

MULTIFREQUENCY VARIABILITY OF BLAZARS 3C 279 and 3C 345

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The multifrequency spectra of Blazars 3C 279 and 3C 345 are presented and their implications for theoretical models are discussed. The spectra resulted from two separate but complimentary observational programs; one a serendipitous discovery by CGRO that extended the spectrum up to GEV energies, while the other a program designed to investigate the spectral variability of a Blazar during an outburst.

The quasi-simultaneous (2 weeks) broadband spectrum of 3C 279 between 10^9 and 10^{24} Hz was compiled after the CGRO detector EGRET observed a large increase in gamma-ray flux from the source. Other observations made independently throughout the observing community were gathered to form the most complete quasi-simultaneous spectrum of a Blazar to date. This spectrum and a second one resulting from observations made two months later when the gamma-ray flux had dropped significantly, reveals that a jet model with varying upper energy electron cutoff can adequately explain the differences between the two spectra.

Target of Opportunity multifrequency observations of 3C 345 made during an outburst in 1991 resulted in 10 nearly simultaneous (1-5 days) spectra between 10^8 and 10^{18} Hz. The spectral changes can be modelled by a broadband SSC jet with the high energy cutoff of the electron distribution varying with time, plus a thermal accretion disk with a varying accretion rate.

Collaborators

3C 279:

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3C 345:

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References:

3C 279

Hartman *et al.* 1994, in preparation.

3C 345

Webb *et al.* 1994, Accepted to Ap. J, Feb. 20th 1994 issue.