

Study of Polarization in OJ 287

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Polarimetry of the BL Lac object OJ 287 has been carried out over the last decade in optical bands with the 1.2-m telescope of Mt. Abu Observatory, operated by Physical Research Laboratory, India. OJ 287 underwent several polarization outbursts during this period. Some of our findings are:

- Polarization outbursts, along with change in position angle, are seen. Time scale of a major outburst is about a month (left panel of Figure 1).
- The degree of polarization increased from about 10% (2006 Dec 17) to more than 25% (2007 Jan 15), followed by a decrease to about the 7% level (2007 Feb 15).
- Intranight micro-variability is seen on some of the nights. Data for the period 2006 Dec 17–20 are shown in the right panel of Figure 1 as an example.

The change in polarization amplitude and position angle during a polarization outburst is perhaps due to shock compression of the magnetic field perpendicular to the jet axis.

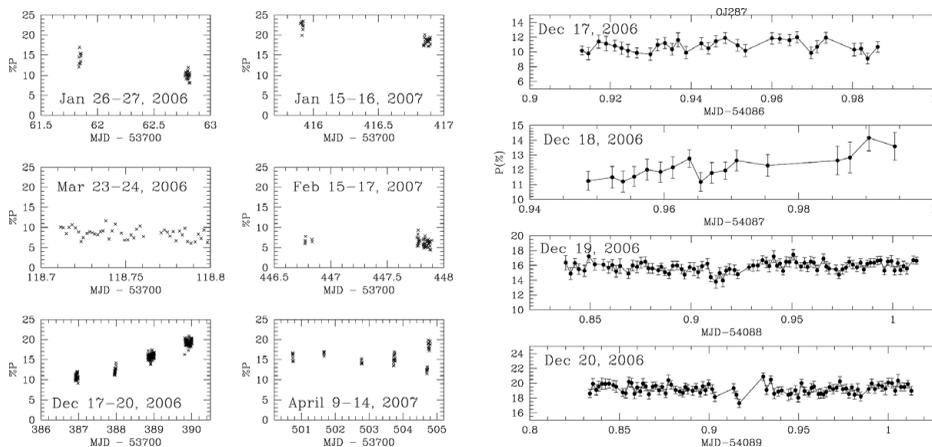


Figure 1. Inter and intra-night variability in OJ 287.

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