

PERIODS FOR FIVE SAGITTARIUS VARIABLES

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Abstract

Updated periods are given for V1652, 1659, and 1660 Sgr and new periods for two previously unpublished variables in Sagittarius. Finder charts are provided.

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While working as an undergraduate research participant under the direction of Dr. Dorrit Hoffleit, during the summer of 1977, I examined five variable stars in the region of λ Sagittarii. Three of these were previously known long period variables listed in the General Catalogue of Variable Stars, with periods based on Harvard plates for the years 1924 through 1953. The other two stars were discovered by Joan Lukas in 1974. All five variables are listed in Table 1, and Figure 1 gives finder charts.

After re-examining the published periods for the first three stars on Nantucket plates taken from 1957 through 1977, I determined that there had been no significant change in their periods.

The second new variable listed is semi-regular with a period of approximately 89.8 days. Figure 2 illustrates two sections of observations, for JD 2436000 to 2437000 and 2442000 to 2443000.

I would like to thank Dr. Hoffleit for her assistance in my research this summer.

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TABLE I
 Five Sagittarius Variables

STAR Sgr	POSITION 1900		MAGNITUDE (pg)		GCVS PERIOD (days)	NEW PERIOD (days)	EPOCH (JD2400000+)	CHART
	RA	DEC	Max	Min				
V1652	18 ^h 15 ^m 53 ^s	-26 ^o 41'.7	13 ^m .6	16 ^m	218	218	37816	1
V1659	18 20 06	-22 30.7	13.9	16.1	197	197	38607	2
V1660	18 20 20	-26 36.4	13.2	15.6	340	340	40750	3
1=V941*	18 28 21	-29 39.0	12.5	14.2	---	203	40028	4
2	18 37 07	-29 54	12.0	14.2	---	89.8	42684	5

*[Note added.] After Miss Wolfson completed her summer internship at the Maria Mitchell Observatory, I ascertained that this variable is V941 Sgr, discovered by Innes (Union Obs. Circular No. 37, p. 302, No. 27, 1917), who assumed it to be a nova. His published observations for 1910-1916 are entirely consistent with the ephemeris determined by Miss Wolfson. The star is also No. 4 in Area 5 of the list given by S.W. McCuskey and R. Melhorn (Astron. Journ. 68, 319, 1963) of M-Type stars near the galactic center, where its type is given as M7.

D. Hoffleit

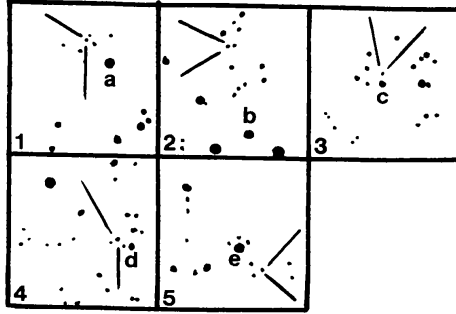


Figure 1. Finder charts, approximately 10' x 10', South at top.
 1- V1652 Sgr, a=CoD -26°13079 4- 1, d=CoD -29°15111
 2- V1659 Sgr, b=BD -21°5020 5- 2, e=CoD -29°15263
 3- V1660 Sgr, c=CoD -26°13164

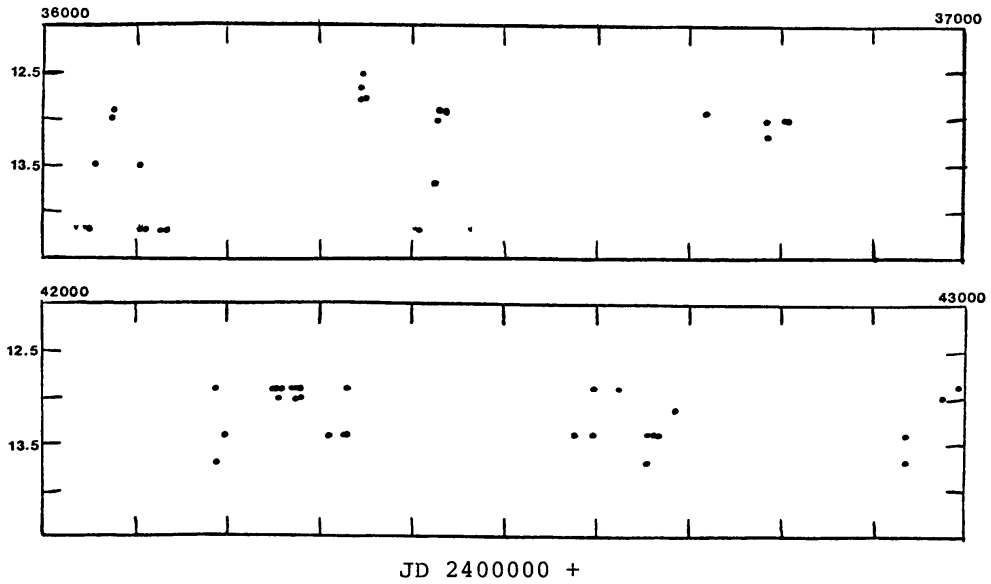


Figure 2. Observations for the second new variable, for JD 2436000 to 2437000 and JD 2442000 to 2443000.