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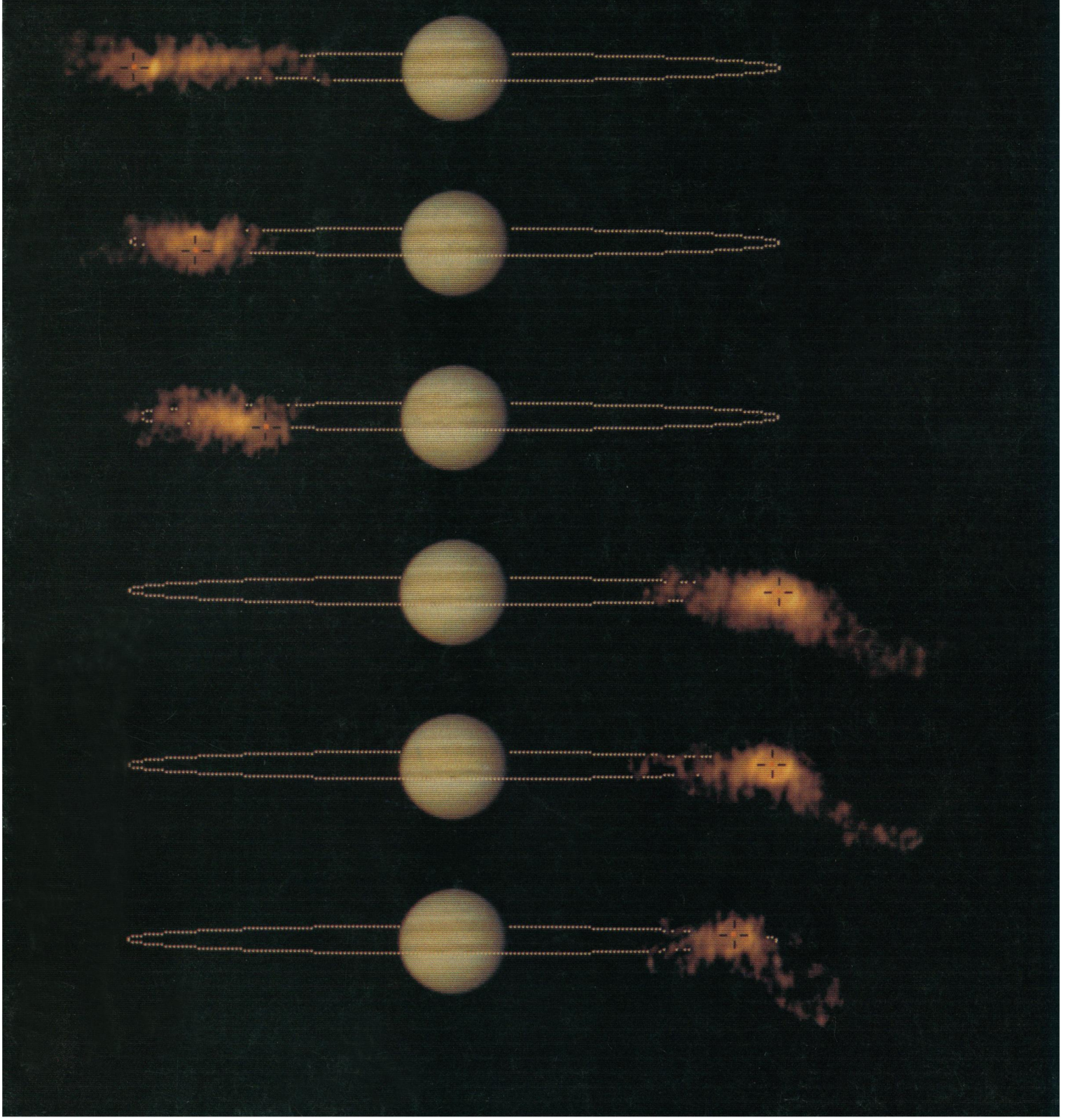

