ers by not requiring the prospective high-school teacher to take the same course as the prospective research physicist. Melburn R. Mayfield is department chairman.

### NSF Finds US Science Policy Fragmented, Socially Oriented

In a study prepared for foreign audiences, the US is found to have a "constellation" of science policies rather than any single policy. At the same time an increasing emphasis on social problems is seen slowing down the growth rate of federal support for science and sparking a search for ways in which science can help achieve social goals.

The publication, National Science Policies of the United States: Origin, Development and Present Status, was prepared by the National Science Foundation at the request of unesco's Division of Science Policy. It is the tenth in a series of unesco studies of national and regional science policies. The report differs from the recent OECD analysis of US science in its increased emphasis on historical development, more detailed treatment of current issues, and inclusion of private and academic as well as governmental agencies. Copies are available from the UNESCO.

### Oppenheimer Papers Deposited With the Library of Congress

A collection of about 75 000 papers and notes of J. Robert Oppenheimer has been donated to the Library of Congress by his widow. Letters, notebooks, manuscripts of speeches, articles and books, even subject files make up the collection. Some of the items go back to the early years of World War II, and the collection as a whole provides valuable glimpses into a quarter century of ferment in physics and world affairs.

There are letters to and from scientific leaders such as Niels Bohr, Albert Einstein, Edward U. Condon, David E. Lilienthal and with Presidents Roosevelt, Truman and Eisenhower. And there is correspondence with other notables: Felix Frankfurter, T. S. Eliot, Indira Gandhi, Dag Hammerskjöld, Pablo Casals. The collection includes tape recordings, among which is a three-hour discussion between Bohr and Oppenheimer

in Denmark in 1958, and about 275 lectures, speeches and articles. One special group of papers deals with Oppenheimer's security hearings before the Atomic Energy Commission in

1954 and includes many drafts of material prepared by Oppenheimer and his wife to support his case, transcripts, clippings and versions of a European play about the hearings.

### History Center Tape Records Interviews With Top Physicists

More than 200 hours of interviews with 56 leading physicists (and, in some cases, their families) have been recorded on tape by the Center for History and Philosophy of Physics. The oral history program is a supplement to the center's traditional written documentation of 20th-century physics.

Trained science historians conduct the interviews, covering the physicist's personal account of his own life and work and his recollection of events of special significance in the history of physics. Later both the interviewer and the subject correct transcriptions, which are deposited in the Niels Bohr Library at the American Institute of Physics in New York. Both transcripts and tape are available to qualified scholars for study in the library, subject only to any restrictions requested by the subject.

Altogether the oral history collection

### IN BRIEF

A nonprofit information-retrieval center for industrial scientists and engineers has completed its first year of operation at the University of Connecticut. The New England Research Application Center scans 6000 publications a month for computer storage.

A joint master's-degree program has been established by Indiana State University and the Naval Ammunition Depot at Crane, Ind. Students spend alternate semesters (including summer terms) on campus at Terre Haute and at Crane, working there in either the quality-evaluation laboratory or the research and development department.

The National Science Foundation has published an analysis of student enrollment, sources of student support, and faculty and postdoctorals in graduate science departments for the years 1965 and 1966. The report is available from the Government Printing Office.

High Voltage Engineering has sold nuclear-physics research "packages" to the University of Massachusetts at Amherst and Indiana University of Pennsylvania at Indiana, Pa. The Amherst package includes a 400keV accelerator; Indiana has bought a 2-MeV package.

A new film, "Atoms in the Marketplace: Nuclear Materials Safeguards and Management," may be borrowed without charge or bought from the Atomic Energy Commission.

A Permanent Magnet Users Associa-

tion has been formed at the Franklin Institute in Philadelphia. The organization will supply and disseminate technical information in the permanent-magnet field. Information can be obtained from L. R. Moskowitz, executive director of the group, at the institute.

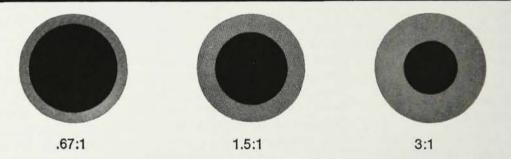
The National Science Foundation has given \$880 000 to California Institute of Technology for research in stellar nuclear processes. The one-year grant provides for continuation of work formerly supported by the Office of Naval Research. William A. Fowler is supervising the study.

Air Force Cambridge Research Laboratories has let a \$28 000 contract to the Lowell (Mass.) Technological Institute Research Foundation for design and construction of an ionospheric sounding system.

The Journal of Composite Materials is being published quarterly for Washington University and Monsanto in St Louis. It is devoted to "theoretical and experimental studies of the physical and structural properties of multiphase materials." Subscription details are available from Technomic Publishing Co, Inc, 750 Summer St., Stamford, Conn. 06902.

National Bureau of Standards has scheduled 13 measurement seminars and workshops, each lasting three to five days, between now and May. Most will be conducted at Gaithersburg or Boulder. The NBS Office of Technical Information and Publications has details.

