



# SPACE TO GROUND

1  
00:00:00,930 --> 00:00:02,400  
VO: Houston, station on space to ground.

2  
00:00:02,400 --> 00:00:05,390  
Josh Byerly: Welcome to Space To Ground, your weekly look at what's happening aboard the

3  
00:00:05,390 --> 00:00:06,390  
ISS.

4  
00:00:06,390 --> 00:00:07,410  
I'm Josh Byerly.

5  
00:00:07,410 --> 00:00:10,210  
More CubeSats were deployed off the side of the station this week.

6  
00:00:10,210 --> 00:00:14,150  
Sixteen were released earlier this month, and twelve more were deployed in this second

7  
00:00:14,150 --> 00:00:15,150  
batch.

8  
00:00:15,150 --> 00:00:18,840  
These small Earth-imaging satellites will provide clearer pictures of our home planet

9  
00:00:18,840 --> 00:00:21,160  
for researches and educators.

10  
00:00:21,160 --> 00:00:24,320  
One of the great mysteries that the station is helping solve has to do with plants.

11  
00:00:24,320 --> 00:00:27,370  
It's a Japanese experiment called Aniso.

12

00:00:27,370 --> 00:00:31,080

And it's designed to figure out how plants automatically know how thick their stems need

13

00:00:31,080 --> 00:00:33,020

to be to overcome gravity.

14

00:00:33,020 --> 00:00:37,480

A lot of a plant's energy goes into overcoming gravity, so this experiment could lead to

15

00:00:37,480 --> 00:00:41,610

better ways to grow things here on earth and on future spaceflights.

16

00:00:41,610 --> 00:00:44,930

The crew is also getting geared up for the arrival of the next SpaceX Dragon vehicle.

17

00:00:44,930 --> 00:00:48,450

They've been practicing on the station's robotic arm, which they'll use to reach

18

00:00:48,450 --> 00:00:50,420

out and grab Dragon once it arrives.

19

00:00:50,420 --> 00:00:53,380

Astronaut Mike Hopkins: This is the control station.

20

00:00:53,380 --> 00:00:59,210

And what you see over here on my left, this controls the translation of the robotic arm.

21

00:00:59,210 --> 00:01:01,620

And then over here we have rotational control.

22

00:01:01,620 --> 00:01:07,330

And then this middle computer is where we actually take the robotic arm into the different

23

00:01:07,330 --> 00:01:08,680

modes that we do have.

24

00:01:08,680 --> 00:01:12,390

Byerly: The current Dragon launch date is set for March 16th with a rendezvous with

25

00:01:12,390 --> 00:01:14,850

the station planned for March 18th.

26

00:01:14,850 --> 00:01:18,140

This week's social media question is how does the OPALS experiment work that is going

27

00:01:18,140 --> 00:01:19,540

up on the next Dragon flight?

28

00:01:19,540 --> 00:01:24,420

Well, OPALS is a way to test out better communication with the space station using lasers.

29

00:01:24,420 --> 00:01:26,290

And lasers are always cool.

30

00:01:26,290 --> 00:01:30,940

Currently, NASA's communications satellites use radio waves to send information from space

31

00:01:30,940 --> 00:01:35,909

to the ground, but lasers could allow us to transmit stronger signals with more data.

32

00:01:35,909 --> 00:01:38,060

So OPALS will test a way to do this from the station.