CRS-14 | LIVE COVERAGE

1
00:00:01,000 --> 00:00:06,160
From NASA's Kennedy Space Center in Florida,
you're watching live coverage of the 14th

2
00:00:06,160 --> 00:00:09,740
SpaceX cargo resupply mission to the International
Space Station.

3
00:00:09,740 --> 00:00:12,110
Hi, I'm Tori Mclendon.

4
00:00:12,110 --> 00:00:13,700
Thanks for joining us.

5
00:00:13,700 --> 00:00:17,770
Today's launch to the station is scheduled
for 4:30 p.m. eastern time, from Space Launch

6
00:00:17,770 --> 00:00:20,970
Complex 40 on Cape Canaveral Air Force Station.

7
00:00:20,970 --> 00:00:25,050
Coming up, we'll hear from SpaceX directly
from their mission control center, and also

8
00:00:25,050 --> 00:00:29,400
learn about some of the groundbreaking research
headed to the space station.

9
00:00:29,400 --> 00:00:33,050
Today's launch will be the first of the year
for NASA from Pad 40.

10
00:00:33,050 --> 00:00:38,800
The Dragon spacecraft and Falcon 9 rocket
will deliver about 5800 pounds of research,

11
00:00:38,800 --> 00:00:43,230
crew supplies and hardware to the orbiting

laboratory.

12
00:00:43,230 --> 00:00:48,370
The Dragon spacecraft launching today was
previously flown on SpaceX's 8th cargo resupply

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00:00:48,370 --> 00:00:51,280
mission for NASA to the station.

14
00:00:51,280 --> 00:00:57,270
The launch window today is instantaneous,
meaning SpaceX has a single second to launch.

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00:00:57,270 --> 00:01:01,399
About 10 minutes after the launch, the Dragon
will reach its preliminary orbit.

16
00:01:01,399 --> 00:01:05,710
It will then deploy its solar arrays and begin
a series of thruster firings as it heads to

17
00:01:05,710 --> 00:01:07,090
the station.

18
00:01:07,090 --> 00:01:10,670
The spacecraft is scheduled to arrive on Wednesday,
April 4.

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00:01:10,670 --> 00:01:12,700
We're now about half an hour away from the
launch.

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00:01:12,700 --> 00:01:16,880
Let's check in with NASA's Josh Finch in Kennedy's
Launch Control Center for some updates on

21
00:01:16,880 --> 00:01:19,940
the Falcon 9 rocket and an update on the weather.

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00:01:19,940 --> 00:01:20,940
Josh?

23
00:01:20,940 --> 00:01:21,940
Thank you Tori.

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00:01:21,940 --> 00:01:25,369
Welcome to those who are joining us for live
coverage of SpaceX's CRS-14 flight to the

25
00:01:25,369 --> 00:01:27,160
International Space Station.

26
00:01:27,160 --> 00:01:31,830
I'm located on Cape Canaveral Air Force Station,
not far away from the launch site at Space

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00:01:31,830 --> 00:01:34,700
Launch Complex 40 where the Falcon 9 will
lift off.

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00:01:34,700 --> 00:01:39,840
The Falcon 9 is a two-stage rocket, standing
at about 230 feet tall.

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00:01:39,840 --> 00:01:44,130
The rocket's first stage is powered by nine
merlin engines, and fueled by liquid oxygen

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00:01:44,130 --> 00:01:47,720
and rocket-grade kerosene, also called RP-1.

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00:01:47,720 --> 00:01:51,729
After engine ignition, a hold before release
system ensures that all engines are verified

32
00:01:51,729 --> 00:01:55,450
for full thrust performance before the rocket
is released for flight.

33
00:01:55,450 --> 00:02:00,790
Then, with a thrust greater than five 747s
at full power, the merlin engines launch the

34
00:02:00,790 --> 00:02:02,450
rocket to space.

35
00:02:02,450 --> 00:02:05,479
The first and the second stages are connected
by what's called the interstage.

36
00:02:05,479 --> 00:02:10,479
The Falcon 9 second stage is powered by a
single merlin vacuum engine, nearly identical

37
00:02:10,479 --> 00:02:15,390
to the first stage engines, but modified to
operate in the vacuum of space.

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00:02:15,390 --> 00:02:18,250
It delivers Falcon 9's payload to the desired
orbit.

39
00:02:18,250 --> 00:02:22,320
The second stage engine ignites for a few
seconds after stage separation.

40
00:02:22,320 --> 00:02:26,260
At the top of the rocket is Dragon, which
carries cargo in the spacecraft's pressurized

41
00:02:26,260 --> 00:02:29,030
capsule, and in the unpressurized trunk.

42
00:02:29,030 --> 00:02:33,730
The Dragon spacecraft and truck is just over
26 feet high and 12 feet in diameter.

43
00:02:33,730 --> 00:02:37,200

Dragon will connect to the space station's
Harmony module.

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00:02:37,200 --> 00:02:41,530
In May, the spacecraft will splash down in
the Pacific Ocean off the coast of Baja, California,

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00:02:41,530 --> 00:02:43,830
returning science experiments to Earth.

46
00:02:43,830 --> 00:02:47,790
Today, the launch countdown has proceeded
per the timeline.

47
00:02:47,790 --> 00:02:52,300
Milestones already performed include collision-avoidance
with the Eastern Range, a checkout of autonomous

48
00:02:52,300 --> 00:02:58,879
flight termination system, loading of RP-1
fuel began at T minus 1 hour, 11 minutes,

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00:02:58,879 --> 00:03:04,379
and the loading of liquid oxygen began at
T minus 35 minutes at 3:55 p.m.

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00:03:04,379 --> 00:03:08,519
Launch teams received a weather briefing from
the U.S. Air Force 45th Space Wing, who are

51
00:03:08,519 --> 00:03:14,019
providing insight into a whole host of weather-related
details, such as wind speed, cloud coverage,

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00:03:14,019 --> 00:03:17,880
potential for thunderstorms and lightning
in the surrounding area, and even solar weather,

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00:03:17,880 --> 00:03:20,860
which launch teams need to know before committing

to launch.

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00:03:20,860 --> 00:03:26,299
The countdown is progressing, and U.S. Air
Force 45th Weather Squadron Officer Mike McAleenan

55
00:03:26,299 --> 00:03:30,830
has noticed some anvil clouds that got about
as close as 8 nautical miles to the launch

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00:03:30,830 --> 00:03:31,830
site.

57
00:03:31,830 --> 00:03:34,250
However, that's produced no lightning yet
at this time.

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00:03:34,250 --> 00:03:35,650
So we remain "go" for weather.

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00:03:35,650 --> 00:03:39,209
But we'll keep an eye on that as it develops
throughout the launch countdown.

60
00:03:39,209 --> 00:03:41,870
But with that, we are still "go" for launch.

61
00:03:41,870 --> 00:03:45,250
With winds at about 10 to 15 miles per hour
out of the east southeast.

62
00:03:45,250 --> 00:03:47,780
Temperature is about 80 degrees.

63
00:03:47,780 --> 00:03:49,799
We're about 80 percent "go" for launch.

64
00:03:49,799 --> 00:03:54,160
What's keeping us that extra 20 percent is

flight through precipitation and the cumulous

65
00:03:54,160 --> 00:03:56,110
cloud rule.