

that no nuclear weapon or "any other kinds of weapon of mass destruction" will be placed on the moon or other celestial bodies or in space. The treaty provides for inspection of all installations and equipment on celestial bodies by other signatory nations given "reasonable advance notice of a projected visit." This part of the treaty was written to meet Soviet demand; the United States had desired stations to be open continually without notification of visit. The treaty does not deal with the question of inspection of orbiting vehicles; such inspection is neither specifically permitted nor prohibited. The treaty does not affect reconnaissance satellites, manned orbital laboratories, or intercontinental ballistic missiles.

The Soviet desire to gain entry to all space-tracking installations was not fulfilled by the treaty. Such an agreement would have given Soviet scientists automatic access to the vast U.S. space-tracking network. The treaty now reads that requests for observation shall be considered "on a basis of equality" with those of other signatory states and "shall be determined by agreement between the states concerned."

The treaty establishes the right of exploration for all countries and prohibits nations from claiming sovereignty over any part of outer space. It guarantees "freedom of scientific investigation" and enjoins states to "facilitate and encourage international cooperation." Countries are to inform the U.N. Secretary-General "as well as the public and the international scientific community, to the greatest extent feasible" of the nature of their space activities. Astronauts of all nations are to be regarded as "envoys of mankind" and to be rendered assistance in the event of accident. The treaty orders signatory states to conduct space exploration so as to avoid harmful contamination of celestial bodies "and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter."

The treaty will go into effect after the ratification of five nations which must include the United States, the Soviet Union, and the United Kingdom. As in the case of the 1963 test-ban treaty, the space agreement can be signed at any of the capitals of these three countries. A nation can withdraw from the treaty by giving notice anytime after it has been in effect for a year; such a withdrawal would take

effect a year after the notice was given.

Having been negotiated and approved by the 28-member United Nations Outer Space Committee, the treaty is to be appended to a General Assembly resolution urging adoption. The resolution is expected to be overwhelmingly adopted by the General Assembly in mid-December, thus prompting member nations to quickly ratify the space treaty.

Senate Ratification

President Johnson has expressed his hope that the United States "will be one of the first countries" to ratify the treaty. As in the case of all international treaties, the space agreement must be considered by the Senate Foreign Relations Committee and must then receive the votes of two-thirds of the members of the Senate to gain approval. In discussions earlier this year, most members of the Committee seemed sympathetic to the treaty, and it would be surprising if it did not eventually receive Senate approval. U.S. officials are hopeful that most nations, including France, will sign the space treaty, but are not sanguine about acquiring Peking's signature.

In terms of existing military conditions and costs, it is not terribly remarkable that the United States and the Soviet Union were able to reach agreement on the first treaty to assure the peaceful uses of space. At present, the costs of using space for military purposes are too high to make it an attractive option. However, the treaty will stand as a guard against military exploitation of space at a future time when improved technology might make such utilization more feasible.

On earth, President Johnson must still deal with mounting military expenditures—not only in Vietnam, but those vast sums contemplated to match the Soviet deployment of an antimissile missile system and a reported Soviet increase in offensive missiles. It is little wonder that he eagerly seized upon the news that one area would be freed from military spending.

Although some U.S. officials attach no great significance to the contents of the space treaty, they do emphasize the importance of achieving any Washington-Moscow accord. With wary optimism, they speculate that the United States and the Soviet Union will agree early next year on the next major item on their bilateral agenda—a nuclear non-proliferation treaty.—BRYCE NELSON

Announcements

The winners of AAAS-Westinghouse science writing awards in three categories were announced today. Each award carries a \$1000 cash prize.

John Kolesar, of the Trenton, New Jersey, *Evening Times*, is the first winner of the new award for writers on newspapers with daily circulations of under 100,000, for his article "The C Stellarator. It's As Hot As The Sun." The article, which appeared in the *Evening Times* on 16 May, concerns the goal of creating electric power through controlled nuclear fusion.

Evert Clark, science correspondent for the New York *Times* Washington bureau, is the winner of the award for writers on newspapers with a circulation of more than 100,000. His entry was a nine-part series about the moon-landing of Surveyor I; the articles were published between 31 May and 14 July.

The award for magazine writing will go to *Life's* Albert Rosenfeld for his article, "The New Man—What Will He Be Like?" which appeared 1 October 1965. This article is part four of his "Control of Life" series and explores the implications to man of new scientific breakthroughs in biology and medicine.

A six-part series, "Our Human Beginnings," earned an honorable mention for Harry S. Pease, of the Milwaukee *Journal*. The series, about recent fossil studies, ran daily between 25 and 30 September.

The Minneapolis *Tribune* will receive a special citation for its "Science Reading" series, articles published each Monday during the school year and written by nationally known scientists and science writers.

Scientist in the News

Gardner Lindzey, chairman of the psychology department, University of Texas, has been elected president of the American Psychological Association. He will serve a 1-year term as head of the 25,000-member organization.

Erratum: In "Immunization of normal mouse spleen cell suspensions in vitro" (26 Aug., p. 1004) by R. I. Mishell and R. W. Dutton, the nutritional cocktail in reference 9 should have included 2.5 ml of 200 mM glutamine.

Erratum: In the article "Interpretation of some organic photochemistry" by H. E. Zimmerman (19 Aug., p. 837), line 6, paragraph 4, column 1, page 843, should read "that of . . . drawing a circle of radius 2" (not diameter). Line 6 from the bottom, column 2, page 843, should read "system . . . favors a conrotatory opening."