

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)  
Interactive Presentations - IAF HUMAN SPACEFLIGHT SYMPOSIUM (IP)

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RESEARCH ON THE SUSPENSION SYSTEM OF CHINA'S MANNED LUNAR ROVER

**Abstract**

After Chang'e 3 and Chang'e 4 landing on the moon successfully, the research on manned lunar rover is started. Suspension system is the critical components of the manned lunar rover to travelling fast on the moon. on the basis of investigation of Vehicles and rovers, combining with the requirements of manned lunar rover, A suitable suspension configuration is confirmed according to the size of the manned vehicle and functional requirements. A vehicle suspension system is designed for high-speed manned vehicle. Dynamic simulation is started for checking out the validity of the hard point parameters of the suspension system, and the dynamic simulation results show that the suspension can meet the demand of use .Finally, the test of prototype of the manned vehicle is carried out on simulated lunar terrain and the aim of the test include pavement passability and ride comfort and the test results are analyzed after test.