



Contribution ID: 33

Type: **Oral**

Variability of Blazar Light Curves

Thursday, September 20, 2018 9:45 AM (20 minutes)

Active Galactic Nuclei emit radiation over the whole electromagnetic spectrum up to TeV energies. Blazars are one subtype with their jets pointing towards the observer. One of their typical features is extreme variability on timescales from minutes to years.

The fractional variability is an often used parameter for investigating the degree of variability of a light curve. By using public data from instruments monitoring blazars in various energy ranges, the variability of the sources can be studied depending on energy and time. Different detection methods and sensitivities of the instruments result in different cadence and time binning of the data sets. The effect of these differences in the fractional variability needs to be studied and taken into account for the physics interpretation.

On the one hand, systematic effects of cadence and time binning are investigated. On the other hand, the fractional variability is studied depending on energy and time.

This presentation shows the results of FACT data combined with multi-wavelength data.

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Session Classification: Methods