
NASA
InSight

1
00:00:06,790 --> 00:00:12,450
Here at Vandenberg Air Force Base in central
California, the InSight launch team is moving

2
00:00:12,450 --> 00:00:15,030
into high gear.

3
00:00:15,030 --> 00:00:18,420
It's time to encapsulate the spacecraft.

4
00:00:18,420 --> 00:00:23,570
"So we're at the phase of the mission where
we're encapsulating with the launch vehicle

5
00:00:23,570 --> 00:00:28,040
and the ULA team with their fairing has now
come in and they take the two halves of the

6
00:00:28,040 --> 00:00:30,920
fairings and they make a clamshell around
the spacecraft."

7
00:00:30,920 --> 00:00:36,110
"And then that's to protect it during launch
because it has to go through a lot of pressure

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00:00:36,110 --> 00:00:39,730
changes and temperature changes as you ascend
through the atmosphere."

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00:00:39,730 --> 00:00:43,310
Once InSight is encapsulated it's off to the launch pad.

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00:00:43,310 --> 00:00:46,520
"It's on the transport vehicle and it's ready
to roll.

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00:00:46,520 --> 00:00:53,140
And we'll be rolling out around 2 a.m., at that

point we'll have a clear convoy that drives

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00:00:53,140 --> 00:00:59,660
very slowly from the payload processing facility
out to the SLC-3 Atlas V facility.

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00:00:59,660 --> 00:01:05,670
And once it arrives, we'll hoist the encapsulated
spacecraft up to the top of the mobile service

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00:01:05,670 --> 00:01:08,520
tower and place it on the launch vehicle."

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00:01:08,520 --> 00:01:12,160
"This morning when it was sitting on the truck,
and they put the crane on it and started lifting

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00:01:12,160 --> 00:01:17,240
it up that's the last time this spacecraft's
ever going to feel the ground of Earth."

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00:01:17,240 --> 00:01:20,580
"I'm just - just kind of jumping out of my
skin this is so exciting.

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00:01:20,580 --> 00:01:24,550
We're getting so close to launch and it's
been a long, long road for me.

19
00:01:24,550 --> 00:01:29,030
We got it on top of the rocket, we're going
to blast it off in just a few days, and when

20
00:01:29,030 --> 00:01:33,260
it gets to Mars and lands, finally it'll have
solid ground under its feet again and will

21
00:01:33,260 --> 00:01:37,860
get to work on probing the depths of Mars."

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00:01:37,860 --> 00:01:43,350
But InSight isn’t traveling to Mars alone...there
are a couple of hitchhikers on board.

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00:01:43,350 --> 00:01:48,640
"So MarCO is a dual payload riding as a secondary
mission on its way to Mars."

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00:01:48,640 --> 00:01:52,600
"MarCO is a pair of CubeSats, and cubesats
are really small spacecraft.

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00:01:52,600 --> 00:01:56,000
They're essentially the size of a large cereal
box, so they're about this big."

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00:01:56,000 --> 00:02:00,140
"It's going to be relaying telemetry from
the entry, decent, and landing of InSight

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00:02:00,140 --> 00:02:01,980
back to Earth in near real time.

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00:02:01,980 --> 00:02:06,140
After InSight is deployed on orbit, and is
heading to Mars, Centaur which is behind me,

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00:02:06,140 --> 00:02:11,870
ejects MarCO-A into oribit, and it will slowly
rotate itself so that MarCO-B ejects 180 degrees

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00:02:11,870 --> 00:02:14,310
on the other side of the vehicle."

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00:02:14,310 --> 00:02:16,359
"But MarCO is a technology demonstration mission.

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00:02:16,359 --> 00:02:19,900
It's actually one of the smallest spacecraft

we've ever launched interplanetary space.

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00:02:19,900 --> 00:02:25,290
It's the first interplanetary CubeSat, so
in and of itself it has all of this technology

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00:02:25,290 --> 00:02:27,549
that we've never tested in deep space before.

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00:02:27,549 --> 00:02:33,180
So if MarCO works this time, the cool thing
we could do is actually replicate that system

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00:02:33,180 --> 00:02:35,549
and fly it with other missions in the future.

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00:02:35,549 --> 00:02:39,810
Whether you're going to Mars or Venus or maybe
even further away to an asteroid, you could

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00:02:39,810 --> 00:02:42,249
think of it as bring your own telecon relay."

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00:02:42,249 --> 00:02:47,269
"So now that our rocket has been assembled,
we're ready to go Mars and we're really excited

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00:02:47,269 --> 00:02:51,169
to be able to launch the first planetary
mission from the West Coast."

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00:02:51,169 --> 00:02:55,709
"So everything went well today with the lift
of the spacecraft and mate onto the rocket.

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00:02:55,709 --> 00:02:58,739
It started off very foggy and windy.

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00:02:58,739 --> 00:03:05,669

Right now it's a beautiful day, typical California weather, and now we're ready to go to Mars."