

13th IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE (D4)
Innovative Concepts and Technologies (1)

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A NOVEL MEDICAL TREATMENT MICRO-SATELLITE BASED ON AUTONOMOUS
ADSORPTION TECHNOLOGY**Abstract**

Abstract: The on-orbit servicing task of the failure and high-valuable spacecraft always should be performed by the astronaut or the space robot, this makes the space activities own the disadvantages of high risks and high difficulties. While micro-satellite technology will lead to major changes in space technology and its applications, because of its light weight, low cost, small size, good performance and short development cycle etc., So a novel concept of MEDICAL TREATMENT MICRO-SATELLITE is proposed to realize the on-orbit repairing task for the high-valuable and collaborated satellite, The failure satellite can be treated or upgraded by the Medical Treatment Micro-satellite based on the autonomous adsorption technology through the process of on-orbit autonomous adsorption, standardized module replacement and function take-over. Different from the traditional on-orbit servicing space robot, this class of micro-satellite owns the characteristics of standardized module, short manufacturing cycle, various ways of deployments and abroad applications. Furthermore, this paper demonstrated the feasibility of Medical Treatment Micro-satellite by analysis the key technologies of the theory of autonomous adsorption, wireless communication, combination dynamics and characteristic parameters identification and so on.