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On the neutrino emission from BL Lacs

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The recent IceCube discovery of 0.1-1 PeV neutrinos

of astrophysical origin opens up a new era for high-energy astrophysics. There are various astrophysical candidate sources, including active galactic nuclei (AGN) and starburst galaxies. Yet, a firm association of the detected neutrinos with one (or more) of them is still lacking. This talk will focus on the possible association of

IceCube neutrinos with BL Lacs, a sub-class of radio loud AGN. We present the results from leptohadronic modeling of six individual BL Lacs, including the closest to Earth, Mrk 421, that were selected as probable counterparts of the IceCube neutrinos. We also show the cumulative neutrino emission from BL Lacs, which was calculated

by incorporating our results from the modeling

of individual sources to Monte Carlo simulations

for the blazar evolution. We finally discuss our results in the light of current IceCube limits (above 2 PeV) and a possible future detection.

Collaboration

- not specified -

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