the third part of all the 43 known planetary bodies, *i. e.*, of all principal and secondary planets.

Although the attention of astronomers was long directed in the solar regions to increasing the number of the members of partial systems—the Moons which revolve round principal planets—and to the planets to be discovered in the furthest regions beyond Saturn and Uranus, now, since the accidental discovery of Ceres by Piazzi, and especially since the foreseen discovery of Astrea by Encke, as well as the great improvements in the star-charts* (those of the Berlin Academy contain all stars as far as the 9th, and partly to the 10th magnitudes), a nearer space presents to us the richest, and perhaps inexhaustible field for astronomical industry. It is an especial merit of the *Astronomischen Jahrbuch*, which is published in my native town by Encke, the Director of the Berlin Observatory, with the assistance of Dr. Wolfers, that the ephemerides of the increasing host of small planets are treated of with particular completeness. Up to the present time, the region nearest to the orbit of Mars appears to be the most filled; but the breadth of this measured zone is in itself more considerable than the distance of Mars from the Sun,† "when the difference of the radii-vectores in the nearest perihelion (Victoria) and the most distant aphelion (Hygiea) is taken into consideration."

The eccentricities of the orbits, of which those of Ceres, Egeria, and Vesta are the smallest, and Juno, Pallas, and Iris the greatest, have already been alluded to‡ above, as well as their degrees of inclination toward the ecliptic, which decreases from Pallas (34° 37′) and Egeria (16° 33′) to Hygiea (3° 47′). A tabular view of the elements of the small planets follows here, for which I am indebted to my friend Dr. Galle.

* With regard to the influence of improved star-charts upon the discovery of the small planets, see *Cosmos*, vol. iii., p. 116.

† D'Arrest, *Ueber das System der Kleinen Planeten zwischen Mars una Jupiter*, 1851, p. 8.

‡ *Cosmos*, vol. iv., p. 102 and 172.