GENERAL SCIENCE

Interlingua Expanding

➤ THREE ADDITIONAL American medical journals have inaugurated the inclusion of summaries in Interlingua of their original articles. Interlingua is the world "bridge" language that every educated person, no matter what his native tongue, can be expected to read and understand without special study.

These journals are: Investigative Radiology, published in Philadelphia by J. B. Lippincott; the Journal of Pediatric Surgery, published in New York by Grune and Stratton and the Journal of Dental Research, published in Chicago by the International Association for Dental Research. The first two of these journals are new publications.

For over a decade Interlingua has been utilized for abstracts and summaries in more than a score of medical journals and international congresses. This use of Interlingua, under the direction of Dr. Alexander Gode, a linguist who is director of the Interlingua Division of SCIENCE SERVICE with headquarters in New York, is based upon a century of earlier linguistic study and development.

The program, in which medical journals throughout the world, and particularly in the United States, have participated, consists of attaching summaries or abstracts in Interlingua to original articles.

This practice makes the information accessible to all medical researchers and practitioners even if they cannot read the article in its original language. SCIENCE SERVICE has sponsored the application of Interlingua as part of its activities.

When editors of journals append Interlingua summaries to their original papers they make the journals accessible without translation to researchers throughout the world who consult the journals.

This has the potential of saving millions of dollars and much time in making foreign medical information accessible.

Interlingua is based upon the Western languages which trace their fundamental origins to Latin. It can be called a "standard average European language." Its grammar has been regularized, particularly in the fields of medicine and science, and its nomenclature is universal because of the development of a vocabulary of technical terms based upon world usage.

Interlingua is both a language of science and the language of the West.

Dr. Alexander Gode, from his offices at 80 East 11th Street, New York City, is in close touch with editors, particularly in the field of medicine. His services are available to editors who wish to utilize the advantages of publishing one abstract in the universal language, Interlingua, rather than carrying abstracts in half a dozen national languages.

• Science News, 89:297 April 23, 1966

ASTRONOMY

Optical Telescope Built

➤ THE GIFT of a 98-inch Pyrex dish mirror by the MacGregor Trust of Michigan has made it possible for the Royal Greenwich Observatory at Herstmonceux Castle, England, to build what will be the biggest optical telescope in Europe.

The mirror was originally made as an experiment before the 200-inch reflector was cast for the Hale telescope, now in operation atop Mt. Palomar, which was completed in 1948. The experimental mirror was given to the British Admiralty in 1949.

The tower to house the Isaac Newton telescope, named after the famous mathematician who was one of England's first Astronomers Royal, is now approaching completion. The telescope, expected to be in use by the end of 1966, is now undergoing performance tests.

The concave mirror is 98.2 inches in diameter, 16.1 inches in thickness at the edge and has a central hole 13.3 inches in diameter. It weighs 9,000 pounds. A reflecting coat of aluminum, evaporated onto the surface, reflects the starlight. The glass surface is polished to an accuracy measured in millionths of an inch.

The total cost of the instrument would have been about $1.5 million with all optical components. The gift of the mirror resulted in a substantial savings.

"The immense strides made in radio astronomy have tended to overshadow the valuable contribution which can still be made by the optical telescope," Sir Richard Woolley, the Astronomer Royal, told SCIENCE SERVICE. "Actually, the observations obtained by radio techniques are complementary to those obtained from visual astronomy.

"That is why several countries are contemplating optical telescopes of large size."

Both the Canadians and Australians are planning to build instruments about 150 inches in diameter.

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ASTRONOMY

Complete Star Catalog Calculated by Computer

➤ THE FIRST CATALOG of stars that an astronomer can use to find the positions of some 250,000 heavenly light sources is now available from the Government Printing Office.

Before this four-volume tabulation was compiled, astronomers sometimes had to consult as many as 50 different sources to check the position of the star they were scanning.

An electronic computer was used to combine and publish in one uniform catalog the information on star locations previously found only by consulting tens of star atlases.

The catalog identifies and locates every known star in the heavens down to those of the ninth magnitude, as well as many much more faint. Under the best conditions, stars of sixth magnitude can be seen by the naked eye; good binoculars will show those of ninth magnitude.

The 2,700-page catalog was prepared by the Smithsonian Astrophysical Observatory, Cambridge, Mass., under a grant from the National Aeronautics and Space Administration. To assemble all this precise information without error, a team of astronomers, mathematicians and computer programmers first reduced the 50 earlier catalogs to a common reference system.

They then transferred this information onto reels of computer tape that were programmed to produce it as pictures of tabulated data, one page at a time, on the face of a TV-like tube. To accomplish this electronic printing, the engineers first had to make the tiny images sharp enough to be enlarged several times.

From photographs of the images generated by these tapes, the Government Printing Office made the plates from which the Star Catalog was printed.

This method saved the costly and time-consuming job of typesetting and proofreading 2,600 pages of closely packed numerical data.

The Star Catalog is available in a hardbound edition from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for $20. The same information can be obtained on magnetic tapes for $50 from the Smithsonian Astrophysical Observatory, Cambridge, Mass.

One of the Star Catalog's first uses is in the preparation, now underway, of the most accurate maps of the heavens ever produced.

The Catalog gives the position, proper motion, photographic and visual magnitude, spectral type and other essential data for each star. It provides astronomers with instant reference to the entire sky, eliminating the laborious cross-checking formerly needed.

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