

before the termination of Magellan's voyage of circumnavigation. He compares their mild effulgence to that of the Milky Way. The larger cloud did not, however, escape the vigilance of the Arabs, and it is probably the white ox (*El Bakar*) of their southern sky, the *white spot* of which the astronomer Abdurrahman Sofi says that it could not be seen at Bagdad or in northern Arabia, but at Tehama, and in the parallel of the Straits of Bab-el-Mandeb. The Greeks and Romans, who followed the same path under the Lagides and later, did not observe, or, at least, make no mention, in their extant writings, of a cloud of light, which, nevertheless, between 11° and 12° north latitude, rose three degrees above the horizon at the time of Ptolemy, and more than four degrees in that of Abdurrahman, in the year 1000.* At the present day, the altitude of the central part of the *Nubecula major* may be about 5° at Aden. The reason that seamen usually first see the Magellanic clouds in much more southern latitudes, as, for instance, near the equator, or even far to the south of it, is probably to be ascribed to the character of the atmosphere, and to the vapors near the horizon, which reflect white light. In Southern Arabia, especially in the interior of the country, the deep azure of the sky and the great dryness of the atmosphere must favor the recognition of the Magellanic clouds, as we see exemplified by the visibility of comets' tails at daylight between the tropics and in very southern latitudes.

The arrangement of the stars near the antarctic pole into new constellations was made in the seventeenth century. The observations made with imperfect instruments by the Dutch navigators Petrus Theodori of Embden, and Friedrich Houtmann, who was a prisoner in Java and Sumatra to the King of Bantam and Atschin (1596–1599), were incorporated in the celestial charts of Hondius Bleaw (Jansonius Cæsius) and Bayer.

* Pigafetta, *Primo Viaggio intorno al Globo Terracqueo*, publ. da C. Amoretti, 1800, p. 46; *Ramusio*, vol. i., p. 355, c.; Petr. Mart., *Ocean.*, Dec. iii., lib. i., p. 217. (According to the events referred to by Anghiera, Dec. ii., lib. x., p. 204, and Dec. iii., lib. x., p. 232, the passage in the *Oceanica* which speaks of the Magellanic clouds must have been written between 1514 and 1516.) Andrea Corsali (*Ramusio*, vol. i., p. 177) also describes, in a letter to Giuliano de' Medici, the rotatory and translatory movement of "*due nugolette di ragione vol grandezza.*" The star which he represents between *Nubecula major* and *minor* appears to me to be β Hydræ (*Examen Crit.*, t. v., p. 234–238). Regarding Petrus Theodori of Embden, and Houtmann, the pupil of the mathematician Plancius, see an historical article by Olbers, in Schumacher's *Jahrbuch* für 1840, s. 249.