

ASTRONOMY

Earth Due for Ice Age

Maybe in another million years the earth will again be dominated by ice. This will happen when the solar system becomes surrounded by a dense dust cloud.

► THE EARTH is due for a new Ice Age. It should happen in the next million years, but just when not even scientists were willing to predict at the American Association for the Advancement of Science meeting in Washington.

Ice will dominate the earth when the sun again becomes surrounded by a dense cloud of dust. Several times in the past million years dark nebulae in the solar system have brought glacial periods that changed the course of earthly life.

Dr. Donald H. Menzel, Harvard astronomer, advanced this new theory to the scientists.

The sun has been traversing a dark nebula, from which it emerged only 50,000 years ago, Dr. Menzel pictured. The denser portions of the nebula, by reflecting part of the sun's radiation back to the earth, produced the warm interglacial periods; the less-dense regions of the dark cloud gave the eras of ice accumulation.

If this theory is correct, Dr. Menzel stated, the outer fringes of the nebula are only about 20 million million miles away, in the direction of the constellation Columba, the dove. Since the nebula as a whole may be quite thin compared with the average dark nebula, no clue is given to its presence by noticeable dimming of the light of distant stars.

Our present climate, variable as it is, is not representative of that experienced throughout geological history. The earth has undergone a number of separate and distinct periods of glaciation, with interim periods when the climate was appreciably warmer than at present. Magnolia trees, for instance, once flourished in Greenland.

Within the past million years the earth has experienced four separate periods of glaciation, Dr. Menzel pointed out. Great glaciers occurred simultaneously on all continents and probably in both hemispheres.

In the course of geological time, our sun has probably passed through many dark nebulae, the Harvard astronomer stated. A dark nebula is so tenuous that the material between the earth and the sun would exert a negligible effect on the amount of heat and light reaching us. But an extensive cloud, even if partially transparent, could scatter an appreciable amount of radiation back to the earth. The total sunlight reaching the earth might be increased five, ten, or even 15%, he suggested.

"At first sight, one might conclude that

the excess radiation would produce an effect just the opposite to that of an ice age," Dr. Menzel said. "A cold age, however, is not necessarily an ice age. An accumulation of ice and snow requires both high evaporation of water from the oceans and high transport of the moisture-laden air to the poles."

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GENERAL SCIENCE

Atomic Progress Endangered By Unfair Investigations

► ATOMIC PROGRESS is endangered in this country because atomic scientists are exposed to abuse, distortion and defamation through unfair investigations, Chairman David E. Lilienthal of the Atomic Energy Commission told the American Association for the Advancement of Science.

Although he mentioned no persons or

group, it was plain he was referring to the investigations being made by the House Un-American Activities Committee on the loyalty of certain American scientists.

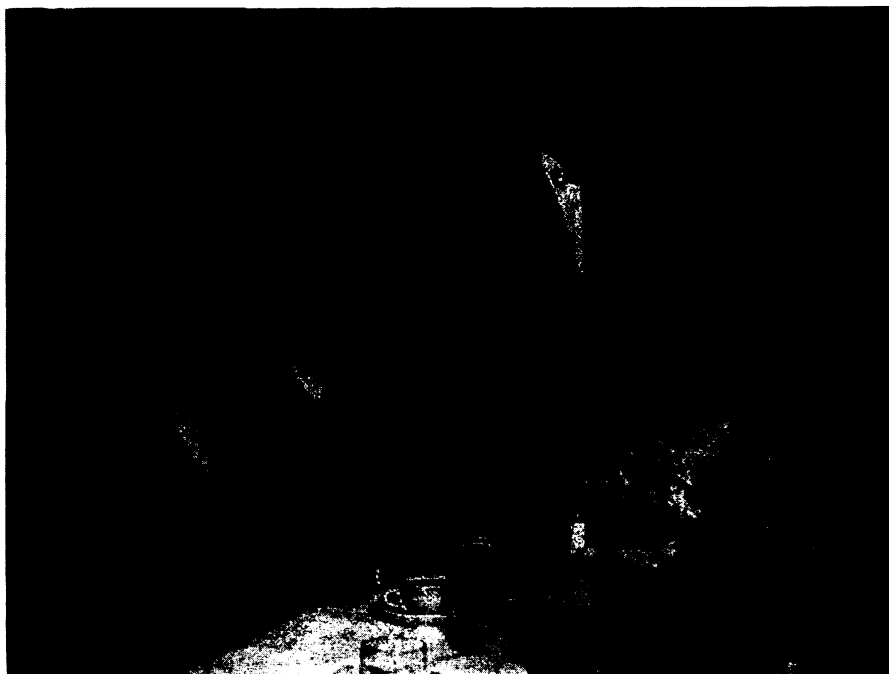
"It is ironic," he pointed out, "that this danger should become acute at the time when specific achievements have just been chalked up to the credit of this country's technical management forces engaged in atomic work—achievements, I may add, that are of importance to every man, woman and child in this country."

He called this a dangerous situation because "a healthy atomic energy program simply cannot stand still. It goes ahead, with greater and greater momentum, or it goes to pot."

Government employment has become in a very real sense a hazardous occupation, Mr. Lilienthal said. "If such damaging and painful occurrences should become common then inevitably self-respecting men will refuse in ever increasing numbers to work for their Government, and this Government, and therefore this Nation, will be in grievous trouble."

Our progress depends on having the very best qualified people in the United States, he said. "We must have more of them, and we must have them right away. Otherwise we face the imminent threat of stagnation. It is this that makes the present situation grave and ominous," Mr. Lilienthal declared.

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AAAS-GEORGE WESTINGHOUSE SCIENCE WRITING AWARDS—Chairman David E. Lilienthal of the Atomic Energy Commission is shown addressing AAAS members and science writers. Seated in foreground, left to right, are: Dr. Edmund W. Sinnott, president of the AAAS; Dr. Howard A. Meyerhoff, new administrative secretary; and George H. Bucher, vice-chairman of the Westinghouse Electric Corp.