

Astro Seminar Series



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Understanding the Long-term Optical/Near-Infrared Color Variability in Fermi Blazars

We have undertaken a 7-year, multiwavelength program to observe a sample of blazars in various Fermi gamma-ray states, using the Small and Medium Aperture Research Telescope System (SMARTS) 1.3m + ANDICAM instrument in Cerro Tololo, Chile. We present near-daily optical and infrared (OIR) color variability diagrams of these sources and compare the OIR flux and color to the Fermi gamma-ray flux on similar cadence.

We then analyze the color variability properties on short and long timescales, as compared to the length of an average gamma-ray flare, to better constrain the physical mechanisms responsible for the variability properties that we observe.

From this long-term observational data, we develop a schematic representation of the possible color variability behaviors in blazars and how it is related to the thermal disk and non-thermal jet contributions in both Flat Spectrum Radio Quasars and BL Lac objects.

Tuesday April 12, 3:30pm

**Bell Room (103)
Rutherford Physics Building**