CORRELATED FLUX DENSITY OUTBURSTS AND STRUCTURAL VARIATIONS IN A SAMPLE OF LOW FREQUENCY VARIABLE RADIO SOURCES

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Snapshot VLBI observations at 18 cm have been obtained with a global array at three epochs (1980.1, 1981.8, 1987.9) in order to investigate flux density and/or structural variations for a sample of 21 low frequency variable sources (Padrielli *et al.* 1987 *Astron Astrophys. Suppl. Ser.*, **67**, 63; Bondi *et al.* 1993 *in preparation*).

We have calculated the Doppler factors implied by the structural variations and compared with the ones obtained by the flux density outbursts at low frequency (408 MHz) during the epoch of VLBI experiments. In such a way we can check, quantitatively, which low frequency bursts can be associated with the superluminal motion and expansion of synchrotron plasmoids, and hence be the relic of an higher frequency variability. Few sources (e.g. BL Lac and 0202+149) show low frequency flux density outbursts that can always be related to observed (or to an upper limit of) structural variations at 18 cm. Others (e.g. 1127-145 and 1611+343) have strong low frequency variability without any structural changes at 18 cm in a period of about 8 years. These outbursts have to be extrinsic and can be explained in the framework of refractive scintillation theory. Most of the sources (e.g. 1055+018, 3C345, 3C454.3) show both the components.

Finally, the previous comparison between the VLBI observations of the first two epochs had proposed three new superluminal candidates ($0224+671$, $0605-085$, and $1510-089$). The new data confirm as superluminal candidates only $0224+671$ and $0605-085$, and suggest that also $0607-157$ and $1055+018$ might be added.

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