Contribution ID: **261** Type: **Poster high energy neutrinos & cosmic rays**

Search for solar atmospheric neutrinos with the IceCube Neutrino Observatory

Cosmic ray interactions with the solar atmosphere are expected to generate energetic neutrinos that might be observable with neutrino telescopes, such as IceCube. These so called solar atmospheric neutrinos are expected to have a harder energy spectrum compared to those generated in the Earth atmosphere. The difference originates from the lower atmospheric density of the Sun, which allows secondary particles to decay rather than to reinteract. We present the first search for solar atmospheric neutrinos, using eight years of data collected with IceCube. To distinguish signal from backgrounds we perform a likelihood analysis using directional and energy spectral information. The analysis method and optimization will be introduced and sensitivities presented.

Authorship annotation

for the IceCube Collaboration

Session and Location

Wednesday Session, Poster Wall #180 (Ballroom)

Poster included in proceedings:

yes

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Track Classification: Poster (not participating in poster prize competition)