



Contribution ID: 348

Type: **Poster Presentation**

## Multi-wavelength variability and correlation studies of flaring Fermi-LAT blazars.

*Tuesday, 26 June 2018 15:00 (2 hours)*

We aim to place constraints on the size and location of the radiation production regions in flaring Fermi-LAT blazars. Multi-wavelength data will be obtained from a selection of BL Lacs and FSRQ sources, from available archival data and new observations. The Fermi-LAT gamma-ray data will be analysed using the Fermi Pass 8 data reduction, which provides a significant improvement in terms of background rejection, event reconstruction and photon acceptance. We aim to investigate the time-domain relationship between several wavelength regimes. From high signal-to-noise light curves, multi-wavelength cross-correlation studies will be performed in order to characterize and compare variability and time-lags. By fitting exponential rise and decay functions to the light-curves, variability times and time gaps between flaring events from different wavelengths will be extracted. The time scale of the variability will be used to place constraints on the size of the emission.

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