than from the impact of giant meteorites. The low heat conductivity of the lunar surface layers may result from the porous character of volcanic material rather than from a dust layer."

Statements by two leading astronomers appeared in the *New York Times*. Donald H. Menzel, director of the Harvard College Observatory, accepts the evidence of the lunar activity but is not persuaded that it is volcanic in origin. He commented that Kozyrev has provided the first definite indication of the existence of a lunar atmosphere composed of rarefied gases. He explained further that leakage of gases from the interior of the moon could be the method for replenishing such an atmosphere.

Lloyd Motz, associate professor of astronomy at Columbia University, also accepts the basic finding that there is activity on the moon, but he, too, doubts the volcanic nature of the eruption. He pointed out that the moon may have very much more uranium than the earth, if it consists of rock structure all the way down. In that case, the radioactivity of the uranium below the surface would produce a temperature gradient, which, in turn, might lead to the ejection of hot materials in volcano-like activity. However, Motz feels that while some surface features of the moon may be the result of internal energy, most of them are the result of the impact of meteorites.

10-Bev Accelerator

Another significant development in Soviet scientific news is the announcement of the successful operation of a synchrophasatron that is the most powerful in the world. The new facility, located at the Joint Institute for Nuclear Research at Dubna, 80 miles north of Moscow, can accelerate protons from the hydrogen atom to an energy of 10 billion electron volts. This is a much higher energy than that generated by the similar installation at Berkeley, Calif., which has achieved a peak of 6.3 billion electron volts.

During a press tour of the Dubna center on 23 January, visitors also saw a new, two-story-high synchrocyclotron that accelerates protons and neutrons to an energy of 680 million electron volts. In addition, they had an opportunity to talk with Bruno Pontecorvo, the Italian-born nuclear physicist who left Britain's research center at Harwell in 1952 to go to the U.S.S.R. He told reporters that Soviet science, because of the social system in the U.S.S.R., was more advanced than that of the West.

Lysenko Reinstated

If Kozyrev's work and the new accelerators are demonstrations of the effect of the Soviet social system, so, too, is the third recent event in Soviet science—the reinstatement of geneticist Trofim D. Lysenko to a pre-eminent position in his country's biology. Lysenko, who was a powerful figure in Soviet science under Stalin, holds that in some cases acquired characteristics can be passed on to future generations. His views are in sharp conflict with those of Western geneticists. In recent years Lysenko's influence appeared to have waned, and Soviet scientists who opposed him were able to voice their criticisms with impunity. Then last summer the tide seemed to turn, as evidenced by last-minute changes in the character of the U.S.S.R.'s participation in the International Congress of Genetics in Montreal. Just before the meeting was to open, cancellations were received from several scheduled speakers, and the Soviet delegation submitted further titles of papers to be delivered, so that the Soviet contributions to the meeting were predominantly from the controversial Lysenko school. As a result of the program changes, the Permanent International Committee on Genetics Congresses presented a resolution at the final plenary session of the Montreal congress that expressed concern and sympathy for "all scientists who may have been prevented from attending the Congress by their governments."

Recent events indicate that the International Committee's point was well taken. The opposition to Lysenko has centered in the Soviet *Botanical Journal*. Although it has been evident for some time that Lysenko had found a new supporter in Khrushchev, the journal has continued to publish papers that attack Lysenko's work. However, just before the Soviet Communist party's recent Central Committee meeting, the official government organ *Pravda* severely criticized the *Botanical Journal's* repeated exposures of Lysenko.

When the Central Committee met, Lysenko was allowed to address a session and criticize his detractors. In response, Khrushchev said that the editors of the *Botanical Journal* must be changed. A verbatim account of the committee's proceedings, as it appeared in the British publication, the *Manchester Guardian,* follows:

"Mustafaev [Azerbaijan party secretary]: The situation in biology is especially bad, as was shown in the *Pravda* article which referred to the incomprehensible behaviour of the *Botanical Journal* and of some of our scientists. Instead of criticising each other in a businesslike and scientific way and pointing out faults, the affair has taken on an insulting tone.

