



Contribution ID: 23

Type: **Oral**

FACT- Studying the X-ray/gamma-ray correlation using 5 years of data

Wednesday, September 19, 2018 4:15 PM (20 minutes)

The First G-APD Cherenkov Telescope (FACT) has been monitoring blazars at TeV energies for more than six years. Because of the automatic operations and the usage of robust solid state photosensors (SiPM, aka G-APDs), it has been possible to collect a large and unbiased data sample of more than 11,000 hours. One of the closest and brightest blazars in the gamma-ray/X-ray sky, Mrk 421, is classified as high-synchrotron-peaked BL Lac type object. It has been extensively monitored by the Large Area Telescope on-board of the Fermi satellite, and the BAT and XRT instruments on-board of the Swift satellite. Using FACT data in the very high energy regime, we study the X-ray/gamma-ray correlation between these two bands. We found a strong correlation that favors a one-zone synchrotron self-Compton model. In this context, also the bright outburst in April 2013 is investigated.

Authors: GARCIA-GONZALEZ, Jose Andres (IF-UNAM); GONZALEZ, Maria Magdalena (Universidad Nacional Autonoma de Mexico); Dr DORNER, Daniela (Universität Würzburg); FRAIJA, Nissim (IA-UNAM)

Presenter: GARCIA-GONZALEZ, Jose Andres (IF-UNAM)

Session Classification: Gamma-Ray