

References and Notes

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News of Science

Schweitzer and Libby on Nuclear Tests

Albert Schweitzer has appealed to the world to end nuclear tests. A letter issued by Schweitzer through the Norwegian Nobel Committee was broadcast to approximately 50 countries, though not to the United States. The letter was read in Norwegian by Unnar Jahn, chairman of the Norwegian Nobel Committee, who in 1952 presented the Nobel peace prize to Schweitzer. The impact of the appeal was heightened for Norwegian listeners because the broadcast followed by 15 minutes a report of a recent radioactive rain over Norway caused by Soviet nuclear explosions. Schweitzer's message included the following statements: "From official and unofficial sources we have been assured, time and time again, that the increase in radioactivity of the air does not exceed the amount which the human body can tolerate without any harmful effects. This is just evading the problem."

"Even if not directly affected by the radioactive material in the air, we are indirectly affected through that which has fallen down, is falling down, and will fall down. . . ."

"We are forced to regard every increase in the existing danger through further creation of radioactive elements by atom bomb explosions as a catastrophe for the human race, a catastrophe that must be prevented under every circumstance. . . ."

"When public opinion has been created in the countries concerned . . . , then the statesmen may reach an agreement to stop the experiments."

"A public opinion of this kind stands in no need of plebiscites or of forming

of committees to express itself. It works through just being there."

"The end of further experiments with atom bombs would be like the early sun rays of hope which suffering humanity is longing for."

Willard F. Libby, member of the U.S. Atomic Energy Commission, has responded to Schweitzer in an eight-page letter to him. After expressing respect for Schweitzer and for the motives behind his appeal, Libby questioned whether Schweitzer "had access to the most recent information" on fallout.

Libby then went on to say that in general the risk from radiation resulting from nuclear tests "is extremely small compared with other risks which persons everywhere take as a normal part of their lives." He urged Schweitzer to weigh this risk against what he believed would be the "far greater risk, to freedom-loving people everywhere in the world, of not maintaining our defenses against the totalitarian forces."

Libby's main thesis was that radiation produced by fallout was far less than the natural radiation to which everyone is exposed. He asserted that a person could get a heavier dose of radiation by moving from the beach to a hilltop or from a wooden house to a brick house than he gets from test fallout.

G.E. Fellowships at Stanford for High-School Mathematics Teachers

Stanford University will award 50 fellowships this year to high-school mathematics teachers from 14 western states for participation in a special 6-week summer program conducted by the department of mathematics of the univer-

sity. The fellowships are supported by a grant from the General Electric Educational and Charitable Fund and pay all expenses, including tuition, room and board, and travel.

Two other similar fellowship programs for high-school teachers, the Shell Merit Fellowship Program and the National Science Foundation Institute for Teachers of Science and Mathematics, are in operation at Stanford, but the General Electric Program is the first which is limited to teachers of mathematics. This limitation has provided an opportunity and a challenge to plan a concentrated and integrated program of training in mathematics which will supplement professional training in the teaching of high-school mathematics.

The aim of such a program, of course, is to increase the mathematical knowledge of the teachers who participate. What mathematics should a high-school teacher know? Most important certainly is the mathematics he teaches. This knowledge is acquired principally through professional training and experience, and the intention of the General Electric Program is to select as fellows teachers who are already competent in this respect. Additional mathematical knowledge will be useful to the teacher if it enables him to place his subjects in a broader context and enhances his ability to stimulate interest. Training of this kind is the specific objective of the program.

With these goals in view two courses have been planned for the program. The first, "Elementary Mathematics from a Higher Point of View," will present subjects which border on high-school mathematics and are at about the same level. Among the topics to be discussed are number theory, whose simplicity and elegance have immediate appeal, and non-Euclidean geometry, whose novelty and connection with modern physics excite interest. Knowledge of such subjects should help the teacher to enrich his classes and direct the curiosity of his better students.

The second course, "Aspects of the Calculus," will present the essential concepts of the calculus, emphasizing ideas rather than technique, and discuss the relationship of these ideas to high-school