

schel engaged at the Cape of Good Hope in exploring the whole of the visible firmament with a colossal twenty-foot reflector, and adding 1708 determinations of position to his previous catalogue of 2307 nebulae and clusters of stars!* Only one third of the southern nebulae and clusters of stars in Dunlop's catalogue (containing 629 nebulous bodies, observed from 1825-1827, at Paramatta, with a nine-foot reflector, having a nine-inch speculum†) were inserted in Sir John Herschel's work.

A third great epoch in our knowledge of these mysterious cosmical bodies commenced with the construction of the marvelous fifty-three feet telescope‡ of the Earl of Rosse, at Parsonstown. All that had ever been advanced on either side of the question, during the long fluctuation of opinions in the different stages of the development of cosmical contemplation, was now made the subject of keen discussion in the contest regarding the nebular hypothesis and its asserted untenability. It appears, from all the notices I have been able to collect from the works of distinguished astronomers long accustomed to the observation of nebulous spots, that out of a large number of nebulae indiscriminately taken from among all the classes contained in the catalogue of 1833, and regarded as irresolvable, almost all (Dr. Robinson, the Director of the Armagh Observatory, enumerates more than 40 such) have been perfectly resolved.§ Sir John Herschel maintains the same

* The numbers which I here give include the objects enumerated from Nos. 1 to 2307 in the European, *Northern Catalogue* of 1833, and those from Nos. 2308 to 4015 in the African, *Southern Catalogue*.—*Observations at the Cape*, p. 51-128.

† James Dunlop, in the *Philos. Transact.* for 1828, p. 113-151.

‡ Compare *Cosmos*, vol. iii., p. 65, and note.

§ See *An Account of the Earl of Rosse's great Telescope*, p. 14-17, which gives a list of the nebulae resolved by Dr. Robinson and Sir James South in March, 1845. "Dr. Robinson could not leave this part of his subject without calling attention to the fact that no real nebula seemed to exist among so many of these objects chosen without any bias: all appeared to be clusters of stars, and every additional one which shall be resolved will be an additional argument against the existence of any such."—Schumacher, *Astr. Nachr.*, No. 536. In the *Notice sur les grands Télescopes de Lord Oxmantown, aujourd'hui Earl of Rosse* (*Bibliothèque Universelle de Genève*, tom. lvii., 1845, p. 342-357), we find the following passage: "Sir James South rappelle que jamais il n'a vu de représentations sidérales aussi magnifiques que celles que lui offrait l'instrument de Parsonstown; qu'une bonne partie des nébuleuses se présentaient comme des amas ou groupes d'étoiles, tandis que quelques autres, à ses yeux du moins, n'offraient aucune apparence de résolution en étoiles." "Sir James South remarks that he never beheld more magnificent representations of the stars than those he saw in the Parsons-