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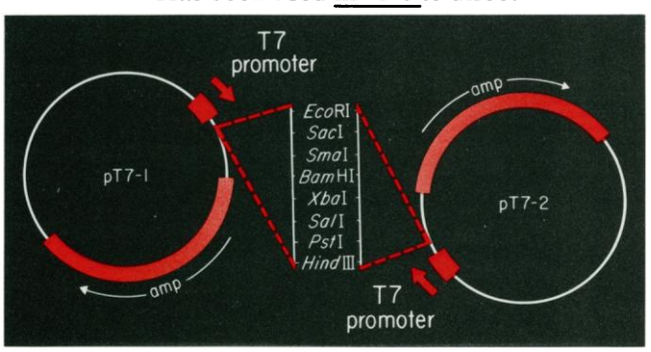

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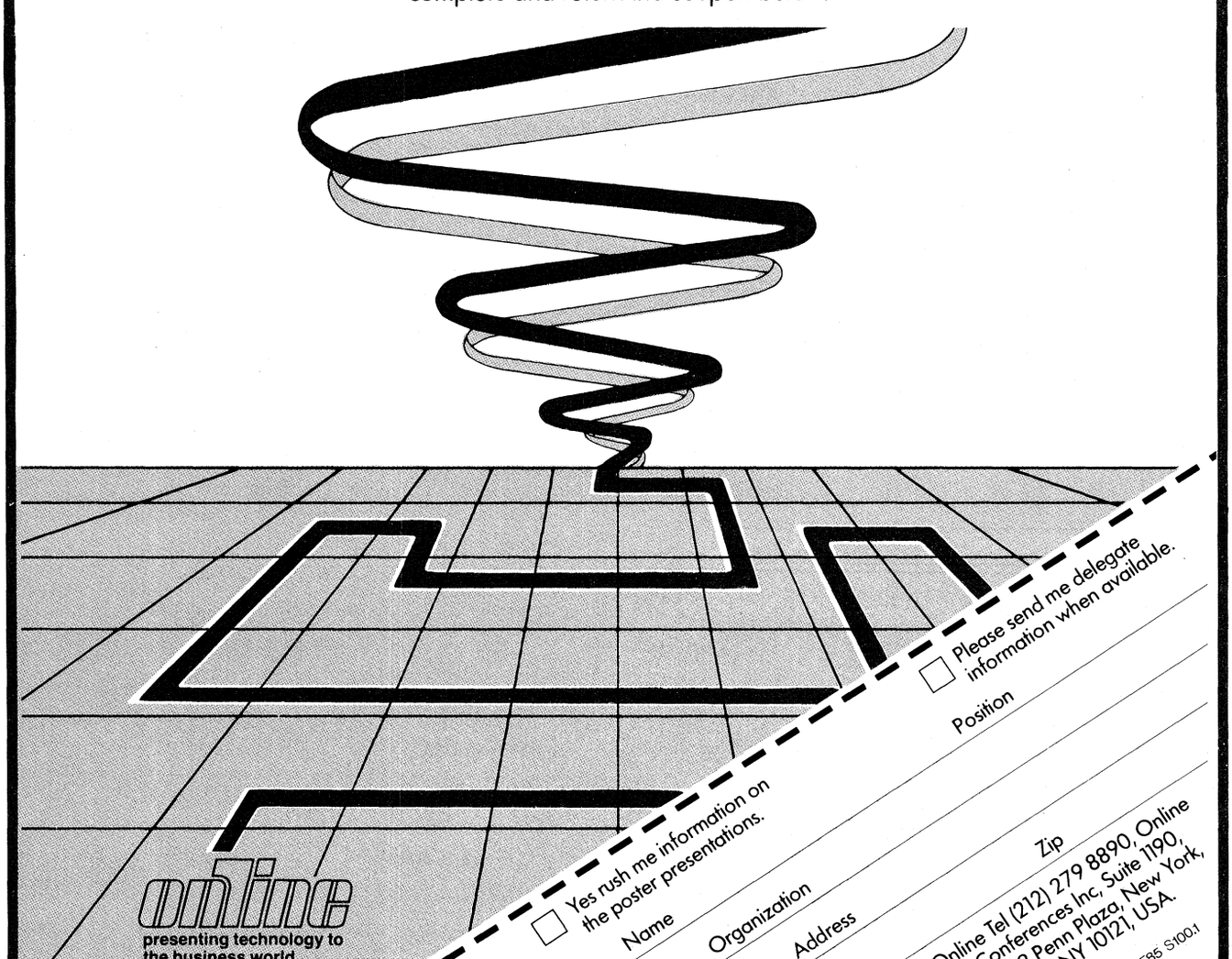

