

What is the MAPLE experiment?

The Space Solar Power Demonstrator's MAPLE experiment was able to wirelessly transfer collected solar power to receivers in space and direct energy to Earth.

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).

Can MAPLE transmit power to a receiver in space?

MAPLE, developed by a Caltech team led by Ali Hajimiri, has successfully demonstrated wireless power transmission to receivers in space. 'Through the experiments we have run so far, we received confirmation that MAPLE can transmit power successfully to receivers in space,' says Hajimiri.

What is MAPLE?

MAPLE is a space solar power demonstrator developed by a Caltech team led by Ali Hajimiri, Bren Professor of Electrical Engineering and Medical Engineering and co-director of SSPP. Through the experiments we have run so far, we received confirmation that MAPLE can transmit power successfully to receivers in space,

What is SSPP's SSPD-1 solar power?

SSPD-1, launched in January 2023, is a solar power system developed by Caltech's Space Solar Power Project (SSPP). The primary goal of SSPP is to harvest solar power in space and then transmit it to the surface of Earth.

What is the main source of power for space solar power?

The experiment proves the viability of tapping into a near-limitless supply of power in the form of energy from the sun from space. Here's how it works. A space solar power prototype has demonstrated its ability to wirelessly beam power through space and direct a detectable amount of energy toward Earth for the first time.

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 ...

The Space Solar Power Project (SSPP) aims to unlock huge orbital clean energy resources. SUBSCRIBE. ... And the MAPLE (Microwave Array for Power-transfer Low-orbit Experiment) module was designed ...

Caltech has beamed solar power from a satellite to the Earth, for the first time. In the Maple (Microwave Array for Power-transfer Low-orbit Experiment) project, a satellite collected solar power and beamed a detectable ...

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 ...

MAPLE is one of three key technologies tested by the Space Solar Power Demonstrator (SSPD-1). This platform consists of an array of flexible, lightweight microwave transmitters controlled by custom electronic chips.

This is a big win for space solar power, which has more energy-grabbing potential than stationary solar panels on Earth. ... MAPLE takes the solar power collected by SSPD-1's solar cells and ...

The transmitted energy from MAPLE was detected by a receiver situated on the roof of the Gordon and Betty Moore Laboratory of Engineering on Caltech's campus in Pasadena, confirming the expected time, frequency, and ...

Le Space Solar Power Demonstrator (SSPD), d'velopp; par le Caltech et mis en orbite en janvier 2023, est parvenu & transmettre de la puissance &lectrique depuis l'espace vers la Terre, sous forme d'un faisceau ...

While the SSPD-1 was successful in deploying MAPLE in space, the real test of the experiment was the ability to harvest and transmit solar power. MAPLE used interference between transmitters to ...

Wireless power transfer was recently demonstrated by MAPLE -- Microwave Array for Power-transfer Low-orbit Experiment -- one of three key technologies being tested by the Space Solar Power Demonstrator (SSPD-1), ...

first transmission of solar power to Earth from a space-based device On a rooftop at Caltech in Pasadena, California, the receiver (right) that on May 22, 2023, detected the first transmission of solar power to Earth from a space-based ...

Wireless power transfer was demonstrated by MAPLE, one of three key technologies being tested by the Space Solar Power Demonstrator (SSPD-1), the first space ...

The Space Solar Power Demonstrator's MAPLE experiment was able to wirelessly transfer collected solar power to receivers in space and direct energy to Earth, Robert Lea reports for Space .

SSPS(space solar power station )?,"""? ...

Next, MAPLE beamed energy all the way down to a lab at Caltech. The scientists were able to detect the energy, proving that it's possible to send solar energy to Earth from space. MAPLE beamed energy all the way down to ...

As the Space Solar Power Demonstrator (SSPD-1) prepared to pass 300 miles directly above the Gordon and Betty Moore Laboratory, Riazati and a small group of Caltech engineers were gathered on the building's ...

Caltech's space solar power demonstrator has delivered its first key operational outcome with wireless transmission of power in space. While such wireless transmission has ...

The achievement was made by MAPLE (Microwave Array for Power-transfer Low-orbit Experiment), an array of flexible lightweight microwave power transmitters with precise timing control.. MAPLE is one of the three ...

The Solar Space Power Demonstrator satellite ran three experiments to begin assessing the tech's feasibility. ... Visible as well are MAPLE (golden, top left) and Alba (white, bottom left). Credit ...

For the first time, detectable amounts of electricity have been transmitted back to Earth, New Atlas reported on June 5. The Space Solar Power Project (SSPP) aims to harness a virtually limitless source of clean energy in ...

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