

Building Curiosity – Landing System Drop Test

[00:00:06]Hi, I'm Savannah McCoy and I'm the rover verification and validation lead.

[00:00:11]My job is to run system-level tests on the rover's structure to insure it's capable of the requirements

[00:00:16]we have for Mars. Basically, for the Mars program, we build two rovers in parallel. One's the flight rover

[00:00:22]and one's the test rover, or DTM. The main difference between the flight rover and the DTM rover is that

[00:00:28]the flight rover actually goes to Mars. Just recently, we ran a major test called the sky crane full-motion

[00:00:34]drop test. This test is to check out the EDL sequence or Entry, Descent and Landing sequence for Curiosity.

[00:00:40]For the first time, we're going to be touching down on Mars with just the rover's wheels. So this is the

[00:00:45]sequence leading up to the touchdown on Mars. Because this test is so important to the project, almost all

[00:00:50]the team wanted to gather and watch the test. We actually projected it into multiple conference rooms

[00:00:56]around the lab so that everyone could have access to this very large milestone for our project.

[00:01:01]"Test is commencing in 5. 5-4-3-2-1, fire!" (Test sounds) (Applause).

[00:01:25]The reason why we do all this testing is to prove that what we think is going to happen actually will

[00:01:28]happen when Curiosity gets to Mars and that we really understand the dynamics of these vehicles.

[00:01:34]During this test everything behaved as expected. We were able to collect all the data and instrumentation that we were hoping for,

[00:01:42]so overall, definitely, a huge success.

[00:01:47]I'm Savannah McCoy and this has been your Building Curiosity update.

[00:01:53]NASA Jet Propulsion Laboratory, California Institute of Technology