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Elaborating the Legal Status of Astronauts

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L.L.D.

I. INTRODUCTION

The multilateral agreements which comprise the foundation of existing space law do not include an agreement devoted exclusively to regulation of the legal status of astronauts during space missions. The absence of such an agreement does not mean, of course, that international space law recognizes no sovereign norms in this area of regulation. Relevant provisions are included in many of the existing space law agreements; indeed, the 1968 Rescue Agreement¹ focuses in great detail on such flights. This Article attempts to delineate significant trends that have developed over the last two decades in the legal regulation of space crews and examines the prospects for future development in this body of law.²

II. STATE JURISDICTION AND CONTROL OVER SPACE CREWS

The exclusive right of jurisdiction and control over a crew in space or on a celestial body belongs to the state in which the spacecraft is registered.³ Existing international space law does not, however, establish which state may exercise jurisdiction and control over a space crew whose spaceship accidentally lands on foreign territory or on the high

1. Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, *entered into force* Dec. 3, 1968, 19 U.S.T. 7570, T.I.A.S. No. 6599, 672 U.N.T.S. 119 [hereinafter cited as Rescue Agreement].

2. See generally Gorbil, *Kosmonauci w prawie miedzynarodowym*, 5 *ASTRONAUTYKA* 22-23 (1980); Bourelly, *Toward a Convention on the Legal Status of Manned International Space Flights* and Menter, *Status of International Space Flight*, in *PROCEEDINGS OF THE 22ND COLLOQUIUM ON THE LAW OF OUTER SPACE, INT'L INST. OF SPACE LAW* (1980). See also *PROCEEDINGS OF THE 21ST COLLOQUIUM ON THE LAW OF OUTER SPACE, INT'L INST. OF SPACE LAW* (1979).

3. See Vereshchetin, *Legal Status of International Space Crews*, *ANNALS OF AIR & SPACE L.* 545-60 (1978); Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, art. VIII, *done* Jan. 27, 1967, 18 U.S.T. 2410, 2416, T.I.A.S. No. 6347, 610 U.N.T.S. 205, 209 [hereinafter cited as 1967 Space Treaty].

seas, or, for that matter, during the spaceship's flight through a foreign state's airspace and over the high seas. Under existing international space law, individual states themselves determine the procedure by which they will exercise jurisdiction and control over spacecraft and personnel thereon by publishing relevant laws or other legal guidelines. In 1980, for example, the United States published NASA Regulations which delegated responsibility to the Space Transportation System Commander for maintaining order, discipline, safety of all shuttle personnel, and safety of the space shuttle and its elements and payloads.⁴

The NASA example shows that, at present, a state's jurisdiction and control over space crews are established primarily by the state's own definition of the commander's administrative and disciplinary powers and the crew members' rights and responsibilities. It would, of course, be expedient for states to agree, within the framework of international law, upon a uniform set of rules concerning the powers of a spaceship commander.

The further use of astronauts in space operations may necessitate revisions in the present law of jurisdiction in space. The question arises, for example, as to which state's law should govern when a transport ship registered in one country delivers astronauts to an orbital station registered in another country. Safety considerations demand that the astronauts obey the administrative and disciplinary power of the orbital station commander once the astronauts transfer to the orbital station. A similar question might arise during exercise of the "right to visit" at structures and installations on the Moon by astronauts of other states.⁵

Furthermore, special regulations may be needed for persons living in space for an extended period of time, especially when permanent space colonies are established. Permanent space colonies could be governed by special laws operating only within their territories. Alternatively, the existing jurisprudence of national and international law, suitably modified, could be applied to space colonies.⁶

III. INCREASING THE SAFETY OF SPACE FLIGHTS

The existing rules of space safety deal primarily with providing in-

4. Space Transportation Systems; the Authority of the Space Transportation Systems (STS) Commander, 45 Fed. Reg. 14,845 (1980) (to be codified at 14 C.F.R. § 1214).

5. See 1967 Space Treaty, *supra* note 3, at art. XII; see also Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, art. XV, 34 U.N. GAOR (Agenda Items 48, 49) at 1, U.N. Doc. A/Res.34/68 (1979) [hereinafter cited as Moon Agreement].

6. See GOROVE, STUDIES IN SPACE LAW: ITS CHALLENGES AND PROSPECTS 213-20 (1977).

ternational aid to astronauts in distress and rendering assistance when an accidental landing occurs on foreign territory. Article V of the 1967 Space Treaty specifies that "in carrying on activities in outer space and on celestial bodies the astronauts of one State Party shall render all possible assistance to the astronauts of other State Parties."⁷ This mutual assistance provision requires that the rescuing state actively assist any survivors of a space-related accident, and offer the survivors shelter in the rescuing state's spaceship or station. Article X of the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement) provides that "State Parties shall adopt all practicable measures to safeguard the life and health of persons on the Moon."⁸ These provisions speak, not by chance, of rendering "possible" assistance to astronauts of other countries. Admittedly, the practical performance of international rescue operations in space under present-day conditions is a very complicated affair, both technically and organizationally.

