HAP Workshop | Monitoring the non-thermal Universe



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Optical study of blazars

To study optical variability of extragalactic objects since 1997 we are conducting in Abastumani Observatory a long-term campaign using dedicated telescopes, which allowed to collect ~300 000 CCD frames during ~2 900 nights. This extensive monitoring campaign over 100 blazars during first five years was carried out in BVRI bands and later on from 2002 mainly in R band using the 70-cm meniscus (f/3, SBIG ST6 and Apogee Ap6E) and 125-cm Ritchey-Chretien (f/13, Apogee Ap6E) telescopes. The list of sources includes blazars detected from Radio to TeV band. Most densely sampled sources are BL Lacertae, S5 0716+714, Mrk 421, Mrk 501, Pg 1553+113, 1ES 1959+650, 1ES 2344+514 and others. The frames have been reduced using Daophot II and homogenous sample of light curves have been constructed. Most sources show wide range of variability (long-term, IDV and micro-variability). The results of multiwavelength campaigns with Whipple, VERITAS, AGILE, FERMI, SWIFT, HESS and MAGIC are also presented. To extend in the future optical photometric, polarimetric and spectral survey of fainter sources with high temporal resolution the purchase of two PanSTAR like telescopes are also considered.

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