

## NEWS and VIEWS

## Mathematics at Sheffield: Prof. A. G. Walker

DR. ARTHUR GEOFFREY WALKER has been appointed to the chair of mathematics in the University of Sheffield, in succession to the late Prof. P. J. Daniell. Dr. Walker has been a member of the Department of Pure Mathematics at Liverpool for the past ten years. He is thirty-seven years old and was educated at Watford Grammar School and at Balliol College, Oxford. On taking his degree in 1931, he went to Edinburgh and commenced research under Prof. (now Sir) Edmund Whittaker. This was a time of exceptional activity at Edinburgh. Prof. Whittaker was mainly interested in relativity and differential geometry, and his staff, which in the years 1927-32 included E. T. Copson, J. M. Whittaker, J. G. Semple, H. S. Ruse, W. H. McCrea and A. Oppenheim, all of whom have gone on to professorial chairs, for the most part followed his lead. To Walker, who had gained distinction in differential geometry in the Final Honours School at Oxford, the subject of Prof. Whittaker's lectures was particularly congenial, and he wrote several papers, the first of a long series on differential geometry, relativity and cosmology. In 1933 he returned to Oxford to take up a Harmsworth Research Scholarship at Merton College, to which he had been elected in the previous year. He worked with Prof. E. A. Milne on kinematical relativity, then at the beginning of its stimulating and controversial career. This subject has continued to engage Dr. Walker's attention ever since. He is a supporter of Milne's general point of view, but has developed a more general theory, which seems capable of accounting both for cosmological effects and for phenomena due to intense local gravitational fields such as that of the sun. Certain functional equations present themselves in this work, and he has investigated them from the point of view of pure mathematics in collaboration with his Liverpool colleagues F. W. Bradley, now professor of mathematics at the University of Alexandria, and Miss Joyce Batty.

## Fuel Technology at Sheffield:

Prof. R. J. Sarjant, O.B.E.

THE chair of fuel technology in the University of Sheffield has been vacant since the death of Prof. R. V. Wheeler in 1938, and the appointment of Dr. R. J. Sarjant to it assumes added importance in view of the national coal situation and the industrial area served by the University. Dr. Sarjant, who is chairman of the Yorkshire Section of the Institute of Fuel, has wide academic knowledge and industrial experience; trained under the late Prof. W. A. Bone at the Imperial College of Science and Technology, London, where he worked upon the constitution of coal, he was appointed in 1918 as fuel officer to the Research Department of Messrs. Hadfields, Ltd., there undertaking tasks pioneering in character. He published with Sir Robert Hadfield a number of papers on the uses of solid, liquid and gaseous fuels, gas producer practice, alloy steels for furnaces and chemical engineering, and gave the first course of lectures on furnace heating at the University of Sheffield in 1924. His later investigations dealt with: special aspects of the design of open-hearth, reheating and heat-treatment furnaces; refractories and moulding sands; and various metallurgical, physical and radiological fields. In 1937 he was

appointed a local director of Messrs. Hadfields, Ltd., and head of its Research Department; and during the War he rendered valuable service on a number of committees, particularly the Fuel Efficiency Committee of the Ministry of Fuel and Power, being chairman of its Education Sub-Committee which produced a notable war-time publication, "The Efficient Use of Fuel". He was the author of "Furnace Heating" (1925), and the section on fuel economy in industrial furnaces in "Coal: Its Constitution and Uses" (1936) by Bone and Himus. An account of his most recent research in collaboration with Prof. D. R. Hartree on the variable heat flow in solids has now appeared in the *Philosophical Transactions of the Royal Society*. Prof. Sarjant's appointment at the University of Sheffield will be widely welcomed.

## Bicentenary of Johann Elert Bode

JANUARY 19 is the bicentenary of the birth of Johann Elert Bode, who at one time was the foremost astronomer in Germany. The son of a schoolmaster at Hamburg, from boyhood Bode was given to astronomical calculations and observations, and at the age of twenty-one published an elementary treatise which became very popular. He next published an essay on the transit of Venus of 1769. In 1772 Frederick II of Prussia called him to Berlin and made him astronomer to the Academy of Sciences, and the remainder of his life was spent in the Prussian capital. He commenced in 1774 the periodical *Astronomische Jahrbücher*, and in 1778 re-stated the law of planetary distance known by his name, which, however, had been stated previously by Titius and Wolf. It was through Bode that the name Uranus was given to the planet discovered by his fellow-countryman Herschel. His "Uranographia", published in 1801, gave observations of 17,240 stars. He made no important discoveries of astronomical objects, but by his writings and activities did much to diffuse a knowledge of astronomy in a country where for a time scientific studies had languished through the disasters of war. Bode died in Berlin on November 23, 1826, aged seventy-nine.

## Cave Art at Lascaux

THE discovery during the War of prehistoric paintings in the Lascaux Caves near Montignac in south-western France is of the highest interest. A large pine tree had blown down, and some French boys wandering with their dog in the vicinity found under its roots the entrance to a hitherto unknown cave. On the walls were innumerable paintings, many of them of large size, which were soon recognized as being palaeolithic. Lascaux, though some distance from the well-known cavesites near Les Eyzies, is after all not so far away from them, and local folk knew by hearsay all about such places as Font de Gaume, Combarelles, etc. But the new paintings (there are also some engravings), while similar in style to some of the paintings at these other sites, are for the most part different. Indeed, the importance of the new discovery is that it vastly increases our knowledge of the earlier styles, of which elsewhere we have so far only known a little. The Lascaux pictures are mainly of Aurignacian age, antedating the wonderful polychromes found at Altamira in northern Spain and Font de Gaume in the Dordogne, and throw a new light on the evolution of this Phase I of the cave art which is now likely to become a great deal clearer. Many of the figures are very large and include drawings of bulls, horses, stags, bison and rhinoceros.