

# Long periodicity of Blazars

with RXTE ASM, TA, HEGRA

S.Osone and M.Teshima (ICRR)

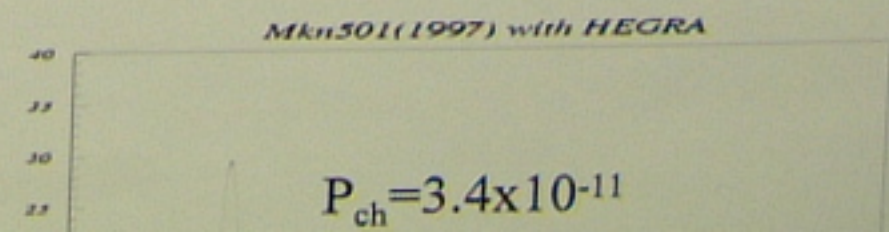
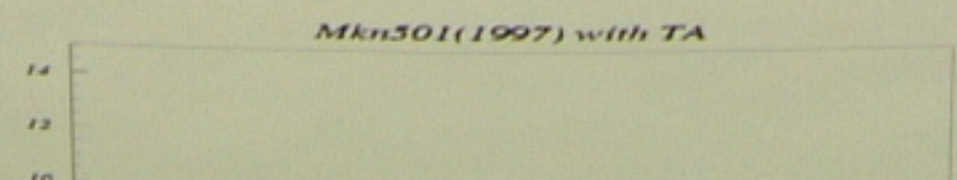
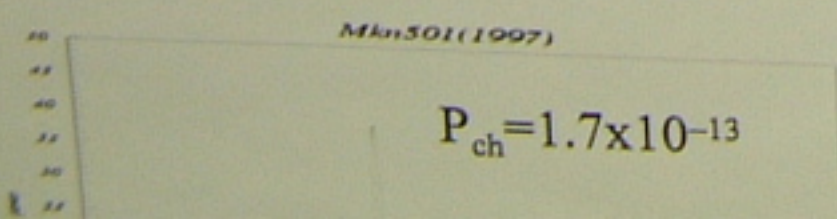


We establish 23 day periodicity in 1997 for Mkn501 with RXTE ASM, TA and HEGRA

The origin of 23 day periodicity is related with change of beaming factor, magnetic field, gamma factor of electron

