensitive to small sterile mixings. We will present results obtained using up-going muon neutrinos taken with one year of full detector and one year of partial detector configurations. Furthermore, we will also present preliminary results from a starting-muon event selection.