

Visual observations of three of the more prominent lines in the yellow and green are also given:—

Intensity	Observed λ	Remarks	Intensity	Observed λ	Remarks
5	5721	(Visual)	15	4350.3	
8	5583	(R. & C. 5723)	7	4340.9	H=4340.66
3	5393	"	4	4225.8	
4	5084.5	"	10	4203.7	
4	4979.0	R. & C. 4985	7	4188.2	
10	4801.3	H=4461.49	20	4166.6	
4	4817.2	"	10	4114.9	
5	4721.5	"	2	4102.2	H=4101.85
10	4681.1	R. & C. 4690	4	4045.4	
10	4644.7	R. & C. 4650	15	4013.0	
8	4623.8	K. & C. 4630	12	3932.0	
7	4609.9	"	7	3957.3	
4	4604.7	"	4	3917.5	
7	4578.7	"	—	3888.9	H=3889.15
9	4509.0	"	6	3867.6	
10	4460.0	"	10	353.6	
8	4435.7	"	7	3739.9	
6	4391.8	"	10	3664.6	
4	4372.1	"	5	3622.2	

A more detailed list of lines will be published later. We understand that Sir William Ramsay showed a photograph of the spectrum of the emanation at the meeting of the Royal Society on June 25. It will be of interest to compare the two spectra.

E. RUTHERFORD.
T. ROYDS.

University, Manchester, July 4.

The Recent Nocturnal Glows.

THE peculiar light phenomenon at midnight on June 30, which was seen, according to the papers, on the northern part of the sky at Copenhagen, Königsberg, Berlin, Vienna, Biala, and other places, was also observed by me at Prague. At 1h. 30m. a.m. on July 1, I saw in the direction N.E. and N.N.E. a peculiar strong orange-yellow light over the horizon, the colour of which was more orange in its lower parts and more yellow in its higher parts. Its upper limit was lying twenty to thirty degrees above the horizon. The whole sky was cloudless. Other people saw it here at 11 p.m. on June 30.

It is reported that magnetic disturbances were experienced on the telegraphic lines, but I saw no trace of the characteristic auroral bands or columns. I may be allowed to add that, according to Arrhenius, this time of the year corresponds to the minimum of auroral display (activity). Interesting is the fact that a high barometric maximum was lying in the north, and that we had winds from that direction for a whole week.

BOHUSLAV BRAUNER.

Bohemian University, Prague, July 4.

A Long-lived Solar Halo.

THERE has been visible here to-day a solar halo remarkable both for its vivid intensity and for its protracted duration. It was first noticed by me at 12.35 p.m. It then formed an unbroken ring, of which the most intensely luminous portion was to the south of the sun, and the least luminous portion to the west-north-west. Half an hour later the southern and northern quadrants of the circle were equally bright, but the northern appeared the more compact and definite; meanwhile, the eastern and western portions continued comparatively feeble, more especially the latter. *These conditions remained unchanged for fully 1½ hours!* After 2.15 p.m. the northern segment of the halo was alone conspicuous, and after 3.30 p.m. the ring was never again complete, though two mock suns (to the southward and eastward respectively) still testified to the original configuration. By 4.50 p.m. nothing remained but a diffused, pale rainbow-coloured mock-sun to the north of the sun; but after 5.15 p.m. this became less indefinite, and by 6 p.m. fully a semicircle of a halo was again traceable above the sun, but this faded gradually, nothing surviving after about 6.20 p.m. The unusually strong tone of rusty orange colouring, and the conspicuous darkness of the region enclosed, made the halo an unusually striking object when at its best (12.30 to 2 p.m.).

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Throughout the day cirrus cloud has strewn the sky in most interesting disorder and variety of forms. Telescopic observation of the sun's image showed (in the features of atmospheric distortion of the sun's limb) the existence of two distinct drifts of the atmosphere, viz. an upper current, of great velocity, passing over from the south-east above the drift from north-north-east that alone affected the local weather-cocks and chimneys' smoke. I may add that my experience as an observer of halos (both solar and lunar) has led me to the conclusion that cirrus clouds, or the conditions conducive to the formation of cirrus cloud, do not in themselves constitute the whole cause of the formation of halos, but that these are further the outcome of cross-currents in the region of cirrus formation.

CATHARINE O. STEVENS.

10 Woodstock Road, Oxford, June 30.

P.S.—Portions of solar halos were also seen here intermittently during July 1 and 2, thus giving a record of three successive days of halo formation.

Genial June.

THE month just past has fully upheld its character, as it did in the Jubilee year, 1887, and on other occasions.

There were a great number of dates suitable for observation (sixteen out of the last seventeen), but I found shooting stars rare.

The nights before June 29 were, I thought, unusually dark, the stars and Milky Way being beautifully bright and distinct; but on June 30 the firmament was abnormally luminous, with a very strong glow all over the north at midnight. Few stars could be seen, and the Milky Way was hardly distinguishable. On July 1 the phenomena of the previous night were repeated in rather a different aspect. There were many clouds of various tints, and the light was again intensely strong, the northern sky being involved in a brilliant aurora. I have never seen June nights so dark, and the Milky Way so gorgeously displayed in the heavens, as this year to June 28, nor have I ever noticed the sky so bright as it appeared on the nights of June 30 and July 1.

The aurora offered so vivid a spectacle that on the dates mentioned the shades of night may be said to have been quite dispersed, for even at midnight the reflected light from sky and cloud was so strong that terrestrial objects could be seen just as at dusk, say at about 10 p.m. on an ordinary June night.

W. F. DENNING.

Bristol, July 2.

THE DARWIN-WALLACE JUBILEE CELEBRATION AT THE LINNEAN SOCIETY.

ON July 1, 1858, Sir Charles Lyell and Dr. J. D. Hooker communicated to the Linnean Society a remarkable paper entitled "On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection," by Mr. Charles Darwin and Mr. Alfred Wallace. The history of this paper is familiar to every student of biology. Darwin had for many years been studying the question of natural selection and its bearing upon the origin of species, but, although his views were well known to several intimate friends, he had refrained from publishing them, and was still occupied in the collection of evidence when he received from Wallace a manuscript essay "On the Tendency of Varieties to Depart indefinitely from the Original Type," in which the same ideas were set forth. At the request of the author this manuscript, after perusal, was forwarded by Darwin to Sir Charles Lyell, with the added suggestion that the essay should be published as soon as possible. After consultation with Hooker, Darwin was induced to allow an extract from his own work on the subject to be published simultaneously.

The reading of this joint paper at the Linnean Society formed the starting point of a revolution in scientific thought the effect of which it would