

made on each plate. In the $\lambda 4250$ region, two spectra each of the latitudes 0° , 30° , 60° , and one at 90° were made on each plate. If any of the plates showed a greater displacement in the spectrum at the pole than about .03 km., they were rejected on the assumption that some instrumental displacement had occurred, and that possibly the other latitudes were affected.

9. The plates of series I and III were measured by Plaskett on the Repsold Measuring Engine with an eyepiece micrometer, while those of series II were measured by DeLury on the Toeffer Measuring Machine with 300 mm. screw. The lines measured in series I and II at $\lambda 5600$ and in series III at $\lambda 4250$ are given with intensities, velocity, constants, etc., in the following tables. Four settings are made on the line in the centre strip and two each on the outside strips, and after measurement of all the lines the plate is reversed on the machine and remeasured. This diminishes the danger of systematic errors and also, as the lines are viewed in the opposite direction in the two cases and the number of settings doubled, the accidental errors.

TABLE I.—LINES IN $\lambda 5600$ REGION

No.	Wave Length	Ele.	Int.	Velocity Constant	No.	Wave Length	Ele.	Int.	Velocity Constant
1	5506.095	Mn	1	19.336	11	5598.524	Fe	1	18.801
2	5514.563	Ti	2	19.289	12	5601.505	Ca	3	18.788
3	5514.753	Ti	2	19.287	13	5624.769	Fe	3	18.653
4	5528.641	Mg	8	19.207	14	5638.488	Fe	3	18.575
5	5544.157	Fe	2	19.118	15	5658.097	Y	2	18.461
6	5560.434	Fe	2	19.024	16	5682.869	Na	5	18.320
7	5562.933	Fe	2	19.010	17	5684.710	Si	3	18.309
8	5578.946	Ni	1	18.919	18	5686.757	Fe	3	18.297
9	5582.198	Ca	4	18.899	19	5688.436	Na	6	18.288
10	5590.343	Ca	3	18.852					

TABLE II.—LINES IN $\lambda 4250$ REGION

No.	Wave Length	Ele.	Int.	Velocity Constant	No.	Wave Length	Ele.	Int.	Velocity Constant
1	4196.699	La	2	26.906	9	4257.815	Mn	2	26.400
2	4197.257	C	2	26.902	10	4258.477	Fe	2	26.394
3	4216.136	C	1	26.745	11	4266.081	Mn	2	26.331
4	4220.509	Fe	3	26.710	12	4268.915	Fe	2	26.296
5	4225.619	Fe	3	26.666	13	4276.836	Zr	2	26.243
6	4232.887	Fe	2	26.606	14	4290.377	Ti	2	26.133
7	4241.285	Fe-Zr	2	26.502	15	4291.630	Fe	2	26.122
8	4246.996	Sc	5	26.490					