

## News and Views

### Long Distance Air Record

THE Russian pilot, Colonel Michael Gromoff, with two companions, flying an Ant 25-1, landed at San Jacinto, California, on July 14—a flight estimated to be of about 6,625 miles from Moscow, over the North Pole which lasted 61 hours 7 minutes. The existing record of 5,675 miles, was held by the French airmen Codos and Rossi. The Soviet Government has been interested in this route, which follows practically a direct line across the North Pole. The pilot's log mentions the points Moscow, south-west Novaya Zemlya, North Pole, northern British Columbia, Oregon, San Francisco, and San Jacinto. So recently as last June, Chekaloff with two others on a similar machine flew over the same course, reaching Portland, Washington, a distance of 5,500 miles. The machine, also an Ant 25-1, was specially fitted for long-distance work, carrying extra fuel tanks and liquid oxygen, presumably for flying at considerable altitudes. The total loaded weight of the machine was  $11\frac{1}{2}$  tons, about 6 tons of which is stated to have been fuel for the flight.

ONE result of this flight, although possibly of a negative order, is the confirmation of the fact that the severe storms encountered, added to many hundreds of miles of ice-bound regions in which forced landings would be impossible, make it questionable as to whether such a route can ever be a commercial possibility, even though it may be the shortest distance from northern Europe to North America. Apart from this, such flights have an obvious interest to the Russian authorities, whose internal air transport and military defence problems over the long distances in northern Siberia, are of a very similar nature. Colonel Gromoff is a well-known Russian test pilot, who has been connected with the development of Russian aviation since about 1917. His name has been particularly associated with the principal Russian research station, the Moscow Central Aerodynamic Institute. It is interesting to remember that he broke a world record in 1934 with a continuous flight of 7,765 miles in a closed circuit.

### Commercial Production of Oil from Coal

ON July 14, the House of Lords debated a Motion by Lord Mottistone that plant for obtaining oil from coal should be set up in Durham and South Wales in the interests both of national defence and increase of employment. Lord McGowan said that the experience of Imperial Chemical Industries, Ltd., has established the technical possibility of such processes but at capital and operating costs so high that the process, even with the assistance of existing protection, is not attractive to private capital. Success would have to depend not on private initiative, but on Government policy. The production of heavy oil for marine purposes from coal is at present un-

economical. The effect on employment ought not to be exaggerated. A plant capable of producing 150,000 tons of petrol annually provides work for 6,000 persons of whom 2,500 would be miners. Low-temperature carbonization and hydrogenation are complementary processes, and increased use of smokeless household fuels would promote both national security and national welfare. Hydrogenation processes, he emphasized, are a question of high national policy and beyond the purview of an ordinary limited liability company. Reference was made to the Fischer process and other methods of developing the use of coal. Lord Hutchinson, in reply, said the Government is awaiting the report of Lord Falmouth's Committee before deciding its policy for the production of oil from coal. Meanwhile, it is encouraging the establishment of plant for carbonizing coal at low temperatures, and another will be in production in South Wales next year.

### Observations of the Longest Eclipse

INFORMATION has come to hand of the success of Prof. J. Q. Stewart, of Princeton University, and Mr. T. Stokley, director of the Planetarium in Philadelphia (representing the Franklin Institute and the Cook Observatory), in observing the recent total solar eclipse for an uninterrupted period of 7 min. 6 sec. from the S.S. *Steelmaker* of the Isthmian Steamship Co. The ship was at  $133^{\circ} 38' W.$ ,  $9^{\circ} 49.5' N.$  and the sun's altitude was  $75^{\circ} .8'$ . Owing to the ship's motion, totality lasted an extra four seconds for the observers. Prof. Stewart was engaged in visual study of the corona, while Mr. Stokley took photographs of the corona and measures of its total brightness at mid-eclipse. Preliminary measures show that this was of the same order as that of the full moon, while the observers on Canton Island have reported a value about half the full moon. The difference is in the opposite sense to what would be expected from purely geometrical considerations of the amount of low corona uncovered. The eclipse is described as a bright one. Despite the shadow extending around in all directions for seventy-seven miles, there was no need of flashlights to read the instruments, while ordinary newspaper print could be read with ease. Only Venus, Mercury and a few first magnitude stars could be seen, and there was indication of a high layer of haze in the sky. The corona was of late intermediate type, approaching maximum, made up of radial spikes and with no very long streamers.

