

also by all other causes tending to the more rapid communication of heat. This is still more apparent when the coloured rings are formed in a thin plate of water interposed between the lenses, and where the effects are independent of radiation.

6. "Analysis of the Moira Brine Spring near Ashby-de-la-Zouch, Leicestershire, with Researches on the Extraction of Bromine." By Andrew Ure, M.D., F.R.S.

The water derived from the spring in question is raised by means of a pump from the coal mines in the neighbourhood of Ashby-de-la-Zouch, is much used as medicinal baths, and is also administered internally, principally as a remedy for bronchocele and scrofulous tumors. The result of the analysis made by the author, is that it contains per gallon,

Bromide of sodium and magnesium .....	grs. 8
Chloride of calcium .....	851.2
————— magnesium .....	16
————— sodium .....	3700.5
Protoxide of iron, a trace	

Solid contents ..... 4575.7

After removing from the water the deliquescent chlorides of lime and magnesia by the addition of carbonate of soda, he transmits through the mother liquor, consisting of chloride and bromide of sodium, a current of chlorine gas, till it communicates the maximum golden tint, and then adds sulphuric æther, which, by agitation, carries with it to the surface the bromine and chlorine, constituting a reddish yellow stratum. The proportion in which these two elements exist in the evaporated solution may be ascertained with the greatest nicety by the addition of a solution of nitrate of silver; the method of calculation for this purpose being detailed by the author.

7. "On the Nature and Origin of the Aurora Borealis." By the Rev. George Fisher, M.A., F.R.S.

The author deduces from his own observations made during a residence of two winters in high northern latitudes, taken in conjunction with the concurring testimony of various navigators and travellers, the general fact that the Aurora Borealis is developed chiefly at the edge of the Frozen Sea, or wherever there is a vast accumulation of ice; and he conceives that it is produced in situations where the vapours of a humid atmosphere are undergoing rapid congelation. Under these circumstances, when viewed from a distance, it is seen fringing the upper border of the dark clouds, termed the "sea blink," which collect over these places; and it generally forms an arch a few degrees above the horizon, shooting out vertical columns of pale yellow light. He concludes that the Aurora Borealis is an electrical phenomenon, arising from the positive electricity of the atmosphere, developed by the rapid condensation of the vapour in the act of freezing, and the induced negative electricity of the surrounding portions of the atmosphere; and that it is the immediate consequence