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THE HISTORICAL OPTICAL VARIATION OF DO Dra (=3A1148+719)

A search of the Harvard College Observatory plate collection for outbursts of this CV encompassed the following numbers of plates and epochs (all magnitudes are blue):

- 1) very-wide-angle patrol series: 223 plates with limiting magnitudes of 13.7 mag or fainter, and more than 200 additional plates of limit 12.2 mag or fainter, 1899-1951;
- 2) wide-angle patrol series: 118 plates with limit 13.7 mag or fainter, 1928-1951;
- 3) recent very-wide-angle patrol series: 91 plates with limit 13.7 mag or fainter, 1968-1984;
- 4) other, non-patrol series: 100 plates with limit 13.7 mag or fainter, 1890-1944.

Only three outbursts were detected, with data given in the table below. At other times the variable, when

Table: Outbursts of the CV DO Dra

<u>Julian Date</u> <u>(2,400,000+)</u>	<u>Mag</u> <u>(B)</u>	
28262.7	>12.2	invisible
28266.7	10.8:	
28267.7	11.1	
28273.7	>12.2	invisible
31498.7	>14.5	invisible
31499.7	>12.2	invisible
31504.7	10.0:	
31505.8	10.8:	
31506.7	11.2	
31511.6	>12.2	invisible
31519.9	>13.7	invisible
33242.9	11.2	
33279.8	>14.4	invisible

seen on the plates, had magnitudes between 16 and 17, with occasional points brighter than 16 mag.

Clearly, from the table, the outbursts are of short duration, lasting no more than ten days and probably even less. Thus, many outbursts would be quite easy to miss entirely. However, the number of outbursts observed, coupled with the number of plates searched, suggests that outbursts of this object are relatively infrequent.

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