Contribution ID: **113** Type: **not specified**

Unravelling the complex behaviour of our closest very-high-energy gamma-ray blazars, Mrk421 and Mrk501, through decades-long multi-instrument observations

Thursday, 8 September 2022 16:20 (20 minutes)

Owing to their proximity and their intense broadband emission from radio to very-high-energy gamma rays, Mrk421 and Mrk501 are among the blazars that can be studied with the greatest level of detail; and hence one can use them as a sort of astrophysical laboratories to study the blazar's phenomena. Because of that, these two objects have been the focus of multiple extensive multi-instrument campaigns during decades. In the conference I will show that, despite some differences in the variability patterns of these two sources, there are also a number of similarities that support a broadband emission dominated by leptonic scenarios, as well as indications for in situ electron acceleration in multiple compact regions. I will discuss the complexity in the temporal evolution of their broadband emission, the presence of different flavours of flaring activity, and highlight a few recent results. These multi-instrument observations on Mrk421 and Mrk501 have yielded thought-provoking results, and demonstrate the importance of performing a continuous monitoring over multi-year timescales to fully characterise the dynamics of blazars.

Summary

Primary author: PANEQUE, David (Max Planck Institute for Physics)

Presenter: PANEQUE, David (Max Planck Institute for Physics)

Session Classification: Extra-Galactic sources