full-length dipole per week, according to Palmer. By April 1984 plans call for about 100 magnets to have been built with 54 dipoles and 23 quadrupoles assembled into a sextant ready for test with beam. By late 1984 the magnets would be cooled down and operated in the Isabelle pulsed mode to provide an integrated systems test. The report says that the R&D schedule is ambitious but with adequate financial resources and proper management the schedule can probably be met. Once the R&D program is completed, it "will provide an adequate test of magnet production capability and enable BNL to proceed with full-scale magnet production."

Concerning the rest of the accelerator systems, Trilling, in his oral report to HEPAP, said that the lattice design is sound and that the vacuum system design is advanced but that other systems are not so far along. He said the panel believes the initial luminosity goal of 2×10^{32} cm^{-2} sec^{-1} is realistic.

The remaining Isabelle cost for construction, R&D, pre-operations, equipment (including detectors) from FY 1983 onward would be about $500 million (FY 1982 dollars). To complete Isabelle by the end of the decade, Trilling said in his oral report, DOE would need a substantial funding increase for high-energy physics in FY 1983, and by FY 1984 one would need to reach $440 million to allow the continuation of Isabelle. —GBL

What will be the future role of national laboratories?

The role of national laboratories is being examined by a number of groups—the White House Office of Science and Technology Policy, the Department of Defense, the Department of Energy, and at least two energy subcommittees in the House.

OSTP plans to examine the role of all Federal intramural laboratories, including those run by DOE, NASA, NOAA and DOD, whether the lab is run by a contractor or not. University and private-sector labs will not be included in the study. According to Douglas Pewitt, now deputy director of OSTP, the Federal government in FY 1982 will spend $15–20 billion on 770 intramural labs. The OSTP review is scheduled to end next summer, but at this writing OSTP is still deciding who will conduct the review.

The Defense Department is already studying its labs, under the direction of Richard De Lauer, who is undersecretary of defense for research and engineering.

Meanwhile, as the Administration plans to disband DOE altogether, many are concerned about the future of DOE-supported research. When we recently visited Alvin Trivelpiece at the Office of Energy Research, he said that DOE functions are likely to continue—civilian nuclear work, weapons production and energy research, regardless of the reorganization.

One persistent rumor is that DOE plans to close one of its multiprogram labs; both Argonne and Brookhaven have been rumored to be in danger. Trivelpiece denied there is any plan to close any multipurpose DOE lab. However, he said, their roles and missions are going to be reviewed. "That doesn't mean we won't consider slowing down and relocating any of the projects at the multiprogram labs. We'd have to invent the national laboratories if we didn't already have them."

Trivelpiece said that hearings have been held under Congressman Don Fuqua (D.-Fla.) to review the missions of the national labs. On its own, through the Energy Research Advisory Board (now headed by Louis Roddis), DOE is reviewing its multiprogram labs and its weapons labs. Trivelpiece hopes the ERAB subpanel will do a long-range look at the labs, considering the appropriate roles for university, industrial and national labs. In addition, Trivelpiece's Office of Energy Research will do its own review of the national labs, involving management and technical issues. The output of both studies should be useful to Presidential Science Adviser George Keyworth.

Keyworth, in a recent speech celebrating the 50th anniversary of Lawrence Berkeley Laboratory, described the OSTP plan to look at the missions and functions of the national labs. He said, "We are examining ways to keep an adequate number of our best young scientists and engineers in advanced research and on our faculties. . . . I think that the national laboratories can play a role in meeting this objective. A wealth of talent exists in the labs to be used in a number of effective ways. The national labs can serve as new training grounds. You can work more closely with industry and academia to create new programs for manpower planning and supply."

"This Administration cannot continue in its budgeting exercise without taking an unprecedented look at the national laboratories and the nation's 'return on its investment,' as it were, from these institutions. . . we are beginning this initiative now. It is one I most certainly intend to carry out in concert with members of the entire scientific community. . ."

"If all this sounds somewhat foreboding to some of you, I'd like to interject an optimistic note here. The scientific community has historically—and particularly in recent years—had a tendency to overreact to the slightest government examination. And therefore, I would encourage you not to be looking for disaster around the corner. It won't come. . . ."

"We are convinced that the national laboratory system comprises a resource of enormous value, one whose health is of paramount importance." —GBL

NSF funds two math institutes

The National Science Board, after considering the recommendations of three NSF panels, recently approved five years of funding for two national institutes for research in mathematical sciences.

The University of Minnesota in Minneapolis was awarded $800 000 for the first year to establish an institute to bridge the gap between discoveries in pure mathematics and their application in other disciplines. The institute will be headed by Hans Weinberger as director and George R. Sell as associate director and will spend its first year considering statistical and continuum approaches to phase transitions.

The Mathematical Sciences Institute at the University of California, Berkeley will concentrate its first year of research on nonlinear differential equations, and numerical methods and statistics. A grant of $1.6 million for the first year will be used to establish the institute, projected to support up to 50 researchers in pure and applied mathematics. Each year the staff, led by Shing-Shen Chern as director and Calvin C. Moore as associate director, will select two areas of mathematics for study.

in brief

The National Research Council will administer about 35 postdoctoral fellowships for Native Americans, Alaskan Natives, blacks, Mexican-Americans and Puerto Ricans engaged in

college or university teaching. The Ford Foundation is sponsoring the one-year grants in humanities and sciences. Information and application materials, which must be returned by 1 February, are available from the Fellowship Office, National Research Council, 2101 Constitution Ave., Washington, D. C. 20418.

