

of 1092, 1181, and 1458), and in the absence of any such record, as also in the occasional addition, "the Ke-sing dissolved" (disappeared), there is contained, if not an infallible, yet a very important criterion. Besides, we must bear in mind that the light of the nucleus of all comets, whether with or without tails, is dull, never scintillates, and exhibits only a mild radiance, while the luminous intensity of what the Chinese call extraordinary (stranger) stars has been compared to that of Venus—a circumstance totally at variance with the nature of comets in general, and especially of those without tails. The star which appeared in 134 B.C., under the old Han dynasty, may, as Sir John Herschel remarks, have been the new star of Hipparchus, which, according to the statement of Pliny, induced him to commence his catalogue of the stars. Delambre twice calls this statement a fiction, "une historiette." (*Hist. de l'Astr. Anc.*, tom. i., p. 290; and *Hist. de l'Astr. Mod.*, tom. i., p. 186.) Since, according to the express statement of Ptolemy (*Almag.*, vii., p. 2, 13, *Halma*), the catalogue of Hipparchus belongs to the year 128 B.C., and Hipparchus (as I have already remarked elsewhere) carried on his observations in Rhodes (and perhaps also in Alexandria) from 162 to 127 B.C., there is nothing irreconcilable with this conjecture. It is very probable that the great Nicean astronomer had pursued his observations for a considerable period before he conceived the idea of forming a regular catalogue. The words of Pliny, "suo ævo genita," apply to the whole term of his life. After the appearance of Tycho Brahe's star in 1572, it was much disputed whether the star of Hipparchus ought to be classed among *new* stars, or comets without tails. Tycho Brahe himself was of the former opinion (*Progymn.*, p. 319–325). The words "ejusque motu addubitationem adductus" may undoubtedly lead to the supposition of a faint, or altogether tailless comet; but Pliny's rhetorical style admitted of such vagueness of expression.

(b) A Chinese observation. It appeared in December, A.D. 123, between α Herculis and α Ophiuchi. Ed. Biot, from Ma-tuan-lin. (It is also asserted that a new star appeared in the reign of Hadrian, about A.D. 130.)

(c) A singular and very large star. This also is taken from Ma-tuan-lin, as well as the three following ones.

It appeared on the 10th of December, 173, between α and β Centauri and at the end of eight months disappeared, after exhibiting the five colors one after another. "*Successivement*" is the term employed by Ed. Biot in his translation. Such an expression would almost tend to suggest a series of colors similar to those in the above-described star of Tycho Brahe; but Sir John Herschel more correctly takes it to mean a colored scintillation (*Outlines*, p. 563), and Arago interprets in the same way a nearly similar expression employed by Kepler when speaking of the new star (1604) in Ophiuchus. (*Annuaire pour 1842*, p. 347.)

(d) This star was seen from March to August, 369.

(e) Between λ and ϕ Sagittarii. In the Chinese Record it is expressly observed, "where the star remained (*i. e.*, without movement) from April to July, 386.

(f) A new star, close to α Aquilæ. In the year 389, in the reign of the Emperor Honorius, it shone forth with the brilliancy of Venus, according to the statement of Cuspinianus, who had himself seen it. It totally disappeared in about three weeks.*

* Other accounts place the appearance in the year 388 or 398 Jacques Cassini, *Elémens d'Astronomie*, 1740 (*Etoiles Nouvelles*), p. 59.