"Khrushchev: We must take a good look at the staff. Evidently people were selected for the editorship who are opposed to Michurinist science. While they remain nothing will change. They must be changed and others put in—real Michurinists. Here lies the basic solution to the question.

"Mustafaev: Nikita Sergeyevich, it is not only this journal that uses this tone. Sometimes scientists who are also party members give no thought to how they should conduct themselves. Not long ago unpleasant rumours reached me that our delegation in China, among whom there were some biologists, declared that Comrade Lysenko was finished now, not only in theory but also in fact.

"Khrushchev: It was Tsistin who said that. [Tsistin, a noted Soviet biologist, has been vice-chairman of the Academy of Agricultural Sciences and director of the Moscow Agricultural Exhibition.]

"Mustafaev: That's bad. If they have had personal relations, it still does not give anybody the right to deprecate the achievements of our science.

"Khrushchev: He should have been asked at a party meeting why he had spoken in this way, and he should have been made to answer in his capacity as a party member. [Cries of 'Hear! Hear!']"

On 20 January, Moscow radio reported that the *Botanical Journal's* editorial board had been dismissed and that the U.S.S.R. Academy of Science's Biological Department was to be "improved." V. N. Sukachev, an academician, was replaced as editor of the *Botanical Journal* by V. F. Kuprevich, president of the Byelo-Russian Academy of Sciences. Further, at a joint meeting of the Soviet Academy's Presidium and Biology Department, V. A. Engelhardt, secretary of the Biology Department, formally acknowledged that criticism of his department had been "correct."

Pathologic Effects of Radiation

The Committee on the Pathologic Effects of Atomic Radiation of the National Academy of Sciences–National Research Council has issued a commentary on the recent report of the United Nations Scientific Committee on the Effects of Atomic Radiation [*Science* **128**, 402 (22 Aug. 1958)]. An excerpt of the commentary follows.

"In those portions of the United Nations report that deal with pathologic effects there are several points on which we are not entirely in agreement and are constrained to make clear our position. These minor points should not cloud our general agreement with and admiration for the report of the United Nations Scientific Committee. We believe, however, that it would be useful to make the following particular comments:

"1) The question of induction of leukemia or other types of cancer in man by very small doses of radiation has been treated in the United Nations report to

suggest that the hypotheses of linearity and threshold effects as applied to the behavior of somatic cells have equal likelihood of validity. Our committee inclines to the view that many forms of cancer, including leukemia, arise through a more or less complex series of responses. While somatic mutations may be included among these, it seems doubtful that a strict linearity analogous to that seen in the genetic effects of radiation is as likely to hold in the case of these conditions. We note that there is a considerable body of experimental evidence favoring nonlinearity in specific instances. Also, the report seems largely to emphasize the two extreme possibilities, that of a linear relation and of a threshold, and gives little attention to nonlinear relations. It is recognized that large-scale definitive experiments and demographic observations are needed since they may be of help in resolving these questions. . . ."

At a press conference held at the National Academy when the commentary was released, Shields Warren, chairman of the Committee on Pathologic Effects, announced that the committee was planning to propose a 20-year demographic study of the effects of radiation; the proposal would be presented to Congress within a year. Under the plan, which Warren estimated would cost $750,000 to $1 million a year, two groups of about a million persons each would be studied. One group would be made up of those living in an area known to have a high radiation incidence from cosmic rays, such as the Colorado plateau; the other group would consist of those living in a sea-level area of low radiation incidence, probably on the West Coast.

Science Talent Search

Forty high-school seniors, picked from a field of over 28,000, have been named winners in the 18th nationwide annual Science Talent Search. Nine girls and 31 boys have been awarded all-expense trips to Washington, where they will compete for $34,250 in Westinghouse scholarships and awards during a 5-day Science Talent Institute beginning 26 February.

Begun in 1942, the Science Talent Search is conducted by Science Clubs of America through Science Service, Washington, D.C. The Westinghouse Educational Foundation, supported by the Westinghouse Electric Corporation, sponsors the program.

This year's winners come from 17 states. New York continues to lead all other states in the number of winners produced, six boys and three girls; six of the winners come from New York City and vicinity. Illinois placed second with four.

