

30th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)  
Private Endeavour in Space Exploration (2)

Author: Prof. Andrea Harrington  
University of Mississippi, United States

LEGAL LACUNAE FOR PRIVATE MISSIONS TO CELESTIAL BODIES

**Abstract**

As private missions are being planned to celestial bodies (the Moon, Mars, and asteroids are all targets of such missions), it is necessary to consider the possible impact of these missions on those celestial bodies and on possibilities for scientific investigation following the completion of private missions. All major space-faring States are parties to the Outer Space Treaty, the backbone of international space law. This treaty sets out a number of important legal rules applicable to private exploitation of celestial bodies, including: States are responsible and liable for the actions of their private entities (Arts. 6-7); space is free for use, exploration, and scientific investigation by all States (Art. 1); and space activities must be conducted with due regard for the interests of other states, without harmfully interfering with activities of other States, harmfully contaminating celestial bodies, or causing adverse changes to Earth's environment from the introduction of extraterrestrial matter (Art IX). These rules and their gaps with regard to private missions to celestial bodies are the focus of this paper. (Non-appropriation is beyond the scope of this paper.)

Though we are constantly searching for other forms of life in the universe, it is distinctly possible that we will not recognize or be able to identify such life upon first contact, as it may be too foreign or dissimilar from what we understand to be the requirements for life on Earth. This creates a scenario where private missions carrying out commercial goals may damage or eradicate potential life without even being aware they had done so. Even in the case of life forms we could easily identify, the possibility of contaminating the environment of a celestial body with potentially harmful Earth materials seems likely. Changes made to a celestial body, either through contamination or physical alteration may degrade the possibility for untainted scientific investigation of those bodies. Given the relatively small number of celestial bodies within reach of a short duration mission, this could be detrimental to humanity's understanding of the universe. This paper explores balancing the interests of commercial entities with protecting possible discoveries on celestial bodies, including taking into account possible applicability and use of the COSPAR Planetary Protection Policy for such missions and provides recommendations that could be implemented to fill legal gaps moving forward.