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Photo-electric observations of Nova Lacertae 1950

Schmidt, M.

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PHOTOELECTRIC OBSERVATIONS OF NOVA LACERTAE 1950,

BY M. SCHMIDT

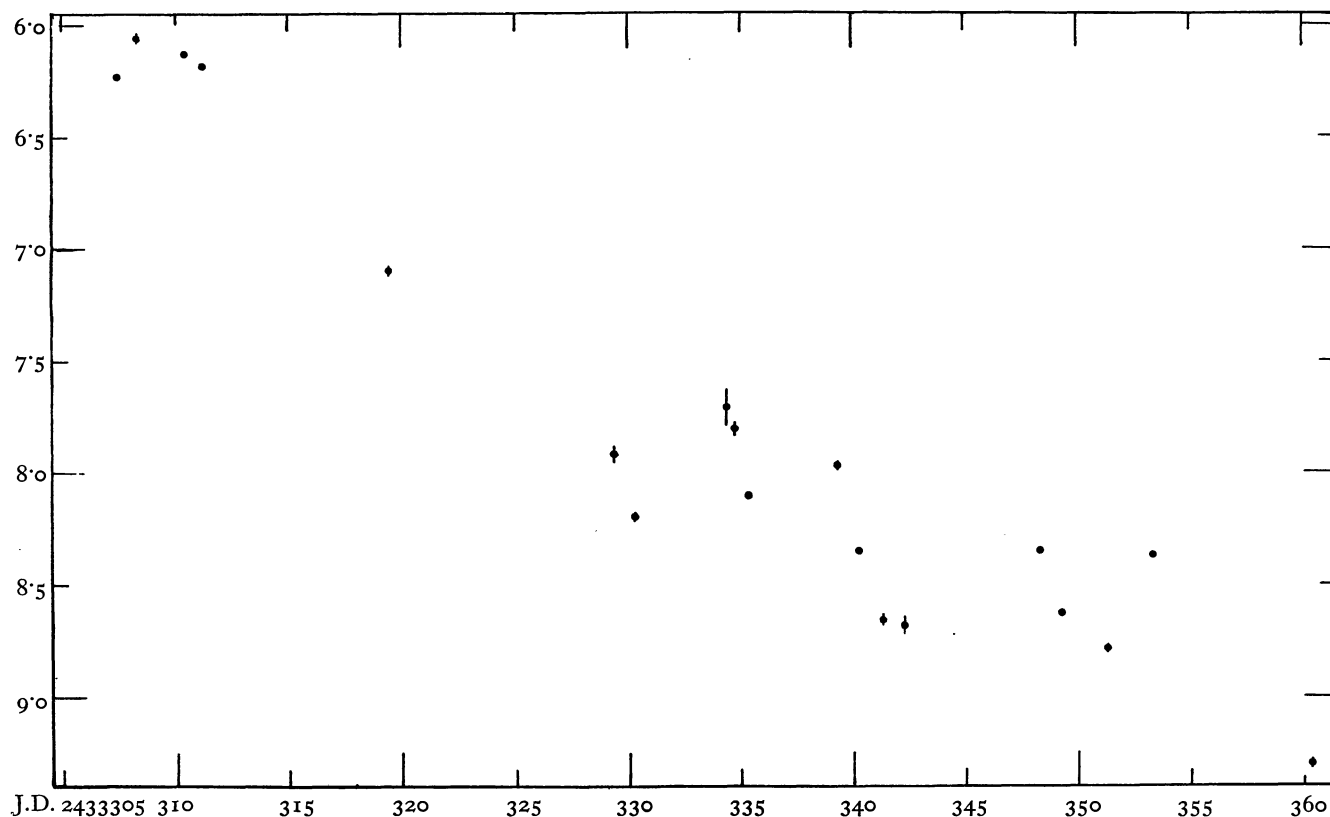
Photographic magnitudes of the Nova and of three comparison stars, observed with a photoelectric photometer, have been derived.

The observations have been carried out with a photoelectric photometer at the Zunderman reflector. Use has been made of two filters which yielded effective wave lengths $\lambda\lambda$ 4200 and 4550. All magnitude differences have been reduced to photographic ones and have been corrected for twice the Potsdam visual

extinction¹⁾. The following comparison stars have been used:

A	HD 215869	AG 7921
B	216057	7935
C	216413	7960

FIGURE 1



These stars have been compared with each other and one, A, has been compared with BD 82°540 and BD 82°572, of which magnitudes are given in the Mount Wilson Polar Catalogue¹⁾. This yielded

$$\begin{aligned} m_A &= 7.04 \pm 0.06 \text{ (m.e.)} \\ m_B - m_A &= -1.07 \pm 0.01 \text{ (m.e.)} \\ m_C - m_A &= +1.44 \pm 0.01 \text{ (m.e.)} \end{aligned}$$

The resulting magnitudes, which have been used further, are given in Table I, as well as the values given in the Henry Draper Catalogue and the Rutherford Zone Catalogue²⁾.

¹⁾ FREDERICK H. SEARES, FRANK E. ROSS and MARY C. JOYNER, "Magnitudes and Colors of Stars North of + 80°", *Carnegie Inst. of Washington Publ.* No. 532, 1941.

²⁾ *Contr. Rutherford Obs.* No. 31, 1938.

TABLE I

Photographic magnitudes of the comparison stars

	HD	Rutherford	Leiden
A	6.77	7.11	7.04
B	6.03	5.87	5.97
C	8.0	8.43	8.48

Table 2 contains the photographic magnitudes of the Nova with their mean error, and the comparison stars used. The mean errors, computed from a few observations only, differ greatly because the observations sometimes had to be made under most unfavourable conditions.

¹⁾ *Publ. Astrophys. Obs. Potsdam* 3, 285, 1883.