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'THE DANGER OF SPACE DEBRIS: LEGAL ISSUES AND SOLUTIONS ASSOCIATED WITH ACTIVE DEBRIS REMOVAL'

Abstract

As a consequence of more than sixty years of activity in outer space, mankind has created a significant amount of space debris, most of which is concentrated in the low Earth Orbit (LEO). Scientists now agree that we have come to a serious point where the LEO region is so overfilled that debris will continue to be created even if we were to stop launching space objects tomorrow. Thus, as the French astronaut Thomas Pesquet stated when addressing this problem, "similar to climate change, we must act now and cannot wait until it is too late."

Active debris removal (ADR) has become necessary in order to stabilise the multiplication of space debris, and ensure the continuity and growth of current and future space activities. ADR technology is developing at a fast pace, as demonstrated by the efforts of the industry and the European Space Agency, however, legal barriers such as ownership and liability issues are hindering its further development. The aim of this paper is to address these issues and attempt to resolve them by issuing recommendations.

The structure of the paper will mirror the structure of this abstract: after describing the threat posed by space debris, and after underlining the existing measures to fight this menace, the paper will demonstrate how active debris removal has now become necessary. Further, the efforts of the industry and the European Space Agency on the matter will be underlined. More importantly, the core of the paper will address the legal issues that are hindering the development of active debris removal and attempts to resolve them.