appointed in their professional capacities as individuals by the NASA administrator and the committees will report to him. As far as feasible, committee membership will be kept small to facilitate discussion and decision.

The new research committees will supersede the 28 technical committees and subcommittees of the National Advisory Committee for Aeronautics, which was absorbed by the NASA when it was established last October. The NACA committees and subcommittees are due to go out of existence on 31 December.

## Research Corporation Grants

The Research Corporation distributed $259,259 as grants-in-aid during the last quarter of fiscal 1958, which ended 31 October, bringing the annual disbursement to $1,244,000. The foundation distributed $1,257,000 in grants-in-aid in fiscal 1957.

The last quarter grants were made among four areas of the foundation's interests. These areas, and the amounts granted, are as follows:

Frederick Gardner Cottrell Grants—$146,908 granted to 46 colleges and universities in 24 states, and abroad to the American University of Beirut for basic research in the natural sciences;

The Williams–Waterman Fund for the Combat of Dietary Diseases—68,260 granted to universities both in the United States and abroad for basic research and experimental programs related to the field of human nutrition;

The Brown-Hazen Fund—$4,700 granted to Baylor University for support of fundamental research in biochemistry, microbiology, and immunology;

Howard Andrews Poillon Fund—$39,391 granted to four universities in the United States for programs of "exceptional scientific merit" which fall outside the scope of the major funds.

Research Corporation is a nonprofit foundation established in 1912 by the late Frederick Gardner Cottrell, who was a professor of chemistry at the University of California. The foundation supports research in the natural sciences in educational and scientific institutions.

## Teacher Recruitment in New York

Some 526 leading scientists, including 15 Nobel prize winners, have announced their support of a far-reaching proposal by a committee of science educators to spur recruitment of teachers and improve science instruction in the New York City public high schools. The proposed plan calls for a sharp increase in expenditure on the high schools. It asks the Board of Education to initiate public relations efforts, legislative activity, and independent budgeting in order to mobilize public support for the increase. It details requirements in the high schools on which money must be spent to make science teaching more effective.

The plan was framed by the Joint Committee on Science Teacher Recruitment, representing science department chairmen of the New York City high schools. Stanley L. Weinberg is chairman of the committee, which has an office in the headquarters of the New York Academy of Sciences, 2 E. 63 St.

Harold C. Urey, Nobel Prize winner and distinguished service professor of chemistry at the University of Chicago, says of the proposal:

"I think this is an excellent statement. The budget of the schools of the United States should be doubled. I have just visited Israel, a country of two million, in very difficult circumstances, and yet able to afford three institutions of higher learning. Saudi Arabia, with hundreds of millions of oil royalties, cannot afford primary-school education. A people can afford what they wish to afford, and it is necessary to get the people of the United States to understand that we must afford better education. The city of New York should lead in this."

## The American Scientist's Knowledge of Foreign Languages

More than 97,000 scientists in the National Register of Scientific and Technical Personnel in 1954–55 reported a knowledge, with varying degrees of proficiency, of at least one foreign language. This constituted approximately three-quarters of the 127,000 persons in the Register, and it is estimated that more than one-half of all American scientists were included in the Register during this period.

German was the language reported most often, and French next, obviously a reflection of educational requirements for scientific training, particularly at the graduate level. By scientific field, those in chemistry and chemical engineering and in physics and astronomy showed a greater concentration in the Germanic languages, while in psychology and the earth sciences there were proportionally greater numbers with knowledge of French, Spanish, and other Romance languages.

Only about 1 in 50 of those reporting a language ability had a knowledge of Russian and less than 1 in 100, of Chinese. In the case of these languages, it appears that such knowledge stems largely from nativity and family background. These findings indicate that nearly all American scientists must depend on translations for knowledge of scientific developments in the Soviet bloc countries.

