

SYMPOSIUM ON SPACE DEBRIS (A6)

(joint session with Space Security Committee): Policy, Legal, Institutional and Economic Aspects of Space Debris Detection, Mitigation and Removal (8)

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LEGAL CONCERNS OF ACTIVE DEBRIS REMOVAL FROM GEO USING GRAVITY FLYBY THE
MOON

Abstract

Space debris problem requires an interdisciplinary approach which is not limited to science and engineering but also includes legal aspect. The legal reference for this problem is the Inter-Agency Space Debris Coordination Committee (IADC) Space Debris Mitigation Guidelines that has been adopted by the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS). This voluntary guideline is a non-binding rule and relies on the willingness of the countries to implement it.

Even after the adoption of the guidelines by the UNCOPUOS, the increasing number of space debris is still high. In Geostationary Orbit (GEO), the numbers of improperly re-orbited objects are still higher than 25 percent. An Active Debris Removal (ADR) system is needed to solve this problem. However, it involves a complex legal issue refer to the international space laws: Outer Space Treaty, Rescue Agreement, Liability Convention, and Registration Convention, where the space debris are not clearly defined.

Using Moon's gravity field for ADR mission adds more complexity to the problem by including Moon Agreement. There are two options proposed for the mission: using Moon's surface as the graveyard or using flyby the Moon trajectory to bring the debris into the Earth's atmosphere. This paper will discuss the legal concerns of the mission referring to the five international space laws. Legal issues related to the patented Moon trajectories will also be discussed.