

Lessons learned from Orion's first test flight

December 10 2014, by Tomasz Nowakowski, Astrowatch.net



With the successful flight test of NASA's Orion spacecraft on Dec. 5, a new space era for has started for America and its aerospace industry. Companies engaged in space exploration like Lockheed Martin, which built the Orion spacecraft, learn a valuable lesson from this first and crucial step on a long journey to Mars. In times of U.S. reliance on other countries regarding spaceflight, this lesson is also a major step forward to an independent homegrown space engineering.

In an interview with astrowatch.net, Lockheed Martin spokesperson, Allison Rakes, talks Orion's milestone [test flight](#).

Astrowatch.net: Is it truly a historic moment for Lockheed Martin?

Allison Rakes: Orion's EFT-1 [Exploration Flight Test 1] is a historic moment for America and for Lockheed Martin – we went further than any spacecraft built for humans has gone in more than 40 years. We are proud of the role we have been privileged to play on this challenging and exciting program.

Astrowatch.net: There were many nail-biting moments during this test flight, like the launch, re-entry or splashdown, which was the most breath-holding?

Rakes: The moment when the Delta IV Heavy upper stage completed its second engine burn, sending Orion on its way to its peak altitude of 3,600 miles, and putting us in the right orbit for re-entry.

Astrowatch.net: Have all the planned tests given you the desired results during the flight?

Rakes: EFT-1 was a very clean flight. From our first look, the data from the [flight test](#) appears great. Once we have fully analyzed the data recorders, sensors and instrumentation, we will learn more about how the spacecraft behaved.

Astrowatch.net: What activities Lockheed Martin will conduct regarding Orion spacecraft in the coming days, months?

Rakes: When the spacecraft is off loaded at Naval Base San Diego, Orion will be transported back to Kennedy Space Center and into the Operations and Checkout building. The final post-mission analysis will be provided to NASA in early March. Data collected during and after the flight will be analyzed to help the Orion team prepare for the next test flight.

Astrowatch.net: In what phase are the preparations for the future Exploration Mission 1 (EM-1) around the moon, the first planned flight of the Space Launch System?

Rakes: We have already started to procure parts needed for the manufacturing of our next, EM-1 vehicle. Building that vehicle, and then the ascent abort test, AA2, which will take place in the next couple years, is what we are focusing on now.

Astrowatch.net: What valuable information your company learned from the EFT-1 mission to prepare the spacecraft for lunar, asteroid and Mars missions?

Rakes: The lessons learned from designing and assembling the Orion [spacecraft](#) for the first time, as well as the data the team will gather from Orion's first flight are invaluable for Orion's future, and will help us move at our best possible speed toward future missions.

Provided by [Astrowatch.net](https://astrowatch.net)

Citation: Lessons learned from Orion's first test flight (2014, December 10) retrieved 19 April 2024 from <https://phys.org/news/2014-12-lessons-orion-flight.html>

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