

## MONITORING OF BL LAC OBJECTS AT 327 MHz

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**ABSTRACT.** The variable BL Lac objects OJ 287 and B2 (1308+326) have been observed using the Ooty Synthesis Radio Telescope (OSRT) at 327 MHz. Preliminary analysis of one of them, namely OJ 287 indicates that flux variations of  $\sim 20\%$  on a time scale of few hours to few days could be present, but this needs to be confirmed by a larger data base.

### OBSERVATIONS AND RESULTS

The observations were made during 11-16 March 1985. The daily observing session lasted for 4 to 5 hours around local transit of each source. Every half an hour, the flux density of OJ 287 was calibrated using 3C 210 ( $S_{327} = 7.27$  Jy). On two days, a control source (0852+12) of comparable flux density ( $S_{327} = 1.50$  Jy) was also monitored every half an hour in addition to the calibration source.

The data were analyzed during standard OSRT analysis package. Fig. 1 shows the observed flux density of OJ 287 during the observing period of 11-16 March. The dotted line through the data points is the best eye fit and the bars are  $\pm 1\sigma$  variation of the control source. The flux density variations are prominent on 11, 13 and 14 March. The time scale of the variations on individual days is 2 - 3 hours. Fig. 2 shows the averaged flux from Fig. 1 plotted as a function of date. The  $\pm 1\sigma$  error bars are derived from the standard deviation of all the data points on individual days. It is seen that the flux density of the source on March 11 is significantly above that on all the other days. If this is not excluded variations in the flux density of OJ 287 of the order of 20% over time scales of 5 - 10 days seem present in the data. It is clear that systematic observations over longer periods are required to confirm these variations.

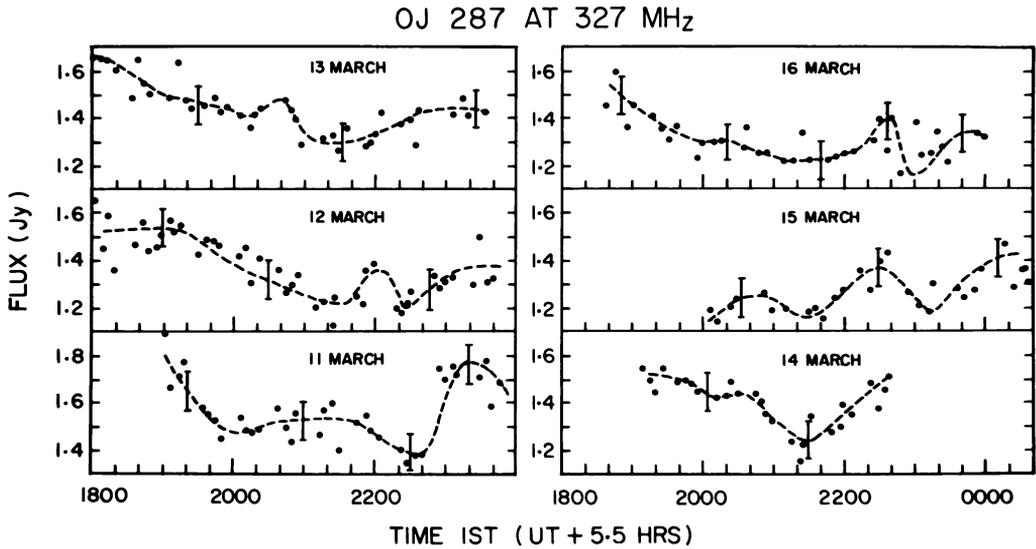


Figure 1. Illustrating the flux variation of OJ 287 with the time for six days (March 11 - 16, 1985)

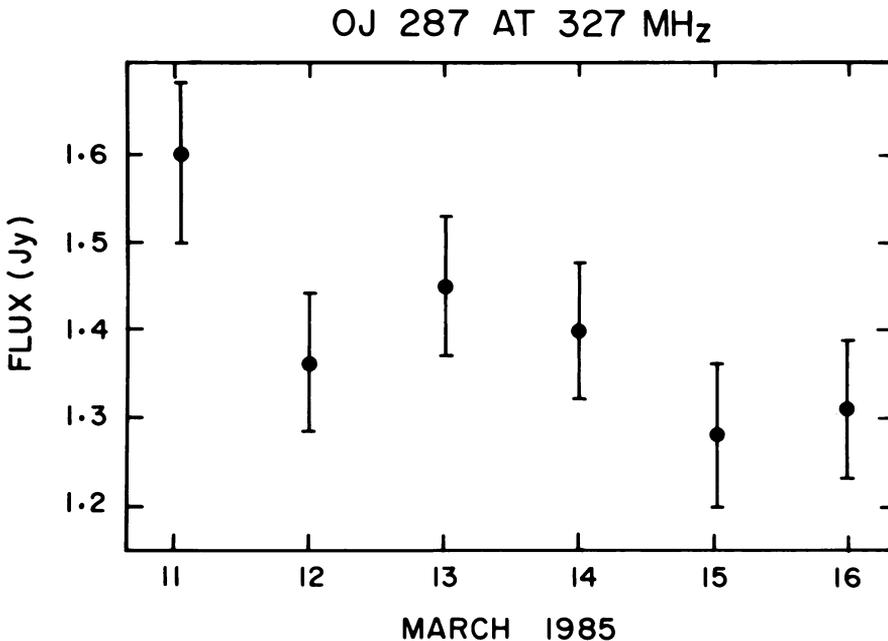


Figure 2. Illustrating the variation of flux (averaged during the daily observing sessions) as a function of day from March 11 - 16, 1985.