



Contribution ID: 182

Type: not specified

Investigating the Quiescent State of the TeV-emitting Radio Galaxy 3C 264

Wednesday, 13 September 2023 17:30 (15 minutes)

The catalog of TeV-emitting sources (TeVCat) comprises six Fanaroff-Riley type I (FR I) radio galaxies. Unlike blazars, the jets of radio galaxies point away from the observer's line of sight. Therefore, despite their small number, these sources, not entirely dominated by the jet component, offer a unique opportunity to investigate high-energy processes from a different perspective.

Among TeV radio galaxies, 3C 264 is one of the most intriguing sources ever detected. Its observation by VERITAS during a flare was interpreted as an indication that the jet was structured. Its high-state Spectral Energy Distribution (SED) seems to require two components: the core emission, almost persistent (and probably dominant in the quiescent state), plus a (transient) component located along the jet, responsible for the flux increase at high and very high energy during the flare.

In this work, we investigate the quiescent state of 3C 264 in the TeV band to test the multi-component model. We reduced and analyzed multi-wavelength data from 2019 to 2022, in particular in the radio (VLBI), optical-UV (*Swift*-UVOT), X-ray (*XMM-Newton*, *NuSTAR*, *Swift*-XRT), and gamma-ray (*Fermi*-LAT, MAGIC) bands. If the structured model were correct, high and low states would allow us to investigate different regions and processes in 3C 264.

Primary author: BRONZINI, Ettore (University of Bologna - INAF/OAS)

Co-authors: Dr ARBET-ENGELS, Axel (MPP); Dr MIGLIORI, Giulia (INAF/IRA); Dr TORRESI, Eleonora (INAF/OAS); Dr GRANDI, Paola (INAF/OAS); Dr ZANIN, Roberta (CTAO); Dr VERRECHIA, Francesco (INAF/OAR)

Presenter: BRONZINI, Ettore (University of Bologna - INAF/OAS)

Session Classification: GRA: Gamma Ray Astronomy

Track Classification: Gamma Ray Astronomy