

*Contributed Talk //*

Active Galactic Nuclei (AGNs); Multi-messenger - neutrinos



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In light of the growing evidence for blazars being the sources of part of the very-high-energy neutrino flux detected by IceCube, many studies have concluded that, in many cases, external photon fields are preferred as targets for photo-pion interactions over co-moving (electron-synchrotron) photons. The bulk Lorentz factor and viewing-angle dependence of the resulting neutrino emission is drastically more strongly beamed than in the case of a co-moving target photon field that is isotropic in the emission-region rest frame. In this contribution, I discuss an exploratory comparison between the neutrino beaming patterns for various plausible cases of target photon fields and demonstrate that, in the case of the most strongly beamed candidate neutrino blazars, the treatment of Doppler boosting under the standard co-moving-isotropic-emission assumption may under-predict the expected neutrino flux (or, conversely, over-estimate the power requirements for individual sources) by very large ( $> 1000$ ) factors.