



# Space Solar Power Project

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The world's richest man said he wants to put as many as a million satellites into orbit to form vast, solar-powered data centers in space -- a move to allow expanded use of artificial ...

China is pushing the boundaries of renewable energy with its ambitious plan to build kilometer-wide space solar stations that will beam energy ...

Now technically and economically viable, space-based solar power (SBSP) could be a new abundant sustainable energy source. Able to provide ...

Space Solar Power (SSP) comprises a constellation of satellites in space, collecting solar power and beaming it securely to receivers either on the Earth or in space. Its main attribute is the ability to ...

Ultralight Structures Our research on ultralight spacecraft structures integrates ultrathin composite materials and polymer films with advanced packaging techniques, often inspired by origami. We ...

Our research solves the fundamental challenges associated with implementing space solar by integrating ultralight and shape accurate structures with high efficiency photovoltaics and large scale ...

Bren Professor of Electrical Engineering and Medical Engineering; Co-Director, Space-Based Solar Power Project

The Project Overview Vision Our Story Milestones Team

A first-of-its-kind lab demonstration shows how solar power transmission from space could work.

We focus on various strategies and techniques for ultralight-weight mid- and long-range wireless power transfer, including using flexible phased arrays systems at various frequencies that can convert, ...



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NASA technical reports indicated that the concept was technically feasible. Despite that, the idea was economically unrealistic at the time. However, recent advances in photovoltaics, structures, ...

Utilizing SBSP entails in-space collection of solar energy, transmission of that energy to one or more stations on Earth, conversion to electricity, and delivery to the grid or to batteries for storage.

From microwave beams to megaton rockets, China's space solar project highlights the gap between imagination and economic gravity.

We seek to advance the state of the art with respect to specific power (power output per mass) of future space solar technologies by leveraging emerging materials, novel photonic structures, and advanced ...

Space Solar Power Demonstrator Wirelessly Transmits Power in Space: Wireless power transfer was recently demonstrated by MAPLE, one of three key technologies being tested by the Space Solar ...

The Space Solar Power Project at Caltech (<https://>) invites applications for postdoctoral fellowships in space solar power science and technology and related fields.

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