VLBI MONITORING OF BL LAC - OBJECTS

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The monitoring has been done with VLBI arrays of upto 8 stations in USA, Europe and South Africa. The wavelength was ∿ 6 cm at all times. So far, maps at two epochs have been completed of the objects AO 0235+164, 0735+178, Mk 421 (1101+38) and 1749+701 with resolutions (FWHM) of ∿ 1 m.a.s. All four sources have core-jet structures. AO 0235+164 was observed at two successive outbursts and by identifying the outburst, an apparent speed of ∿ 45c seems to give consistency. 0735+178 showed no discernible motion outwards, but the jet has changed its position angle by ∿ 20°. Mk 421 is an X-ray source and has a redshift of ∿ 0.03. There seems to be no superluminal motion. The change in flux density all emanated from a point source in the core < 0.15 m.a.s. in diameter. 1749+701 has a very wide opening angle of the jet and a motion of ∿ 0.2 m.a.s./year. But since the redshift is not very well known it is difficult to estimate the apparent speed. The core changed by ∿ 0.2 Jy and the jet by ∿ 0.1 Jy between the two epochs.

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