

Scientific Objective and Infrastructure of Space Exploration (1)  
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## A NEW DEPLOYABLE AND LOCKABLE MECHANISM OF GOSSAMER SPACECRAFT

### **Abstract**

Introduced the researches of Deployable and Lockable mechanism for a new Gossamer Spacecraft built by space apply which can be locked and deployed by own. This mechanism integrate deploying and locking, it's advantages are simple and reliable. It is based on serious project "Platform Technology of Gossamer Spacecraft" of Lanzhou Institute of Physics, manufactured a model machine, finished the ground experiment, passed the project check. Introduced work theory particularly, built the dynamics models, factors which affect the experiment results were analyzed and measures were raised. Result showed that the mechanism designed can meet the project requirement; it can build the foundation for the super-large Gossamer Spacecraft of China and improve the degree of the Aerospace technology application.