

Letters

International Peace Week

A distinguished international group of scientists, including Hans Bethe, Bernard Feld, Sheldon Glashow, David Hubel, and Philip Morrison, has endorsed a call for the "First International Peace Week of Scientists" from 10 to 16 November 1986. The aim is to contribute to stopping and reversing the arms race and to enhancing international security by promoting well-informed discussion and creative thinking. The concept is for scientists to organize meetings, lectures, seminars, and other events all over the world, coordinating and publicizing them as one big event.

One major event will be a teleconference satellite summit sponsored by the Union of Concerned Scientists scheduled for 2 to 4 p.m. on 15 November. This will link scientists and others in Washington with a session of the Scientists Peace Congress in Hamburg, West Germany, on "Ways Out of the Arms Race." Another event linked to the Peace Week will be a United Nations University Conference in Osaka, Japan, on "Preparation for a Life of Peace."

Concerned scientists who may wish to cooperate can obtain a prospectus and information from Howard Ris, Union of Concerned Scientists, 26 Church Street, Cambridge, MA 02238 (617-547-5552), or Robin Crews, Bethel College, North Newton, KS 67117 (316-283-2500).

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Water Diversion in the Soviet Union

The News & Comment briefing "Soviet Union suspends plans to divert four rivers" by David Dickson (5 Sept., p. 1036) warrants commentary. These schemes did not "originate under Leonid Brezhnev 20 years ago." Projects for massive diversion of Arctic flowing rivers southward were formulated and seriously discussed as early as the 1930's. A proposal to divert 40 cubic kilometers (km^3) a year from the Pechora River into the Caspian basin was possibly near implementation in the early 1960's (under Khrushchev) but was abandoned after an outcry from the Soviet scientific community, who were concerned about environmental and economic damage in northern regions of water export.

New concepts and designs of water trans-

fer were developed during the 1970's with considerable attention paid to mitigating their potential environmental harm. The initial phase of diversion for the European U.S.S.R. (6 km^3 a year) was approved by the highest planning body (Gosplan) in 1983 and by the top party and government organs in 1984. It was included in the Draft Guidelines for the 12th Five-Year Plan (1986-1990) when, reportedly, preliminary construction on infrastructure facilities had begun. The more grandiose first-phase Siberian water transfer project (27 km^3 a year) had not received a final go-ahead by 1985, but was undergoing final design work.

The situation has undergone a dramatic reversal over the past 18 months. There has been a resurgence of public criticism of the diversion projects, muted since the early 1980's, primarily by well-known writers and leading scientists, some of the latter members of the Soviet Academy of Sciences. Proponents (including some respected scientists) continued for some time to defend the water transfers, but steadily lost ground. The initial phase of the European project was deleted from the final version of the 12th Five-Year Plan at the 27th Party Congress in February 1986. As mentioned by Dickson, a resolution stopping work on diversions was passed by the Politburo of the Communist Party in August 1986.

The key to the demise of the water transfer projects is Gorbachev. He may have privately opposed these projects for some time, but was outvoted in the Politburo. After his ascendancy to leadership in early 1985, he was willing not only to listen to the arguments against these projects but to have the debate, once again, go public. Shelving the schemes fits in with his drive for economic efficiency, better use of resources, including water, and opposition to giant, expensive "boondoggle" construction projects.

Environmental concerns, which are serious on a local and regional scale, no doubt played a role in the projects' fate, but were not determinant. These had been investigated in great detail (primarily by institutes of the Soviet Academy of Sciences and of the State Committee for Hydrometeorology and Environmental Protection during the late 1970's and pronounced not of sufficient magnitude to justify foregoing implementation. Indeed, the claim of potential global climatic change (made by scientists outside the U.S.S.R.) was ridiculed. Environmental arguments against diversions appear to be undergoing resurrection to lend further support to a decision made fundamentally on economic grounds.

Severely wounded, the projects are not yet dead. Although further design and con-

struction work is suspended, research on the ecological and economic aspects of water transfers is to continue. If the agricultural and water supply situation in southern European Russia and particularly in Central Asia is not substantially improved by the various "local" measures that are to be taken and if the Caspian Sea reverts to a phase of shrinkage, water diversion projects may again be viewed favorably in the 1990's.

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Galileo and the Catholic Church

David Dickson's article about Galileo (News & Comment, 8 Aug., p. 612) reinforces the widespread misimpression that the Vatican or Pope John Paul II has actually "pardoned" the 17th-century astronomer. In 1633 the Inquisition found Galileo guilty of defending the heliocentric system in his *Dialogue on the Two Great World Systems*, essentially a charge of disobeying orders. Under the circumstances of the day the verdict was probably correct, but from our modern vantage point the sentence—house arrest for the remainder of his life—was vindictively harsh. These historical circumstances leave the papacy with limited options for dealing with Galileo retrospectively, and Pope John Paul II has taken the course of commending Galileo in various public statements (which have been reported in *Science*) and of encouraging Galilean studies under Vatican auspices. But he has not, to the best of my knowledge, pardoned Galileo.

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Vitamins, Fiber, and Cancer

The references presented by Victor Herbert (Letters, 29 Aug., p. 926) to support his earlier contention that excessive amounts of vitamins A and C and fiber may promote cancer (Letters, 4 Apr., p. 11) are not convincing. One of the articles he cites is devoted to the teratogenicity of retinoids and lists 18 cases of human birth defects associated with maternal use of high levels of vitamin A (1). No mention is made of the incidence of these defects in the absence of such use, nor do any of the defects appear to be related to cancer.

In the second paper (an abstract) cited by