

the celestial river of the Arabs*), which forms almost a great circle of the sphere, and is inclined to the equator at an angle of 63° . The poles of the Milky Way are situated in Right Ascension 12h. 47m., N. Decl. 27° ; and R. A. 0h. 47m., S. Decl. 27° ; the south galactic pole therefore lies near Coma Berenices, and the northern between Phœnix and Cetus. While all planetary local relations are referred to the ecliptic—the great circle in which the plane of the sun's path intersects the sphere—we may as conveniently refer many of the local relations of the fixed stars, as, for instance, that of their accumulation or grouping, to the nearly complete circle of the Milky Way. Considered in this light, the latter is to the sidereal world what the ecliptic is to the planetary world of our solar system. The Milky Way cuts the equator in Monoceros, between Procyon and Sirius, R. A. 6h. 54m. (for 1800), and in the left hand of Antinous, R. A. 19h. 15m. The Milky Way, therefore, divides the celestial sphere into two somewhat unequal halves, whose areas are nearly as 8 to 9. In the smaller portion lies the vernal solstice. The Milky Way varies considerably in breadth in different parts of its course.† At its narrowest, and, at the same time, most brilliant portion, between the prow of Argo and the Cross, and nearest to the Antarctic pole, its width is scarcely 3° or 4° ; at other parts it is 16° , and in its divided portion, between Ophiuchus and Antinous, as much as 22° .‡ William Herschel has observed that, judging from his star-gaugings, the Milky Way would appear in many regions to have 6° or 7° greater width than we should be disposed to ascribe to it from the extent of stellar brightness visible to the naked eye.”§

Huygens, who examined the Milky Way with his twenty-three feet refractor, declared, as early as the year 1656, that the milky whiteness of the whole Galactic zone was not to

illuminating power, in reference to the very great inequality of the light of the whole zone, during my long residence in the southern hemisphere, and which I have recorded in my journals.

* The comparison of the ramified Milky Way with a celestial river led the Arabs to designate parts of the constellation of Sagittarius, whose bow falls in a region rich in stars, as *the cattle going to drink*, and to associate with them the ostrich, which has so little need of water. (Ideler, *Untersuchungen über den Ursprung und die Bedeutung der Sternnamen*, § 78, 183, and 187; Niebuhr, *Beschreibung von Arabien*, s. 112.)

† *Outlines*, p. 529; Schubert, *Ast.*, th. iii., s. 71.

‡ Struve, *Etudes d'Astr. Stellaire*, p. 41.

§ *Cosmos*, vol. i., p. 150.