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On the interpretation of high energy neutrino limits

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Abstract content

Recent results from the AMANDA experiment yield limits on the extraterrestrial neutrino flux, based on different analysis methods. A limit on the diffuse neutrino flux is derived at high energies, i.e.˜between 1e4.2 GeV and 1e6.4 GeV. The stacking of different AGN subclasses gives a point source limits for each of the classes. In this contribution, a method of interpreting stacking point source limits as diffuse limits to the particular source classes is presented. While 11 source classes are used for AMANDA's current stacking analysis, further source catalogs suitable for an analysis are discussed. The catalogs are investigated with respect to the sources' distribution in the sky. In particular, the capabilities of IceCube and KM3NeT, are examined. Since these second generation detectors are going to have complementary fields of view (FoV), the fraction of the signal in the IceCube's and KM3NeT's FoV (˜northern resp. ˜southern hemisphere) is discussed.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 3 (OG part 2), pages 1209-1212

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