

Abstract Submitted  
for the APR17 Meeting of  
The American Physical Society

**Constraining the extragalactic origin of IceCubes neutrinos using HAWC** IGNACIO TABOADA, Georgia Institute of Technology, HAWC COLLABORATION — IceCube has observed an astrophysical isotropic flux of neutrinos in the 10 TeV - 8 PeV range. Though an extragalactic origin is usually assumed, no unequivocal association with astrophysical objects has been made. It is often assumed that the neutrino sources are also cosmic ray sources and therefore gamma-ray sources. HAWC has studied 2/3 of the sky with 500 GeV - 100 TeV photons. Only two, previously known, objects are found in the extragalactic sky by HAWC: Mrk 421 and Mrk 501. The lack of observed extragalactic gamma-ray sources by HAWC can be used to set a lower bound on the local Universe density of optically thin neutrino sources. This in turn can be used to disqualify classes of potential sources.

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Date submitted: 26 Sep 2016

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