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LINEAR POLARIMETRIC MEASUREMENTS OF 55 CYGNI

In the last several years the investigation of Be stars came into prominence. Their polarimetric measurements may provide additional data to our understanding of the physics of these stars.

In the past 20 years I have carried out polarimetric observations of a number of Be stars. Because these observations may be of some interest I plan to publish the data in a series of papers.

55 Cygni (=BD+45<sup>o</sup>3291=HD198478) was previously recommended as a polarimetric standard star (Serkowski, 1974). Hsu and Breger (1982) showed that 55 Cyg underwent definite polarimetric variations on a short time scale in the position angle while the amount of the polarization changed only marginally.

Our polarimetric observations of 55 Cyg were made in August 1967 and July-August 1974. The measurements are given in Table I. The observations obtained in 1967 (J.D. 2439733-741) were carried out in V light with a two-channel integrating polarimeter attached to the 50 cm Cassegrain telescope of Konkoly Observatory. The 1974 observations (J.D. 2442250-279) were made with the same polarimeter in UV light at the 60 cm Cassegrain telescope of the Haute Provence Observatory.

The 1967 observations in V light did not indicate any noticeable changes in the polarization values, whereas the 1974 observations in UV light definitely show small irregular changes in the amount of polarization between 2.0 and 2.6%. Small changes in the position angle were also observed within only a few days. This result is in accord with that of Hsu and Breger (1982).

I would like to thank Dr. Marie Therese Martell for her help and encouragement. I also thank the granted observing time at Haute Provence Observatory.

Table I. Polarimetric observations of 55 Cygni

J.D.	p %	$\theta$	filter
2439733.344	2.54 $\pm$ 0.34	169.3 $\pm$ 1.9	V
734.333	2.57 0.34	169.4 1.9	V
735.354	2.53 0.34	169.5 1.9	V
738.437	2.38 0.32	173.6 1.9	V
739.385	2.51 0.33	170.9 1.9	V
741.313	2.44 0.33	171.0 1.9	V
2442250.438	2.57 0.19	0.6 1	UV
250.465	2.54 0.18	2.0 1	UV
250.479	2.56 0.17	1.9 1	UV
250.528	2.52 0.17	2.3 1	UV
250.542	2.37 0.20	3.3 1	UV
250.552	2.30 0.22	1.7 1	UV
251.535	2.44 0.19	0.0 1.1	UV
251.563	2.40 0.16	1.7 1	UV
252.542	2.41 0.24	2.1 1.4	UV
273.500	2.39 0.23	8.1 1.3	UV
274.514	2.43 0.26	2.7 1.5	UV
275.493	2.21 0.20	3.7 1.2	UV
275.521	2.02 0.21	179.9 1.4	UV
276.507	2.06 0.22	1.2 1.4	UV
279.507	2.36 0.26	0.5 1.5	UV

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 Serkowski, K., 1974, *in: Planets, Stars and Nebulae* (ed. T. Gehrels),  
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