INTUITIVE MACHINES

IM-1 MISSION VEHICLE HEALTH UPDATE



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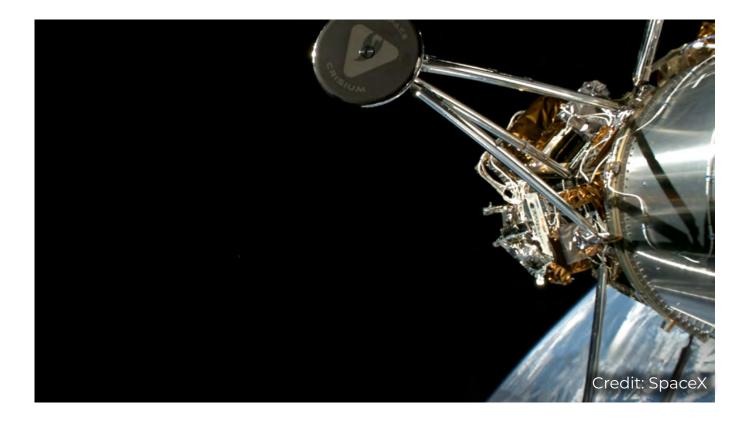


HOUSTON, TX – February 15, 2024

The IM-1 mission Nova-C class lunar lander continues to be in excellent health, and we are preparing for our engine commissioning maneuver.

Following nominal launch vehicle separation, the spacecraft autonomously brought up all sensors and radios. Odysseus listened to the Inertial Measurement Unit to determine attitude rates and activated the Reaction Control System to nullify those attitude rates as designed.

Earlier today, Nova-C's navigation system rejected star tracker data, but a patch has been sent to the spacecraft, and the star tracker updates have resumed nominal operations.



Initially, the star tracker information was numerically conditioned slightly differently than we anticipated. We were expecting a one-in-a-thousand numerical tolerance and received a number more like two and three in a thousand. So, Nova-C's navigation system rejected the star tracker data.

When we tested this system terrestrially, they were within tolerance, but we experienced slightly different numerical conditioning in flight.



The vehicle had a very low rate of rotation, approximately .15 degrees per second, mostly around the long axis, which caused our solar arrays and antennas to rotate in and out of the desired attitude.

We noticed that, at one point, we passed through Nova-C's max power attitude, and we recorded the artificial attitude. We then manually forced the navigation system to advance to attitude pointing and commanded the vehicle to go to the maximum power attitude we observed.

This put Nova-C into a power-positive configuration and fully charged Nova-C's batteries. With the diagnostic data we collected, we identified a patch to align the numerical conditioning of the star tracker data with our navigation system's acceptance test. We tested the patch on the ground, sent it to the spacecraft, restarted the star tracker, and immediately began processing star tracker updates – resuming nominal operations.

Again, the IM-1 mission Nova-C class lunar lander is in excellent health, and we are preparing for Odysseus' commissioning maneuver.





WE OPEN ACCESS TO THE MOON FOR THE PROGRESS OF HUMANITY

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