

academician, Werner the head of a great mining school, Humboldt a traveller, Markgraf a private gentleman. Haller, indeed, shone as a great light in the University of Göttingen, where he did more than any other to place scientific studies on a level with classical ones, and to create for them a permanent abode within the pale of "alma mater." He founded in 1751, in close connection with the university, the *Göttingen Society*, which from 1753 published the celebrated 'Göttinger Gelehrte Anzeigen.'<sup>1</sup> Tobias Mayer and Lambert<sup>2</sup> can hardly be said to have got much help either from the university, to which the former belonged, or from the Academy, of which the latter was a member; their celebrity rests on works produced by private and unaided effort. Humboldt also depended upon his personal means and upon his connection with the Paris Academy, and only attained late in life, and in the course of the present century, his eminent position as the head and patron of German science. Von Zach and Olbers, who together with Tobias Mayer and Lambert raised German astronomy during the eighteenth century to the level of English and French science, stood outside the university system. Von Zach was indebted to personal connections, and ultimately to Duke Ernest II. of Gotha, for the position which

<sup>1</sup> The 'Göttinger Gelehrte Anzeigen' had existed since 1739.

<sup>2</sup> Joh. Heinrich Lambert (1728-77), a very extraordinary man, was a native of Mühlhausen, Alsace, which then belonged to Switzerland. He was received as a member of the Berlin Academy, and associated there with Euler and Lagrange. He is celebrated through his 'Photometry' (1760) and 'Pyrometry' (1779), his equation referring

to the orbits of comets, employed by Olbers in his method for calculating them (Weimar, 1797, republished by Encke, 1847), and his prophetic prediction of the proper motion of the sun (in his *Cosmological Letters*, 1761). This motion was actually calculated by Sir William Herschel in his paper "On the proper Motion of the Sun and Solar System" ('*Philos. Trans.*,' 1783).