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SEARCH FOR AN ECLIPSE OF HR 913

The star HR 913 was discovered by R.F. Griffin (1980) to be a double-lined spectroscopic binary with a period of 363.10 days. Griffin gives the spectral types of the components to be F8 V and G5 V. He predicts the possibility of an eclipse on 1980 September 30.8 (JD 2444513.3) with an uncertainty of 0.5 days. The duration of a central eclipse would also be about half a day.

The author searched for the eclipse on four nights with the No. 4 16-inch telescope at Kitt Peak National Observatory. Differential V and B photometric observations were obtained using ρ^1 Eri as a comparison star. The observations were corrected for differential atmospheric extinction and transformed to the standard UBV system. The observations are shown in the Table below.

TABLE

| Hel. J.D. (2 440 000 +) | ΔV | ΔB |
|----------------------------|------------|------------|
| 4510.9288 | 0.443 | -0.007 |
| 4510.9329 | 0.441 | -0.006 |
| 4510.9370 | 0.438 | -0.008 |
| 4511.8762 | 0.442 | |
| 4511.8793 | 0.436 | |
| 4512.8284 | 0.442 | |
| 4512.9340 | 0.446 | |
| 4513.7986 | 0.439 | |
| 4513.9442 | 0.443 | |
| 4513.9544 | 0.447 | 0.002 |
| 4513.9592 | 0.447 | 0.000 |
| 4513.9937 | 0.439 | -0.005 |

The data bracket the predicted time of eclipse and show no evidence of an eclipse. However, a 0.5 day eclipse very close to the

predicted time would have occurred entirely between the last observation obtained on JD 2444512 and the first observation on JD 2444513 and, hence, would not have been observable from the longitude of Kitt Peak.

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Reference:

Griffin, R.F., 1980, The Observatory 100,113

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