

buildings will be converted into offices and book-stores, and the site provides adequate room for expansion in the future. The new library—the nucleus of which already exists in the Department's Lending Library Unit now at Chester Terrace, Regent's Park, London—will cover all subjects in science and technology, except for some fields of medicine. It will take over the responsibility for the lending service now provided by the Science Museum Library, which in future will concentrate on serving the needs of the enlarged Imperial College of Science and Technology. It is also taking over some of the literature now held by the Science Museum Library. The present Lending Library Unit has been collecting literature for the National Library since 1957. It already operates a loan service for Russian literature which is being progressively extended to cover publications from other countries. Eventually, much of the scientific and technological literature in the world will be included in this collection, to make it the most comprehensive of its kind in the United Kingdom. The new library in Yorkshire will make its unique collection available to research, industrial, educational and other organizations by loans and photographic reproduction. Its primary objective will be to encourage the greater use of scientific and technical literature. One important activity will be the expansion of work on the translation of Russian scientific literature, now organized by the Lending Library Unit in collaboration with the National Science Foundation in the United States. It remains distinct from the National Reference Library of Science and Invention, which it is proposed to establish in London as the successor to the existing Patent Office Library.

#### International Federation of Operational Research Societies

AN International Federation of Operational Research Societies has been created with the objects of developing operational research as a unified science and its advancement in all countries. The initial membership of the Federation consists of the Operational Research Society (United Kingdom), the Operations Research Society of America, and the Société Française de Recherche Opérationnelle. Membership is open to other national societies with the primary object of promoting operational research and with memberships including qualified scientists working in this field. The Federation will be governed by a board of representatives, one representative coming from each member society. According to the statutes, the voting power of each is proportional to the square root of the size of the membership of the Society he represents.

One of the first activities of the Federation will be to sponsor the second international conference on this subject, following the successful first conference held in Oxford in 1957. The second conference is provisionally planned to be held at Aix-en-Provence early in September 1960. Sir Charles Goodeve has agreed to act as secretary and Mr. Donald Hicks as treasurer of the Federation, the address of which is 11 Park Lane, London, W.1.

#### American Geographical Society Expedition to Chile

THE American Geographical Society is sending an expedition to southern Chile for two months study of glaciers in the vicinity of Laguna de San Rafael. Dr. Calvin J. Heusser, of the Society's research staff,

will be in charge of the project, which is supported by the Office of Naval Research. Its purpose is to determine the nature and duration of successive phases of climate and vegetation since the glaciers of the last Ice Age receded. The Laguna de San Rafael area was selected because it contains the northernmost glaciers in South America reaching to sea-level and also because its climate, vegetation and physical features resemble those of south-eastern Alaska, where the Society has conducted similar studies since 1948. By correlating the results from Chile with those from Alaska it is hoped that a comparative chronology of climatic variations in the northern and southern hemispheres may be obtained. In addition to Dr. Heusser, the expedition comprises Dr. and Mrs. D. B. Lawrence, both professors of botany in the University of Minnesota; Dr. E. H. Muller, professor of geology, Cornell University; Dr. Carlos Munoz Pizarro, of the Faculty of Agronomy, University of Chile; Shoji Horie, of the Department of Botany, Yale University; and Augusto Grosse, of Puerto Aysen, Chile.

#### The Atlas Satellite (1958 ζ)

THE largest and heaviest satellite so far placed in orbit by the United States was launched in a south-easterly direction from Cape Canaveral in Florida at 23.02 u.t. on December 18. The complete satellite weighs some 8,500 lb., of which only a small proportion, about 150 lb., is pay-load. The remainder of the object is the empty shell of the *Atlas* missile which performed the launching, about 80 ft. long and 10 ft. in diameter. The main purpose of the satellite is to act as a radio relay station, storing and re-transmitting, on frequencies of 132.45 and 139.905 Mc./s., messages sent to it from the ground. It also carries telemetry transmitters operating on 107.97 and 107.94 Mc./s. The satellite is the first to be successfully launched since July 1958, and is designated 1958 ζ. Its orbit is inclined at 32.4° to the equator. Initially, the period of revolution was 101.47 min., and the height varied between 120 and 920 miles, an eccentricity of 0.089; the perigee was near lat. 25° N., when the satellite was on the southward half of its orbit, but the perigee point moved rapidly forward around the orbit, at a rate of 8½° a day. Because its perigee is so low, the life-time of the satellite is expected to be short—only about four weeks.

#### Giacomo Pylarino (1659–1718)

A PIONEER who made variolation a scientific procedure, Giacomo Pylarino was born 300 years ago on January 9, 1659, on the Ionian island Cephalonia. He studied law at Venice and medicine at Padua where he graduated M.D. Practising at Candia in Crete, he made enough money to allow him to travel, and he visited Constantinople, Syria, Egypt, and Smyrna, where he became Consul for Venice. In 1713, Emmanuel Timoni, a Greek physician of Constantinople, wrote for the *Philosophical Transactions* an account of the method of variolation as observed and practised by him. Anxious to have further details, Sir Hans Sloane wrote to the British Consul at Smyrna, Dr. Sherrard, who communicated with his former colleague, the Venetian Consul. Pylarino had returned to Venice, but was persuaded to draw up an account of what he knew of the original methods of inoculation at Constantinople during the first years of the century. This was printed at Venice