

indications also of a secondary spectrum in the iron lines λ 4549, λ 4325 and λ 4260. In the third plate only λ 4308 was measurable. No trace of a doubling of the K line was found on any of our plates.

The lines measured were as follows :

Elements	Wave-Length	No. of Times Measured
<i>Hβ</i>	4861.527	12
<i>Fe</i>	4549.766	46
<i>Mg</i>	4481.400	69
<i>Hγ</i>	4340.934	58
<i>Fe</i>	4325.039	5
<i>Fe</i>	4233.328	7
<i>Si</i>	4128.211	9
<i>Hδ</i>	4101.890	33
<i>Ca</i> (K)	3933.825	39

The hydrogen lines with the exception of *H γ* are broad and diffuse. The *Mg*, λ 4481 is the best line in the spectrum and was measured on every plate as will be seen in the table above. Metallic lines other than *Mg*, λ 4481, *Fe*, λ 4549 and K do not occur frequently. As different lines on the same plate in many cases gave widely differing velocities the determination of the period offered some difficulty. Several such plates were re-measured or checked by other observers, and the resulting means taken. These measures were usually in fair agreement. From the consideration of the velocities of the *Mg*, line alone the period was found to be between fifteen and sixteen days. Several trials using the velocities of whole plates gave 15.84 days as the most satisfactory period.

Following is a table of observations with data of each plate :