

## SPACE DEBRIS SYMPOSIUM (A6)

Political, Economic and Institutional Aspects of Space Debris Mitigation and Removal (Joint with Space Security Committee) (6)

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## LEGAL AND TECHNICAL ISSUES OF SPACE DEBRIS REMOVAL

**Abstract**

Second half of the last century witnessed numerous advancement in the arena of space technologically and exploration of outer space. Humans have carried out various space endeavors which have facilitated the growth of knowledge in the outer space. This has lead to creation of nonfunctional small, medium and large space debris (broadly it can be defined as tangible objects generally pieces of metal, glass and plastic etc.) They are a growing threat to further outer space explorations as may cause damage to functional space objects. These particles become a part of outer space for an indefinite period as they do not degrade by themselves and there is no easy known cost effective mechanism of removing these particles from the outer space. The problem of space debris is an ongoing problem where space debris generates more and more debris by causing damage to a functional space object and rendering it nonfunctional i.e. turning a functional space object into space debris. This may lead to further collision between space objects and a never ending process of creation of space debris is triggered.

There is practical difficulty in monitoring the movement of the debris all the time and launching state can't always be expected to monitor all the particles created by collision among the space craft or due to any other reason. Neither the Outer Space Treaty, 1967 nor The Liability Convention, 1972 contains provisions requiring space faring nations to serve as collectors of trash. The United Nations has released space debris reduction guidelines; however these guidelines are merely of recommendatory nature. This research paper deliberates on what is space debris (definition of space debris). Further it discusses and analyses the space debris reduction guidelines, highlights problems of legal and technical nature that arise in removal of space debris (as space debris leads to creation of endless space debris). Paper concludes with suggestions and recommendation of the author.