The American Association for the Advancement of Science will award mass-media fellowships to outstanding students, preferably at the graduate level, to work during the summer at radio and television stations and newspapers and magazines. Applications, to be returned by 1 February, should be submitted to Mass Media Science and Engineering Media Fellows Program, AAAS, 8th Floor, 1776 Massachusetts Ave., N. W., Washington, D. C. 20036.

The National Academy of Sciences is inviting applications for research visits (preferably of 5 to 12 months duration) to Soviet-bloc countries (or Yugoslavia) in Europe during 1983. Expenses will be met by NAS and the host academy. Request applications from NAS, Commission on International Relations, USSR/EE, 2101 Constitution Ave. N.W., Washington, D.C. 20418. Deadline is 20 March 1982.

the physics community

Rheologists elect Schowalter and Collier

William R. Schowalter took office as the new vice-president of the Society of Rheology and John R. Collier became its new secretary at the Society's October Meeting.

Schowalter, after his two-year term as vice-president, will succeed the new president, Alan Gent, professor of polymer physics and dean of graduate studies and research at the University of Akron.

Schowalter was educated at the University of Wisconsin (BS, 1951) and the University of Illinois (MS, 1953 and PhD in chemical engineering, 1957). He went to Princeton University in 1957 as assistant professor of chemical engineering. In 1966 he became professor and in 1978 chairman of the department, positions he currently holds. From 1972 to 1977 he was associate dean of the School of Engineering and Applied Science. He has conducted research in fluid mechanics, non-Newtonian flow and rheology.

Collier, who will serve a two-year term as secretary, studied at the South Dakota School of Mines and Technology (BS 1961), University of Illinois (MS, 1962) and Case Institute of Technology (PhD in polymer science engineering, 1966). Joining Ohio University as an assistant professor of chemical engineering in 1966, he rose to his present position, professor, in 1972. He was associate dean of the Graduate College from 1972 to 1978. He has done work on interrelationships between processing conditions, morphology and resultant properties of semicrystalline polymers and on tailoring of properties of polymers.

SCHOWALTER

New members elected to the executive committee of the Society are John M. Dealy of McGill University and Kurt F. Wissbrun of Celanese Research. They join Edward B. Bagley, USDA Agricultural Research Center, who serves on the committee as past-president. Treasurer Edward A. Collins and editor Raymond R. Myers were reelected.

NTIS sells AIP bibliographies

The National Technical Information Service is using the AIP magnetic tape database, SPIN, in the preparation of retrospective bibliographies. SPIN (Searchable Physics Information Notices), a monthly tape sent to subscribers, contains bibliographic information and abstracts of articles published in one-third the world's periodical literature in physics and astronomy, including all the AIP and member society journals. The NTIS bibliographies, containing abstracts, cover subjects in physics ranging from airglow and albedo to vacuum systems and whistler waves. The NTIS service, begun in 1981, uses the New England Research Applications Center's interactive retrieval system. Requests for free catalogs of published searches (Document PR-186) should be addressed to: National Technical Informative Service, US Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161.

National Society of Black Physicists meets

The National Society of Black Physicists has just published the proceedings of its eighth annual day of meetings held last May at Fermilab. This, the first such publication, contains five technical papers given on topics ranging from high-energy astrophysics to semiconductors.

Shirley Jackson, a theoretical physicist at Bell Labs (Murray Hill) and the Society's president, describes the day of meetings as the cornerstone of the Society's activities. Each year a prominent physicist—this year Walter E. Massey, director of Argonne National Lab—delivers a speech. Black physicists (who in some cases work in small departments and don't have resources to travel to national conferences) present their work to their peers with the support of the Society. During the day the group also holds its business meeting and provides the setting at which members can discuss common problems: the credibility sometimes denied them, their isolation and their restricted access to the "loops," as Jackson puts it, of the usual resources and contacts in physics. They assist each other and create some loops of their own within the mainstream.

This year the Society also invited about 100 high school and college students to attend the day of meetings and to meet working black physicists. The Society hopes to encourage these young people to go into physics and to advise them about opportunities in expanding fields of physics and at various schools.

The Society also keeps a roster of black physicists originally compiled by Ronald E. Mickens, professor of physics at Fisk and Vanderbilt universities. The roster provides another "loop" by supplying black physicists with the names and institutional affiliations of 200 black colleagues holding degrees or working in physics.

The Society originated eight years ago with annual dinners honoring older black physicists or physics educators. At these occasions other physicists presented talks on current work. These dinners expanded to days as more papers were presented and more people attended. In 1978 the organization formally constituted itself and elected officers. At present the officers, besides Jackson, are treasurer, W. Eugene Collins (Southern University); executive officer, Stephen McGuire (Oak Ridge National Lab); executive committee members, Sekazi Mtingwa (Fermilab) and Clayton Bates (Stanford University).

The proceedings are available, at cost, through the Public Information Office, Fermilab, P. O. Box 500, Batavia, IL 60510. □