

Periodic Variability in gamma-ray Emitting Blazars with Fermi-LAT

Tuesday, 5 July 2022 17:00 (15 minutes)

Blazars display variable emission across the entire electromagnetic spectrum, which ranges in timescales from minutes to years. This variability is generally interpreted as stochastic and unpredictable processes. However, recent studies have inferred the presence of periodic signals coming from blazars. These could be caused by, e.g. a helical jet or a precessing jet due to the presence of a supermassive black hole binary. In this talk, we will report on the largest systematic search of periodic emission in the gamma-ray lightcurves of 350 blazars. Using 12 years of Fermi-LAT data, we have built a sample of 24 blazars displaying evidence of periodic emission. These results will be interpreted in the modeling framework of supermassive black holes binaries.

Primary authors: PEÑIL, Pablo (Clemson University); Dr AJELLO, Pablo (Clemson University); Dr BUSON, Sara (University of Wuerzburg); Dr DOMINGUEZ, Alberto (IPARCOS-GAE); ON BEHALF OF THE FERMI-LAT COLLABORATION

Presenter: PEÑIL, Pablo (Clemson University)

Session Classification: Contributed Talks