

Alexander Plavin – HEP Seminar – April 23, 2024
Harvard

From radio waves to neutrinos: the multimessenger picture of blazars

Abstract:

Observatories such as the IceCube have recently introduced another astrophysical messenger, high-energy neutrinos. Neutrinos have been associated with blazars since 2017, initially in terms of individual objects, and later with well-defined samples. In this talk, I will present my view on the current understanding of the neutrino-blazar connection, from observational evidence to possible neutrino production mechanisms and their constraints. I will demonstrate how these particles fit into the full multiwavelength and multimessenger picture – from radio waves to high-energy photons and neutrinos. Our understanding of neutrino origins in blazars still has many gaps, and I will discuss how they can be filled in the near future with existing and planned instruments.