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SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FAR FUTURE (D4)
Space Elevator Design and Impact (3)

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DYNAMICS OF SPACE ELEVATOR IN RESPONSE TO DISTURBANCES

Abstract

Dynamics of a space elevator model is studied in this paper. The lateral vibrational motion is analysed numerically employed with a continuous model and an implicite method for solution. The continuous model is believed most accurate to manage such a space elevator with exteremely large length as 1000,000km. The model is tapered so that the actual space elevator will figured. Results of the analysis show lateral vibartional motion disturebed by any arbitrary excitation. Stability of the lateral vibrational motion is concluded in effect of the external disturbances.