Biela had great merit in the discovery of his Comet's periodicity, having set about his search of it from an anticipation of its return founded upon former observations.

Also a Comet was discovered by De Vico at Rome on Aug. 22, 1844, which was found to describe an elliptical orbit having its aphelion near the orbit of Jupiter, which is consequently one of those of short period. And on Feb. 26, 1846, M. Brorsen of Kiel discovered a telescopic Comet whose orbit is found to be elliptical.]

We may add to the history of Comets, that of Lexell's, which, in 1770, appeared to be revolving in a period of about five years, and whose motion was predicted accordingly. The prediction was disappointed; but the failure was sufficiently explained by the comet's having passed close to Jupiter, by which occurrence its orbit was utterly deranged.

It results from the theory of universal gravitation, that Comets are collections of extremely attenuated matter. Lexell's is supposed to have passed twice (in 1767 and 1779) through the system of Jupiter's Satellites, without disturbing their motions, though suffering itself so great a disturbance as to have its orbit entirely altered. The same result is still more decidedly proved by the last appearance of Biela's Comet. It appeared double, but the two bodies did not perceptibly affect each other's motions, as I am informed by Professor Challis of Cambridge, who observed both of them from Jan. 23 to Mar. 25, 1846. This proves the quantity of matter in each body to have been exceedingly small.

Thus, no verification of the Newtonian theory, which was possible in the motions of the stars, has yet been wanting. The return of Halley's Comet again in 1835, and the extreme exactitude with which it conformed to its predicted course, is a testimony of truth, which must appear striking even to the most incurious respecting such matters.[39]

Sect. 7.—Application of the Newtonian Theory to the Figure of the Earth.

The Heavens had thus been consulted respecting the Newtonian doctrine, and the answer given, over and over again, in a thousand

[39] M. de Humboldt (*Kosmos*, p. 116) speaks of *nine* returns of Halley's Comet, the comet observed in China in 1378 being identified with this. But whether we take 1378 or 1380 for the appearance in that century, if we begin with that, we have only *seven* appearances, namely, in 1378 or 1380, in 1456, in 1531, in 1607, in 1682, in 1759, and in 1835.