

This report was undertaken by Sir Bernhard Samuelson in 1867 at the request of the vice-president of the Committee of Council, and for the purpose of obtaining particulars he visited the principal manufacturing centres of Great Britain and the Continent. The report was published as a Parliamentary paper, and the *Times* records that it was for years referred to in all debates on technical education. He followed up this report by a Parliamentary inquiry into the education of the workmen of our manufactories in 1868, and was chairman of the committee, the report of which was adopted by the House of Commons. He was a member of the Duke of Devonshire's Royal Commission on Scientific Instruction, which issued a valuable report, and also of the Royal Commission on Elementary Education, presided over by Viscount Cross.

Sir Bernhard Samuelson was appointed chairman of the Royal Commission on Technical Instruction, the labours of which extended over the years 1882, 1883, and 1884, and embraced an examination into the systems in use in all parts of the United Kingdom and a great portion of the Continent of Europe. The exhaustive report of the Commission has become the standard authority upon the questions with which it deals. In 1888 he was appointed a member of the Parliamentary Committee for inquiring into the working of the Education Acts.

For his scientific work, Sir Bernhard Samuelson was elected a Fellow of the Royal Society in 1881, and for his many public services he was created a baronet in 1884, and was afterwards made a Privy Councillor. He was a member of the Institutions of Civil and Mechanical Engineers, and was the recipient, in 1871, of the Telford gold medal for a paper on improvements in iron manufactures. He was a member of the council of the Iron and Steel Institute, of which he occupied the presidential chair for two years. At the annual meeting of the institute held last week, the following resolution was unanimously adopted:—"The council have received with the deepest regret the intimation of the death of their esteemed colleague the Right Hon. Sir Bernhard Samuelson, Bart., past-president, P.C., and one of the founders of the institute, and they desire to convey to Lady Samuelson and his family an expression of sincere sympathy in their bereavement. The council feel that it would be difficult to over-rate the services that Sir Bernhard rendered to the Iron and Steel Institute in the promotion of the objects for which it was formed, and they will ever remember with gratitude his constant readiness to devote his time and energies to the advancement of those objects."

DR. OTTO VON STRUVE.

THE announcement of the death of Dr. Otto von Struve does more than awaken a profound regret. His name recalls a period of past history, and summons up before us the memory of times when astronomy occupied a different position from that it assumes to-day, when it had fewer objects of interest wherewith to attract, and offered fewer problems for solution. Fifty-five years have gone since Otto von Struve received at the hands of the late Astronomer Royal the medal of the Royal Astronomical Society for his paper on precession and solar motion, and sixty-five since the paper was published. Seeing that Struve was born in 1819, he early came into prominence as an astronomer, and the value attached to the results and the confidence inspired by the paper are not a little remarkable, for there were some very obvious objections which might have been taken to the conclusions stated, or at least

it appears so when viewed from a later standpoint. Accompanying the paper was also a discussion of the amount and direction of the solar motion. Only four years had elapsed since Argelander had published his paper assigning with some precision the place of the solar apex, and thus perhaps settling a doubt which had long divided astronomical thought. Prevost and Klugel had taken one side of the question, and Burckhardt and Lindenau led the party who were unwilling to accept the evidence. Men's minds were certainly divided as to the possibility of detecting the sun's motion, and Struve's paper came at a fortunate moment and strengthened the evidence produced by Argelander, for, based on very different material, Struve's position scarcely differed two degrees from that assigned by the Abo astronomer. Also, Struve was fairly fortunate in fixing the annual amount of the solar motion at about twice that of the radius of the earth's orbit. Later investigations have shown that a greater velocity is probable, but he was certainly correct in asserting that the linear motion of the sun appeared to be less than that of stars in general.

But it was in the domain of double stars that Otto von Struve won his reputation, and it was in this direction that he exhibited untiring industry. His father at Dorpat, and later at Pulkova, had not only devoted himself with great energy to this branch of astronomy, but had introduced a degree of accuracy into the observations that up to his time had been wanting. Otto von Struve, anxious to uphold the family reputation, was as diligent to detect these objects and as accurate in his observations as was his father before him, though he laboured under some peculiar difficulty as an observer, and was obliged to remove a systematic error which affected his observations by introducing a correction depending upon the distance of the component stars—a correction investigated with great care by means of artificial double stars.

From 1861, on the failing health of his father, Otto von Struve became the director of the Imperial Observatory at Pulkova, and in every department maintained the reputation for accuracy the observatory had won. In meridian places of stars, in cometary observations, in geodesy, in spectroscopy, the activity and efficiency of the institution have been everywhere acknowledged. In expeditions, whether for the transit of Venus or for eclipse work, the observatory has displayed its zeal and its desire to cooperate with similar work carried on elsewhere. Instruments have been renewed as needed, and the erection of the 30-inch refractor testifies to the determination to keep the observatory on a level with those best equipped. Under the care of the late director, splendid laboratories have arisen devoted to spectroscopic inquiries, and it is not too much to say that his direction of a world-famous observatory has been of a most enlightened and beneficent character. The recipient of many honours, he retired from the observatory in 1893 to enjoy the repose to which he was so well entitled amid the society of his many friends.

NOTES.

THE Croonian lecture of the Royal Society will be delivered by Mr. W. B. Hardy, F.R.S., on Thursday next, May 25, on "The Globulins."

By the creation of the Committee of Defence, the functions and views of which were described by Mr. Balfour in the House of Commons on Thursday last, an expert advisory body has been introduced into the councils of the Government. In the discussion which followed the speech of the Prime Minister, Mr. Haldane remarked that millions of money uselessly expended would have been saved to the