LETTERS TO THE EDITOR

A NEW WOLF-RAYET SPECTROSCOPIC BINARY*

The prevalence of binary nature among Wolf-Rayet stars is a curious phenomenon but one that has contributed toward an understanding of these peculiar stars. However, a model for these stars still remains obscure. Although the presently known Wolf-Rayet binaries (especially the eclipsing ones) are still inadequately observed, the discovery of still other binaries in which one component is a Wolf-Rayet may lead to new information. Upon inspecting the illustration of the spectra of three newly discovered Wolf-Rayet stars in Cygnus by Herbig and Mendoza (1960) it was obvious that their Wolf-Rayet star No. 2—No. 1 in the illustration; No. 422 in Merrill and Burwell (1950)—may well be a binary because of the relatively strong continuum in its spectrum. Consequently, a series of nineteen spectrograms was obtained with the *Gf*/1 Cassegrain spectrograph of the McDonald Observatory. This combination gives a dispersion of 200 A/mm at He II 4686. Only the above line, which is 25 A wide, was measured for radial velocity. The observations are recorded in Table 1. The first column refers to the spectrogram numbers in the McDonald spectroscopic observing book. The second and third columns record the date and U.T. of the observations. The last column gives the radial velocity. The velocities are given relative to the first in the series, that is, 15234. These velocities are plotted in Figure 1. It is quite obvious that the radial velocity is variable with a semiamplitude of 150 km/sec. However, the period is not uniquely defined. Periods of approximately 45 days, 22 days, and two near 1 day will all satisfy the obser-

TABLE 1

RADIAL VELOCITY OBSERVATIONS

No.	Date	UT	V km/sec
15234.....	1960, May 6	8:30	C+0
15235.....	May 6	10:21	C+50
15239.....	May 7	8:46	C−50
15240.....	May 7	10:21	C−25
15245.....	May 8	9:55	C−25
15248.....	May 9	7:32	C−25
15257.....	May 11	7:41	C−190
15260.....	May 12	7:10	C−165
15264.....	May 13	7:26	C−270
15267.....	May 14	6:55	C−165
15269.....	May 14	10:08	C−220
15275.....	May 17	7:10	C−220
15277.....	May 17	10:40	C−205
15281.....	June 6	6:50	C−295
15283.....	June 8	6:42	C−295
15298.....	June 16	7:28	C+50
15301.....	June 17	7:30	C+65
15302.....	June 17	8:37	C+15
15303.....	June 17	9:44	C+0

* *Contributions from the McDonald Observatory, University of Texas*, No. 328.