OBITUARIES

Dr. Antonín Bečvář

WITH the death of Dr. Antonín Bečvář on January 10 the Czechoslovak astronomers lost one of their most distinguished colleagues, and the world community the principal contributor to astronomical cartography within our lifetime.

Dr. Bečvář was born on June 10, 1901, in Brandýs nad Labem (some twenty miles north-east of Prague) and was educated at the Charles University originally as a meteorologist. Fragile health delayed the commencement of his professional career until well into his thirties, when he accepted a post as Government climatologist at the region of High Tatra Mountains. The turbulent events of 1938–39 caught Bečvář in Slovakia, and when, as an aftermath of the Munich Agreement, the Czechoslovak Astrophysical Observatory at Stará Dala had to be evacuated, Bečvář succeeded in persuading the Slovak Government to remove its 24-in. Zeiss reflector to a new location at Skalnaté Pleso (that is, Rocky Lake) in the eastern part of the High Tatra Mountains—1,634 m above sea-level. He thus became the founder and and first director of the only high-altitude observatory in Czechoslovakia.

In May 1945, at the risk of his life, Bečvář managed to ward off the dynamite squads of the retreating German army ordered to blow up his institution as a part of Hitler's scorched-earth policy, and he guided the destinies of the Observatory until 1950, when differences with the regional Government led to his premature retirement. He then left Slovakia to return to his native Brandýs, where he spent the rest of his life.

Within its regrettably brief span, and in spite of troubled times and infirm health, Bečvář succeeded in compressing a remarkable range of achievements into his life. When the Observatory site at Skalnaté Pleso proved to be more favoured by sky transparency than steady seeing, Bečvář inaugurated a systematic programme of comet discovery which has since made it famous. Bečvář himself discovered the comet 1947c, and the number of those discovered since by his collaborators (Pajdušáková, Mrkos, Kresâk, Antal, etc.) attained almost two dozen in twenty years—making Skalnaté Pleso the most active centre of work of this kind in the world. Meteor photography and variable star observations have also been systematically inaugurated, and are being carried on by the new generation of Slovak astronomers.

However, the greatest contributions which science owes to Dr. Bečvář are in the field of astronomical cartography. Early in post-war years Bečvář conceived the idea of a modern star atlas, encompassing the whole sky and appropriately stressing all its physical features. Its realization, in the form of an *Atlas Coeli Skalnaté Pleso* (published in the English-speaking world under the title of *Atlas of the Heavens* by the Sky Publishing Corporation in Cambridge, Massachusetts), published first in 1948, became an instant success (for its review by Sir Harold Spencer Jones, the late Astronomer Royal, see *Nature*, 164, 635; 1949). It has since gone through several editions, and it is no exaggeration to say that there is scarcely any active observatory in the world to-day where several copies of this atlas are not in daily use. A detailed catalogue of all objects listed in the atlas appeared in book form in 1950.

Encouraged by its success, after his premature retirement in 1950, Bečvář embarked (with the support of the Czechoslovak Academy of Sciences) on a still more ambitious mapping programme, which in 1958 resulted in the publication of his monumental *Atlas Eclipticalis* (containing all stars within ± 30° declination down to approximately 9th apparent magnitude, with indication of their spectral types in six colours), followed by the *Atlas Borealis* (1960) covering in the same manner the northern declinations 30°–90°; its southern counterpart *Atlas Australis* appeared in 1964.

After the completion of this series, Bečvář commenced another large project—that of an *Atlas Galacticus*—which should represent the sky with all its stars to the 10th magnitude, clusters, and nebulae, in galactic rather than equatorial co-ordinates. Unfortunately, the enthusiasm with which Bečvář embarked on this work undermined further his always frail health, and a repeated attack of pneumonia (which he tried to cure by working even harder) prematurely terminated his life at an age of less than sixty-four years. It is understood that a group of Czechoslovak astronomers intend to complete this work, in accordance with Bečvář's original plan, as a memorial to their departed colleague.

