mathematics, and astronomy, California Institute to Technology; George A. Kolstad, chief, physics and mathematics branch, U.S. Atomic Energy Commission; Edward J. Lofgren, Lawrence Radiation Laboratory, University of California, Berkeley; Robert E. Marshak, chairman, department of physics and astronomy, University of Rochester; and Robert R. Wilson, director, Laboratory of Nuclear Studies, Cornell University.

The Russian scientists who will tour U.S.-controlled thermonuclear research installations are Boris I. Gavrilov, member, Institute of Atomic Energy; Il'ya F. Kvartskhava, member, Physical-Technical Institute; Yevgeniy V. Piskarev, member, Institute of Atomic Energy; Vladimir T. Tolok, member, Ukrainian Physico-Technical Institute; and Natan A. Yavlinskiy, member, Institute of Atomic Energy.

Poliomyelitis Group Embarrassed

While the cooperative program in nuclear science is proceeding smoothly, an American exchange group concerned with public health has encountered difficulties. A six-member delegation went to Moscow under the United States–Soviet cultural exchange agreement to attend an international symposium on poliomyelitis, 13–16 May. Another international poliomyelitis conference, outside the cultural exchange framework, is now being held (17–21 May). The State Department "requested" the three members of the U.S. team who are federal employees not to attend the second conference because Communist Chinese and East German delegations are participating.

The second meeting is devoted in great part to Soviet experience with a live-virus vaccine developed by Alfred Sabin of Cincinnati. The vaccine is virtually untested in this country, but it has been administered to some 50 million people in the U.S.S.R. Sabin, a nongovernment member of the U.S. delegation, is attending the conference, as is Victor Cabasco of Lederle Laboratories Company and Theodore Boyd of the National Foundation. The three federal employees forbidden to participate are David E. Price, assistant surgeon general of the Public Health Service, Roderick Murray of the National Institutes of Health, and Alexander Langmuir of the Public Health Service Communicable Disease Center in Atlanta, Ga.

First Meteorological Rocket Firing Network Established

Heretofore, meteorologists have been limited by their inability to probe more than the first 100,000 feet of the atmosphere with their radiosonde balloons; now, however, they have the promise of simultaneous and routine rocket observations of the atmosphere to altitudes more than twice as high. The development of this important aid to understanding the weather was revealed in the recent announcement of the beginning of regular meterological rocket-firing periods. A governmental working group has reported details of the unusual system to the Space Science Board of the National Academy of Sciences for transmittal to the international Committee on Space Research (COSPAR).

Rocket Schedule Announced

From 18 January to 19 February 1960, low-cost Loki and Arcas rockets carrying instruments to gather meteorological data in the upper atmosphere were simultaneously fired on a daily basis from Wallops Island, Va., and Point Mugu, Calif. There will be similar monthly firing periods in the spring, summer, and fall of this year. In future launchings meteorological stations at Tonepah, Nev., Eglin Air Force Base, Fla., and Cape Canaveral, Fla., will also participate, forming, with the Virginia and California stations, a meteorological rocket firing network.

The seasonal daily firings will be part of this country's contribution to a series of international Rocket Weeks, which will commence in September 1960. Beginning in 1961, the Weeks will be observed quarterly. It is hoped that other countries will join, during these weeks, in extending this network to other parts of the world. International Rocket Weeks are sponsored by COSPAR; the first was observed from 16 to 22 November 1959.

The present network is a joint undertaking of the Air Force, the Army Signal Corps, the Atomic Energy Commission, the National Aeronautics and Space Administration, the Navy, and the U.S. Weather Bureau. The U.S. Army Signal Missile Support Agency at White Sands, N.M., provided rocket vehicles and launched the initial test rockets.

Firings Make New Data Available

The simultaneous firings from widely separated points afford a means of gathering precise and extensive meteorological data that cannot be obtained by any other existing method. For more than 20 years, weather balloons launched from an increasingly dense network of stations throughout the world have provided wind, pressure, temperature, and humidity data, but their altitude is limited to about 100,000 feet. The rockets employed in the new meterological network reach altitudes of over 40 miles; primarily, they gather data on winds, obtained by radar tracking of the paths of parachutes or clumps of falling "chaff."

It is expected that improvements in the rocket system will lead to routine observations of temperatures and pressures as well as winds. These data, coupled with observations from balloons and meteorological satellites such as Tiros I, will be of great value to meteorologists in helping them achieve more accurate knowledge of the atmosphere. The rocket measurements are of immediate importance for the information they give about the winds that large rockets and space vehicles will encounter during their flight.

These measurements have revealed that winds in the region of the atmosphere which is being explored by the rocket system may exceed 250 miles per hour, and that remarkable changes in this wind velocity sometimes occur. Exactly how these changes affect the weather lower down in the atmosphere is not yet known, but meteorologists will be able to study this problem with the aid of the new data that will become available.

U.S.S.R. Launches Experimental Space Ship

The U.S.S.R. launched a 9988-pound satellite into a nearly circular orbit of the earth on 15 May. The vehicle is described as a "space ship" in the official Soviet announcement, for it carries a pressurized cabin that contains a dummy human figure and equipment for a future manned space flight. On command, the 5510-pound cabin is to be separated from the ship for descent to earth. However, no attempt will be made to retrieve the cabin, which is expected to burn up in the denser layers of the atmosphere.

The satellite circles the earth every 91 minutes at an angle of 65 degrees to the equatorial plane. It is traveling in

an orbit that has a perigee of 195 miles and an apogee of 230 miles. Radio signals, described as a series of quivering long and short "beeps," can be heard clearly at 19.995 megacycles.