# finally a choice.



A choice of SUPERCON® T48B in three new copper to superconductor ratios. It's no longer necessary to design your magnet around the only type available. With Norton's three new types, you can now vary the packing factor, current capacity and stability to suit your particular needs.

SUPERCON T48B is available from stock with copper to

superconductor ratios of .67:1 (Type S), 1.5:1 (Type M) and 3:1 (Type G). Its copper jacket is metallurgically bonded to the superconductive core for excellent stability. SUPERCON T48B is suitable for applications up to 90 kilogauss. It comes insulated or uninsulated in a variety of core diameters. It's your choice.

Write or call for our new 4-page brochure:

NDRTON SUPERCON DIVISION
FORMERLY NATIONAL RESEARCH CORP.
9 ERIE DRIVE NATICK, MASS 01760

Cable Address SUPERCON NATICK Tel: 617 655-0500

in the library contains 225 additional reels of tape, including recordings of lectures and symposia and interviews other than those conducted by the center. More is being added all the time.

The work has been supported by the National Science Foundation and the American Academy of Arts and Sciences. The NSF approved a new grant this fall.

The center's "traditional" program continues unabated. An August newsletter reported more than 1000 collections or individual items at 120 repositories are now linked in the Center's "National Catalog of Sources for the History of Physics," Credit is given to the "continuing cooperation of physicists, historians, librarians and archivists." Through personal visits and letters and telephone calls, the center staff has compiled catalog cards listing the name of the repository, name of collection, major subject of collection and the type of materials. Selected portions of the catalog will be published by AIP in a "Guide to Sources."

The center is directed by Charles Weiner. Its quarterly newsletter is available without charge,

## Queens College Establishes Low-Temperature Center

A center for experimental and theoretical low-temperature studies has been established in the physics department at Queens College in New York. Arthur Paskin, formerly of Brookhaven National Laboratory, is director. Erna M. J. Herrey, a professor in the department, assists. Construction of experimental facilities began this fall.

## World's 2nd Reactor Opened To Visitors At Oak Ridge

The historic Graphite or X-10 Reactor at Oak Ridge is now open to the public six days a week. Visitors may see the loading face and control room of the reactor as well as exhibits tracing the development of reactor technology.

The X-10 was built only 11 months after the success of Enrico Fermi's reactor at the University of Chicago, and served as the prototype for the plutonium reactors at Hanford, Wash. Although technically the world's second reactor, the X-10 was the first

to operate at significant power. Built in 1943 and shut down 20 years later, the reactor was registered as a National Historic Landmark in 1966, the same year the last fuel slugs were removed.

## Two Federal Labs Establish University of Maryland Links

The National Bureau of Standards and the Naval Research Laboratory have established cooperative programs with the University of Maryland.

The NBS arrangement has broad implications. Bureau employees will participate in university research and training programs, and university faculty and students will be encouraged to use NBS facilities. Initial emphasis will be given cooperation between the university's Center of Materials Research and the bureau's Institute for Materials Research. The bureau compared the possibilities with the 1962 establishment of the Joint Institute for Laboratory Astrophysics in Boulder, operated by NBS and the University of Colorado.

The Naval Research Laboratory agreement is confined to a coöperative program for materials research. NRL said its purpose was to "increase significantly the scientific breadth of the participants by coupling the strengths of a major government research organization with those of a leading academic institution."

### Physical Review Adds Section For Comments and Addenda

The Physical Review has added a "Comments and Addenda" section for short communications that are not urgent enough to justify publication in Physical Review Letters. The section is designed for only two types of communications:

Comments on papers previously published in The Physical Review or Physical Review Letters. Comments by others than the authors of papers under discussion will be sent to the original authors for their comments in turn.

Addenda to papers previously published in either journal, in which the additional information can be presented without writing a complete article.

In the 8 July issue of *Physical Review Letters*, the editors said, "It should be noted that this new section is not intended as a medium for

We don't make extravagant claims for our lithium niobate single crystals...

## They are simply the best available.

Using a newly developed growth technique we are now able to offer single domain lithium niobate single crystals characterized by high optical perfection, very low absorption losses and uniform Curie temperature. All crystals are guaranteed to be single domain and free from scattering centers, inclusions and striations. Each polished lithium niobate crystal is tested in a Twymann-Green interferometer and test data are supplied with the crystal. Selected crystals for use in modulators or other electro-optic devices can be provided; in such cases active electro-optic tests are performed on the crystal to insure satisfactory performance. For example, a typical Q-switch device, utilizing a crystal 9 x 9 x 36 mm, was fabricated and tested with the following results: contrast ratio 50:1 (at 1.64), half wave voltage 1000 volts, 2 fringes in a Twymann-Green interferometer, and 98.5% transmission (AR coated). Our technical staff will be glad to assist you.

Write or call:

ISOMET

433 Commercial Avenue Palisades Park, New Jersey 07650 Phone: (201) 944-4100