We find Blazar which have long periodicity are TeV detected source

Establishment of 23 day periodicity for Mkn501 in 1997

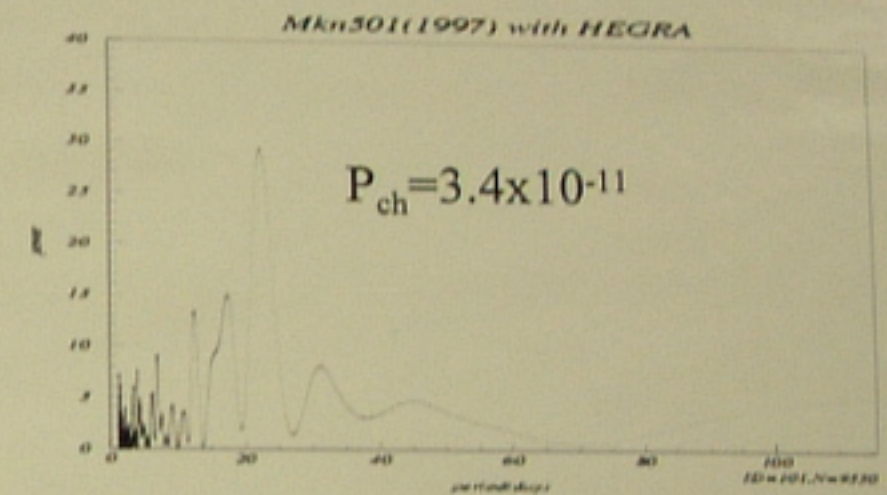
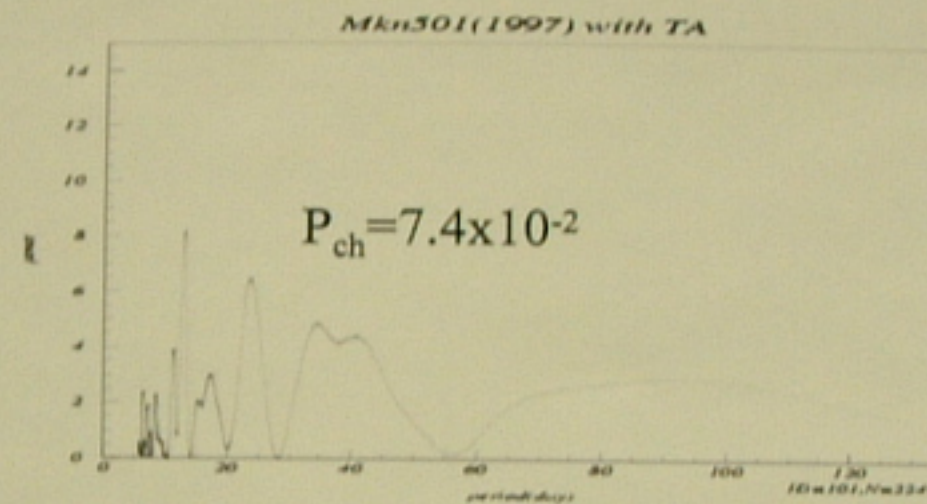
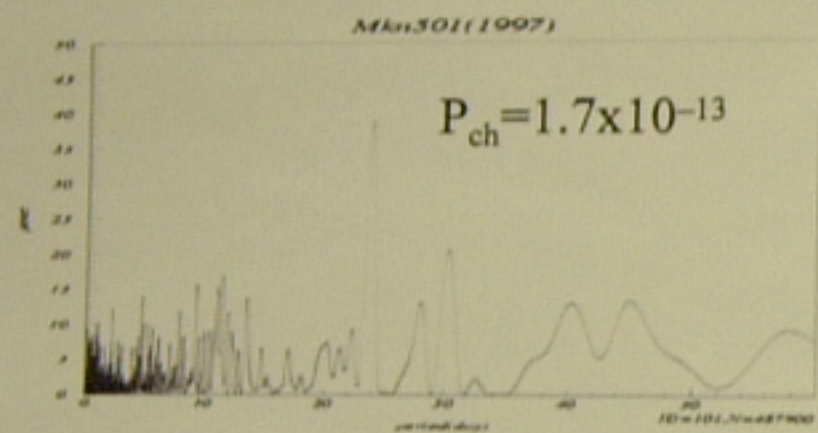




