

Sir William Huggins.

The death of Sir William Huggins was so sudden and, notwithstanding his advanced age, so unexpected that there has not been sufficient time to put together an adequate notice of his great career in this number. But it has been thought that members of the Association (of whom he was one from its foundation) would prefer not to have his obituary delayed. And, indeed, a long account of labours that are written large in every history of astronomy (especially of what is often called the New Astronomy) during the last 50 years is scarcely necessary on the present occasion.

William Huggins was born on the 7th of February 1824, and early developed a taste for astronomy (taking also great interest in microscopy), but was not able to devote himself to it until after he had completed his thirtieth year. It was in 1856 that he established an observatory on Tulse Hill, which has been the scene of his astronomical work and discoveries in astrophysics ever since, for they were continued almost to the end of his life, energetically aided by his wife, now Lady Huggins, whom he married in that year, in which also he was elected a Fellow of the Royal Society; he had joined the Royal Astronomical Society in 1854.

Not long after Huggins had begun his observing work at Tulse Hill a large part of astronomical thought was directed into a new channel by the discovery of Kirchhoff and Bunsen that the lines in the solar spectrum (four of which were first noticed by Wollaston in 1802, but this number had been greatly increased by Fraunhofer) corresponded with those in the spectra of metals in a state of vapour. Huggins at once grasped the significance of this, and the vast field of research it might open out, and devoted himself to the study and comparison of those different kinds of spectra. He worked at first in conjunction with the great chemist, Dr. W. Allen Miller, and they were jointly awarded in 1867 the Gold Medal of the Royal Astronomical Society for their discoveries in astronomical physics. Dr. Miller died in 1870, but Huggins continued his researches, and in 1871 (the same year in which a doctor's degree was conferred on him by both the Universities of Oxford and Cambridge) there was placed

at his disposal by the Royal Society a powerful means of greatly extending those ; it consisted of a large duplex telescope with an achromatic of 15 inches aperture, and a reflector of 18. This beautiful instrument was in constant use at Tulse Hill until 1908, when it was transferred to the University of Cambridge, to be employed by Prof. Newall, who has charge of the astrophysical investigations there.

It would be impossible here to go through any part of Dr. Huggins's strenuous labours. He applied spectrum analysis not only to the Sun, Moon, and planets, but subsequently to comets and to nebulae, throwing unexpected light upon their constitution and nature. Especially noteworthy are his measurements, on the Doppler principle, of the motions of stars (recession or approach) in the line of sight, which, taken in conjunction with their so-called proper motions, is opening a way to the knowledge of their actual motions in space.

Dr. Huggins received, of course, many scientific honours. He was awarded three medals by the Royal Society and three by the Institute of France, besides many others from other countries. He filled at various times the offices of co-Secretary, Foreign Secretary, and President of the Royal Astronomical Society ; was President of the Royal Society from 1900 to 1905, and President of the British Association at its Cardiff meeting in 1891. On the occasion of Queen Victoria's Diamond Jubilee in 1897 he was created a K.C.B.

In 1900 he published jointly with Lady Huggins a valuable work entitled "An Atlas of Representative Stellar Spectra." In 1900 one appeared on "The Royal Society and its History," consisting chiefly of his Presidential addresses. His last work was a collection of his scientific papers, edited by himself and Lady Huggins, which appeared in 1909. The late Mr. Proctor gave him the appropriate designation of the Herschel of the spectroscope. Only a week before his death he took part in a meeting of a committee for the publication of Sir W. Herschel's collected papers. But an operation which had become necessary for hernia obliged him to go to a medical establishment on Clapham Common ; and, though the operation was successfully performed, he succumbed to the subsequent weakness and died on the 12th of May. At the meeting of the Royal Astronomical Society, held on the 13th, a hearty address of condolence was sent to Lady Huggins.—W. T. L.