## Blood of Aquatic Animals

The first symposium on the blood of aquatic animals was held in Tokyo, Japan, on 3 November under the sponsorship of the Japanese Fisheries Agency and the Japanese Fisheries Society. The purpose of this symposium was to establish an organization for the discussion of problems relating to the blood of aquatic animals. Abstracts of the seven papers presented will be published in English in the *Japanese Journal of Ichthyology*, volume 7, Nos. 2, 3, 4 (now in press). These papers were concerned with antigens in the blood of oysters, mackerel, tuna, and whales, the blood composition of carp, and the physiology of blood in relation to the productivity of fish ponds. Correspondence concerning this symposium and succeeding ones should be sent to Professor Y. Suyehiro, Chief, Department of Fisheries, Division of Agriculture, Tokyo University, Bunkyoku, Tokyo, Japan.

## Argentine Astronomy

On 7–9 November, a meeting was held by Argentine astronomers at the Felix Aguilar Observatory of the University of Cuyo in San Juan. Seventeen papers, three general reports and ten progress reports, were presented. An important outcome of the meeting was the founding of the Argentine Astronomical Association and the election of the members of the Argentine National Committee for Astronomy. The officers of the new association are B. H. Dawson, president, J. J. Nissen, vice-president, C. Jaschek, secretary, J. Landi-Dessy, treasurer, and C. U. Cesco and J. L. Sersic, councilors. L. Gratton, C. Jaschek, R. Platzeck, and J. Sahade are the members of the National Committee.

## Foreign Medical Graduates' Examination Results

Results of the first world-wide American Medical Qualification Examination held 23 September in 30 U.S. examination centers and 30 foreign centers have been announced by Dean F. Smiley, executive director, Educational Council for Foreign Medical Graduates. The foreign centers were established in Latin America, the Far East, the Middle East, and Europe.

Statistics reveal that of the 844 foreign-trained physicians taking the examination, 418 passed and will receive the ECFMG Certificate. According to the council, these physicians are certified as possessing medical knowledge reasonably equivalent to that expected of graduates of approved American and Canadian medical schools and as having

satisfactory facility in the English language.

The examination results also indicate that 226 candidates came sufficiently close to passing, in spite of language difficulties, to earn temporary certificates which will qualify them to study not more than 2 years as interns or residents in U.S. hospitals approved for internship or residency training.

Those foreign-trained physicians who pass the examination and enter the U.S. on exchange visitor visas may participate in the National Intern Matching Program or apply directly to a hospital for an internship or residency. In addition, graduates entering the U.S. on immigrant visas may be admitted to licensing examinations in at least 16 states.

Located in Evanston, Ill., the Council for Foreign Medical Graduates was established in 1957 as a means of evaluating the education of foreign medical graduates wishing to take advanced training or obtain licenses in the United States. On 25 March of this year the council administered the first examination of this type in 17 stations in the United States. Fifty-one percent of the 300 applicants tested passed this initial test.

The American Medical Qualifications Examinations for 1959 are scheduled for 17 February and 22 September. To be admitted to these examinations the candidate is required to present, 3 months in advance, an application and credentials confirming that he has had 18 years or more of formal education at least four of which have been in a recognized school of medicine.

Other sponsoring organizations of the examinations are the Association of American Medical Colleges, the American Hospital Association, the American Medical Association, and the Federation of State Medical Boards of the United States.

## Cytoanalyzer

Successful results from the first clinical trial of the Cytoanalyzer, an electronic device for sorting specimens of vaginal fluid in the cell examination test for uterine cancer, were reported on 14 November at the annual meeting of the Inter-Society Cytology Council in New York. John C. Pruitt of the National Cancer Institute gave the results of developmental studies from two reports prepared by himself and colleagues in the institute's Field Investigations and Demonstrations Branch.

The Cytoanalyzer is designed to detect abnormal cells by microscopically scanning slides bearing fluid from the vaginal tract. In the current study, 1075 negative slides and 20 positive or suspected-positive were fed into the machine. The machine was so adjusted that about 40 percent of the known negative slides were correctly eliminated as totally negative. Only those not eliminated by the machine would have had to be examined by cytotechnicians.

