

GENERAL SCIENCE

Peaceful Atomic Control

► THE United Nations which has not been able to reach any agreement on international atomic energy controls might turn to the peaceful, non-military side of the problem. This proposal was made by the Federation of American Scientists in Washington.

The Federation, through its chairman, Dr. Arthur Roberts of the State University of Iowa physics department, suggested the peaceful approach to atomic control in a letter to Trygve Lie, UN secretary general.

Job urged for the UN is supervising distribution of the non-dangerous radioactive varieties, or isotopes, of chemical elements, an important but bombless by-product of atomic energy piles.

An appeal was also made for more detailed consideration of the majority plan for international control of atomic energy which the U.S.S.R. has balked at.

A four-point program was proposed by the Federation for UNAEC discussions to develop details of the international control plan. The four points:

1. Financial, administrative and other details of the operation of the proposed international control authority.

2. Quotas to be allotted each country of such atomic facilities as nuclear reactors, a matter which the Soviets have indicated they are willing to discuss.

3. Development of a system of stages leading from the present situation of domestic atomic energy programs to international controls without special advantages to any nation.

4. Sanctions to be used by the proposed international atomic authority for dealing with violations of its rules.

The Federation statement just issued by Dr. Roberts, said that the organization welcomed the reopening of discussions in the UNAEC. It urged the UN commission to give consideration to the suggestion of Soviet Delegate Vishinsky that destruction of existing atomic weapons might be carried on simultaneously with the setting up of international controls. The suggestion came last fall in the General Assembly after the Soviets had previously insisted that weapons should be destroyed first.

Dr. Roberts emphasized that the Federation proposals stressed details of the majority plan, because each nation is now working out its own domestic program. These systems can be developed in ways which will fit in with future international controls only if more complete proposals are made, he argued.

The statement said that international control of atomic energy must be considered both as a single problem and as a part of the overall problem of international security.

As research materials for scientists, isotopes promise important advances in medicine, agriculture and industry, as well as in basic scientific research.

The United States is now world's leading producer and exporter of these important research tools. But isotopes are scheduled to become a big, competitive international trade commodity, Dr. Roberts explained.

Three other nations now already make radioactive isotopes in atomic piles and three more, probably four, have scheduled early construction of atomic piles which will produce these isotopes. Canada, Great Britain and France are already making isotopes in chain-reacting piles. Sweden, Norway and India have scheduled construction of piles.

The U.S.S.R. is probably at work on such an atomic energy development, Dr. Roberts said.

International trade in these peaceful atomic products, he emphasized, would create problems which do not depend on

international control of atomic energy. Some of these problems are licensing, health protection, standards of measurement, distribution procedures, nomenclature and prices of the isotopes.

Greatest scientific progress from use of the isotopes would be made by UN supervision, the Federation chairman argued, because researchers in small as well as large countries would get the peaceful atomic products they needed for their work.

Supplies of radioactive isotopes will be unlimited and even the smallest laboratories can use them, the letter declared. A UN agency could serve as a clearing house for research information and serve to stimulate world scientific progress, it was contended.

Successful operation of the UN in the field of non-military atomic energy, might help encourage solutions of some of the problems which have brought the UN's Atomic Energy Commission to a deadlock, Dr. Roberts said.

"There is very little that can be lost by initiating such a program and much to be gained," the appeal to the UN Secretary General concluded.

The proposal made in the letter was made previously by the Federation in a report last year.

Science News Letter, March 5, 1949

PUBLIC HEALTH

Fighting Air Pollution

► "IF people won't fight air pollution to save lives, maybe they will to save stockings." This was the reaction of one chemist to the Case of the Running Nylons, reported from Jacksonville, Fla.

Sulfur compounds clinging to particles in the air are the best bet for "who done it" in the case of the nylons. But scientists point out that lives as well as stockings can be saved by cleaning up the air over American cities. A more tragic case of air pollution was the loss of 20 lives in Donora, Pa., last fall from a death-dealing smog. Scientists are still studying the air over Donora to get full facts on the chemistry of the disaster there.

More facts are known about the nylons, because that same thing has happened elsewhere. When it struck Washington in 1940, scientists at the National Bureau of Standards solved the case. Sulfur dioxide on particles in the air from chimneys in a small area were forming sulfuric acid. The particles were found on the running hosiery—both nylons and silk. The acid weakened a thread, causing a run—or in some cases many threads on the same stocking.

The nylon or silk does not vanish into thin air or form a gas which makes them disappear. They simply get runs.

Sulfur compounds in the air are an old enemy of clothes. Several years ago in New England, all types of cotton goods, but particularly men's shirts, were found

to be breaking up under certain apparently normal conditions. Investigation revealed that sulfuric acid was being formed from sulfur on particles in the air.

Scientific tests indicate that the runs will strike old or new stockings of either nylon or silk. The sheerest hose pulled tightly over the leg will, of course, be most likely to have the threads wear through.

But the best way to prevent run epidemics is simply to keep the air clean. In addition to saving stockings, it can save health and lives.

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Calabar beans, from which a drug is obtained, grow wild in Liberia; natives gather the beans from the inland bushes on which they grow and carry them in headloads to the coast for shipment to Europe.

Montana is said to have the widest range of *temperatures* of any state in the union; highs of 110 degrees Fahrenheit have been recorded, also lows of 50 degrees below zero.

Twelve *dams* on the Connecticut river are proposed to control flood water; a pact for the purpose has been signed by Vermont, New Hampshire, Massachusetts and Connecticut, and is now ready for Federal action.