record is in the first Book of Herodotus's History (chap. lxxiv.) He says that there was a war between the Lydians and the Medes; and after various turns of fortune, "in the sixth year a conflict took place; and on the battle being joined, it happened that the day suddenly became night. And this change, Thales of Miletus had predicted to them, definitely naming this year, in which the event really took place. The Lydians and the Medes, when they saw day turned into night, ceased from fighting; and both sides were desirous of peace." Probably this prediction was founded upon the Chaldean period of eighteen years, of which I have spoken in Section 11. It is probable, as I have already said, that this period was discovered by noticing the recurrence of eclipses. It is to be observed that Thales predicted only the year of the eclipse, not the day or the month. In fact, the exact prediction of the circumstances of an eclipse of the sun is a very difficult problem; much more difficult, it may be remarked, than the prediction of the circumstance of an eclipse of the moon.

Now that the Theory of the Moon is brought so far towards completeness, astronomers are able to calculate backwards the eclipses of the sun which have taken place in former times; and the question has been much discussed in what year this Eclipse of Thales really occurred. The Memoir of Mr. Airy, the Astronomer Royal, on this subject, in the *Phil. Trans.* for 1853, gives an account of the modern examinations of this subject. Mr. Airy starts from the assumption that the eclipse must have been one decidedly total; the difference between such a one and an eclipse only *nearly* total being very marked. A total eclipse alone was likely to produce so strong an effect on the minds of the combatants. Mr. Airy concludes from his calculations that the eclipse predicted by Thales took place B. C. 585.

Ancient eclipses of the Moon and Sun, if they can be identified, are of great value for modern astronomy; for in the long interval of between two and three thousand years which separates them from our time, those of the *inequalities*, that is, accelerations or retardations of the Moon's motion, which go on increasing constantly,[1] accumulate to a large amount; so that the actual time and circumstances of the eclipse give astronomers the means of determining what the rate of these accelerations or retardations has been. Accordingly Mr. Airy has discussed, as even more important than the eclipse of Thales, an eclipse which Diodorus relates to have happened during an expedition of

[1] Or at least for very long periods.