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ASSEMBLY PROGRESS

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The Orbiter has completed its mechanical environments testing. After measuring the mass properties of the spacecraft, we completed 3 axes of sine vibration, acoustics testing, and shock testing. Sine vibration shakes the spacecraft to simulate oscillations that may occur during launch. In the acoustics test, we blasted the Orbiter with the noise of launch. The noise couples in through large surfaces (like the solar array) and shakes the spacecraft. We completed the second of two shock tests today, where we released the clamp band that holds the Orbiter to the launch vehicle. The shock of this release gives the bottom of the spacecraft a hard bang.



This view of the Orbiter shows the solar array on the right and the Mini-RF antenna on the left with the other instruments in the background. The bolt catchers sticking out from the array catch the hardware that keeps the array attached to the spacecraft during launch.



Here the Orbiter is on the Miller table undergoing mass properties measurements. We measure the mass, center of mass in two axes, and the moment of inertia in one axis. You can see the instrument module on the right. The radiator panel is the surface coated in mirrors. These Optical Surface Reflectors

reject most of the energy incident from the sun but still emit energy in the infrared, allowing the surface to run cold, even in direct sun. The high-gain antenna boom, shown here stowed across the radiator, will be deployed on the way to the moon, rotating around the hinge at the bottom.



The mechanical team prepares for the final shock test. During the test, an electrically actuated pin puller released the band mechanism, dropping the separation system on the foam pads. The flight separation system is painted white so that it doesn't get too hot in the sun while it travels with LCROSS to the moon.

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