

What is Caltech's space solar project?

Caltech's wildly ambitious space solar project, buoyed by a massive hundred-million-dollar donation, is preparing to launch its first prototypes into orbit. These cutting-edge ultralight structures will collect, convert and wirelessly send energy.

What happened to Caltech's space solar power demonstrator (SSPD-1)?

After nearly a year in orbit, Caltech's Space Solar Power Demonstrator (SSPD-1) reached its end of mission.

What is the goal of the Space Solar Power Project (SSPP)?

The Space Solar Power Project (SSPP) aims to harvest solar power in space and transmit it to the Earth's surface. Wireless power transfer was demonstrated on March 3 by MAPLE, one of three key technologies being tested by the Space Solar Power Demonstrator (SSPD-1), the first space-borne prototype from Caltech's Space Solar Power Project (SSPP).

How did the Caltech effort start?

The Caltech effort to develop space solar power began after philanthropist Donald Bren learned about the potential for space-based solar energy manufacturing as a young man after reading an article in Popular Science magazine.

What is space-based solar power?

Space-based solar power is the concept of using mirrors in space to concentrate sunlight and transmit it to Earth.

What has the space solar power prototype demonstrated?

A space solar power prototype... has demonstrated its ability to wirelessly transmit power in space and to beam detectable power to Earth for the first time. It was launched into orbit in January and is operational.

A year ago, Caltech's spacecraft Space Solar Power Demonstrator (SSPD-1) was sent into space to test three new solar power technologies. This included testing how to send power wirelessly in ...

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The Project. Overview Vision Our Story. Milestones Team RESEARCH. Photovoltaics Ultralight Structures Wireless Power Transfer PUBLICATIONS NEWS Careers RESEARCH; Photovoltaics; Ultralight Structures; Wireless ...

Ali Hajimiri is the codirector of Caltech's space-based solar power project. Caltech. Ali Hajimiri: I would call it a detection. The primary purpose of the MAPLE experiment was to demonstrate ...

SSPD-1 is the first spaceborne prototype from Caltech's Space Solar Power Project (SSPP). The source of the evening's anticipated signal was the Microwave Array for Power-transfer Low-orbit Experiment (MAPLE), a ...

Electrical engineer Ed Tate was skeptical of proposals for space-based solar power when he initially heard about the concept seven years ago. "My first reaction was, "That really ...

One year ago, Caltech's Space Solar Power Demonstrator (SSPD-1) launched into space to demonstrate and test three technological innovations that are among those necessary to make space solar power a reality. ... 2023, ...

SSPD-1 is the first spaceborne prototype from Caltech's Space Solar Power Project (SSPP). [Caltech story] On a cool, clear evening in May 2023, Caltech electrical ...

Three Engineering and Applied Science professors have joined forces to work with Northrop Grumman Corporation on the largest sponsored research project from industry that Caltech has undertaken in recent history. ...

The Caltech Space Solar Power Demonstration One Mission, 2022 IEEE International Conference on Wireless for Space and Extreme Environments (WiSEE). ... (DOLCE) for the space solar ...

Caltech Space Solar Power Project principal investigators from 1. Sergio Pellegrino, Harry Atwater, Ali Hajimiri. Following Caltech's first demonstration of wireless transmission of solar power in space, the other two ...

Ali Hajimiri is Professor of Electrical Engineering at Caltech. His research areas include silicon photonics, Integrated THz and mm-wave, and bio sensing. CHIC. Menu. ... and co-Director of ...

A sponsored research agreement with Northrop Grumman Corporation will provide Caltech up to \$17.5 million over three years for the development of the Space Solar Power ...

This paper describes Caltech's Space Solar Power Demonstration One (SSPD-1) payload and upcoming mission on Momentus Space Vigoride 5. SSPD-1 is comprised of three experiments ...

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We provide an update on the Caltech Space Solar Power Project (SSPP). Our space power station employs a "sandwich" architecture where solar energy is collected on one side of a plate and...

Caltech's Space Solar Power Project has around US\$120 million to work with, and is making some incredible progress toward the goal of wireless energy beamed from space. Caltech.

Today, Caltech is announcing that Donald Bren, chairman of Irvine Company and a lifetime member of the Caltech Board of Trustees, donated over \$100 million to form the Space-based Solar Power Project (SSPP), which is ...

In January 2023, the Caltech Space Solar Power Project (SSPP) is poised to launch into orbit a prototype, dubbed the Space Solar Power Demonstrator (SSPD), which will test several key ...

A research agreement between the Northrop Grumman Corporation and Caltech provides up to \$17.5M for the development of scientific and technological innovations necessary to enable a space solar power system. Three Caltech ...

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