

plicius maintains, in accordance with the advice of Aristotle) to send to Greece observations of the stars for a very long period (Porphyrius says for 1903 years) before Alexander's entrance into Babylon, Ol. 112, 2. The earliest Chaldean observations mentioned by *Almagest* (probably the oldest which Ptolemy found available for his object) only go back 721 years before our era, that is to say, to the first Messenian war. It is certain "that the Chaldeans knew the mean motions of the moon with an exactness which induced the Greek astronomers to employ their calculations for the foundation of a lunar theory."\* The planetary observations to which they were led by their ancient love of astrology appear also to have been used for the true construction of astronomical tables.

The present is not the place to decide how much of the Pythagorean views regarding the true structure of the heavens, the course of the planets, and of the comets which, according to Apollonius Myndius, return in long regulated orbits,† may be due to the Chaldeans. Strabo calls the mathematician Seleucus a Babylonian, and distinguished him in this manner‡ from the Erythræan, who measured the tides of the sea. It is sufficient to remark that the Greek zodiac was most probably taken from "the Dodecatemoria of the Chaldeans, and that, according to Letronne's important investigations,§ it does

739). In this passage four Chaldean mathematicians are indicated by name, in conjunction with the Chaldean astronomers. This circumstance is so much the more important in an historical point of view, because Ptolemy always mentions the observers of the heavenly bodies under the collective name of *Χαλδαῖοι*, as if the observations at Babylon were only made collectively in collegiate bodies (Ideler, *Handbuch der Chronologie*, bd. i., 1825, s. 198).

\* Ideler, *op. cit.*, bd. i., s. 202, 206, und 218. When a doubt is advanced regarding the astronomical observations said to have been sent by Callisthenes from Babylon to Greece, on the ground that there is no trace of these observations of a Chaldean priestly caste to be found in the writings of Aristotle (Delambre, *Hist. de l'Astronomie Ancienne*, t. i., p. 308), it is forgotten that Aristotle, in speaking (*De Cælo*, lib. ii., cap. 12) of an occultation of Mars by the Moon, observed by himself, expressly adds, that "similar observations had been made for many years on the other planets by the Egyptians and the Babylonians, many of which have come to our knowledge." On the probable use of astronomical tables by the Chaldeans, see Chasles, in the *Comptes Rendus de l'Académie des Sciences*, t. xxiii., 1846, p. 852-854.

† Seneca, *Nat. Quæst.*, vii., 17.

‡ Compare Strabo, lib. xvi., p. 739, with lib. iii., p. 174.

§ These investigations were made in the year 1824 (see Guigniaut, *Religions de l'Antiquité, ouvrage traduit de l'Allemand de F. Creuzer*, t. i., Part ii., p. 928). See a more recent notice by Letronne, in the *Journal des Savans*, 1839, p. 338 and 492, as well as the *Analyse Cri-*