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My name is Jared Vander Kam, and I'm the manager here at the NASA Ames Research Center

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for the Orion Thermal Protection System.

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On Orion, we're developing and flying the technologies and systems that we'll need

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to fly crewed missions to Mars in the future.

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The Orion heat shield is the largest ablative heat shield ever made.

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And we'll need that technology to bring crews safely back to earth after a Mars mission.

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Here at the Ames Research Center, we do lots of Arc Jet Testing, where we test very small

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material samples to see how they'll do on re-entry into the earth's atmosphere.

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And it was really exciting to see how that testing translated into the EFT-one Flight

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Test results from December 2014.

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It's been really exciting to go through

all of the great imagery and maps we have

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of the Martian surface and think about crew
finally putting feet down on the surface,

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gathering samples and bringing them back home
on technologies developed by Orion.