Proconsul in Uganda

Proconsul, an Old World primate from the Lower Miocene of Kenya, was first described by Hopwood in 1933. This animal is particularly interesting in that, although its teeth exhibit specializations in the direction of the modern African anthropoid apes, the remainder of its known structure, including its brain (as determined from an endocranial cast), skull, and limbs, is much more generalized. Indeed, from animals with extremities of this sort there could have evolved, on the one hand, the modern anthropoid apes with their highly specialized limbs adapted to bimanual, arboreal progression and, on the other hand, the immediate precursors of the bipedal, terrestrial Hominidae [Clark and Leakey, *The Miocene Hominoidea of East Africa* (*Fossil Mammals of Africa,* No. 1) (British Museum, Natural History, London, 1951); Straus, *Am. Anthropologist* **54**, 257 (1952); Straus, in *Anthropology Today* (University of Chicago Press, Chicago, Ill., 1953), p. 77]. Thus, although its dental specializations apparently disbar it as the common ancestor of the Hominoidea (= anthropoid apes and man), *Proconsul* does provide a glimpse of what may well have been a critical, basic stage in hominoid evolution.

It therefore is of great interest that W. W. Bishop [*Nature* **182**, 1480 (29 Nov. 1958)] has recently reported the presence of an undoubted lower right second molar tooth of *Proconsul nyanzae* (the intermediate-sized of the three known species of *Proconsul*) among a rich and varied mammalian fauna from the Lower Miocene of Napak, Uganda. *Proconsul* hitherto was known from 10 localities in western Kenya, but this is the first record of its occurrence in Uganda. Since this creature evidently had a rather wide distribution, it may be hoped that future exploration will unearth some of the parts of its skeleton that are now missing and which are needed to establish its precise taxonomic status.—W. L. S., Jr.

Statistical Research Monographs

The Institute of Mathematical Statistics and the University of Chicago have established a series of publications entitled *Statistical Research Monographs.* The primary purpose of this series is to provide a medium of publication for material of interest to statisticians that is not ordinarily provided for by existing media. It will help fill the gap between journal articles and textbooks or treatises. Some of the kinds of publications envisaged are as follows.

1) New research results too lengthy for the usual journal article. In particular, authors will have ample scope for detailed exposition of their findings.

2) Research results of interest in both theoretical and applied statistics. At present authors of such material frequently find it necessary to publish part of their results in a theoretical journal and part in an applied journal.

3) Expository monographs in particular areas of statistics.

4) Discussions of statistical problems and techniques in particular areas of application.

The editorial board consists of David Blackwell (University of California), William G. Cochran (Harvard University), Henry E. Daniels (University of Birmingham), Leo A. Goodman (University of Chicago), Wassily Hoeffding (University of North Carolina), Jack C. Kiefer (Cornell University), and William H. Kruskal (University of Chicago). Authors are invited to send manuscripts and correspondence concerning the series to Leo A. Goodman, Department of Statistics, University of Chicago, Chicago 37, Ill.

Summer Conferences for College Teachers

The National Science Foundation has announced the award of grants totaling approximately $247,000 to 19 colleges and universities for an experimental program of Summer Conferences for College Teachers. These conferences are directed toward strengthening teachers' mastery of the newer developments in science and mathematics and toward increasing their capacity as teachers. The shorter length of these conferences, 1 to 3 weeks, as compared with the more familiar summer institutes of 4 to 12 weeks duration, will enable college teachers to familiarize themselves with recent advances in their specific fields. Association with colleagues from other areas of the country will be valuable to the participating college faculty members.

Under the new program, some 550 college teachers will receive financial support in the form of stipends up to $15 per day plus an allowance for travel. Stipend holders will not have to pay any registration fees or tuition. The conferences cover nine major subject-matter areas.

Participants will be chosen by the conferences, not by the National Science Foundation. Inquiries and applications for participation should be addressed to directors of the individual conferences named in the following list. Early inquiry is advised.

Biophysics. Yale University, New Haven, Conn. (Ernest C. Pollard, Biophysics Department).

Basic concepts in physical science. Georgetown University, Washington,