

20th IAA SYMPOSIUM ON SPACE DEBRIS (A6)
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SPACE DEBRIS RECOVERY AND REUSE: A BUSINESS OPPORTUNITY

Abstract

Since the beginning of the space age more than seventy years ago humanity has launched many thousands of satellites into orbit, and most of these are now inactive, dangerous wreckages, which pose an increasing risk of collision with other satellites and the operations of manned spacecrafts. When wreckages eventually collide, an unpredictable mass of smaller debris are produced, which greatly increase the general risk: any small fragment, traveling at orbital speed, can open holes in the hull of manned spacecrafts, causing quick depressurization. The above situation is now well known, and we hear many concerns about that, often associated to recommendations to start recovering, cleaning and claiming Earth orbit. However, we know that there is a similar general concern about pollution on Earth surface, sea, and air. And very little has changed so far. The problem is that, until we will see the space debris as an expense of public money, it is quite unlikely that this initiative will take off. The good news is that space debris are also a value. If collected, reprocessed and reused, space debris can mark the starting point of orbital industrial development, It is therefore very urgent to begin working on this issue in terms of feasibility, cost estimation, return of investment, i.e. business plan.