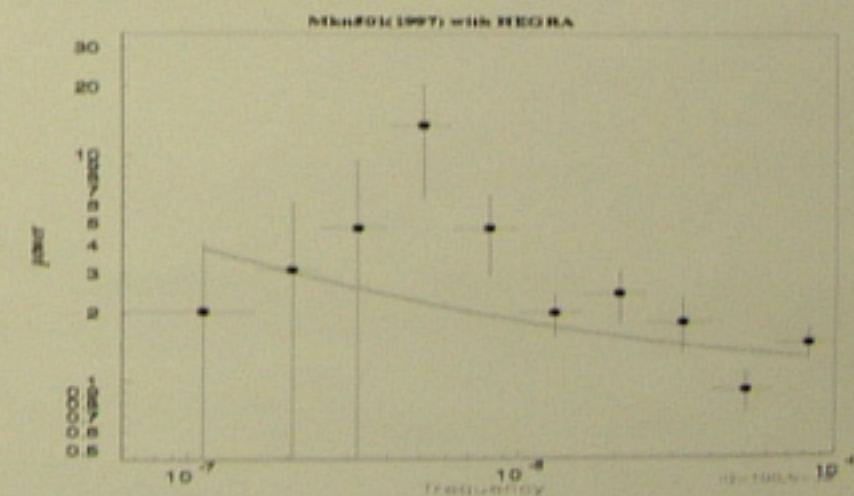
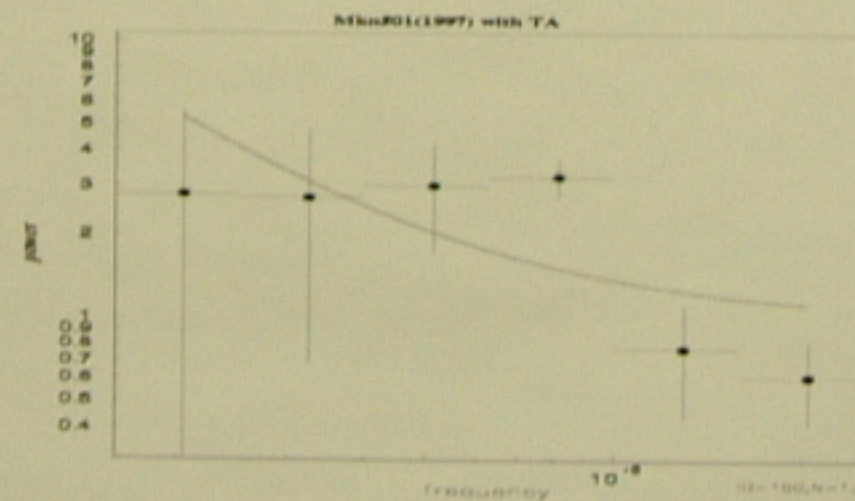
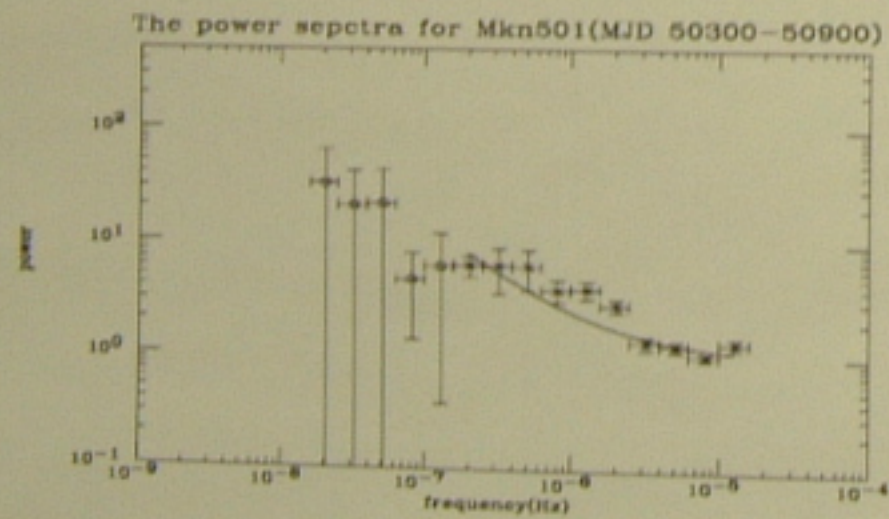
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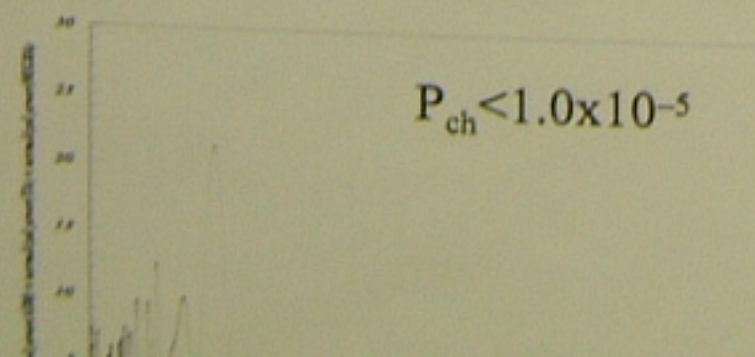
Establishment of 23 day periodicity for Mkn501 in 1997



