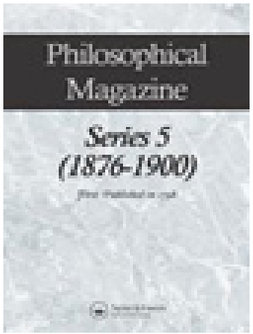

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XXXI. Intelligence and miscellaneous articles

Prof. K. Prytz

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Parallactic Equality, subjects which are not sufficiently developed in Astronomical treatises. The author clearly explains some points in these lunar irregularities which the student may find a difficulty in thoroughly understanding, and clears up some *apparent* paradoxes with which the subject is beset.

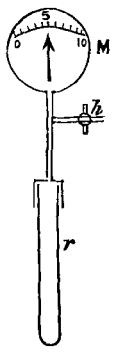
On the whole, this little work will be found of great assistance to students of mathematical astronomy, and we can strongly recommend it to their attention. J. E. GORE.

XXXI. *Intelligence and Miscellaneous Articles.*

AN EXPERIMENT WITH SOLID CARBONIC ACID.

BY PROF. K. PRYTZ.

INCITED by the interesting account by Prof. Bleekrode (Phil. Mag. xxxviii. pp. 81–89, 1894) of his experiments with solid carbonic acid, I wish to describe an experiment which I have made. A quantity of solid carbonic acid being compressed in a wooden cylinder, I cut the block of the substance in pieces small enough to be put into a stout glass tube r 1·5 centim. wide. When the tube was filled with the pieces of carbonic acid, it was connected with a manometer M, the cock h being open. On closing the cock the index of the manometer rises slowly until the pressure is as much as 5 atm. The index then stands completely still for a tolerably long time; at the same time we see pieces of carbonic acid sink down on melting: only when the whole is melted, and consequently fills the bottom of the tube, does the index suddenly rise again, and now *much faster than before.*



When the index has reached 10 atm. the cock is opened a little: the melted carbonic acid then evaporates quickly, the pressure diminishes, the index goes back to 5 atm.: there it suddenly stops again, and is stationary until the carbonic acid is again solid, whereupon it slowly goes back to 1 atm.

The experiment is very instructive. It shows better than any other that I know of the fixity and the identity of the melting and solidifying points: it shows that solid carbonic acid only melts under pressure, and it indicates the great difference between the solid and the liquid carbonic acid in respect of conductivity for heat.

I usually place the glass tube in water; the transparent ice crust then formed shows the cold inside the tube.

The Physical Laboratory of the
Polytechnical School at Copenhagen.