Contribution ID: 63

Studying the neutrino-blazar connection with public data from the IceCube Neutrino Observatory

Astrophysical neutrinos, produced in the interaction of accelerated ions with particles or radiation fields, are a key messenger for understanding the origin of ultra-high-energy cosmic rays. However, the sources of astrophysical neutrinos are, for the most part, still unknown. Blazars, active galactic nuclei with relativistic jets pointed towards Earth, are among the most powerful cosmic accelerators in the Universe and promising candidate sources for both neutrinos and cosmic rays. In this project, you will analyse public data from the IceCube Neutrino Observatory, gaining experience with maximum likelihood methods used in the search for neutrino point sources. The work will be aimed to study the hypothesis of blazars being sources of astrophysical neutrinos.

Group

GAMMA

Project Category

C3. Theory of astroparticle physics

Special Qualifications

DESY Site

Zeuthen

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