Bečvář was a man of wide interests and many parts: side by side with his interests in astronomy (which became dominant in the latter part of his life) he never abandoned his earlier meteorological pursuits, and these, combined with his skill as a photographer, resulted in the publication of his *Atlas Nubium Skalnaté Pleso* by the Slovak Academy of Sciences in 1953. A striking collection of his photographs of the High Tatra Mountains was published by the Matice Slovenská in 1948, and he ventured even into the domain of belles lettres with a novel, *Last Summer*, which appeared during the War.

Personally, Bečvář combined true idealism of a dedicated soul with indefatigable zeal and modesty which endeared him to his friends, now greatly saddened by his passing—the circle of whom was never very wide owing to his shy and retiring nature. Although he never travelled abroad and was not personally known to many, the renown of his cartographic work spans the seven seas and has made his name a by-word among practising astronomers of the world to-day. ZDENĚK KOPAL

Dr. H. E. Dadswell

THE death of Herbert Eric Dadswell on December 19, 1964, came with tragic suddenness and will be deeply regretted throughout scientific and industrial circles in Australia.

Whatever commitments Dadswell accepted were undertaken with great enthusiasm. His major lifework lay in the Australian forests and the products from them, but he found time for several other interests, all of which he adopted with zest.

Dadswell gained an M.Sc. degree at the University of Sydney, and then went, in December 1926, with a post-graduate studentship of the Council for Scientific and Industrial Research (forerunner of the Commonwealth Scientific and Industrial Research Organization) to the Forest Products Research Laboratory of the U.S. Department of Agriculture at Madison, Wisconsin. It was a tied studentship, which entailed his joining the Division of Forest Products of the Council for Scientific and Industrial Research two years later. Few would have then seen in him the qualities that led to his appointment 31 years later as the chief of this same Division, for Dadswell had not yet had the opportunity to demonstrate his outstanding research and organizing abilities.

Dadswell was intended to be the Division's specialist in the chemistry of wood. However, he had the perspicacity to realize that, while chemistry was a key to the properties

of timbers, their anatomy was of equal importance to industry. So throughout his working life he was as much interested in botany as in chemistry and achieved eminence in both subjects such as must be rare indeed.

In 1961 he became president of the Royal Australian Chemical Institute and three years later was president of the Botany Section of the Canberra meeting of the Australian and New Zealand Association for the Advancement of Science. He handled both roles with distinction, being friendly and kindly at all times yet firm when necessary. The Chemical Institute, in particular, owes much of its present strength to his activities as secretary and Council member over a period of twenty years. His Melbourne D.Sc., conferred in 1941, was in the School of Botany.

Some Australian hardwoods have profoundly different structures and properties from those of other countries. This implied that there was a vast area to be covered by Dadswell and his colleagues, but it also meant that scientific rewards were not lacking. Definitive studies were made of the anatomy of the native timbers of Australia and the nearby Pacific areas, and on the distribution of the chemical constituents in the cell wall: he published almost a hundred papers on these subjects. Later he was to connect these basic studies with everyday usage of wood.

Dadswell's laboratory became well known throughout the world, and attracted guest workers and students from many countries. He himself had well-merited recognition when he became the Walker-Ames professor of forestry in Seattle in 1955, and guest lecturer at North Carolina State College in 1960. It was also in 1960 that he became chief of the Commonwealth Scientific and Industrial Research Organization Division of Forest Products. He was a foundation member, and in 1949–50 president, of the Australian Pulp and Paper Industry Technical Association. Dadswell served on international committees, and agencies such as the Food and Agriculture Organization, and his attendance was eagerly sought at forestry conferences throughout the world.

As the chief of a laboratory the staff of which numbered well over 200, his duties were necessarily onerous, and placed a heavy strain on his health, for he was never strong physically. However, this did not diminish his zeal for his work or for life. He enjoyed his position, valued his friendships and spent much of his spare time in his garden or alongside nearby trout streams.

