

such varying circumstances, it might be as well to wait until we had nearly as long an interval as possible, and use only three observations which were known to be good, and all made by the same individual, if practicable. I accordingly waited until the comet could be again observed on the meridian in the morning sky, and selected an observation made on the meridian on the morning of September 20th, and one on the meridian on the morning of November 25th, both by Mr. Winlock, and one made by myself on the morning of the 9th of October with the equatorial, the comet having been compared with a star which was afterwards observed by Mr. Winlock, and thought that the conditions were nearly fulfilled.

From the observations I have deduced the following results :—

Time of perihelion passage, September 17.22282, Greenwich mean time.
 Longitude of Node..... $346^{\circ} 1' 7'' 91$
 Perihelion to Node..... $69^{\circ} 16' 12'' 79$
 Inclination to ecliptic..... $141^{\circ} 59' 52'' 16$
 Angle whole sine=eccentricity $89^{\circ} 13' 42'' 70$
 Log. semi axis major..... 1.9331366
 Log. perihelion distance..... 7.8904739
 Period of revolution 793.689 years.
 All referred to the mean equinox of 1882.0.

By means of this computed perihelion distance, and the positions in orbit at the first and third observations, I computed the two corresponding perihelion times which agreed within two units in the 7th decimal of a day, which was altogether closer than I expected, even to take the logarithms from the tables. As a further test, from the perihelion time I computed the latitude and longitude for the middle place, which was even, if possible, more accurate, the latitudes agreeing with one hundredth of a second of arc and the longitudes within six hundredths. The next test was to see how the elements corresponded with Mr. Finlay's place as observed at the Cape of Good Hope, on the

morning of September 9th, when it was one hundred and sixty-five degrees on the other side of perihelion, and then compare with observations on December 12th and 29th. I find the following results :

The computed place agreed with Mr. Finlay's observed place within less than a half second of time in right ascension, and within one second and a half in declination, quantities altogether within the limits of errors of observation. The computed places for December 12th and 29th differ from the observed places by one second to one and a-half seconds of time, in right ascension, and sixteen to eighteen seconds of arc in declination, which is still very close considering the interval of time. But the deviation from the computed orbit, although exceedingly small, is just as marked on one side of the perihelion as the other, the latter two comparisons being slightly greater on account of the length of time from the observations that were used in getting out the elements, and being altogether independent of which side of the perihelion it is. In short, the comet seems to be describing at present a pure elliptic orbit, and there is no foundation whatever for the many sensational stories that have been going the round of the press to the effect that the comets of 1668, 1843, 1880, and 1882 are the same, that it passed through the sun's atmosphere and had its orbit changed, and that it will return in six months. Those who make such statements have certainly never taken the trouble to calculate or assure themselves that their speculations stand on a sound basis. The elements of the first three comets just mentioned are undoubtedly similar to those of the present comet, so also are the elements, as far as can be ascertained, of the comet seen about 371 B.C., mentioned by Diodorus Siculus, and de-