As previously mentioned, offering shelter to astronauts in distress in a ship or station of another country may be one form of mutual assistance in space, provided the technical capacity exists with which to do this. The Moon Agreement continues: "State Parties shall offer shelter in their stations, installations, vehicles and other facilities to persons in distress on the Moon."⁹ Although the right to offer shelter on ships and stations that are in Earth orbit is not mentioned explicitly, it may be implied from Article V of the 1967 Space Treaty which speaks of offering "possible assistance" to astronauts of other countries.¹⁰

It is necessary to differentiate between the right to shelter (connected with preserving the life and health of astronauts) and the so-called "right to visit." The right to visit refers to exchanges of research personnel and to verification procedures associated with the ban on military activities on the Moon. It does not apply to spaceships and stations orbiting the Earth. Moreover, a proposal was made, quite correctly in my opinion, to prohibit *expressis verbis* not only unsanctioned visits of orbital ships and stations, but also performance of maneuvers near foreign ships and stations within determined safety zones.¹¹ These measures

7. See 1967 Space Treaty, *supra* note 3, art. V.

8. See Moon Agreement, *supra* note 5, art. X.

9. *Id.* art. X, para. 2.

10. See 1967 Space Treaty, *supra* note 3, art. V.

11. See A. Rudiev & P. Lukin, *Legal Status of Near-Earth Manned Space Stations*, KOSMOS I PRAVO 104 (1980).

would help to abate the risks connected with unplanned operations in space.

Reliable communications between the crew and the ground control center are of utmost importance in ensuring the safety of space flights. Taking into account the ever-growing overloading of the radio frequency spectrum and resulting interferences which hinder normal communication channels between astronauts and the Earth, the time has come to designate special frequencies for communications with astronauts in spaceships and stations during conventional missions, especially in emergency situations.

In another step toward ensuring astronauts' greater safety in space, signatories to the 1967 Space Treaty agreed to immediately inform one another, or the Secretary General of the United Nations, of phenomena in space (and on the Moon and other celestial bodies) which could jeopardize the life and health of astronauts.¹² Such phenomena include, for example, solar flares, which cause sharp changes in radiation conditions in space. Timely information about such phenomena is of vital importance to ensure that appropriate safety measures can be taken.

Existing norms of international space law regulate in detail the rescue and return of astronauts in an emergency landing outside the limits of the state of registration. Central to this regulation is the duty of states to render all possible assistance to astronauts in distress and to immediately return them to the state of registry of their space vehicle¹³ or to representatives of the launching authorities.¹⁴ Astronauts would be obliged to abide by the laws of a state where they have landed for the duration of their stay there.

The problem of organizing an international rescue service, operating both in space and on Earth, will probably arise in the future. Such a service is possible only with the development of appropriate technical facilities and a high degree of trust and cooperation among interested states. At present, international organizations such as the International Astronautical Federation have only discussed this problem.

IV. RESPONSIBILITY FOR WRONGS AND DAMAGES

International space law on tort liability presently focuses on liability for damage caused to persons or property of a foreign state. The 1972 Convention on International Liability for Damage Caused by Space Ob-

12. See 1967 Space Treaty, *supra* note 3, art. V.

13. *Id.*

14. See Rescue Agreement, *supra* note 1, art. IV.

jects is devoted to this problem.¹⁵ An important feature of international space law is that issues of tort liability arise directly between states; that is, in cases where the victim or the offender is a legal or a natural person, his or her interest is represented by the state of which he or she is a citizen.

The fact that the states rather than the astronauts have responsibility for the astronauts' activities in space does not diminish the astronauts' moral or juridical responsibility in their own states. Nevertheless, the negligence or intentional tort of an astronaut may invoke the political and moral responsibility of his or her own state with respect to other states. This is especially true in cases of damage inflicted during space operations by one state upon vehicles of another state. In such a situation, a state is liable only if it or the persons for whom it is responsible are guilty of negligence or wrongdoing.¹⁶ The prolonged habitation of humans in space and, in the future, simultaneous space operations by astronauts and vehicles of different countries require that an attentive legal evaluation of liability arising out of such situations be undertaken.

