Video: NASA's Laser Communications Relay demonstration gears up for launch

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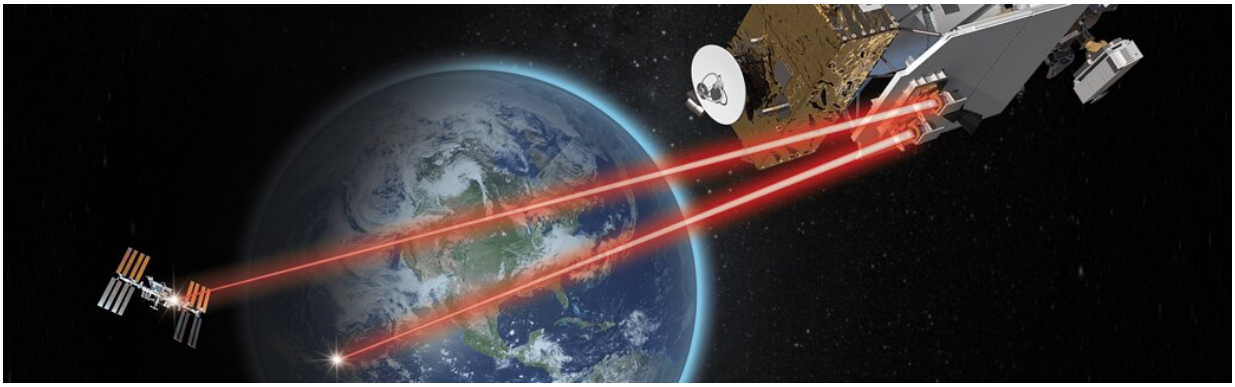

Illustration of NASA's Laser Communications Relay Demonstration communicating with the International Space Station over laser links. Credit: NASA's Goddard Space Flight Center

NASA's Laser Communications Relay Demonstration (LCRD) is gearing up for launch this fall, no earlier than Nov. 22. The payload arrived in Florida in May, fully integrated into its host spacecraft and ready for its final testing before being lofted into space.

LCRD will leverage the power of infrared light to send and receive information encoded into invisible laser beams from one location to the next. Once in orbit, LCRD will demonstrate the benefits of using infrared lasers to communicate information from space. These benefits include increased data in a single downlink, as well as reduced size,

weight, and power requirements for a communications system on a spacecraft.

As part of the final testing campaign, several LCRD team members integrated the last pieces of hardware, completed final inspections, and conducted launch integration systems tests at the Astrotech Space Operations facility in Titusville, Florida. Completed in May, these were the last set of Earth-based tests for the payload, ensuring its readiness for launch. Soon, the host spacecraft will be fueled with propellant and prepared for encapsulation and mating with an Atlas V rocket.

Once the spacecraft is thrusted into space and reaches its destination in geosynchronous orbit—22,000 miles above Earth's surface—LCRD will become NASA's first two-way laser communications relay.

Provided by NASA's Goddard Space Flight Center