Reduction of error in the electronic selection was accomplished by a new method of preparing vaginal-cervical specimens for machine scanning. This method allows the instrument to scan each cell and record the results.

## German Hydrographic Institute

The founding of the German Hydrographic Institute (Deutsches Hydrographisches Institut) dates back to 1861 when a Prussian Hydrographic Service was established as a section of the Prussian Navy. In 1871 this organization, located in Berlin, was taken over by the German Navy, under whose jurisdiction it remained until 1945, although during the period from 1919 to 1935 certain sections were temporarily transferred to the German Ministry of Communications. At the end of World War II the entire German Hydrographic Service was disbanded. After a short lapse of time, it was reorganized by the Allied Control Council of Germany as a strictly civilian organization with its seat in Hamburg. It was placed under the German Federal Government in 1949 and today operates under the authority of the Federal Ministry of Communications.

Owing to the circumstances under which its postwar reorganization took place, many sections of the institute had to be set up initially in widely scattered localities. This was felt to be a severe handicap; therefore, in 1957 a large new building was erected in Hamburg on a site adjacent to the harbor. This structure houses all the main sections of the institute. The building consists of two wings, one of ten stories and one of six; extensive basement premises occupied by workshops are used for the installation of instruments which are sensitive to temperature and climatic changes.

Twelve subsidiary offices must still be maintained in ports and similar localities for the testing and on-the-spot certification of nautical instruments and for the rendering of specific nautical information to local shipping interests. There is also a geomagnetic observatory maintained in open country at Wingst (about 60 miles from Hamburg in the vicinity of the Elbe estuary). Because of the nature of the work, the observatory must be located at a substantial distance from traffic and industrial disturbances.

The institute is the owner of six survey vessels: *Gauss* of about 850 tons, *Suderoog* of about 155 tons, *Ruden* and *Hooge* of about 100 tons each, and *Atair* and *Wega* of about 70 tons each. The newest of these vessels is the *Suderoog,* which was put into service in 1957. The institute ships can serve all types of nautical and oceanographic work, such as precision depth sounding, geophysical and marine geological research, testing of nautical instruments, and development and test work on radio and radar navigation. In 1956–57, the *Gauss* made several exploratory voyages preparatory to the German contribution to the International Geophysical Year. The vessel has already completed one voyage in the North Atlantic area allocated to German IGY research during the spring of 1958, and she sailed at the end of July for the second of these voyages.

The general mission of the insitute includes all matters of a nautical nature which are of importance to German shipping. One aspect of this work concerns the collection and evaluation of observational data which are to be incorporated in German federal regulations or in charts, manuals, and directories to be supplied to shipping interests. The institute must therefore be able constantly to meet changing demands and, when necessary, perform research. Another aspect of the institute's work is of a more technical nature: its certificate is required for many nautical instruments, and it must therefore be in a position to perform the tests for compliance with the most recent standards.

The institute is headed by a president, at present G. Boehnecke. His staff consists of about 500 persons, of whom about 40 are scientists and engineers; most of the remaining technicians are mechanics, draftsmen, and printers. A large clerical staff is also maintained. Organizationally, the institute is divided into the following seven main sections: Nautical Publications and Nautical Information Service (section head, H. Mertgen); German Sea Chart Work (section head, H. R. Ermel); Nautical Charting and Geodetics (section head, K. Ansorge); Oceanography and Geomagnetism (section head, J. Joseph); Astronomy, including Astrometry, Tidal Movements, and Time Service (section head, H. Horn); Nautical Technology (section head, H. Gabler); and Library, Archives, and Stocks of Publications (section head, Th. Stocks).

The volume and scope of the institute's work are perhaps best reflected by the fact that the total paper consumption for the institute's printed publications is approximately 80 tons per year. In 1957 the chart printing department produced 1.3 million prints and the letter-press printing department about 3¼ million. Further, the institute's library is the only one of its kind in Germany and comprises about 60,000 volumes, all dealing with nautical and hydrographic subjects. In 1957, more than 10,000 books and periodicals were circulated.