

SpaceX launches solar array on space station for power system upgrade

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The SpaceX Falcon 9 rocket departed after the International Space Station, which thundered from Florida on Thursday and carried over 7,000 pounds of supplies. Science gear And other hardware includes the first two of six new rollout solar wings to power up your lab.

The new array, rolled up like a 10-foot-wide carpet, is angled to the lab's existing solar wings and accumulates in the carbon composite unwinding after the latch is released. It expands automatically using the "strain energy" that has been created. Boom on both sides.

"They don't want to be rolled up. They want to roll out," said Andrew Rush, president and chief operating officer of Redwire, the parent company that supplied Boeing with the new array under contract. "We only release the restraint mechanisms, they are deployed via their own strain energy reduce complexity."

The new array reinforces the eight large wings that are part of the station's original equipment and compensates for aging. When all six new arrays are installed with a \$ 103 million upgrade, the overall power generation will increase by 20-30%, which is about the same as the output when the new array was introduced.

Joel Montalbano, Space Station Program Manager at NASA Johnson Space Center in Houston, said:

"We, Axiom space Adding a module to the International Space Station can provide sufficient power to the additional module and other international partners to maximize the use of the International Space Station. These new arrays provide that functionality.

"When SpaceX's 22nd cargo was driven to the space station, nine Merlin engines powering the first stage of the Falcon 9 ignited and adjusted to thrust of up to 1.7 million pounds at 1:29 pm on the EDT. I pushed the rocket away from Pad 39A at the top of the Kennedy Space Center. A brilliant exhaust rush.

The 215-foot-high rocket accelerates rapidly, consuming propellant and losing weight, ascending directly into the orbit of the space station and flying away along a northeastern orbit that is tilted 51.6 degrees with respect to the equator. It was.

Two and a half minutes after the launch, the first stage fell and successfully landed on an offshore drone, recording SpaceX's 86th successful booster recovery and 64th successful landing at sea.

Unusual for SpaceX to regularly retrieve and reflly boosters, this was the first new addition to the company's reusable rocket population.

Meanwhile, in the second phase of Falcon 9, the Cargo Dragon capsule was put into orbit after burning for 6 minutes. Hopefully everything will fly to the docking of the station's front harmony module early Saturday morning, arriving around 5am

Capsule pressurized cabin, a section accessible to space station crew, includes 750 pounds of astronaut equipment, over 2,000 pounds of research equipment and materials, 760 pounds of space station hardware, and about 250 pounds. It is packed with nearly £ 4,300 of cargo, including spacewalks. Gear and computer equipment.

Crew supplies also include fresh apples, oranges, cherry tomatoes, onions, lemons, peppers, avocados, coffee, tea and other menu items.

The wings of the ISS Rollout Solar Array (iROSA) were mounted on the unpressurized trunk section of the Cargo Dragon. After docking with the space station, the lab's robotic arms pull them out and place the panels on the left edge of the station's flagship truss.

On July 16th and 20th, astronaut Shane Kimbro and European Space Agency crew Thomas Pesquet are planning two EVAs.

Once installed and plugged into the station circuit, the restraint held by the new array in a rolled-up configuration is released, the panel automatically unwinds in about 10 minutes, fully unfolds and tilts about 10 degrees to stretch 60 feet. I will. Degrees against the original array.

The new array is smaller than the original wing of the station and extends 120 feet from top to bottom. According to Rush, the iROSA array is packed with more solar cells than the original panel, and the cells themselves are based on newer and more efficient technology.

"We can take advantage of these improvements and efficiencies in power generation to significantly increase the power of the ISS without having to deploy the same (sized) array," says Rush.

The next two iROSA panels will be launched in SpaceX Cargo Mission No. 25 in April next year. The last two wings will be installed on the next SpaceX freighter, No. 26, in October 2022.

The iROSA array will be built by Red Wing's subsidiary Deployable Space Systems for NASA under a contract with Boeing, the base's leading contractor, using solar cells provided by Boeing's subsidiary Spectrolab.

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Shareholders will also be able to obtain a copy of the preliminary proxy statement / prospectus and the definitive proxy statement / prospectus once they are available, without charge, at the SEC's website at <http://sec.gov> or by directing a request to: investorrelations@redwirespace.com.

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