

HEATING THE GLOBAL WARMING DEBATE

In 1988 scientist Jim Hansen testified that the world was getting hotter. But how hot? And how fast?

LAST MONTH SCIENTISTS reported that 1990 was the warmest year on the meteorological record: the average global temperature, measured over land and sea, exceeded that of any year in the past century or so. Citing this, a group of 16 senators, including Albert Gore Jr., Democrat of Tennessee, wrote a letter to President Bush calling for immediate policy action to counter global warming. The 1990 information, said the senators, "illustrates clearly that global climate change is real."

Does it?

In the five years since the terms "global warming" and "greenhouse effect" became shibboleths of environmental awareness, the weather as a topic of conversation has gone from casual to confounding. The briefest of heat waves is enough to kindle despair over the future of the planet, while a transient cold spell can send greenhouse consciousness into hibernation. Environmentalists conjure images of disaster; industrialists appeal to scientific uncertainty; the media

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seize on any hint of controversy with intemperate zeal. And climate experts offer scant relief, insisting as they do that the day-to-day fluctuations ordinary people notice aren't nearly as significant as the long-term trends about which they themselves don't seem to agree.

Anyone who's had traffic with the global-warming issue eventually longs for an oracle or a scapegoat, a figure to trust implicitly or to blame entirely. Both man-

gles have come to rest on the shoulders of one unlikely individual: a mild-mannered scientist in the National Aeronautics and Space Administration named James E. Hansen. Hansen, the director of NASA's Goddard Institute for Space Studies, located in Manhattan, is the plain-spoken climatologist who testified before the Senate Committee on Energy and Natural Resources in the summer of 1988 that the world was warming, probably because of an increase in the atmospheric levels of carbon dioxide and other so-called greenhouse gases, which trap heat the way the glass plates of a greenhouse do.

For those seemingly modest statements, Hansen has been alternately praised, denounced, lionized and lampooned by peers and public alike. Meanwhile, his views on the greenhouse effect

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