

rapidity from the North-west towards the East. The pale streamers were apparently accompanied by dark coloured or rather black waving streamers. At the base of the auroral field—for arch it could scarcely be termed—a dense, long, and very narrow black cloud formed rapidly: the shortest diameter of the cloud was about 10 degrees; it was also removed about 10 degrees from the horizon, and beneath it the stars were plainly visible. When the cloud was fully developed it served as a base, from which a constant succession of long, and unusually broad, pale and black (?) streamers arose. The progress of the Aurora was from North-west to East. The streamers did not appear, in their upward ascent, to converge. Of a sudden, the Eastern portion of the auroral field seemed to be bent back upon itself, and thus, apparently, partially folded, with one part rather lower than the other, the very magnificent spectacle of a nearly circular crown, quite illuminated the North-eastern horizon for the space of two minutes. The time this beautiful phenomenon occurred was about $\frac{1}{4}$ past 3 a. m. It was succeeded by one equally curious, although not so imposing. A few minutes after the auroral crown had disappeared, no trace of any auroral light could be discerned in the Northern horizon. Toward the East, however a very faint pyramid of light, occupied the heavens to the height of about 50 degrees. Supposing that this might still be a portion of the Aurora which we had just been watching, or that the eye might not have recovered its tone after the recent brilliant display of light in the North, we rested awhile, and, after a quarter of an hour, on again looking toward the East, found that the pyramid of light had not only increased in distinctness, but also appeared to have extended itself in all directions, still retaining the form of a gigantic, faintly luminous pyramid. The Zodiacal light, for such it was, remained visible, and with increasing luminosity, until obscured by morning clouds.

Observations of Meteors at the Provincial Magnetic Observatory.

A look-out was kept for the periodic recurrence of the meteoric fall on or about the 10th of August, known as the St. Lawrence Stream, from the time of its occurrence being near St. Lawrence's Day. With the exception of that between the 12th and 14th of November, the St. Lawrence is the most brilliant and best established of all the periodic falls. It was noticed as early as the tenth century, and its constant recurrence about the same time of the year is attested not only by old traditionary legends, but by ancient church calendars, under the poetical title of "St. Lawrence's fiery tears." Scientific attention was drawn to the fact by Muschenbroek in the middle of last century, and it has since been repeatedly confirmed by Quetelet and others.

According to the observations of Julius Schmidt at Bonn, the number of meteors on an average of 8 years was, for August 9th 29 in one hour; and for August 10th, on an average of 6 years 31 in one hour. The observations of Heis shew for the 10th of August, in 1839, a fall of 160 in one hour; in 1840, a fall of 43, and in 1841, of 50 in that time; while, in 1842, there fell in ten minutes no less than 34. The great frequency of these meteors is sufficient to distinguish them from the merely *sporadic*

of which a fall of from 4 to 5 per hour may commonly be expected; they are also distinguished by a tendency to parallelism in their directions, and a common point of divergence or convergence.

At Toronto on August 9th, 1853.—None were observed till 9.47 P.M., between which time and 12.40 P.M., there fell 46 meteors; observation was continued for some time longer, but no more were seen. These may be classified as follows, being at the rate of 16 per hour:—

Of first magnitude.....	2
" second ".....	2
" third ".....	5
" fourth ".....	9
" fifth and lower magnitude.....	28
In direction N.....	1
" S.....	4
" E.....	2
" W.....	5
Between N and E.....	2
" E " S.....	15
" S " W.....	11
" W " N.....	6

There were 10 which left behind perceptible trains, and in general their flight was very rapid and short, only 12 being visible for one second and upwards. The night was very favourable.

On August 10th, 22 were seen between 8.59 P.M., and 12.9, being at the rate of 7 per hour; but the early part of the evening was unfavourable, being thickly over-spread with haze. Not one of the first, and only one of the second magnitude fell, the majority being very small. The directions were as follows:—

N, 2; S, 6; E, 2; W, none; N E, 1; N W, 1; S E, 3; S W, 7 Only 2 had tails, and in no case was the time of flight more than half a second.

August 11th was unfavorable, being overcast; only 2 seen.

August 12th was clear, but only 5 fell in 2 hour's observation.

August 13th, observations made for one hour and twenty minutes before the sky became overcast. Not one meteor was seen.

The following remarkable ones were casually observed during the month:—

Aug. 6, at 10.45 P.M.—A very large one moving from S E to W N W, in a course of 20° length; time of flight 2 seconds; large train visible some time after its disappearance; colour very bright, with tinge of orange.

Aug. 8, at 8.50 P.M.—One with a course of 35° , in direction S S E, leaving a tail of a dull orange colour throughout the whole of its path, which lasted for some seconds.

Aug. 10, at 8.10 P.M.—A bright-red meteor; time of flight 2 seconds; direction S W; apparently nearer than the clouds.