I. W. Wark

NEWS and VIEWS

High Temperature Chemistry Section, U.S. National Bureau of Standards: Dr. William S. Horton

Dr. William S. Horton has been appointed chief of the High Temperature Chemistry Section in the National Bureau of Standards Institute for Materials Research, U.S. Department of Commerce. Born in New York City in 1917, Dr. Horton gained his B.S. and M.S. in chemistry from the Polytechnic Institute of Brooklyn and his Ph.D. in chemistry from Ohio State University. His principal fields of research have been chemical kinetics and thermodynamics. In his new post he will be particularly concerned with the chemical kinetics of heterogeneous gas reactions at elevated temperatures and theoretical chemical kinetics involving simultaneous mass transport. Dr. Horton joins the Bureau from the General Electric Company's Advanced Technology Laboratories, where for the past four years he has carried out research in high-temperature chemical kinetics, working particularly with pyrolytic graphite and ablation-resistant materials. From 1950 until 1960 he was with the General Electric Co. Knolls Atomic Power Laboratory, where he undertook work in X-ray diffraction, X-ray fluorescence, crystal structure, analytical emission spectroscopy, mass spectrometry, visible and electron microscopy, and vacuum techniques. He was an instructor in chemistry at the University of Connecticut (1946–50), Indiana University (1945–46), and Ohio State University (1944–45).

Second Chair of Applied Physical Sciences in the University of Reading

The University of Reading is developing courses in applied physical sciences alongside the more traditional undergraduate courses involving mathematics, physics and chemistry; cybernetics has been a degree subject for some years, applied electricity and applied mechanics are also now offered, and it is expected that courses with a greater chemical content will shortly be developed. Two chairs in applied physical sciences have so far been established, and the first appointment of a professor was that of Mr. P. D. Dunn, at present at the Atomic Energy Research Establishment, Harwell (*Nature*, **205**, 1265; 1965).

Prof. P. B. Fellgett

Dr. P. B. Fellgett, head of the Astronomical Instrumentation Division of the Royal Observatory, Edinburgh, has been appointed to the second chair of applied physics in the University of Reading. Dr. Fellgett entered Peterhouse, Cambridge, in 1940 to take the Natural Sciences Tripos. He spent the years 1942–47 working with a group under Dr. G. B. B. M. Sutherland dealing with the use of infra-red spectrometry for the molecular analysis of petrols. After gaining his B.Sc degree he undertook research at the Observatories of the University of Cambridge on infra-red magnitudes of stars and the development of the theory of ultimate sensitivity of radiation detectors. This research also included the invention of multiplex spectrometry. Dr. Fellgett spent 1951–52 at the Lick Observatory, California, working on observations of stellar magnitude in six colours and the development of photo-electric photometers for very low light levels. He was awarded a Ph.D. degree in 1952. During the period 1952–55 he received a grant from the Paul Fund of the Royal Society for development of multiplex spectrometry, and worked on informational analysis of optical images with Dr. E. H. Linfoot. This work led to the systematic formulation of methods of assessing optical images in the Huygens wave-theoretic approximation. From 1955 until 1959 Dr. Fellgett was senior observer on the staff of the Cambridge Observatories; his research included the analysis of the variation of latitude and of solar granulation, using machine language programmes on the *Edsac II* computer. In 1959 he was appointed head of the Electronics Group at the Royal Observatory, Edinburgh, in which post he was concerned with automatic control and digital measurement, and the logical design and analysis of detection and decision criteria in stochastic situations. He was made Head of the Astronomical Instrumentation Division of the Observatory in 1963, and has been working on programmatic telescope control, automatic and digital microphotometers and iris photometers, and the 'Galaxy' automatic measuring engine for Schmidt photographs. He was elected a Fellow of the Royal Society of Edinburgh in 1961.