

porate comments they have received at the conference into the proposal, then gear up to mount a major effort to sell it to potential funders in Congress, nonprofit foundations, and the private sector. The clock is ticking. "This is a pretty scary time for us," says Buck, whose department manages more than half the state's land. "If we don't get the resources" to protect the native ecosystems before more species are lost, he says, "we may never get another chance."

—RICHARD STONE

SPACE SCIENCE

U.N. Plans Its Future In Space

At a meeting in Vienna last week, the 188 member states of the United Nations adopted a declaration on space and human development—their first in 17 years—that emphasizes the importance of space science and technology for improving human health, studying the environment, and helping sustainable development and disaster management. Although the declaration does not commit any country to a specific course of action, it provides a road map for cooperation among the U.N.'s member nations as well as technical and political recommendations for future space activities. Delegates also approved a voluntary fund to pay for the action plan that accompanies the declaration and suggested that countries be allowed loans from the World Bank to enable them to use the international space station.

"What the UNISPACE III meeting has given us is the bible for the U.N.'s involvement in space and human development for the next 10 to 15 years," says Hans Haubold of the U.N.'s committee on the peaceful use of outer space. Adds U. R. Rao, former head of the Indian Space Agency, who presided over the meeting, the delegates "listened to the needs of the developing as well as industrialized countries."

Most of the conference focused on the application of space technology to environmental issues. If member states act on the decisions made, possible spin-offs could include the establishment of a global, space-based system for disaster management and special funds for regional remote-sensing

centers. It also called for a reduction in the growing swarms of space debris circling Earth and in the electromagnetic pollution that makes both ground-based astronomy and communication with spacecraft difficult.

But basic science was not ignored: The gathering gave its blessing to several space science and astronomy proposals, including networking small telescopes in developing countries and building an orbiting world space observatory. Both of these sprang from a series of workshops organized jointly by the U.N. and the European Space Agency (ESA) that aim to improve astronomical research and education in the Third World. Each workshop, held in a developing country, brings local scientists together with the top international researchers in their field.

Now that the concept of a world space observatory has the meeting's endorsement, possible participants will have to decide what sort of observatory they want and how to build and pay for it. It will most likely be a 1.5- to 2-meter ultraviolet telescope, says ESA's Willem Wamsteker, a former project scientist for the International Ultraviolet Explorer, who helped organize the workshops. None of the major space agencies have plans for an ultraviolet space telescope, so Wamsteker argues that such an instrument would be both scientifically important to all

nations as well as a technical challenge for developing nations.

The Vienna meeting also endorsed a plan to coordinate observations of variable stars by networking together existing small telescopes in places as far afield as Paraguay and Sri Lanka. Variable stars are a good target, according to Haubold, a professor of theoretical astrophysics, most recently at the University of Vienna, because they provide information about star structure and evolution and because there are many left that need cataloging. Such studies would also provide useful training in countries that do not have a strong tradition of modern astronomy. The participants are now discussing their ideas with the American Association of Variable Star Observers, and more concrete technical plans for turning these individual telescopes into a coordinated global network will be finalized at a meeting in Toulouse, France, next June.

—HELEN GAVAGHAN

Helen Gavaghan is a writer in Hebden Bridge, U.K.

SYNCHROTRON RADIATION

France Takes Share in British Synchrotron

France has all but abandoned its plans to build a new, state-of-the-art synchrotron facility, called SOLEIL, which had been on the drawing board for 8 years. Earlier this week, the French government announced that it will instead invest heavily in a new synchrotron to be built in the United Kingdom, together with the British government and the Wellcome Trust, a London-based charity. That decision makes it unlikely that plans for SOLEIL will be realized, France's science minister Claude Allègre told *Science*. French scientists, who favored having their own facility on French soil, are disappointed.

Materials scientists and biologists use synchrotrons to determine a compound's atomic structure from diffraction patterns produced when x-rays scatter off its internal atoms. SOLEIL, a 106-meter-diameter ring whose location in France was yet to be decided, would have given French scientists their own third-generation x-ray source. But Allègre had hinted several times that, with several other European synchrotrons to become available in the next decade, the \$180 million project would be redundant. Instead, he has now opted to become a partner in DIAMOND, a new synchrotron ring to be constructed in Britain. The French and British governments and the Wellcome Trust will each donate \$57 million over the next 7 years to build the machine, plus \$10 million to \$13 million yearly to operate it. Each will get an equal share of the facility's beamlines.

Allègre says his decision was inspired by the need to further European scientific cooperation. "Of course, there are financial reasons [as well], but they are second to my wish to build a European [scientific] community," Allègre says. "I will not approve large French projects anymore, my priorities are European instruments." France's participation in DIAMOND, added to its use of the European Synchrotron Radiation Facility (ESRF) in Grenoble and LURE, an older x-ray source in Orsay, will guarantee the country's researchers access to x-ray beams, Allègre asserts.

But French scientists disagree, arguing that the decision may stifle future research projects. Besides, says Yves Petroff, former director-general of ESRF and a member of SOLEIL's scientific council, using several European facilities will drive up travel and other costs and may be more expensive than SOLEIL would have been. "This decision has been taken only by the minister, and the scientific community has not been involved," says Petroff. "We have been kept completely outside of it."

—ALEXANDER HELLEMANS

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U.N.'S PROPOSED VARIABLE STAR NETWORK

Optical telescopes

(all less than 0.5-meter aperture)

Sri Lanka
Colombia
Honduras
Jordan
Egypt
Philippines
Paraguay

Radio telescopes

Colombia	5.5 meters
Jordan	32 meters*
Egypt	10 meters

* Under construction