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.