My name is Dave Manzella, I’m the Chief Engineer for the Solar Electric Propulsion Program at NASA Glenn.

The Solar Electric Propulsion Program is a program we’re developing next generation space propulsion technologies that could one day be used to send men to Mars.

Right now we’re working to develop systems that could be operated at about 50 kilowatts of electrical power.

That’s about 5 to 10 times greater than the power level that are currently being used.

The work that we’re doing would be used to send cargo and payload logistics resupply, things like that to Mars in advance of crew getting there, because the power level that we’re developing results in trip times that are too long for a crew.

That same technology that we’re developing now is also been used for deep space robotic
missions.

There is a NASA mission called DAWN which has gone to the main belt asteroids and is currently orbiting Vesta.

What’s exciting about electric propulsion is that we’re generating systems at high enough power that one day we could actually send crew and missions to Mars.

To date the power levels that we’ve been operating on have worked very well for small deep space probes or for spacecraft in orbit around Earth but if we want to send large payloads and human crewed missions beyond Earth space, we’re going need this high fuel economy, electro propulsion that we’re working on.

That’s what I’m excited about.