

million is marked for fundamental research. Improved instrumentation is to be stressed in the new budget, according to NSF Acting Director Richard Atkinson, and the bulk of this year's increases (see Table 3) reflect this emphasis. For example, one-half of the physics division's \$5.3-million gain in the new budget request is to go into the conversion of the Cornell University accelerator to an 8-GeV $\times$ 8-GeV electron-positron colliding-beam facility. Construction, which essentially consists of building a new magnetic ring in the present tunnel, is to commence with the 1978 fiscal year this October. In the materials-research division, a physics-related effort will be the expansion and development of synchrotron-radiation facilities at the Stanford Synchrotron Radiation Project and the University of Wisconsin, set at \$4.2 million.

In NSF's Astronomy program, funds for the National Radio Astronomy Observatory increased from \$21.8 million in FY 1977 to \$22.3 million in FY 1978, of which \$13.0 million is allocated each year to the Very Large Array project under way in New Mexico. Support for the Foundation's Research Applied to National Needs program also rose this time, up \$10.4 million to \$78.0 million—RANN funding had dropped in the previous budget. The increase is mostly the result of greater emphasis upon earthquake re-

search, for which funds were approximately doubled in FY 1978.

Defense R&D up. Total Research, Development, Demonstration, Testing and Evaluation obligations are 11% greater in the Defense Department's FY 1978 request (\$12.3 billion) than in FY 1977. The Pentagon's Office of Defense Research and Engineering continues its programmed beyond-inflation hikes of roughly ten percent for "6.1" (mostly basic) research and five percent for "6.2" exploratory development (including considerable applied work). Basic research for military functions—not including such items as DOD's development of a booster for the Space Shuttle—was supported at a rate of \$274 million in FY 1977; the FY 1978 figure, \$314 million, is 15% higher. The increase for basic research in physics is expected to be about 12%, but exact figures are not yet available.

—FCB

Minorities, women and handicapped assist NSF

The National Science Foundation is seeking to increase the representation of minorities, women and the handicapped in its Rotator Program. Under the program, NSF augments its permanent staff of scientists and other professional employees with qualified individuals from

college and university faculties. Approximately 30 such individuals are selected each year and they serve one- or two-year terms aiding the administration of continuing NSF programs.

The NSF particularly welcomes applications from doctoral scientists with six years of successful scientific research experience. In addition, some administrative experience and a broad general knowledge of the applicable field of science are also desirable.

Applications may be made to the program by sending a resumé and statement of interest to Herbert Harrington Jr, Director, NSF Office of Equal Employment Opportunity, Washington, D.C. 20550.

in brief

The American Association for the Advancement of Science is currently accepting nominations for the AAAS-Newcomb Cleveland Prize, which will be given to the author of an outstanding paper published in the "Reports" section of *Science* magazine, 3 September 1976–26 August. The prize consists of \$5000 and a bronze medal. Nominations should be sent to AAAS-Newcomb Cleveland Prize, 1515 Massachusetts Avenue N.W., Washington, D.C. 20005.

the physics community

OSA publishes set of uniform color cards

A set of 552 color cards designed by the Committee on Uniform Color Scales of the Optical Society of America is now available. This set of colors represents the culmination of 35 years of research directed toward producing a set of samples whose color differences consist solely of chromaticity differences without luminance differences.

The cards, which are two-inches square, are arranged in a 28-page loose-leaf binder. A set may be ordered for \$350 from OSA, Suite 620, 2000 L Street NW, Washington, D.C. 20036.

ACA elects Coppens vice-president for 1977

Philip Coppens, professor of chemistry at the State University of New York, Buffalo, has been elected vice-president of the American Crystallographic Association. The 1976 vice-president, Carroll K. Johnson (Oak Ridge National Laboratory), has succeeded to the office of president of the Association.

Coppens received his doctorate from



COPPENS

the University of Amsterdam in 1960, having conducted research in crystallography at the Weizmann Institute since 1957. He then joined the staff of Brookhaven National Laboratory, where he served as a scientist, 1965–68. In 1968 Coppens joined the faculty of the State University of New York, Buffalo.

Included in Coppens's research interests are crystal-structure determination, crystallographic computing, neutron diffraction, electron-density determination by accurate diffraction methods and crystallography at liquid-helium temperatures.

Pakistani meeting to stress current needs

The government of Pakistan has provided \$90 000 for the Second Summer College on Physics and Contemporary Needs, which will be held 20 June–8 July in Nathiagali, Pakistan. The College is co-sponsored by the International Centre for Theoretical Physics (Trieste, Italy).

The College is intended for physicists with postdoctoral research experience, particularly those from developing countries. Lectures will be given in these areas: physics and technology; physics, energy and natural resources, and physics and the frontiers of knowledge.

Requests for participation and further information may be sent to the Pakistan Atomic Energy Commission, PO Box 1114, Islamabad, Pakistan by 15 April. The Commission will give financial assistance to some participants.