Tomatis removed the 10 ppm extrapolation but retained a 100 ppm estimate that was also based on the same extrapolation. Hoel said that the inconsistency was "peculiar."

Tomatis said that he had reservations about the estimate once the draft was published. He then had an agency statistician contact the scientists who calculated the risk estimate. Hoel said that is true, but he told the statistician that if the 10 ppm calculation was dropped, then a paragraph should be added to explain the deletion. Hoel requested that a written draft of any changes be circulated among the working group members and another consensus reached.

Philip Landrigan, a member of the working group and director of the surveillance, hazard evaluations, and field studies at the National Institute for Occupational Health and Safety, fired off a telegram to Tomatis in July saying that he was "surprised and chagrined to see a critical portion of the benzene risk assessment altered. . . . I fail to understand why the working group was not consulted in regard to this important change. . . ." He said the deletion "goes against the text agreed upon by the group . . . and also appears to run completely counter to that stated policy of IARC" that working groups' conclusions are immutable.

Tomatis wired back, arguing that the section of the monograph in which the estimate initially appeared was the appendix and therefore not subject to the same procedural tradition as the actual monograph itself.

In retrospect, Tomatis said, the quantitative risk assessment should have been published separately from the monograph. He concluded he should also have sent a written confirmation of his changes to the scientists involved. But he said he is unsure what he would have done if they had objected to his actions. "I wish I could go back in history," he said with frustration.

The toughest critics of NCI and IARC in this matter point out that Tomatis is caught between a rock and a hard place because the agency is financially supported by the cancer institute. "Tomatis is a good man," but he "must have felt threatened by NCI," said Roy Albert, a member of the October working group and a professor at the Institute for Environmental Medicine at New York University. "I know for a fact that Tomatis was leary of quantitative risk assessment," and that he has legitimate scientific reasons. On the other hand, the circumstances leading up the deletion "look perfectly awful," Albert said.

At a National Cancer Advisory Board meeting in May, Tomatis reiterated that the institute had not pressured him to refrain from risk assessment. Board members seemed satisfied with his denial. But Sheldon Samuels, a board member and director of health, safety, and environment for the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO), proposed that a board subcommittee investigate the matter further. He was voted down 11 to 2. (William E. Powers, chief of radiology at Detroit's Harper Grace Hospital, sided with Samuels.)

The problems with the benzene monograph apparently troubled the special review group at the cancer institute that evaluates funding proposals, including IARC requests. This group, comprised of scientists outside the cancer institute, told NCI, in effect, to mind its own business and stop meddling in the agency's affairs. According to a memo written by a cancer institute official who attended the meeting, the committee "believes that IARC should remain open to suggestions from NCI . . . , but it would be a mistake for NCI to use its financial leverage to influence unduly the selection of topics or the choice of individuals to participate in the reviews."

Obey, who is a member of the House Appropriations Committee that oversees the NCI budget, has promised to continue investigating the matter. He said in a recent statement that he finds it "difficult to believe that the extraordinary steps taken by IARC staff in altering the findings of a scientific panel without approval from that panel were not at least partially a result of pressure from the National Cancer Institute officials who control IARC funding."—MARJORIE SUN

U.N. Space Conference Ends in Compromise

But final agreement papers over some major disagreements between rich and poor countries

Moderation and compromise finally won the day at the 2nd United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE-2), which ended in Vienna, Austria, on 21 August, with the rich nations giving away few concessions to the poor.

The results left many representatives from the developing countries frustrated that their more radical demands for international regulation of space technology had not been met. In contrast, negotiators from the industrial nations were relieved that their refusal to make any major concessions did not seem to have created substantial obstacles either to their efforts to sell space technology for Third World needs, or to further U.N. conferences on global technical issues.

The spirit of compromise was revealed in what rapidly became one of the most controversial topics of the conference, namely how far a meeting formally devoted to the peaceful uses of space technology should go in condemning efforts to exploit its potential military applications.

From the opening session it was clear that this topic was not going to be ignored. In a strong and emotional statement, U.N. Secretary General Javier Perez de Cuellar claimed that the "increasing and rapidly escalating militarization of outer space" threatens not only to inhibit and reduce international cooperation, but "to divert urgently needed resources from programs of social and economic development." Recent military activities in space, he said, seem to contravene the spirit, if not the letter, of the U.N. outer space treaty of 1967, which states that space is considered the province of all mankind and should only be used for peaceful purposes.

Others—particularly the United States, with the support of the United Kingdom—made it clear that they did not consider the militarization of space to be a legitimate topic for a conference officially devoted to peaceful applications. James Beggs, the administrator of the National Aeronautics and Space Administration and the head of the U.S. delegation, emphasized at a press con-

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NASA Floats a Global Plan

Keen to dispel a growing impression that its primary interest in space research lies in the eventual military applications, the Reagan Administration chose the Second United Nations Conference on the Exploration and Peaceful Uses of Space (UNISPACE-2) to announce plans for a decade long program of research into "global habitability."

