



Mount Erebus, believed to be the only active volcano on the Antarctic continent, is located near the U.S. Naval Air Facility on McMurdo Sound, from which U.S. scientific bases in the interior of the continent are supported. [Official U.S. Navy photo]

concerned with research in these latitudes. And they would take on the function of data reduction for information obtained through antarctic research.

Although such centers may in time provide the answer for the academic scientist, temporary solutions are needed. Recent visitors to Antarctica report that such solutions are being developed. At the new biological laboratory at McMurdo Sound a series of seminars, conducted by the scientists who have gained experience in antarctic research, has been under way for some time. Field workers who visit the laboratory after completing a traverse or after a year's work at one of the inland stations give lectures on their work. This program gives promise, according to Jones, of developing further in the coming years. With the increase in the number of university people participating in the antarctic program, the academic approach is more and more evident. At the airlines terminal in Christchurch one can occasionally see an investigator conducting an informal seminar with his graduate students before their plane departs for Antarctica. Jones feels that an investigator and three or four graduate students constitute the ideal unit for antarctic research. Such a group could divide its time between field work on the continent during the antarctic

summers and formal academic work in the United States during the remainder of the year.

The interest expressed by scientists now working in the Antarctic seems to promise that the "laboratory continent," as Jones describes it, will become increasingly attractive as an area for scientific research. Certainly the expansion of facilities and the recent conclusion of the Antarctic treaty, which reserves the continent for peaceful purposes, particularly scientific work, point in this direction.

### **Suspension of Test Ban Talks in Geneva Leaves Many Problems Unresolved**

Problems that were revealed last month during sessions of the scientific committee at the atomic test ban talks in Geneva threaten to increase the difficulties of the group discussing political questions, which will resume its work on 12 January. The committee of scientists from the United States, Britain, and Russia, which was studying the technical aspects of a control system to police the ban, submitted a report which indicates that no agreement has been reached on the major issue of what criteria should be used to deter-

mine whether tremors recorded by control posts are caused by natural earthquakes or underground nuclear explosions. Agreement was reported, however, on improvements in instrumentation to be used at the posts.

The main obstacles to agreement came in discussions of the latest United States data concerning the difficulty of distinguishing earthquakes from nuclear tests and the possibility that tests could be deliberately disguised to make their identification more difficult. These data, which had been submitted to the scientific committee last January, were not examined until November, because the Soviet Union refused to permit their joint consideration.

The slow progress of the talks has raised the question of what action the U.S. will take in regard to the test ban that was due to end on 31 December. Before the talks opened last November, John A. McCone, chairman of the Atomic Energy Commission, said that he believed that this country's voluntary suspension should be extended only on a week-to-week basis after its formal expiration. This extension, he said, should be made on the basis of the promise shown at the test ban talks. How this general principle will be applied now that the talks are temporarily ended is yet to be seen. The Soviet Union has said that it will continue its ban as long as the U.S. refrains from nuclear testing.

### **Hopes Were High**

During the period of more than a month that the talks were under way, considerable hope was expressed by both the conferees and government officials that general agreement might be forthcoming. At his news conference 2 December, President Eisenhower said that he was more optimistic about the talks than he had been "... a few months back when it looked like they were going to be completely abandoned." After the suspension of talks, however, State Department spokesman Lincoln White said that the department was "greatly disappointed" that the meeting has concluded with only "minimal agreements." He also said that he "could not answer" as to whether the United States would refrain from nuclear testing until the resumption of the political talks on 12 January.

Observers here suggest that the United States may set a cut-off date for the talks to avoid an indefinite con-

tinuation of the test ban. Some U.S. officials are reported to be chafing under the ban which was undertaken in October 1958 to create a favorable atmosphere for the talks. Particularly distressing to these officials, according to reports, is the scientific evidence that indicates that the Soviets, at least theoretically, could be conducting underground tests without any risk of detection. Behind this concern is a report recently made public by the Government indicating that an underground explosion of 300-kilotons could be successfully masked by use of the "big hole" method of muffling the force of an explosion. The report says that if an underground chamber were large enough, the force of an explosion would be contained within it. The report, which was prepared by the RAND Corporation, an Air Force-sponsored research organization, says that, under certain conditions, a 300-kiloton explosion could not be distinguished from a natural earthquake by the detection net that is now proposed for policing the test ban. Explosions in the range of 100-kilotons could not be detected at all by the proposed system, according to the report.