### Price Chair of International Economics

THE Council of the Royal Institute of International Affairs announces the appointment of Prof. Allan G. B. Fisher, of the University of Western Australia, to the newly established Price chair of international economics at Chatham House. The purposes of the chair is to provide the Institute with the means for

more intensive research into world economic problems than has hitherto been possible. Prof. Fisher is the first occupant of this chair, and will consequently inaugurate the new development in the Institute's activities which has been rendered possible by the recent generous gift of £20,000 made by Sir Henry Price for this specific purpose. Prof. Fisher, who was born at Christchurch, New Zealand, in 1895, has been professor of economics in the University of Western Australia since the beginning of 1936. He has contributed widely to periodicals dealing with economics, and has published two books, "Some Problems of Wages and their Regulation in Great Britain since 1918", and "The Clash of Progress and Security". Prof. Fisher hopes to take up his new post at Chatham House early in 1938.

### Avebury

Two years ago, Mr. W. G. A. Ormsby-Gore, then First Commissioner of Works, urgently directed attention to the necessity of taking steps by means of a planning scheme to preserve the surroundings of Avebury, constituting in their entirety, as he pointed out, the most imposing monument of prehistoric civilization in the whole world. He then expressed the hope that it would not be long before such a scheme was initiated. There is now a prospect that this hope may be fulfilled. A scheme under the Town and Country Planning Act, 1932, has been prepared, which, if the necessary financial provision is made, will be put into operation before the main Wiltshire Planning Scheme, for the planning and preservation of the village of Avebury and its immediate surroundings. This scheme involves the prohibition of building in certain areas, and its restriction in others. The area covered by the prehistoric remains will be preserved for ever from building, and this, with the willing co-operation of the owner, also applies to the grounds and building of the Manor House, of which part dates from before 1548, part from the latter half of the sixteenth century. Over the main part of the downland, upon which the charm of the monuments and their appeal to the historic imagination so intimately depend, no new building will be allowed, except for agricultural purposes and necessary extensions of existing buildings, while the harmonious character of new cottages will be ensured and the planting of trees continued. To some small extent the village has encroached on the monument, but condemned cottages will not be re-erected. The agricultural character of the district will be preserved, and provision made for its future prosperity by the setting aside of adequate sites for new buildings.

This scheme will cost money. It is estimated that a sum of £11,000 will be required to meet the cost of compensation and other charges necessary to carry out the provisions of the scheme. Towards this, the sum of £4,000 already has been promised privately. An appeal for the balance is made by Sir Ernest Wills, Lord Lieutenant of Wiltshire, the Marquess of Bath, chairman of the County Council, Sir Philip

Sassoon, First Commissioner of Works, Mr. W. G. A. Ormsby-Gore, Lord Baldwin and others. The National Trust has undertaken to receive subscriptions and hold the funds for the purpose of the Scheme, which will be controlled partly by a special body composed of representatives of the County Council, the Rural District Council, the Parish Council, H.M. Office of Works, the Council for the Preservation of Rural England, and the Wiltshire Archæological and Natural History Society, and partly by the National Trust. In view of the number of prehistoric monuments of the first importance in the neighbourhood of Avebury—Windmill Hill, Silbury Hill, Overton Hill, the Avenue, the Roman Road, to name the most prominent only—the price of preservation is small, and the appeal should meet with a ready response from the public.

### Mesolithic Site in Surrey

AN important mesolithic site consisting of a group of pit-dwellings has been excavated by Dr. J. G. D. Clark near Farnham, Surrey. It was discovered by Mr. W. F. Rankine, a local archæologist, and has been described as "without any parallel in this country". (*The Times*, July 20.) The pits are circular and some three feet deep by about twelve feet across. One of the dwellings shows the site of a hearth, in which the blackening by fire can still be seen. Several hundred microlithic implements have been found, as well as a fine pointed-butt axe or pick, about five inches long. It is suggested that the settlement may be dated at about 3000 B.C., that is towards the close of the Mesolithic period, to which Dr. Clark in his studies of the Mesolithic period in Northern Europe has assigned a dating of from 8000 B.C. to 2500 B.C., when the full-fledged Neolithic culture takes its place. It would appear that this find gives an entirely new conception of the character of the mode of life of the Mesolithic peoples, which here at least would appear to have entered on a more or less settled stage. Other sites previously investigated afford little or no indications of permanent habitations, the inhabitants having lived in shelters, wind screens or skin tents as did the prehistoric inhabitants of North America and the less advanced of the recent Indians.

### Necessities of Scientific Training

IN his presidential address delivered at Harrogate on July 6 to the Society of Chemical Industry, Lord Leverhulme emphasized the value of a scientific training whether a man's business career is on the technical side of industry or not. Scientific method and the scientific habit of thought have an application far beyond the confines of technical research and technical processes, and Lord Leverhulme referred in particular to the importance and value of a scientific study of markets involved in market research and forecasting, as well as to the development of scientific methods of management commencing with the ideas and methods of Taylor. Referring to the synthetic production of an increasing number of our raw materials, he suggested that this development indicates an economic revolution, the proximity and