The details of the research program, which will link together the analysis of physical, chemical, and biological data from earth-based stations and remote sensing satellites with that generated from studies of nearby planets, are still being discussed within the National Aeronautics and Space Administration (NASA). But it is not yet clear whether the Office of Management and Budget will be prepared to endorse extra funds for the program. Nor is it certain that other nations fully support NASA's initiative.

Nevertheless, NASA administrator James Beggs was sufficiently confident to tell the space conference that the United States was keen to begin to discuss the global habitability concept with other governments and international institutions. "We envision continued long-term research efforts with international cooperation to expand further the base of data and knowledge from which sound decisions can be made with respect to the environment," he said.

The idea of introducing "global habitability" as a new focus for NASA's scientific programs has been floating around the agency for some time, and recently picked up the endorsement of deputy administrator Hans Mark. The White House, however, is said to have been slightly skeptical, concerned that the concept is merely being used by NASA to keep existing research going during a period of financial stringency. But the Department of State appears to have recognized the political capital to be made out of presenting the global habitability program as a new initiative at the United Nations conference, particularly in view of the criticism which the United States expected—and has subsequently received—for the military focus of many of its current activities in space.

The scientific aspects of the new program were endorsed at a meeting of 50 scientists held at Woods Hole, Massachusetts, at the end of June at NASA's request. "We can see no better use of our mastery of near space than acquisition of the body of knowledge essential for the future well being and prosperity of mankind," the draft report says. Furthermore it suggested that presentation of the proposed program at the U.N. conference was a step "appropriate for reasons both of feasible science and of good international policy."

The political aspects of an international program, however, will not be straightforward. Some, including the International Council of Scientific Unions, have openly welcomed the U.S. initiative. Others, however, remained slightly wary of U.S. attempts to shoulder too much political responsibility for what they consider should be a globally organized research effort. One official from the United Nations Environment Program, which already runs its own Global Environmental Monitoring Systems, suggested there were dangers in allowing any one nation too much control over the collection of data and the coordination of research. "Any one nation can do its own thing, but the results will be more effective if it is done through the U.N. system," he said.

NASA officials were busy during the UNISPACE meeting talking to representatives of various international bodies such as the World Meteorological Organization and the Food and Agricultural Organization, many of whom, like the United Nations Environment Program, have already initiated their own global monitoring efforts and remain to be convinced that the U.S. proposals are totally compatible with their own endeavors.

NASA will also have to do a lot of talking at home to convince other agencies concerned with climate research, in particular the Department of Commerce's National Oceanographic and Atmospheric Administration and the National Science Foundation, which have had their own budgets for climate research cut back by the Reagan Administration, that the new initiative deserves their support.—DAVID DICKSON

ference that the United States did not want to see the military question debated, arguing that it should be left to other forums, such as the U.N. committee on disarmament. Many developing countries, however, pushed for strong language in the final report, suggesting for example that the conference should condemn outright the placing or testing of weapons in space.

Eventually a compromise was thrashed out in the last days of the two-week conference by an unofficial committee chaired by Austria's foreign minister, Willibald Pahr. Based on this committee's proposal, the final report goes further than the United States and its supporters had wanted, recommending that the militarization of space be taken up as an urgent agenda item both by the committee on disarmament and the U.N. general assembly. However, it refrains from endorsing any specific positions which the United States in particular has claimed would have tied the hands of the disarmament negotiators.

Another controversial topic—the overcrowding of the geostationary orbit by telecommunications satellites—was dealt with in a similar way. Various developing countries, in particular India, had suggested that the conference should endorse specific regulatory solutions such as requiring that satellites from the developed countries shift to different wavelengths, freeing those currently used for the developing countries' own applications.

The final conference report, after prolonged negotiations, acknowledges that overcrowding of wave bands is becoming a problem, but it does little more than suggest possible solutions.

Frustrated at their lack of negotiating success, the developing countries almost brought the conference to its knees on procedural grounds on the final afternoon. Speaking on behalf of the Group of 77, Mexico demanded a vote on its proposal that the conference report include an annex listing the critical views of the 127 developing countries which currently make up the group.

In reply, a member of the British delegation claimed it made little sense to attach to a report, endorsed by consensus, an annex signed by a majority of the states present which appeared to conflict with many of the official report's conclusions. After five hours of last minute behind-the-scenes negotiations, a compromise was reached in which the dissenting document is referred to briefly in the final conference report, but developing countries' grievances will not be published in full.—DAVID DICKSON

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