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HD 190155 \equiv V1359 Aql: not a Cepheid variable*

The variability of HD 190155 was discovered by Henden (1980), who used it as comparison star for V765 Aql. He reported 8 *UBV* measurements spanning 136 days and concluded that "it probably is not a cepheid because the colours are constant with *V* magnitude variation". In spite of this the *General Catalogue of Variable Stars* classified HD 190155 as a suspected *s*-Cepheid variable, also giving a period of 3.7317 d. This period corresponds to one of the higher peaks, but not the highest, in the power spectrum obtained by analyzing Henden's measurements. Owing to the paucity of the data, this result must be taken with a great deal of prudence. As a variable star HD 190155 was named V1359 Aql.

To solve the matter, we photoelectrically observed HD 190155 with the ESO 50 cm in September and October 1991. The *V* observations were performed with a single channel photometer and an EMI 9789QB photomultiplier. HD 189923 (7.3, G5) was used as comparison star and HD 190157 (8.5, G5) as check star; a faint companion is visible a few arcseconds north to HD 189923. The measurement cycle ...-C-V-CK-C-... was repeated at least 4 times and the average of the differential magnitudes relative to HD 189923 were calculated. The normal points so obtained are listed in the table; ΔV 's are in the sense "Star minus HD 189923" and have a typical internal standard deviation of about 0.004 mag.

In our measurements of HD 190155 there is no indication of a light variability as large as that reported by Henden. The star brightness did not vary more than 0.02 mag over the 35 days covered by our survey; however, the rms scatter of the normal points is 0.007 mag, about twice the corresponding value in the HD 190157 measurements. In order to prevent a possible misidentification, HD 190156 was inserted in the observing cycle, being located only 3' south to HD 190155, but its brightness was found to be constant.

Taking into account that the variability of HD 190155 is evident in Henden's mea-

* Based on observations collected at European Southern Observatory, La Silla, Chile

Table I

Hel. J. D.	HD 190155	HD 190157	HD 190156
2448503.516	0.717	0.548	
8505.492	0.724	0.552	
.634	0.727	0.554	
.754	0.725	0.547	
8506.490	0.720	0.548	
.662	0.732	0.555	
8507.489	0.728	0.553	
8508.491	0.734	0.562	
8511.491	0.732	0.558	
8512.517	0.731	0.556	
8513.502	0.735	0.556	1.902
8517.496	0.738	0.551	1.903
8518.495	0.732		1.903
8519.495	0.729		
8530.498	0.736	0.552	1.904
8532.506	0.727	0.551	1.905
8533.493	0.731	0.548	1.906
8538.494	0.712	0.551	

surements (the peak-to-peak amplitude is 0.19 mag), we can only conclude that the star is not a periodic variable. Its G5 spectrum suggests that it can be a spotted star; these objects often go through low-level activity phases in which the light variability is hardly detectable. Owing to the very small scatter in our magnitudes the hypothesis of a semiregular variable is much less probable.

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Reference

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