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THE NEED FOR ARTIFICIAL GRAVITY IN THE TETHERING SATELLITE WITH CONNECTION
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Abstract

Artificial gravity, by loading the gravity instead of missed one in space, may mitigate the physiological deconditioning (spaceflight deconditioning) followed by the spaceflight. Several countermeasures were proposed to load the astronauts in the LEO. The easiest way is installation of a short arm centrifuge device on the spacecraft. The second way is rotation of spacecraft, specifically the habitation area at a certain frequency to produce centripetal force. The third way is a rotation of two combined habitation areas with tethering. Several unwanted effects were reported during microgravity, including 1. Visual disturbance, 2. Urolithiasis, 3. Sensorimotor disturbance, 4. Osteoporosis, 5. Impaired performance, 6. Reduced aerobic capacity, 7. Adverse health effects, 8. Urinary retention, 9. Orthostatic intolerance, 10. Back pain, 11. Arrhythmias, 12. Effects of medication, 13. Intervertebral disc damage. To prevent these problems, artificial gravity is inevitable for countermeasures to cope with the multiple systems. The protocol, including the frequency, duration, and intensity of G loads will be discussed.