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MILITARY SCIENCE

Nuclear Test Ban Urged

VERY LITTLE military power would be lost for the United States if an agreement were made with the Russians to halt nuclear tests, Dr. Hans Bethe, the scientist who worked out the method that keeps the sun stoked—also the basis for the hydrogen bomb—urged.

Dr. Bethe, a Cornell University physicist who was a member of the U.S. negotiating team at Geneva, said he considers a treaty to halt tests "very worthwhile." A political decision to run the "rather small risk" of cheating against the inspection system is needed, however, before agreement can be reached, Dr. Bethe said.

He said a treaty to stop nuclear tests might keep other nations from joining the nuclear club in which the U.S., USSR, Great Britain and France are now members.

Although it has been argued that the U.S. cannot afford to have the Russians cheat on a test ban, Dr. Bethe said the U.S. can even less afford resumption of tests. If tests were resumed, he argued, the Russians will develop those weapons of greatest use to them—probably large strategic weapons to threaten our homeland, as well as small tactical weapons.

The alternative of not reaching agreement and of breaking off negotiations would set back the general cause of disarmament enormously, Dr. Bethe said. However, a nuclear test ban agreement might be followed by others of a more worthwhile type, such as limitation of the number of missiles and atomic warheads.

Both the U.S. and Russians have been very hard negotiators, Dr. Bethe reported. He warned that the Russians may come to a point at which they consider further negotiations futile and revert to the tough Stalin line in foreign policy.

One major point the Russians have accepted is the principle that there should be a control system, Dr. Bethe said. Originally, detection of nuclear tests seemed a simple problem. However, negotiators were forced to consider increasingly more difficult situations and increasingly more determined violations.

The Russians, Dr. Bethe reported, were "amazed" at the idea of the "big hole"—

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Science News Letter, May 14, 1960

the exploding of bombs in deep caverns so that the shock waves travel through air before entering the earth's rock layers, thus cutting down the chances of detection by seismic methods.

Dr. Bethe said he was "embarrassed" to present the theory of muffling nuclear explosions at Geneva because this implied the U.S. considered the Russians capable of cheating on an enormously massive scale. No system will ever be entirely foolproof, and Dr. Bethe questioned whether the U.S. should worry about tests so small they could not be detected by the agreed methods.

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