

THE ROYAL ASTRONOMICAL SOCIETY OF LONDON.

THIS society, the most important astronomical organization in existence holding frequent meetings, had its anniversary session on Feb. 13, on which occasion the principal event was the presentation of the gold medal to Dr. William Huggins for his spectroscopic researches, as already announced. The 'Monthly notice' which gives account of this meeting is usually the most interesting number for the year, and the present issue is not disappointing in this regard. The society, which was organized about the year 1820, is possessed of a good degree of wealth, aggregating considerably more than a hundred thousand dollars, of which about seventy thousand are pecuniarily remunerative. Not a small amount of the society's property is in the shape of astronomical and other instruments of precision, a catalogue of which is regularly published, and embraces this year a list of a hundred and twenty-one entries. The publications of the society have now reached the forty-fifth volume of 'Monthly notices,' and of the 'Memoirs' the forty-eighth. The second part of this latter volume is now in press, and is announced to contain Mr. Seabroke's fourth catalogue of micrometric measures of double stars, Professor Pritchard's determination of the relative proper motion of forty stars in the Pleiades, Mr. Knobel's observations of Mars in 1884, and two memoirs relative to the moon, — the one by Mr. Neison on the corrections required by Hansen's 'Tables,' and the other by Gogou on an inequality of long-period in its motion.

The council of the society record the loss by death, during the year, of fifteen fellows and one associate: an exceptional number of these are men of wide reputation, and the obituary records are exceptionally well written. We note only Henry George Bohn, John Henry Dallmeyer, Isaac Todhunter, Francis Diedrich Wackerbarth, Ernst Friedrich Wilhelm Klinkerfues, Marian Kowalski, and Johann Friedrich Julius Schmidt. In general, the 'Proceedings of observatories' are not more interesting than formerly; and, of the twenty-one institutions reported, a small number appear to be gradually fossilizing, while at two or three an extraordinary degree of activity is evinced. American astronomers will find slender cause for complaining at the council's "Notes on some points connected with the progress of astronomy during the past year;" for about one-half of the section of twenty-seven pages devoted to this history is occupied with the work of Americans in the advancement of this science. The important 'points' commented upon are Professor Newcomb's researches in mathematical astronomy, Professor Safford's investigation of Greenwich planetary observations, star catalogues by Dr. Gould and Dr. Grant, Dr. Backlund's investigation of the motion of Encke's comet, Dembowsky's measures of double stars, Professor Pickering's work with the meridian photometer, Dr. Huggins's photography of the solar corona without an eclipse, Professor Langley's researches in

atmospheric absorption, and the conclusions of the International prime-meridian conference.

At the conclusion of the anniversary meeting, Mr. Edwin Dunkin was re-elected president of the society; and Professor Adams, Professor Cayley, Dr. De la Rue, and Mr. Stone were elected vice-presidents.

JAMES CLERK MAXWELL.

THIS abridged volume will be welcomed with great pleasure by all who have enjoyed the larger work, for it puts into one's hands a *vade mecum*. The life of Maxwell is worth pondering upon; and it is a peculiarity of all that he has ever written upon science, that some minds can draw inexhaustible nourishment from his essays and letters. Many will miss portions of the larger volume; but, in return for what has been omitted, the editors have given three important letters from Clerk Maxwell to Faraday, and one of Faraday's to him. The volume also contains letters to Dr. Huggins on the structure of comets. His letter to Faraday, upon the latter's idea of lines of force, shows clearly how strongly the new conception had taken possession of his mind. In this letter he says, —

"You have also seen that the great mystery is, not how like bodies repel and unlike attract, but how like bodies attract by gravitation. But if you can get over that difficulty, either by making gravity the residual of the two electricities or by simply admitting it, then your lines of force can 'weave a web across the sky,' and lead the stars in their courses, without any necessarily immediate connection with the objects of their attraction."

It is highly interesting to read the letters which passed between these distinguished men. It was perfectly natural for Maxwell to express his physical ideas in mathematical language; while Faraday, unversed in mathematics, could nevertheless express his conclusions in a logical shape, which were the translations into ordinary language of the results of Maxwell's equations. In one place Faraday writes, —

"There is one thing I would be glad to ask you. When a mathematician, engaged in investigating physical actions and results, has arrived at his conclusions, may they not be expressed in common language as fully, clearly, and definitely as in mathematical formulæ? If so, would it not be a great boon to such as I, to express them so, translating them out of their hieroglyphics, that we also might work upon them by experiment?"

The life of James Clerk Maxwell; with selections from his correspondence and occasional writings. By LEWIS CAMPBELL, M.A., LL.D., and WILLIAM GARNETT, M.A. New edition, abridged and revised. London, Macmillan, 1884. 16+421 p. 8°.