

The two high-altitude solar observatories of the Institution, in Chile and on Table Mountain, California, will be maintained in operation. Prof. F. L. Whipple, who will succeed Mr. L. B. Aldrich on his retirement as director of the Smithsonian Astrophysical Observatory, will continue to hold his present post at Harvard College Observatory; and it is contemplated that the two bodies, though retaining their separate identities for administrative purposes, will eventually be staffed jointly.

The basic work of the Smithsonian Astrophysical Observatory from 1902 (twelve years after its foundation) to the present time has been the precise measurement of the Sun's output of radiation. This so-called 'solar constant' is a basic datum not only of solar physics but also of terrestrial meteorology. The early measurements of its magnitude were admittedly imperfect—the estimation of atmospheric absorption presents a formidable difficulty—but the instruments and the methods of observing have been steadily improved. Although the evaluation of periodicities in the variable energy output of the Sun and their correlation with terrestrial weather changes have been and are still controversial matters, there can be no doubt that the data accumulated at Washington and its field-observing stations during the past half-century represent a major contribution to the Institution's avowed purpose of "increasing and diffusing knowledge among men". The association of this work with that of the Harvard College Observatory, where solar research has also frequently followed a geophysical trend, promises well for the future study of solar-terrestrial relationships.

#### Mr. L. B. Aldrich

MR. L. B. ALDRICH retires from the directorship of the Smithsonian Astrophysical Observatory after forty-two years service with the Institution. Joining in 1913 as 'bolometric assistant', he worked in association with Dr. C. G. Abbot for the greater part of the latter's life study of the solar constant and of periodicities in its measured variations. He was appointed assistant director in 1930, and on Dr. Abbot's retirement from administrative work in 1944 he became acting director, being confirmed in the post of director a year later. During his long period of service, there have been issued from the Observatory not only the long reports containing the basic data from which the solar constant is derived but also a series of papers discussing the associated instruments and observational techniques, in the development of which Mr. Aldrich has often been personally concerned.

#### Prof. F. L. Whipple

PROF. F. L. WHIPPLE, who succeeds Mr. Aldrich as director on July 1, joined the staff of Harvard College Observatory in 1931, immediately after receiving the Ph.D. degree from the University of California at Los Angeles. He has done much basic work in high-speed ballistics and aerodynamics, particularly in connexion with the Harvard programmes of meteor study; in pure astronomy he has been interested chiefly in the physics of comets, of meteors and of interstellar gas. As professor, Dr. Whipple will remain a member of the council directing teaching and research in astronomy at Harvard. As director of the Smithsonian Astrophysical Observatory, he will join the Solar Associates, a group co-ordinating solar and upper-air research at Harvard and its Climax station with allied work by the U.S.

Air Force at Sunspot, New Mexico, and the Central Radio Propagation Laboratory of the National Bureau of Standards at Boulder, Colorado.

#### Physiological Research on Channel Swimmers

LAST year, when Butlins Ltd. organized a swimming race across the English Channel, two members of the Survival at Sea Committee of the Royal Naval Personnel Research Committee made a preliminary physiological examination of the participants and recommended that a fully organized research would be very valuable. As a result, for this year's race, which will be swum during August 10-16 by eighteen competitors, the Admiralty and the Medical Research Council are co-operating in such a full-scale investigation. The objects will be to determine so far as possible the effects of prolonged energy expenditure under cold immersed conditions and to study the biochemical changes which may arise; in particular, the fat distribution of each participant will be recorded before and after the swim. Each boat accompanying a swimmer will have on board a Royal Marines signaller, who will be in constant touch by radio with a Royal Naval vessel, Seaward Defence M.L. 3515, on which will be six scientific workers, and with two medical bases to be set up at Dover and Folkestone. The moment a swimmer gives up, the signaller will notify the scientific team and a research worker will immediately go and make an examination.

#### Scientific Needs of the Army

COMMEMORATION DAY was celebrated at the Royal Military College of Science, Shrivenham, on June 18, when a large company of past and present students attended with their guests and toured the laboratories. In an address given by Field Marshal Sir John Harding, Chief of the Imperial General Staff, he said that the Army needs a much higher standard of technical knowledge and that the general purpose of the College is to raise that standard and to make fashionable a technical outlook in the Army. Two other crucial needs are, first, that the Army's requirements are properly understood by research and development establishments and by producers and, secondly, that the Army knows what science has to offer. The War Office, in conjunction with the Ministry of Supply, is to set up a special selection board to deal with the planning of the careers of technical staff officers.

#### Research and Development in the Coal Industry

IN referring to the report of the Advisory Committee on the Organization of the National Coal Board (*Nature*, May 21, p. 867), attention was directed to the recommendation that a research and development committee should be set up. The National Coal Board has now established a Technical Research and Development Committee consisting of J. Bowman (deputy chairman of the Board), J. Latham (finance member), Dr. W. Reid (production member) and A. H. A. Wynn (scientific member). The director-general of research (Dr. Idris Jones) and other senior officials of the Board attend the Committee by invitation. The terms of reference of the Committee are as follows: "To consider and approve, in the form of programmes and budgets, the general lines of the Board's research and development in the Production and Carbonization fields, having regard to the weight of effort to be directed to the various elements in the programmes and the