



WEISSKOPF

hadron probes is necessary.

Recommendations. For fiscal year 1976 the subpanel recommends authorization of the joint Lawrence Berkeley Laboratory-SLAC proposal for construction at SLAC of an electron-positron colliding beam device, PEP, (PHYSICS TODAY, August, page 20) with a design luminosity of $10^{32} \text{ cm}^{-2} \text{ sec}^{-1}$ and an energy in each beam of 15 GeV. The estimated construction cost is \$53 million (in fiscal-year 1974 dollars), the cost of equipping the new installation is estimated at \$20 million, and the additional operating expense at SLAC is estimated as \$4 million/year.

Also in fiscal year 1976 the subpanel recommends that \$3-4 million be provided to Brookhaven to complete fabrication of prototypes of superconducting magnets. This effort would lay the groundwork for early construction at Brookhaven of ISABELLE, a proton-proton colliding-beam device (PHYSICS TODAY, August, page 20) with a design luminosity of $10^{33} \text{ cm}^{-2} \text{ sec}^{-1}$ and an energy in each beam of 200 GeV. The subpanel notes that the project represents a very large step in the use of superconductive systems; it believes that the program will have wide impact on many fields of science and technology. Construction cost is estimated at \$127 million (in fiscal year 1974 dollars).

The subpanel's final recommendation is that funds be provided to support an accelerator-development program at the Fermi Lab directed toward the long-term goal of fixed target and/or colliding-beam systems in the region of 1000 GeV and above. This program should include such features as the energy doubler (PHYSICS TODAY, July, page 19) and other steps toward attaining energies in the TeV range. The subpanel foresees the need for a multi-

TeV accelerator within 10-15 years. If no technical innovations are found to reduce substantially the cost of a multi-TeV, fixed-target machine, the subpanel suggests that an international approach might be advisable, either as a joint US-European effort or on an even wider scale to include the Soviet Union and/or other nations.

In resting its case, the subpanel argues that its three recommendations can be implemented over the next ten years and still keep the combined support of the AEC and NSF for operations and equipment at \$200 million/year (in fiscal-year 1974 dollars). Past experience shows that 20-25% of the total high-energy physics budget should go toward new and innovative facilities, they say. The subpanel's first two recommendations would allow initiation of research at PEP and ISABELLE in 5-8 years. The subpanel hopes that electron-proton facilities will also become available, either by adding an electron beam to ISABELLE or a proton beam to PEP. In making its projections the subpanel assumes that some lower-energy activities at existing machines would be reduced considerably or phased out as the new facilities become operational.

The subpanel said that the dispersal of high-energy physics facilities around the country was desirable. It felt strongly that such a dispersal, with PEP on the West Coast, a TeV facility in the Midwest and ISABELLE on the East Coast, offers the "diversity of physics, style and intellectual input which is desirable for a fruitful scientific endeavor." —GBL

Petrone takes up new post at NASA

As part of the reorganization of the National Aeronautics and Space Administration Headquarters, Rocco Petrone, currently director of the Marshall Space Flight Center, Huntsville, Ala., has been named associate administrator. He will be responsible for the overall management of the Agency's research and development programs, directing the activities of the Headquarters program offices, including manned space flight, space science, applications, aeronautics and space technology, and tracking and data acquisition. These offices previously reported to the administrator.

Deputy associate administrator will be John Naugle, who is now the associate administrator for space science; he will continue in that role until a successor is named.

George M. Low, NASA deputy administrator, will serve as acting associate administrator for center operations until a permanent appointment

has been made. Edwin C. Kilgore has been named deputy associate administrator for center operations.

Abernathy heads NSF energy-research office

Frederick H. Abernathy, previously director of the National Science Foundation's division of engineering, has been named head of the newly created NSF Office of Energy-Related General Research. Deputy head of the office is M. Kent Wilson, who has been head of the NSF's chemistry section.

The new office will coordinate internally all energy-related research within the Research Directorate, also working in conjunction with programs in other Federal agencies. Its staff will consist of six task coordinators located in various NSF divisions.

The Research Directorate budget includes \$130.1 million for energy-related research in 1975. The budget also shows \$233.6 million for basic research in areas not related to energy.

Bruce Hannay becomes president of IRI

N. Bruce Hannay has been named president of the Industrial Research Institute, an association of 230 companies engaged in industrial research. Hannay, vice-president of research and patents for Bell Laboratories, succeeds Herbert I. Fusfeld as IRI president. Arthur M. Bueche, vice-president for R&D at General Electric is the new president-elect and Donald J. Blickwede, vice-president and director of research for Bethlehem Steel, is the new IRI vice-president.

Hannay has been at Bell since 1944 and has served as a member of the solid-state sciences committee of the National Research Council and is the past chairman of the National Materials Advisory Board.

Satellites

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cessed and sent back to SMS-1 at 1.75 megabits per second—this slower rate signal is then rebroadcast to other receiving stations.

Test results. ATS-6 tests, according to Frank J. Kerr, spokesman for the National Academy of Sciences Committee on Radio Frequencies, show that significant interference was recorded in a field within approximately 10-20 deg from a direct line to the satellite by those observatories trying to monitor low-level signals from such sources as distant galaxies, fields of ionized hydrogen or quasars. Kerr said that at 2690

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