MAGIC

Science of the Cosmos

Contribution ID: **72** Type: **not specified**

Investigations of the active galactic nucleus 4C +55.17 at high and very-high energies

4C +55.17 is a radio-loud active galaxy classified as a flat-spectrum radio quasar. It is a distant object located at the red shift of z=0.896. Spectrum of 4C +55.17 has been measured through radio and X-ray band to the high-energy gamma-rays. At the energies of MeV-GeV range, 4C +55.17 is detected with Fermi LAT as the bright and steady source of gamma-rays with a hard spectrum. This object has been proposed to be a GeV – TeV gamma-ray source and the best candidate to study of extragalactic background light (EBL). The very high-energy gamma-rays from 4C +55.17 were detected with SHALON. As a result, the spectral energy distribution of 4C +55.17 is obtained in the wide energy range. The combination of Fermi LAT and very high energy data puts an upper limit on the level of EBL. A number of morphological, flux variability, and spectral properties detected through the wide energy range question the classification of active galaxy 4C +55.17. Standard blazar and young radio source emission scenarios are considered to describe the spectral energy distributions of 4C +55.17 and to clarify the origin of high and very high energy gamma-ray emission from this object. Thus, the GeV –TeV energy data constrain the level of EBL, whereas further multiwavelength observations of 4C +55.17 can help to clarify the classification of this object.

Authors: SINITSYNA, Vera Georgievna; SINITSYNA, Vera Yurievna

Presenter: SINITSYNA, Vera Yurievna