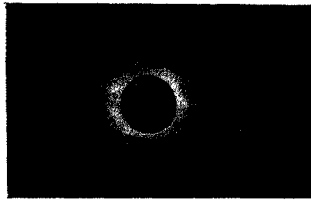


No. 5.

ECLIPSE, August 21st, 1914.



No. 7.

ECLIPSE, August 21st, 1914.

## Note on the Total Eclipse of the Sun of August 1914.

NOTE BY R. C. SLATER, ESQ., F.R.A.S.

I AM enclosing two lantern slides of the Corona. I took the photographs at Strömsund, Sweden, No. 5 with an exposure of  $\frac{1}{2}$  sec. and No. 7 with  $2\frac{1}{2}$  sec. on Isolar plates. These are slow plates, but they show a fair amount of Corona. On No. 7 you can pick out Regulus with a magnifying glass E. of the Sun. I unfortunately sent my instruments to Riga, but the outbreak of the war prevented my getting there, and as I only had the lens with me the rest of the apparatus I had to make after arriving at Strömsund with a minimum of tools and from very soft green wood. I had to focus 2 or 3 days before the eclipse, and the wood warped so that the focus is not good. The lens was 4" in diameter, but of poor quality, and as I had no means of following the Sun, and no slow motions, I am surprised that the definition is as good as it is. I took altogether 4 photographs with this lens, and 4 with an ordinary camera I had with me. The latter are on a very small scale, but show some details, and would have been sufficient to demonstrate the type of the Corona if no others had been available.

The weather conditions on the day were excellent, but on every other day that we were there the sky was overcast at eclipse time.

If you think these would be of any interest to the Astronomical Society of India I shall be very pleased if you will make use of them.

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NOTE BY H. G. TOMKINS, ESQ., C.I.E., F.R.A.S.

I HAVE been so fortunate as to obtain for the Astronomical Society of India two views of this eclipse taken by Mr. R. C. Slater, F.R.A.S., who was one of the few fortunate observers to see the eclipse. Mr. Slater has most kindly sent me two slides for the Society in India as well as a very interesting letter showing when and how they were taken.

The eclipse was total for about 2 minutes more or less according to the place of observation. The line of totality ran through Norway and Sweden, across the Baltic, Russia to the Black Sea, and thence across Persia to the coast upon the Indian Ocean to a point just west of Guzerat (India). India, therefore, just missed being on the line of

totality. Elaborate preparations were made by scientists all over the world to view the eclipse and points on the line of totality were selected all along the line from Norway to the Black Sea. Most of the parties had started on their journeys to these stations and their instruments were on the way when a difficulty, which they certainly had not calculated on, occurred. War broke out on the 4th August 1914 just 17 days before the eclipse. The risk of bad weather had been carefully examined and allowed for by choosing the best places available. The unexpected happened, and just as every one was on the move to their stations for observation, the mobilization began and caught the scientists in its meshes. Several of the English Astronomers, who were soldiers, had their thoughts transferred by telegram from science to war, and went Home again to duty by the shortest routes. Others whose presence was not so necessary in England or their own countries, stayed on. The German party, if report says true, were taken prisoners by the Russians and their instruments confiscated! War put an almost complete stop to many of the observations. We are therefore extremely fortunate in having obtained the slides, so kindly given us by Mr. Slater as well as his letter. Although he did not get his instruments for use at the eclipse, he was not altogether denied the object of his visit to Sweden, and he was probably rather glad he had selected that country to go to for the purpose. Some of the parties in Russia were successful and an interesting account of the one at Minsk will be found in the *Observatory* for October 1914.

The Corona was of the intermediate type—that is to say there were no long streamers. The Corona was very bright. No shadow bands appear to have been seen.

I attach Mr. Slater's letter which give interesting details of his observations.

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## The Nebulæ and their Relation to Cosmic Evolution.

BY THE REV. A. C. RIDSDALE, M.A., F.R.A.S., F.R. MET. SOC., M. LOND. MATH. S., F.P.H.S., A.L.C.M., FOREIGN MEMBER OF SOCIÉTÉ ASTRONOMIQUE DE FRANCE.

THE Nebulæ are masses of shining diffused matter, shreds and balls of cloudy stuff distributed here and there throughout the immensities of space. The most notable of the Astronomers who have given special attention to the discovery and study of these celestial objects are Messier, the two