1
00:00:06,620 --> 00:00:12,680
The United Launch Alliance Delta IV Heavy;
one of the largest rockets in the world.

2
00:00:13,760 --> 00:00:18,560
And it’s not often NASA’s Launch Services
Program chooses to launch it – in fact,

3
00:00:18,560 --> 00:00:21,760
they’ve never launched it, until now.

4
00:00:22,660 --> 00:00:28,620
I’m Nicky Fox, Project Scientist for Parker
Solar Probe and tonight you will witness,

5
00:00:28,620 --> 00:00:34,600
up close and personal, this spacecraft being
launched on her journey to the sun.

6
00:00:35,550 --> 00:00:40,940
Watch as we encapsulate the spacecraft -- as
you can see Parker Solar Probe to your left

7
00:00:40,940 --> 00:00:47,400
looks pretty small compared to these enormous
fairing halves that protect her during launch.

8
00:00:47,400 --> 00:00:52,860
That is because the Delta IV was made to launch
satellites the size of school buses!

9
00:00:52,860 --> 00:00:58,900
So why on earth would NASA need a rocket this
powerful to launch our little 15-hundred pound

10
00:00:58,900 --> 00:01:00,850
spacecraft to the Sun?

11
00:01:01,860 --> 00:01:02,680

Speed.

12
00:01:03,040 --> 00:01:03,660
That’s right.

13
00:01:04,320 --> 00:01:05,820
Pure and simple.

14
00:01:05,820 --> 00:01:11,770
Parker Solar Probe needs the most launch power
she can get to leave Earth and get to Sun.

15
00:01:11,770 --> 00:01:19,560
It takes 55 times more energy to get to the
Sun than Mars, and we need all of it to get

16
00:01:19,560 --> 00:01:23,280
into the right orbit around our star.

17
00:01:23,280 --> 00:01:28,729
Parker Solar Probe, built by the Johns Hopkins
Applied Physics Lab, will keep her protective

18
00:01:28,729 --> 00:01:33,880
heat shield between herself and the Sun once
she's in that orbit.

19
00:01:33,880 --> 00:01:39,039
The spacecraft will soar through the Sun’s
3 million degree plasma atmosphere we call

20
00:01:39,039 --> 00:01:45,109
the corona, and give us scientists some incredible
data to answer long sought after questions

21
00:01:45,109 --> 00:01:46,340
about the Sun.

22
00:01:49,469 --> 00:01:56,159

Back on the launch pad, United Launch Alliance’s Delta IV Heavy is just the right rocket: three

23
00:01:56,159 --> 00:02:02,530
massive booster cores, a cryogenic second stage and even a third stage, specially made

24
00:02:02,530 --> 00:02:10,120
by Northrop Grumman to propel Parker over 94 miles per second at spacecraft separation.

25
00:02:11,080 --> 00:02:24,220
Lift off in 5, 4 ,3 ,2 , 1, Zero and liftoff of the Parker Solar Probe on her way to unlock

26
00:02:24,220 --> 00:02:27,540
the mysteries of the Sun's corona.

27
00:02:30,740 --> 00:02:32,560
That was awesome.

28
00:02:32,560 --> 00:02:34,800
Why don’t we watch it again from the front side.