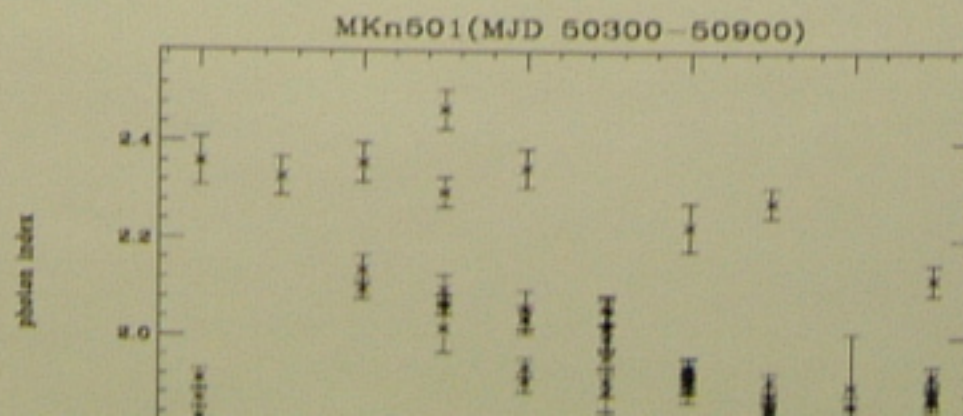
Frequency dependent component



The summed power spectra considering frequency dependent component

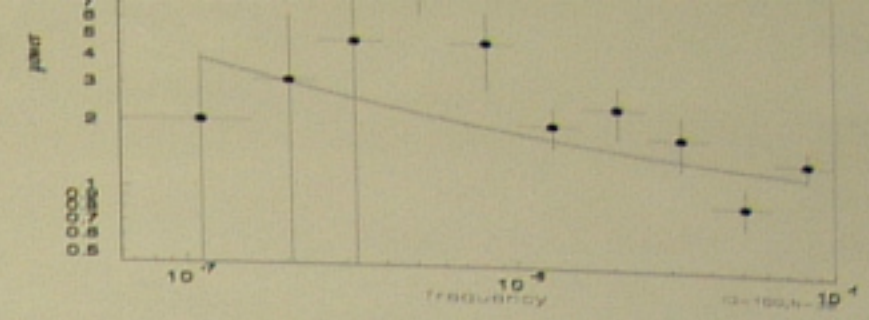
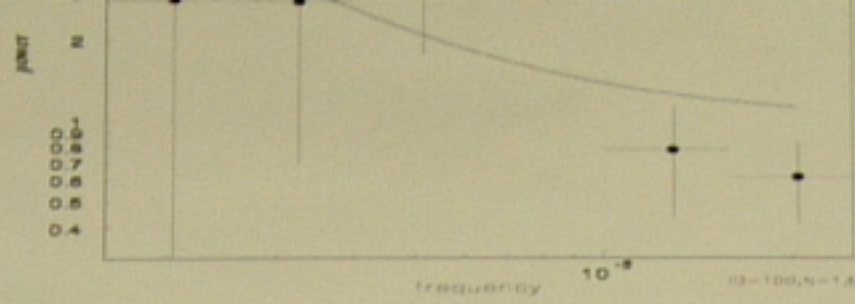
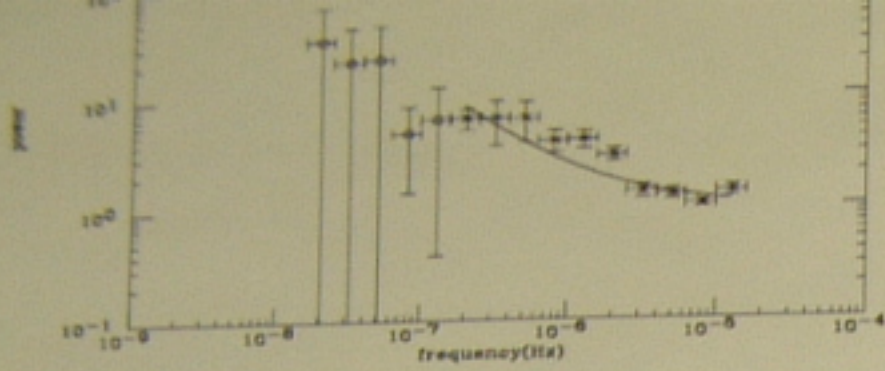


