

Landing Practice

Transcript:

Mission Control: As a reminder at this point the vehicle should be warming up its RCS system and prepping to turn to entry to prepare the last few preparations for entry.

Richard Cook: Today we did a test of the whole approach and landing all the activities from cruise stage separation through the parachute deploy through the power decent all the way to landing.

Mission Control: We are seeing heartbeat tones indicating that the vehicle is behaving normally and has nothing to report, so everything looks good right now.

Richard Cook: You would think it was actually landing day, we have everybody in their places in front of the computers looking at what information they would actually see. Essentially it's like a dress rehearsal of the whole mission.

Mission Control: Parachute deploy tone. Vehicle is deploying parachute at Mach 1.7 and slowing down very rapidly.

Richard Cook: We're simulating what the team will do and see as the vehicle lands on Mars.

Mission Control: We are looking for heatshield separation. We have heatshield separation confirmation from the spacecraft.

Richard Cook: We don't actually use the spacecraft obviously; we use the test bed as our spacecraft for these tests. Its running just like it was approaching Mars, so it's sending us information, we can send all that data up here and it looks to us like the spacecraft even though obviously it's sitting on the ground.

Mission Control: Flight nav, go ahead.

Richard Cook: We also have a simulated data for what the DSN would be getting, for navigation data for example and when we combine all that together pretty intricately actually so it really feels like were actually there and were actually getting ready to land on Mars.

Mission Control: Vehicle started, has rover separation. We have skycrane. We have touchdown. Fly away is beginning. Safe on the surface of Mars. [Cheering] Congratulations.

Richard Cook: This one is what we call the nominal ORT where everything just goes exactly the way it's supposed to. The spacecraft behaves perfectly the navigation is very straight forward and so there's no surprises.

Mission Control: Everything was as expected. Very good landing.

Richard Cook: Next time we'll have a group of Gremlins through some curve balls at us basically, at the team, to make sure they can respond if the spacecraft has a problem, prepare the team for what they'll have to do on actual landing day.

Mission Control: Alright, it looks like from all the data that we have we are nominally on the surface of Mars. [Clapping]

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