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REUSABLE SATELLITES WITH AN ADVANCE RE-ENTRY MECHANISM

Abstract

Nowadays, we are highly sophisticated in space exploration and immense growth in satellite technology and development. The process of disposing of space objects (such as dysfunctional satellites, unusable parts of space vehicles) as per the traditional methods, has been able to produce a lot of issues for our planet. Our proposed study could develop a re-entry system for the satellites and other man-made space objects (which we can be used for future missions) as per our need that would enhance the technology in the reusability of satellites. One of our mission objectives is to reduce the Earth's atmospheric pollution caused by the burning of space objects (mostly made up of Aluminum alloy), which can produce an aluminum oxide that has a significant potential to change the chemistry of the upper atmosphere Albedo of a planet. So for those concerning issues, we developed our re-entry system in two main categories: i) In-built segmented re-entry system for large observational satellites; ii) on-orbit highly sophisticated Spacecraft which can build a re-entry system for the space satellites in the graveyard orbit as well as assemble a complete shielded system for collective CubeSat. Our re-entry system is entirely designed with a robust mechanical structure and facilitated with an automatic flight and attitude control system along with autonomous technology. Another novel outcome of our developed re-entry system can pave a new technology in re-entry transportation and surveying the active and inactive satellites in our planetary system in the future.