I'm Molly White, an aerospace engineer working on the heat shield design for the space craft right behind me; Orion.

I work on the design of the heat shield which is the exterior layer of the space craft that protects it from the extreme temperatures during re-entry.

This can get really, really hot like two-times the temperatures of molten lava.

During the return home from Mars, the astronauts will come back through the atmosphere inside Orion. The vehicle will have to be able to withstand extreme temperatures during its re-entry into earth’s atmosphere and that’s where the heat shield comes in.

The most recent mission landing on Mars of the Curiosity Rover, tested the heat shield design for that vehicle and knowing how well we did on that design can translate back to Orion's design.

Plus we landed this really cool Rover that’s paving the way for human exploration.

The 2014 test of Orion gave us a lot of really great data to be able work on the next iteration of Orion’s design.

I was there at the launch, I got to see the rocket go up and it just disappeared and we just crossed our fingers and hoped that everything that we’d done was right.
On my design team, the best thing that we got back from the flight test was all of the data.

We’re going to use that going forward and get more data on our next flight.

NASA turns Science Fiction into Science Fact!