

## VLBI and Multiwavelength Studies of Gamma-Ray AGN

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We discuss the possibility that the emergence of new components from the radio cores of blazars are associated with strong gamma-ray flares. In the case of 3C279, a sequence of VLBI images made at 5 and 22 GHz between 1990 and 1994 traces the emergence and superluminal motion of a new blob in the parsec-scale radio jet. The blob could have coalesced when charged particles passed through a standing or moving shock located within one or two lightyears of the central engine. We also discuss the production of x-rays via inverse Compton scattering in the jet. Our inverse Compton calculations use the inhomogeneous jet models of Blandford and Konigl; the input parameters are obtained from simultaneous ROSAT and VLBI observations.

Synchrotron emission from the jet and nuclear regions of most blazars peaks in the infrared and gamma-ray regions of the spectrum. Theoretical models indicate that the infrared and gamma ray emission should vary in concert (within days or months). The ESA Infrared Space Observatory mission, planned for launch in 1995, will overlap in its 18-month lifetime with the Compton Gamma Ray Observatory. Data from these two spacecraft, obtained simultaneously, can be used to constrain models of the emission mechanisms in Active Galactic Nuclei.