

## FROM THE EDITORS

### Treasures in the Stars

Exploration of space has sprinted forward over the past two decades, even though no human has ventured outside the lunar orbit. Thanks to strings of probes with names like Voyager, Pioneer, Galileo, Magellan and SOHO, planetary and solar science thrived. We have seen all the planets but Pluto from close by, visited Mars and Venus by proxy, and even witnessed the collision of Comet Shoemaker-Levy with Jupiter. The moons graduated from minor players to varied, exotic worlds in their own right and possibly to abodes for life. The sun revealed its complex internal anatomy. Whole new classes of frozen bodies beyond Neptune's orbit came into view.

Meanwhile the magnificent Hubble Space Telescope, other orbiting instruments and their Earth-bound cousins peered clearly into deeper space. They showed us new types of galaxies and stars, spotted planets around other suns and took the temperature of the big bang. We better appreciated our own solar system after seeing how fiercely bright some corners of the universe burn.

With this issue, *Scientific American* summarizes the most extraordinary discoveries and still open mysteries of modern astronomy. It also debuts the new series of *Scientific American Presents* quarterlies, each of which will look in depth at a single topic in science or technology. (The regular monthly magazine will, of course, continue to scan the full range of disciplines.)

All the authors of this issue deserve thanks for their fully new articles or for the extensive updates they made to previous works. But I must with sadness extend special appreciation to the late cosmologist David N. Schramm, whose untimely death in December 1997 immediately followed our collaboration. We mourn him for both his many kindnesses and his scientific vision. I am grateful also to the Lockheed Martin Corporation for its generous offer to become the sole sponsor of this issue; such financial support, unfettered by editorial constraints, helps to ensure that we can bring to readers the information they crave at a price they can afford. My deepest gratitude, though, goes to editor Rick Lipkin and, as always, the rest of the staff of *Scientific American*, for their unfailing industry and love of good science.



JOHN RENNIE, *Editor in Chief*  
editors@sciam.com

#### About the Cover and the Table of Contents

These paintings by Don Dixon imagine the views from two fascinating moons in our solar system. The scene at the left is set on the Jovian moon Europa, showing liquid water through a fissure in the icy surface. The cover image offers a perspective just above the methane clouds of the moon Titan as it orbits Saturn.



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*Magnificent Cosmos* is published  
by the staff of SCIENTIFIC AMERICAN,  
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415 Madison Avenue • New York, NY 10017-1111  
(212) 754-0550  
PRINTED IN U.S.A.