V. LIMITATION ON MILITARY ACTIVITIES IN SPACE

Existing international agreements do not completely prohibit states from performing military defense activities in outer space. They do, however, impose a number of limitations on such activities. The 1967 Space Treaty expressly states that the use of military personnel for scientific research or any other peaceful purpose is not prohibited. This provision is consonant with the widespread use of military pilots for many space flights. Nonetheless, some writers have called for consistent and far-reaching bans upon military activities in space, including the complete demilitarization and neutralization of the Moon and other celestial bodies.¹⁷

As for near-Earth space or, more precisely, the orbits around the Earth, a regime of partial demilitarization has been established. Of major importance is the ban on orbiting any objects carrying weapons of mass destruction, nuclear or otherwise. Stationing such weapons in

15. Convention on International Liability for Damage Caused by Space Objects, *done* Mar. 29, 1972, *entered in force* with respect to the United States Oct. 9, 1973, 24 U.S.T. 2389, T.I.A.S. No. 7762 [hereinafter cited as Liability Convention].

16. *Id.* art. III.

17. See G. ZHUKOV, INTERNATIONAL SPACE LAW 55 (1971). The provisions on banning military activities on the moon and other celestial bodies were developed in the Moon Agreement, *supra* note 5.

outer space is also prohibited.¹⁸ The 1963 Moscow Treaty prohibits any nuclear weapons test explosions in space.¹⁹ In addition, the 1978 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques²⁰ outlaws the use of any scientific technological means, including space objects, to alter weather or climate conditions if such modifications potentially cause long-term harm to the environment. Certain limitations on military activities in space also stem from the 1972 Soviet Union-United States agreement on the limitation of antiballistic missile systems and on the limitation of strategic offensive arms.

The efforts of the Soviet Union have always been aimed at using outer space exclusively for peaceful purposes. Evidence of this intent is found in the Soviet proposals in the United Nations to ban the stationing of any weapons in outer space and to conclude a Treaty on the Prohibition of the Use of Force in Outer Space and from Space against the Earth.²¹

A number of articles have recently appeared in the daily press and in specialized literature with regard to use of the United States Space Shuttle for military purposes.²² Mention was made of plans to use the Shuttle for testing new types of weapons, launching into orbit and repairing military satellites in space, as well as inspection, seizure and destruction of the satellites of foreign countries. Statements were also made of the alleged legality of stationing mass-destruction weapons aboard the Space Shuttle when it performs sub-orbital flights.

It must be noted that some of these allegedly legal military uses of the Space Shuttle are prohibited in international space law. For example, the seizure or intentional destruction of a foreign country's space vehicle may be characterized as an act of aggression, a very serious international crime. The inspection of another country's space vehicles which are in orbit around the Earth is also prohibited by international space law. Additionally, the presence on the Space Shuttle of nuclear arms or any other weapons of mass destruction, even during a sub-orbital flight, would contravene both the letter and spirit of Article IV of the 1967 Space

18. See 1967 Space Treaty, *supra* note 3, art. IV.

19. *Id.* art. I.

20. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, with annex, *done* May 18, 1977, *entered into force* Jan. 17, 1980, 31 U.S.T. 333, T.I.A.S. No. 9614.

21. See, e.g., U.N. Doc. A/36/192 (1981) and U.N. Doc. A/38/194 (1983).

22. *Le "Shuttle" cle des missions; spatiales militaires americaines*, AIR ET COSMOS 32 (1981); *Vingt et un vols militaires de "Shuttle" d'ice la fin 1986*, AIR ET COSMOS 42 (1981); *Christian Science Monitor*, Mar. 25, 1981, at 2, col. 3.

Treaty.²³

Moreover, large scale military activities in space by astronauts, even within the limits allowed by international law, could lead to unfavorable consequences for their protected legal status. Underlying the international norms protecting the life and health of astronauts both in flight and in case of an emergency landing is recognition of the importance of astronauts' activities for all of humankind. Therefore, activities of astronauts during space flights, especially those performed in violation of existing international laws, may make it difficult to enforce rules that establish a special legal status for astronauts. Particularly difficult to enforce may be those rules dealing with unconditional and immediate return of astronauts who land on foreign territory due to an accident.

VI. CONCLUSION

The legal norms that regulate human activities in space must be further elaborated and systematized in light of the increasingly sophisticated needs of astronautics. This mandate exists both at the national law level and in the arena of international space law. In the international sphere, this undertaking may result in a single comprehensive agreement or several special agreements which would eventually form a special branch of international space law governing astronauts and their activities. Indeed, the outlines and the main trends of legal regulation in this area of law are already taking shape.

23. See also Zedalis & Wade, *Anti-Satellite Weapons and the Outer Space Treaty of 1967*, 8 CAL. W. INT'L L. J. 454 (1978).

