

POLARIZATION OF DWARF NOVAE AND NOVALIKE VARIABLES

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Linear polarization observations have been made over the past several years on several bright dwarf novae (DN) and related objects (NL). The purpose was to investigate any possible variation that could be related to outburst state (changes in the asymmetry of the disk from max to min), short time scale variability (related to flickering) and variability over the orbital cycle (related to the view of the hot spot or to cyclotron emission as in the AM Her variables). The measurements were made at Kitt Peak (KP), Lowell (L), or Battelle Obs. (B) with either the Dyck (D), Hall/Bowell (HB) or Battelle (B) polarimeters and the system was calibrated in each case by taking 30-40 measurements of the non-polarized and known polarized standards of Serkowski. The data is summarized in the following table. AE Aqr shows the only variation in mean p between runs while the largest variations on flickering timescales are evident in V Sge, RX And and V426 Oph. VSge and RX And show orbital phase dependent variability. SS Cyg does not show any changes in mean polarization over the outburst cycle although the wavelength dependence of the polarization (U→R) reverses from max to min.

Object	Type	Date/Obs.	Polarimeter	Outburst state	Mean %p	Spread	# obs. comments
SS Cyg	DN	Jul 5,77/L	HB	max	.1±.02	.03-.1	7
		Jul 14,15,76/KP	D	fall	.2±.1	.1-.3	4
		Jul 30-Aug 1,76/KP	D	min	.2±.1	.1-.3	6
		Jul 4,77/L	HB	rise	.1±.05	0-.4	3
AH Her	DN	Jul 31,76/KP	D	max	.5±.2	.3-.8	5
RX And	DN	Jul 14,76/KP	D	fall	.3±.1	0-1	1
		Jul 31-Aug 1,76/KP	D	min	.4±.15	.1-1	12
		Nov 3-6,78/L	B	max	.3±.03	0-1	var ph .25-.5
U Gem	DN	Nov 5,6,78/L	B	min	0±.1	0-.1	over orbit
AE Aqr	NL	Jul 14-Aug 1,76/KP	D		.2±.1	0 .4	7
		Jul 1,4,5,77/L	HB		.7±.1	.6-.9	16
V426 Oph	NL	Jul 30-Aug 1,76/KP	D		.5±.1	.3-.6	5
		Jul 5,77/L	HB		.5±.1	.3-.8	6
V Sge	NL	78-79/B	B		0±.2	0-1	var ph .5-.75

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