

Space Station Flexible solar Panels





Overview

The China Manned Space Agency (CMSA) has revealed that the first lab module of China's space station is being powered by a "pair of wings" composed of huge, flexible solar arrays. Why is flexible solar array important for China Space Station?

In the numerous subsystems of the China Space Station, the flexible solar array is quite significant because it provides over 90% of the energy. Its safety is a fundamental guarantee for the stable operation of the China space station.

How many solar arrays does the Space Station have?

Flexible Solar Arrays The space station has a total of six flexible solar arrays, with two carried by the core module, Wentian module, and Mengtian module, respectively.

What is the difference between a flexible solar array and a space station?

However, on one hand, the flexible solar array is subjected to pre-tension, with a fundamental frequency below 0.1 Hz and exhibits strong nonlinear characteristics. On the other hand, the space station is a vast and complex structure with significant flexibility features.

What is the difference between a space station and a solar array?

On the other hand, the space station is a vast and complex structure with significant flexibility features. The on-orbit load analysis for the flexible solar array of the space station needs to consider the flexibility of the space station structure and the nonlinear characteristics of flexible solar arrays.



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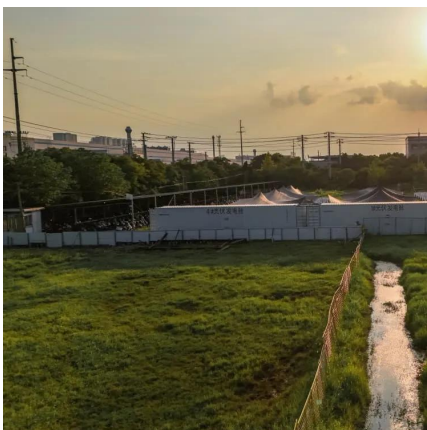
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