Origin of 23 day periodicity



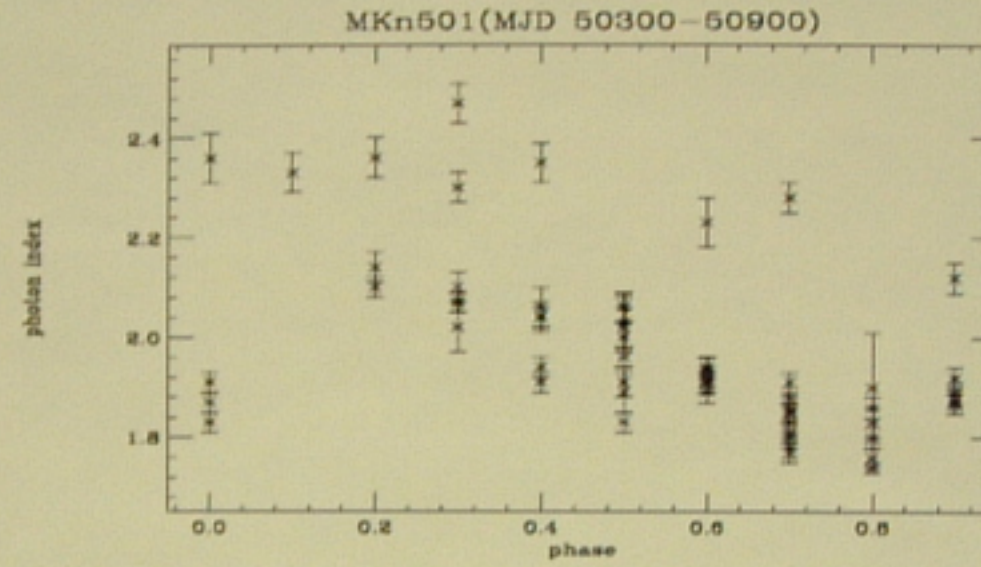
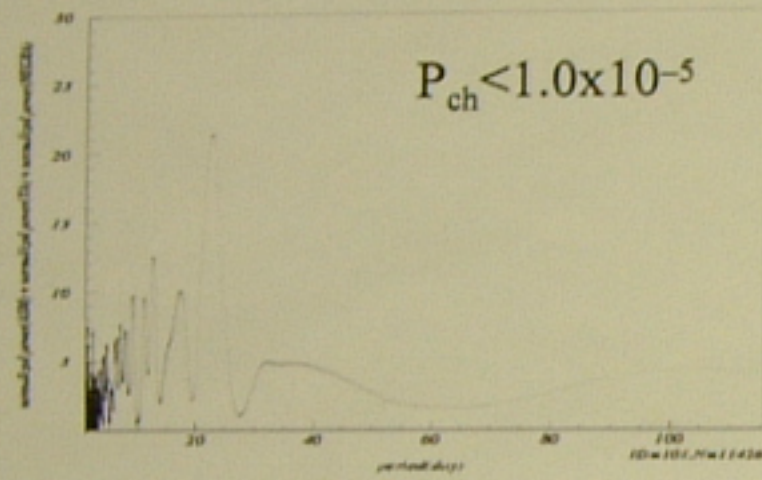
Photon index            2.4 — 2.0 — 1.8  
 Index in  $\nu F_\nu$  vs    0.4 — 0.0 — -0.2  
 Change of peak energy of synchrotron emission





The summed power spectra considering frequency dependent component

### Origin of 23 day periodicity



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### Search for long periodicity for ten Blazars