#### **Soviets Ridicule Report**

The Soviet view of the data presented by the report was unusually blunt. "The Soviet experts submit that here their U.S. colleagues are on the brink of absurdity . . . their criteria would leave under suspicion the overwhelming majority of earthquakes registered by the control system." Citing what it calls errors in the data with which the United States supports its case, the report went on to say: "The Soviet experts therefore cannot regard these shortcomings as resulting from carelessness or coincidence, and have come to the conclusion that there has been tendentious use of one-sidedly developed material for the purpose of undermining confidence in the control system, whose basic characteristics were determined by the 1958 Geneva conference of experts."

On 28 December Senator Albert Gore urged the Administration to abstain for 3 years from conducting nuclear tests in the atmosphere but to make no commitment about not resuming them underground. Gore is a member of the Joint Congressional Committee on Atomic Energy. His suggestion was essentially the same as the one he made November 1958.

#### **\$300 Million Increase in Space Agency Budget Held Inadequate for Major Acceleration of Program**

No new major effort to speed up this country's space program in fiscal year 1961 is planned, according to a newspaper report indicating that the Administration has decided to ask Congress for \$800 million to support the National Aeronautics and Space Administration. The figure, which is \$300 million more than the agency's current budget, was reported in the *New York Times*. Official comment on NASA's proposed budget will not be available until late next month when the national budget is published. A good part of the new funds will be taken up by the newly assigned Saturn booster program with the result that NASA's effort in its other programs will be carried on at about the same rate as last year. This, in effect, indicates that a decision has been taken against accelerating the U.S. space program to match or overtake the Soviet Union in this field. Another indication that such a decision might be forthcoming can be seen, observers suggest, in a speech given early in December by George Kistiakowsky, special assistant to the President for science and technology. Speaking before the American Institute of Chemical Engineers, Kistiakowsky said: "If one separates civilian space science and technology from military missiles, . . . one wonders whether our insistence on superiority in space is of overriding importance." Earlier in his talk he had cited the Administration's argument that the larger size of the Soviet missiles gave them no advantage for strictly military applications.

#### **Substantial Cut Reported**

The budget originally requested by the space agency for its activities was cut substantially by the Bureau of the Budget, according to the news report. No definite information on the size of this original request or on the bureau's action will be available until the Congress begins its authorization hearings. Both the Aeronautical and Space Sciences Committee of the Senate and the Science and Astronautics Committee of the House of Representatives must pass on the Administration's request. Last year, congressional action cut the amount the Administration had requested by \$30 million. Also last year, T. Keith Glennan, the administrator of NASA, suggested that new pro-

grams would require a budget of approximately \$100 million. Despite the Congress' action last year, there is reason to believe that the administrator will receive new support from it in his efforts to gain more funds. A number of Soviet successes, particularly the two moon probes of last fall, are expected to weigh heavily in the committees' deliberations. Another consideration may be the widely publicized fact that after the failure of an Atlas firing just before Thanksgiving no second attempt could be made because there were no more Atlases available.

#### **World Forestry Congress Being Organized by United States**

The fifth World Forestry Congress is to be held at the University of Washington, Seattle, 29 August-10 September 1960. The United States Government is host to this congress. The Food and Agriculture Organization of the United Nations and other agencies are cooperating in its preparation.

This is the first such congress to be held in the Western Hemisphere. The earlier World Forestry Congresses were held in Rome (1926), Budapest (1936), Helsinki (1949), and Dehra Dun, India (1954).

Although the congress is an official one, and many countries will name official delegations, participation will be open to any individual or technician with interests in this field upon application to the Organizing Committee. Such individuals may attend without special invitation.

Some 80 governments within the United Nations have been invited to take part in the congress. There are indications that it may be the largest World Forestry Congress ever held, with 1500 to 2000 participants from 55 to 60 countries.

Responsibility for making the necessary preparations has been vested in a 44-man organizing committee appointed by the Secretary of State. This committee includes representatives from interested federal departments, forestry schools, forestry associations and societies, conservationists, and forest industrialists. The chief of the Forest Service, Richard E. McArdle, has been named chairman of the organizing committee.

The committee has delegated responsibility for detailed preparations to seven working committees. Their ac-