

# About This Issue

Science is the source of innovations that improve public health, lighten the burden of labor, improve energy efficiency, and expand human understanding of the cosmos and the living world.

Science is also an inherently international undertaking. Researchers share the results of their work with a scientific community that spans the planet through a growing array of collaborative efforts, technical journals, conferences, the Internet, and dedicated high-bandwidth data networks for research and education.

This increasingly global scientific enterprise straddles national boundaries to create a set of relationships in which traditions and cultures mix in cooperative ways, despite temporary setbacks arising from security concerns and economic competitiveness.

On the following pages, scientists, engineers, researchers, and educators who work with international colleagues at the leading edge of this global movement to share knowledge describe their work and preview the future of international collaboration.

Scott Horowitz of NASA describes how, at the dawn of a new space age, the world's spacefaring nations are collaborating to enable achievements in space exploration that are beyond the financial and technical capability of any single country.



Scientists at work on a device that is part of the Compact Muon Solenoid Collaboration at CERN, the European Organization for Nuclear Research.

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Three researchers supported by the U.S. National Institutes of Health John E. Fogarty International Center for Advanced Study in the Health Sciences work with collaborators in Thailand, Central and Eastern Europe, and Peru to enhance global health. NASA astrophysicist Joseph Davila tells of a rare total solar eclipse and how it brought scientists from Libya, the United States,

Switzerland, Italy, France, and Germany together for the first time in Libya's ancient southern desert to study the sun's corona and broadcast the event to the world. Norbert Holtkamp, who will lead the construction of the world's largest fusion experiment, explains how the International Thermonuclear Experimental Reactor could become a clean energy source for a growing world demand.

These and other experts offer their thoughts on *Sharing Science: Global Partnerships*. ■