



William Herschel

1738 -1822

William Herschel is best known today as the discoverer of the planet Uranus. He also discovered two satellites of Uranus - Titania and Oberon, and two of Saturn - Mimas and Enceladus. In addition, however, he was the first to begin to see the structure of our Galaxy. Herschel noticed the fact that stars are much more numerous in the Milky Way and the plane of the celestial equator, becoming fewer towards the celestial poles. To explain this he supposed that the Galaxy is shaped like a disc or 'grindstone'. He registered about 100 nebula.

Friedrich Wilhelm (or William since 1793) Herschel was born in Hanover, in Germany at that time. His father 'a man... with a wide range of interests' was a musician and also admired astronomy. Almost all the children inherited their father's distinguished musical ability. William remembered how 'at the age of four his father set him on a table to play a violin solo on a special miniature instrument that had been made for him'. At school, William was excellent in arithmetic, and he easily learned languages.

At the age of fourteen, William joined his father in the Band of the Hanoverian Guards. Following the French victory and occupation of Hanover, however, Herschel fled to England. In London, **William applied for copying work in a music shop and did it so well that he was able to support himself.** At the same time he was teaching music.

In 1760, Lord Darlington, having heard good accounts of the young German musician, appointed him instructor to the Band of the Durham Militia of which he was Colonel. Later, he found work as a musician, first at Halifax and then in Bath. There, Herschel was appointed organist to the Octagon Chapel.

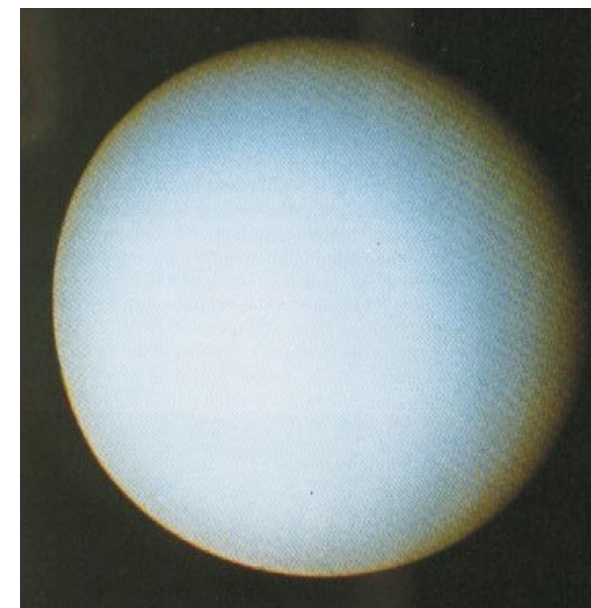


Caroline aged 79, from the portrait by Tielmann

Much of his work was done with his sister Caroline



His discovery of Uranus in 1781 was a marvelous feat



A photograph by the camera of Voyager.

His work as a musician demanded that he should learn the theory of music; to do this he had to study and improve his grasp of mathematics; this led him far. His study of the theory of optics led to his desire to construct a telescope of his own and eventually to practical astronomy.

In 1772, he was joined in Bath by his sister Caroline. She had hoped to have a career as a singer, but shared her brother's interest in astronomy. She became a skilled 'comet-hunter' in her own right and in fact she found eight comets. **Their greatest discovery with William's hand-made telescope was the planet Uranus.**

Caroline devoted herself to her brother until he married the charming Mary in 1788. They had only one son, John, a future notable astronomer and physicist.

King George III, who had a passionate interest in astronomy and clocks, was so impressed with Herschel's achievements, particularly his discovery of Uranus, that he granted him a life pension (£200 a year) and financed construction of a very large telescope.

Herschel built many telescopes of various sizes culminating in his enormous 40-foot (12-m) reflector. This cost George III £4000 !

In 1782 Herschel moved to Datchet near Windsor Castle and, later, to nearby Slough, where he lived for the rest of his life. He was knighted in 1816, and died at Slough in 1822.