Spokesmen for the national space surveillance control center at Bedford, Mass., say that the residents of every major city in the United States eventually will be able to see the satellite (and its carrier rocket) with the unaided eye. It is said to be of the second magnitude, or about the brightness of a star in the Big Dipper.

Pacific Science Information Center Established in Honolulu

A Pacific Scientific Information Center has been established at the Bishop Museum, Honolulu, with the aid of a grant from the National Science Foundation. The purpose of the center is to further the interchange of information concerning the geography and natural history of Pacific islands, especially information dealing with the land flora and fauna and with man in his relationship to his environment

An initial project is the compilation of a card catalog of persons working on or actively interested in these areas, with addresses and specific interests. Existing bibliographies, published and in manuscript, are being explored in preparation for the compilation of records concerning pertinent publications. Files of maps, air photographs, and geographical data that have been assembled at the Bishop Museum also will be reorganized and expanded.

The center is being directed by E. H. Bryan, Jr., of the Bishop Museum staff, who is a consultant in Pacific geography and bibliography for the Pacific Science Board, National Academy of Sciences–National Research Council. Work will be done in cooperation with the Pacific Science Association, which will hold its tenth Pacific Science Congress in Honolulu in August 1961.

Age of Peking Man

The date of Peking Man, *Sinanthropus (= Pithecanthropus) pekinensis,* like that of most Pleistocene hominids, has been a matter of considerable uncertainty. Apparently, the earliest dating has been "first" (Günz-Mindel or Cromerian) interglacial and the latest, "second" (Mindel-Riss or Holsteinian) interglacial, the latter assignment being the most favored one. A recent paper by B. Kurtén [*Vertebrata Palasiatica* **3**, 173 (Dec. 1959)] presents the results of a new study of the age of Peking Man, based on a combination of floral and faunal analysis of the Choukoutien deposit in which the remains of this fossil man were found. The pollen spectrum indicates a climate that was glacial, rather than interglacial. The ratio between living and extinct species of mammals is similar to that found in later "second" (Mindel II or Elster II) glacial deposits of Europe but differs significantly from that occurring in European "third" (Riss or Saale) glacial deposits. Kurtén thus assigns *Sinanthropus* to the time of the latter part of the Mindel (Elster) glaciation. Since a potassium-argon dating by Evernden, Curtis, and Kistler (1958) places the Mindel glaciation at about 360,000 B.P., Kurtén regards this as the approximate age of Peking Man.—W.L.S., Jr.

American Academy Elects Fellows and Foreign Members

The American Academy of Arts and Sciences, at its 180th annual meeting on 11 May, elected 116 new fellows; 32 of these were in the mathematical and physical sciences and 28 were in the biological sciences. The academy also elected 37 foreign honorary members, of whom 16 are in the mathematical and physical sciences and five are in the biological sciences.

Re-elected to the presidency of the academy for the fourth year was Kirtley F. Mather, professor of geology, emeritus, of Harvard University.

Fellows

Mathematics. Alonzo Church, Princeton University; Nathan Jacobson, Yale University; Atle Selberg, Institute for Advanced Study, Princeton.

Physics. Robert B. Brode, University of California, Berkeley; Peter T. Demos, Massachusetts Institute of Technology; Herbert Friedman, Naval Research Laboratory, Washington; Roger W. Hickman, Harvard University; William L. Kraushaar, Massachusetts Institute of Technology; Conrad L. Longmire, University of California, Los Alamos, N. Mex.; Alvin M. Weinberg, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Chemistry. Ralph A. Beebe, Amherst College; Elias J. Corey, Harvard University; Raymond M. Fuoss, Yale University; Izaac M. Kolthoff, University of Minnesota; William N. Lipscomb, Harvard University; Carl S. Marvel, University of Illinois, Urbana.

Astronomy. Walter O. Roberts, High Altitude Observatory, Boulder, Colo.

Earth sciences. Jacob A. Bjerknes, University of California, Los Angeles; Perry Byerly, University of California, Berkeley; Gustav A. Cooper, National Museum, Washington; Richard F. Flint, Yale University; George C. Kennedy, University of California, Los Angeles; Francis J. Pettijohn, Johns Hopkins University.

Engineering sciences. Arthur E. Bryson, Jr., Harvard University; Samuel H. Caldwell, Massachusetts Institute of Technology; Barnett F. Dodge, Yale University; Robert C. Gunness, Standard Oil Company (Indiana), Chicago; Irving Kaplan, Massachusetts Institute of Technology; Hans W. Liepmann, California Institute of Technology; William R. Marshall, University of Wisconsin; Louis D. Smullin, Massachusetts Institute of Technology; Theos J. Thompson, Massachusetts Institute of Technology.

Biophysics and biochemistry. David E. Green, University of Wisconsin; Boris Magasanik, Massachusetts Institute of Technology; Stanford Moore, Rockefeller Institute, New York; Hans Neurath, University of Washington, Seattle; Alexander Rich, Massachusetts Institute of Technology; William H. Stein, Rockefeller Institute.

Botany and bacteriology. James F. Bonner, California Institute of Technology; Royal A. Brink, University of Wisconsin; Mary I. Bunting, Radcliffe College; René J. Dubos, Rockefeller Institute; Norman H. Giles, Yale University; Carl P. Swanson, Johns Hopkins University.

Zoology. Robert W. Briggs, Indiana University; Clifford Grobstein, Stanford University; Libbie H. Hyman, American Museum of Natural History, New York; Arthur R. Kellogg, United States National Museum, Washington; John A. Moore, Columbia University; Francis J. Ryan, Columbia University.

Physiology and experimental psychology. Harry Eagle, National Institutes of Health, Bethesda, Md.; Alexander Hollaender, Oak Ridge National Laboratory; Stephen W. Kuffler, Harvard Medical School; Horace W. Magoun, University of California, Los Angeles;