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COVER

Neutral sodium cloud which accompanies Jupiter's satellite Io is shown at six different orbital phases. These images of the cloud were acquired by Earth-based observations and are shown to scale with Jupiter. Location and size of Io are indicated by the dot within the crossbars; its orbit is indicated by the dashed ellipse. Changes in the cloud's apparent size and shape are largely the result of viewing perspective. See page 512. [B. A. Goldberg, G. W. Garneau, and S. K. LaVoie, Jet Propulsion Laboratory, Pasadena, California 91109] (*Time-lapse movie version of the sodium cloud movements will be shown this winter at the National Air and Space Museum, Washington, D.C.*)

2 November 1984, Volume 226, Number 4674 **SCIENCE**

A Meeting of Minds on Global Resources

For decades the question of the adequacy of the world's natural resources to support its increasing population has generated deep divisions among environmentalists and other concerned observers. The more extreme conservation and environmental advocates assert that the earth's carrying capacity has already been exceeded; others warn that resources are being depleted at ever increasing rates while population growth rates also remain high. In contrast, some resource managers argue that advances in scientific knowledge and technology offer the promise of meeting the needs of a much larger population at enhanced levels of living.

In subtle ways, people are tagged as for or against the environment. Industrial managers are labeled as exploiters and, in turn, are inclined to dismiss avowed friends of the environment as prophets of gloom and doom.

Beginning with preparations for the United Nations Conference on the Human Environment in 1972, efforts were made to recognize the possible compatibility of economic development and resource protection. A World Conservation Plan prepared by the International Union for the Conservation of Nature was an attempt to reconcile the two aims in a program drawn up in a variety of countries. An assessment of changes in the world environment between 1972 and 1982, looking at gains and losses in many sectors, was presented by the United Nations Environment Program.

It remained for a gathering representing a wide range of views—scientific, conservationist, industrial, and public interest—to articulate the growing consensus. After a meeting at Wye Island, Maryland, in May the participants issued a statement on "The Global Possible: Resources, Development and the New Century." The central message is that although the bleak predictions could prove to be accurate, still "it is possible to build a world that is more secure, more prosperous, and more sustainable both economically and environmentally." It reflects neither gloom nor euphoria.

The agenda for action covers a broad spectrum of activities that will require cooperation among governments, international organizations, the business and scientific communities, and citizens. In an array of programs beginning with population, spanning the major sectors of natural resources, and concluding with science and research, numerous policies and activities are recommended for consideration.

To the scientist, the agenda assigns priorities for research at the largest and smallest scales of human interaction. At the global level, urgent need is seen for understanding the great natural cycles of nutrients and water and how they are altered by human action. At the local level there is a call for research on health, technologies, and production on a scale that will directly benefit the poor.

Consensus at one conference will not put the long-standing controversy to rest, but it does signal an important convergence in the way the global resource problem is defined and attacked. All the participants recognize the basic role of science in appraising the workings of global systems and the impacts on them of everyday management in the field, forest, mine, and factory.—GILBERT F. WHITE, *Gustavson Distinguished Professor Emeritus of Geography, Institute of Behavioral Science, University of Colorado, Boulder 80309*

*Available from the World Resources Institute, 1735 New York Avenue, NW, Washington, D.C. 20006.