

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Technologies for Future Space Transportation Systems (5)

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RESEARCH AND DEVELOPMENT OF REVOLUTIONARY LOW COST SPACE
TRANSPORTATIONS FOR SPACE INFRASTRUCTURE CONSTRUCTIONS**Abstract**

The proposal titled “Research and Development of Revolutionary Low Cost Space Transportations for Space Infrastructure Constructions” by the Japan society for aeronautical and space science was selected as one of the master plan 2017 by Science Council Japan in February 2017. This is the 10 years plan for verifying the technologies of future space transportation system consists of (1) ground - stratosphere space elevator, (2) space plane equipped with a airbreathing engine, (3) LEO - GEO orbit space elevator. These three systems are connected to contribute Earth-Space Low Cost Transportation. In the presentation, conceptual system overview of each segment will be described. Also, the social value by creating this infrastructure, such as new possible radio frequency services by stratospheres platform, Space Solar Power System (SSPS) as sustainable energy source, etc. will be explained.