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Space Elevator as Transportation Infrastructure to Access Space (3)

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SPACE ELEVATORS THE GREEN ROAD TO SPACE

Abstract

The final report of an 18-month technical study entitled "Space Elevators are the Green Road to Space" is now available. This report considered the environmental impact of all aspects of the Space Elevator: construction, operation and how it could improve the Earth's environment. In the consideration of improving the Earth's environment the following were considered: space solar power, permanent disposal of high Level nuclear waste, Sun Earth L-1 solar shade, setting up highly polluting necessary industries at GEO and the impact of the dual space access architecture. We show how each of these impacts are feasible because of the Space Elevators ability to deliver large payloads to Geo and beyond, on a regular schedule. The amount of material needed for each of these projects is considered and how operational Space Elevators can insure their success. This study report highlighted the benefits of Space Elevators with respect to the Earth's environment and illustrated how future visions depend on the leveraging of both rockets and Space Elevators in a Dual Space Access Architecture.