



**Universiteit  
Leiden**  
The Netherlands

## **Three new variable stars**

Laustsen, S.

### **Citation**

Laustsen, S. (1957). Three new variable stars. *Bulletin Of The Astronomical Institutes Of The Netherlands*, 13, 338. Retrieved from <https://hdl.handle.net/1887/5979>

Version: Not Applicable (or Unknown)

License: [Leiden University Non-exclusive license](#)

Downloaded from: <https://hdl.handle.net/1887/5979>

**Note:** To cite this publication please use the final published version (if applicable).

## THREE NEW VARIABLE STARS

BY S. LAUSTSEN

During a stay at the Leiden Observatory the writer compared one pair of plates of one of the Leiden variable star fields in the blink microscope. Three of the variable stars discovered proved to be new. Two of them were classified as long-period variables. The equatorial co-ordinates, the periods, the epochs of maximum brightness and the magnitude at maximum are given in Table 1.

TABLE 1

	$\alpha_{1900}$	$\delta_{1900}$	Per.	Max.	$m_{pg}$ (max.)
1	18 <sup>h</sup> 3 <sup>m</sup> 34 <sup>s</sup>	-41° 3'.7	207 <sup>d</sup>	2431314	12.5
2	18 3 51	-42 24.5	249	2431254	12.8

The third variable belongs to the RR Lyr type. Its co-ordinates are:

$$\alpha_{1900} = 18^h 13^m 26^s$$

$$\delta_{1900} = -44^\circ 47'.5$$

The elements are:

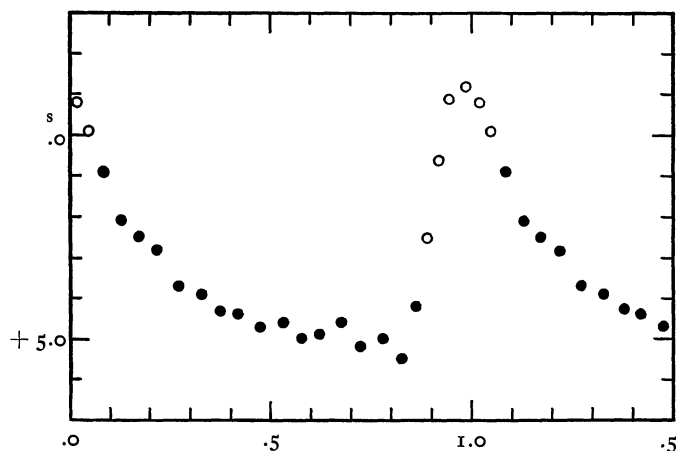
$$\text{Max.} = 2431288^d.353 + {}^d.4265594 E$$

$$\pm 6 \pm 35 \text{ (m.e.)}$$

The individual maxima, the number of epochs elapsed and the residuals ( $O - C$ ) from the ephemeris given above are shown in Table 2. The mean light-curve is shown in Figure 1 and in tabular form in Table 3. The phases were computed with the formula:

$$\text{phase} = 2^{d-1}.3443394 \text{ (J.D. - 2431288.353)}.$$

FIGURE 1



The photographic magnitude at maximum and at minimum is estimated to be 13.5 and 15.1 respectively.

TABLE 2

Max.	$E$	( $O - C$ )
d		d
2429791.551	-3509	-.005
94.518	-3502	-.024
9807.378	-3472	+.039
2430549.515	-1732	-.037
74.309	-1674	+.016
0606.304	-1599	+.019
0998.274	-680	-.019
1001.274	-673	-.005
1203.469	-199	+.001
64.448	-56	-.018
69.579	-44	-.005
85.339	-7	-.028
86.256	-5	+.036
88.354	0	+.001
93.457	+12	-.015
1312.256	+56	+.016
25.454	+87	-.010
26.287	+89	-.030
1560.487	+638	-.011
1672.292	+900	+.036
78.285	+914	-.057
2765.510	+3463	-.018

TABLE 3

$n$	mean phase	mean brightness
6	.020	-.8
6	.048	-.1
12	.086	+.9
18	.128	+2.1
16	.173	+2.5
14	.219	+2.8
12	.273	+3.7
16	.327	+3.9
15	.376	+4.3
16	.420	+4.4
17	.474	+4.7
14	.532	+4.6
16	.577	+5.0
15	.622	+4.9
12	.675	+4.6
13	.723	+5.2
15	.777	+5.0
17	.824	+5.5
12	.863	+4.2
6	.890	+2.5
7	.919	+.6
7	.946	-.9
7	.985	-1.2