ART. XI.—*On the Meteors of April 30th–May 1st;* by Professor DANIEL KIRKWOOD.

PROFESSOR SCHIAPARELLI, in his list of meteoric showers whose radiant points are derived from observations made in Italy within the last few years, describes one as occurring on April 30th and May 1st, the apparent position of whose radiant is in the Northern Crown, R. A. 237°, N. P. D. 55°. The same shower has also been recognized by Robert P. Greg, F.R.S., of Manchester, England. This meteor-stream, it is now proposed to show, is probably derived from one much more conspicuous in ancient times.

In Quetelet's *Physique du Globe*, pp. 290–297, we find meteoric displays of the following dates. In each case the corresponding day for 1870 is also given,* in order to exhibit the close agreement of the epochs.

1.	A. D. 401,	April 9th;	corresponding to	April 29th,	for 1870.
2.	" 538,	" 6th;	"	April 25th,	"
3.	" 839,	" 17th;	"	May 1st,	"
4.	" 927,	" 17th;	"	April 30th,	"
5.	" 934,	" 18th;	"	May 1st,	"
6.	" 1009,	" 16th;	"	April 28th,	"

The epochs of 927 and 934 suggest as probable the short period of 7 years. It is found accordingly that the entire interval of 608 years—from 401 to 1009—is equal to 89 mean periods of 6·8315 years each. With this approximate value the six dates are all represented as follows:

From A. D. 401 to	A. D. 538,	20	periods of	6·85 years.
" 538 to	839,	44	"	6·84 "
" 839 to	927,	13	"	6·77 "
" 927 to	934,	1	"	7·00 "
" 934 to	1009,	11	"	6·82 "

This period corresponds approximately to those of several comets whose aphelion distances are somewhat greater than the

* Making proper allowance for the precession of the equinoxes.

mean distance of Jupiter. So long as the cluster occupied but a small arc of the orbit, the displays would evidently be separated by considerable intervals. The two *consecutive* showers in the tenth century indicate, however, an extensive diffusion of the cluster at that epoch; so that the *preceding* part passed the node April 30th, 927, and the *following* part May 1st, 934. The comparative paucity of meteors in modern times may be particularly explained by the fact that the ring has been subject to frequent perturbations by Jupiter.

It is not impossible that this meteor-stream was connected in its origin with the comet which passed its perihelion about the 29th of April, B. C. 136.