

scientist who was the acting senior member of the Soviet party after Marchuk had to return early to the USSR because of the Armenian earthquake, told *PHYSICS TODAY* that the Academy-Academy negotiations were successful but that agreement on more specifics would have been reached if Marchuk had been able to stay for the intended duration of the visit. Marchuk, a specialist in applied mathematics, has done considerable work on modeling of ecological systems.

As a result of Marchuk's departure, signature of the protocol by the Soviets has been delayed, but finalization of the agreement is considered routine.

The agreement calls for a committee of experts from a wide variety of disciplines to be established. The committee will meet twice a year and report directly to the two academies. "Its activities will complement and support the many bilateral intergovernment programs currently under way and planned, particularly those programs carried out within the framework of the US-USSR agreement on environmental protection," the agreement says. "Also, it will assist in international efforts, such as the International Geosphere-Biosphere Program. When appropriate, the committee will consider preparing joint statements for public release concerning the state of the global ecology and the need for international action."

In a report justifying the establishment of the committee, representatives of the two academies said: "Natural resources are being exhausted on land and in the sea, and thousands of species of plants, animals and microorganisms are becoming extinct. Natural biogeochemical cycles, on which all life depends, are being disrupted; all parts of the environment are being polluted. The global ecosystem is being degraded rapidly, so that its sustainability is being called into question. As a consequence of the exhaustion of land, water, fishery, forest, mineral and other natural resources, the basis for economic development is being undermined. Indeed, it is calculated that human beings currently consume directly, divert or waste some 40% of total global photosynthetic productivity on land, while our numbers climb rapidly. In these circumstances, urgent action is clearly required."

"To reverse these threatening trends, accelerated research by scientists from all nations is of critical importance. . . . Mathematical models of different levels of complexity will

become increasingly important in ecology for the study and forecasting of the dynamics of the biogeochemical cycle that is a part of the Earth's life-support system. . . . Continued monitoring of the whole planet and of its separate regions must be done. For this reason, the application of satellite and other airborne remote sensing, in combination with conventional observations, to monitor the Earth is becoming an increasingly vital element. . . . In order to monitor the consequences of human activities, it is necessary to have a better base-line inventory of appropriate environmental components. For example, we do not even approximately know the number of species of organisms that exist: Estimates vary from 5 to 50 million species, with only about 1.4 million described thus far."

The committee's mandate is to focus, initially, on the following areas:

- ▷ global energy and biogeochemical cycles
- ▷ observation systems for assessing global change
- ▷ global changes in biotic activity
- ▷ theoretical and methodological bases for understanding ecological change
- ▷ review and support of related inter-

national efforts.

Concurrently with the announcement of the agreement on global ecology, it was disclosed that the Soviet Union had accepted an offer from the US National Academy to send a team of US earthquake experts to Soviet Armenia.

—WILLIAM SWEET

Fermilab Names Computing Center After Feynman



The Feynman Computing Center at Fermilab, shown here in an aerial view, was dedicated on 2 December. Construction of the new building was started four years ago, and the decision to name it after Richard Feynman was made last year. The objective of the center is to "increase fivefold the computing capacity available for scientific applications and to provide new space for these and related activities," according to the Department of Energy. The cost of the project has been about \$25 million. Robert R. Wilson, the former director of Fermilab, designed the building for the center in collaboration with Edward Crumpley of Fermilab's construction engineering services.

IN BRIEF

A recording of Richard Feynman playing the bongo drums and telling stories about his safecracking escapades during the Manhattan Project days at Los Alamos is available. The price is \$15 for a compact disc and \$10 for a cassette tape. Checks should be made out and addressed to Ralph Leighton, Box 70021, Pasadena CA 91107. All proceeds go to the Richard Feynman Memorial Fund for Cancer Research at the University of California, Los Angeles.

Addison-Wesley is publishing a special commemorative edition of the *Feynman Lectures in Physics* this year. Each of the three hardbound volumes sells for \$36.50 and the packaged set for \$88.95.