Contribution ID: **72** Type: **Poster**

Constrains of Extragalactic Background Light expected from observation of distant metagalactic sources 1739+522 (z=1.375) and 3c454.3 (z=0.859) (by SHALON Cherenkov telescopes).

Tuesday, 29 June 2010 16:30 (1 hour)

Extragalactic diffuse background radiation blocks the propagation of TeV γ-ray over large distances (z>0.1) by producing electron-positron pairs. As a result, primary spectrum of gamma-source is changed, depending on spectrum of background light. So, a hard spectra of Active Galactic Nuclei with high red shifts of 0.03 – 1.8 allow to determine an absorption by Extragalactic Background Light and thus spectrum of EBL. The redshifts of SHALON very high energy gamma-ray sources range from z=0.0183 to z=1.375. During the period 1992 – 2010, SHALON has been used for observations of the metagalactic sources NGC1275 (z=0.0183), SN2006gy (z=0.019), Mkn421 (z=0.031), Mkn501 (z=0.034), Mkn180 (z=0.046), OJ 287 (z=0.306), 3c454.3 (z=0.895), 1739+522 (z=1.375). Among them bright enough AGNs of BLLac type (Mkn421, Mkn 501) and FSRQ type (3c454.3, 1739+522) those spectra are resolved in the TeV energy band from 1 to ~20-30 TeV. Spectral energy distributions and images of distant Active Galactic Nuclei are presented. Spectral energy distribution of Extragalactic Background Light constrained from observations of Mkn421 (z=0.031), Mkn501 (z=0.034) 3c454.3 (z=0.859) and 1739+522(z=1.375) together with models and measurements are presented. Observations of distant metagalactic sources have shown that the Universe is more transparent to very high-energy gamma-rays than previously believed.

If this is a contributed presentation, please indicate preference for Oral (O) or Poster (P):

P

Primary author: Dr SINITSYNA, Vera Yurievna (P.N. Lebedev Physical Institute)

Co-authors: Prof. NIKOLSKY, Sergey (P.N. Lebedev Physical Institute); Prof. SINITSYNA, Vera Georgievna (P.N. Lebedev Physical Institute)

Presenter: Dr SINITSYNA, Vera Yurievna (P.N. Lebedev Physical Institute)

Session Classification: Poster Session I

Track Classification: Anisotropy