

## **Gamma-ray signatures from cosmic-ray interactions in AGN**

Over the past few years the IceCube observatory has detected dozens of high-energy neutrinos in association with known blazar AGN. This emission is often explained by interactions of PeV cosmic rays with thermal or atomic photon fields surrounding the jet, leading to pion production and subsequent neutrino emission. As I will argue in this talk, the multi-wavelength emission from these interactions depends highly on the energy of the cosmic rays, the physical properties of the AGN components, the location of the emission region, and the distance of the source to Earth. I present recent results of self-consistent numerical models of different blazar AGN, and compare the signals from cosmic-ray interactions expected in the X-ray to TeV regime. I discuss the implications of these results for the high-energy monitoring and follow-up strategies of neutrino source candidates.

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