

phases could have been observed, were for the most part cloudy. The star is still available at time of writing, but it is felt that observations now would not add any special weight to the determination.

As the spectral lines have been resolved over such a limited portion of the orbit, it is hoped that when the large reflector at Victoria is ready for use, additional observations, using greater dispersion, will be secured and the orbit determined with greater precision. For this reason the present determination is considered only a preliminary one. On 28, out of the total of 49 plates secured, the spectra are separated, and these 28 measures of the primary, together with 2 plates where the spectra must be nearly superposed, are used in the determination. The spectrum of the secondary component is so poorly defined that only 13 measures of it have been accepted as at all trustworthy. In some cases only a single line is used. These 13 measures, duly weighted, have been combined with the 30 just mentioned in the solution. All the plates have been made on Seed 27 emulsion with spectrograph P whose dispersion is 32.3 Å per millimetre at the minimum deviation, λ 4325.

The following table gives the wave-lengths which were used for the lines measured. They were adopted from a star of similar type, 14 Aurigæ, and have not been revised for this star. The number of times measured on 28 plates with the residuals for each line from the mean of the plate is also shown. After this table the detailed measures of the plates are given.

TABLE OF WAVE-LENGTHS

λ	n	Mean Numerical Residual	Mean Algebraic Residual	λ	n	Mean Numerical Residual	Mean Algebraic Residual
4572.190	1		+10.3	4236.000	5	6.9	+5.3
4549.743	8	10.4	-1.9	4233.125	11	13.6	+1.4
4481.477	26	7.7	-0.3	4202.366	1		-5.1
4415.345	1		+3.3	4143.839	3	15.7	+6.5
4404.861	2	15.8	9.2	4101.898	6	6.7	-5.9
4340.645	14	9.2	0.1	4077.862	1		+2.3
4325.698	3	9.5	0.0	4071.865	7	4.8	-1.4
4307.974	5	15.3	+9.3	4063.730	3	2.9	+2.9
4271.675	6	8.7	-2.6	4045.940	8	10.7	+1.1
4260.537	1		-19.0	3933.825	14	6.9	-3.8