SpacetoGround

1
00:00:03,100 --> 00:00:08,100
Welcome to Space to Ground, I'm Isidro
Reyna. This week, space walks and science on station.

2
00:00:09,360 --> 00:00:12,660
NASA flight engineer Jessica
Meir partnered for a second time with

3
00:00:12,660 --> 00:00:17,500
fellow NASA astronaut Christina Koch for
a spacewalk on January 15. This was the

4
00:00:17,510 --> 00:00:20,330
first of two battery replacement
spacewalks this month.

5
00:00:20,330 --> 00:00:24,380
Meir and Koch replaced nickel hydrogen
batteries with newer, more powerful

6
00:00:24,380 --> 00:00:28,970
lithium-ion batteries for the power
channel on one pair of the station solar

7
00:00:28,970 --> 00:00:33,080
arrays. The spacewalking work continues
the overall upgrade of the station's

8
00:00:33,080 --> 00:00:37,220
power system that began with similar
battery replacement during spacewalks in

9
00:00:37,220 --> 00:00:41,560
January of 2017. A second spacewalk is
scheduled for January 20th.

10
00:00:42,260 --> 00:00:47,180
NASA and SpaceX are preparing to launch the final,
major test before the astronauts fly

11
00:00:47,180 --> 00:00:51,780
aboard the Crew Dragon and Falcon 9
rocket is part of the Commercial Crew Program.

12
00:00:52,840 --> 00:00:56,440
The test, known as In-Flight
Abort, will demonstrate the spacecraft's

13
00:00:56,450 --> 00:01:00,649
escape capabilities showing that the
crew system can protect astronauts even

14
00:01:00,649 --> 00:01:05,030
in the unlikely event of an emergency
during launch. The uncrewed flight test

15
00:01:05,030 --> 00:01:09,850
is targeted for Saturday January
18th from launch complex 39A in Florida.

16
00:01:09,850 --> 00:01:14,810
After liftoff, Falcon 9 ascent will
follow a trajectory that will mimic a

17
00:01:14,810 --> 00:01:18,530
Crew Dragon mission to the International
Space Station, matching the physical

18
00:01:18,530 --> 00:01:22,540
environments the rocket and spacecraft
well encounter during a normal ascent.

19
00:01:22,540 --> 00:01:26,570
SpaceX will configure Crew Dragon to
intentionally trigger a launch escape

20
00:01:26,570 --> 00:01:30,770
prior to 1 minute and 30 seconds into
flight, to demonstrate Crew Dragons

21
00:01:30,770 --> 00:01:35,659
capability to safely separate from the
Falcon 9 rocket during ascent. This test

22
00:01:35,659 --> 00:01:39,680
is designed to provide valuable data
toward NASA certifying SpaceX's crew

23
00:01:39,680 --> 00:01:43,369
transportation system for carrying
astronauts to and from the International

24
00:01:43,369 --> 00:01:48,049
Space Station. NASA flight engineer
Andrew Morgan and Commander Luca

25
00:01:48,049 --> 00:01:52,240
Parmitano of the European Space Agency
were on science duty this week.

26
00:01:53,480 --> 00:01:58,140
The astronauts took turn safely burning
fabric and acrylic samples to help

27
00:01:58,140 --> 00:02:00,770
scientists understand how flames spread
in space.

28
00:02:00,770 --> 00:02:04,770
Understanding how flames spread in
microgravity in confined spaces of

29
00:02:04,770 --> 00:02:09,360
different shapes, enables the development
of numerical models that allow designers

30
00:02:09,360 --> 00:02:13,709
and planners to anticipate fire behavior
and create plans for preventing or