14TH IAA SYMPOSIUM ON SPACE DEBRIS (A6)
Space Debris Removal Issues (5)

Author: Mr. Oleg Sokolov
Commercial Space Technologies Ltd., United Kingdom

Mr. Alan Webb
Commercial Space Technologies Ltd., United Kingdom
Dr. Konstantin Milyayev
Commercial Space Technologies Ltd., Russian Federation

APPROACHES TO THE SPACE DEBRIS PROBLEM IN RUSSIA

Abstract

Soon after the beginning of space flights it was found that the danger of collisions with meteorites, which had been earlier considered one of main problems, was strongly exaggerated. However, human space activity created a full-scale substitution for this imaginary meteorite danger. The number of artificial objects in near-Earth orbits and their debris is continuing to grow as they collide, destruct or remain without deorbiting. Naturally, this growth of space debris creates a threat for spacecraft operation and this threat is also growing. The situation in the field of studying the space debris problem and the attempts to find methods for its solving can be assessed best of all using as an example one of the countries that is among the world's leaders in satellite launching. The current leader in the number of annual launches is Russia and this country has also produced the largest amount of space debris in result of its space activity. For this reason, the current situation with the space debris problem in Russia is chosen as an example for the assessment. The paper presents the opinions of Russian experts on the problem and on possible ways for its solving. The opinions are commented on and analyzed for a following general assessment of the problem. A description of real cases of the damage of Russian spacecraft by space debris allows one to understand the seriousness of the threat and explains why certain initiatives on the legislative arrangement of practical work in the fight against space debris have been raised in Russia in order to begin the real developments of corresponding programmes and projects. Certain proposed anti-debris concepts are described briefly and this description explains why the idea arose to realize anti-debris systems (initially in the GEO) within a frame of the 'Liquidator' project that has been included into Russia's new Federal Space Programme for 2016-2025. A discussion of plans for the work continuation is also presented with an assessment of the prospects for solving the space debris problem, although partially, within the frame of international cooperation.