

Search for high-energy neutrino emission from Mrk 421 and Mrk 501 with the ANTARES neutrino telescope

ANTARES is the largest high-energy neutrino telescope in the Northern Hemisphere. This contribution presents the results of a search, based on the ANTARES data collected over 17 months between Nov. 2014 and Apr. 2016, for high energy neutrino emission in coincidence with TeV gamma-ray flares from Markarian 421 and Markarian 501, two bright BL Lac extragalactic sources highly variable in flux, detected by the HAWC observatory.

The analysis is based on an unbinned likelihood-ratio maximization method. The gamma-ray lightcurves for each source were used to search for temporally correlated neutrinos, that would be produced in pp or p-gamma interactions. The impact of different flare selection criteria on the discovery neutrino flux is discussed.

Plausible neutrino spectra derived from the observed gamma-ray spectra in addition to generic spectra E^{-2} and $E^{-2.5}$ are tested. If available at the time of the conference, the final results for the search period will be presented.

Authorship annotation

on behalf of the ANTARES Collaboration

Session and Location

Wednesday Session, Poster Wall #200 (Ballroom)

Poster included in proceedings:

yes

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Track Classification: Poster (participating in poster prize competition)