

A man with short brown hair, wearing a grey jacket over a dark blue shirt, stands in front of a large screen. The screen displays the title 'SPACE TO GROUND' in a stylized font. The background behind the man is a blue grid pattern with glowing lines. The overall scene is set in a dark environment with some purple lighting visible in the background.

SPACE  
TO  
GROUND

**#SPACETOGROUND**

1  
00:00:01,300 --> 00:00:02,735  
>> Houston Station  
on Space to Ground.

2  
00:00:02,735 --> 00:00:04,036  
>> [Background Music]  
Welcome to Space to Ground,

3  
00:00:04,036 --> 00:00:05,604  
your weekly look at  
what's happening aboard the

4  
00:00:05,604 --> 00:00:07,073  
International Space Station.

5  
00:00:07,073 --> 00:00:08,441  
I'm Josh Byerly.

6  
00:00:08,441 --> 00:00:10,810  
A lot of eyes, both on  
the ground and in space,

7  
00:00:10,810 --> 00:00:12,778  
were watching out  
for Comet Ison.

8  
00:00:12,778 --> 00:00:14,346  
The station crew got  
the chance to see it

9  
00:00:14,346 --> 00:00:17,450  
on November 23rd before it  
began its swing around the sun,

10  
00:00:17,450 --> 00:00:19,151  
eventually disintegrating.

11  
00:00:19,151 --> 00:00:21,687  
If you'd like to take a look at

this photo or any of the others

12

00:00:21,687 --> 00:00:26,525  
that the crew has taken onboard,  
just log on to [nasa.gov/station](http://nasa.gov/station).

13

00:00:26,525 --> 00:00:27,626  
Just in time for the holidays,

14

00:00:27,626 --> 00:00:29,562  
the crew is getting  
loaded up with cargo.

15

00:00:29,562 --> 00:00:32,331  
A Russian vehicle arrived last  
week with almost three tons

16

00:00:32,331 --> 00:00:34,733  
of supplies and on  
December 17th,

17

00:00:34,733 --> 00:00:38,003  
Orbital Sciences will launch  
its Cygnus cargo vehicle.

18

00:00:38,003 --> 00:00:40,639  
It will arrive at the  
station on December 20th.

19

00:00:40,639 --> 00:00:42,408  
Onboard are crew  
supplies as well

20

00:00:42,408 --> 00:00:44,376  
as several hundred  
pounds of science.

21

00:00:44,376 --> 00:00:45,678  
There will be thousands  
of students

22

00:00:45,678 --> 00:00:47,947  
across the country  
also flying experiments

23

00:00:47,947 --> 00:00:51,350  
that study everything from  
ameba reproduction to calcium

24

00:00:51,350 --> 00:00:54,553  
in the bones to salamanders.

25

00:00:54,553 --> 00:00:56,288  
In station science, the  
crew worked this week

26

00:00:56,288 --> 00:00:58,224  
on a capillary flow experiment.

27

00:00:58,224 --> 00:01:00,659  
If you've ever used a paper  
towel to mop up water,

28

00:01:00,659 --> 00:01:02,728  
you've seen capillary  
flow in action.

29

00:01:02,728 --> 00:01:06,065  
In space, it's a little harder  
to control fluids such as fuel,

30

00:01:06,065 --> 00:01:07,967  
so the purpose of this  
experiment is to look

31

00:01:07,967 --> 00:01:10,636  
at how capillary flow  
works up there and to use

32

00:01:10,636 --> 00:01:12,271

that to design better  
spacecraft.

33

00:01:12,271 --> 00:01:14,507

It can also be used  
down here on earth

34

00:01:14,507 --> 00:01:17,643

to understand how ground water  
moves and also in certain types

35

00:01:17,643 --> 00:01:19,044

of electronics cooling.

36

00:01:19,044 --> 00:01:21,947

How you ever wondered exactly  
how the crews weigh themselves

37

00:01:21,947 --> 00:01:23,315

in space?

38

00:01:23,315 --> 00:01:25,885

You can't exactly step on a  
scale since there's no gravity.

39

00:01:25,885 --> 00:01:29,455

Well as it turns out, they slam  
themselves against the wall.

40

00:01:29,455 --> 00:01:31,123

It's a device called  
Slam D [phonetic]

41

00:01:31,123 --> 00:01:32,992

and it uses Newton's  
laws of physics

42

00:01:32,992 --> 00:01:36,295

to accelerate the crew toward

the wall using a known force.

43

00:01:36,295 --> 00:01:40,232

From that, the crew's weight can be tracked to the half pound.

44

00:01:40,232 --> 00:01:42,268

Make sure you look up in the sky over the next few days.

45

00:01:42,268 --> 00:01:45,271

Even though the sun may have won the battle with Comet Ison,

46

00:01:45,271 --> 00:01:47,673

the space station still looks pretty spectacular.

47

00:01:47,673 --> 00:01:49,308

To find out if you can spot it in the sky,

48

00:01:49,308 --> 00:01:52,678

just go to [spotthestation.nasa.gov](http://spotthestation.nasa.gov).

49

00:01:52,678 --> 00:01:55,681

We also encourage you to send us your comments and questions.

50

00:01:55,681 --> 00:01:58,150

Use the hashtag [spacetoground](#) to talk to us.

51

00:01:58,150 --> 00:01:59,785

If there's something you have always wanted to know

52

00:01:59,785 --> 00:02:02,121

about the station, we'll

see if we can answer it.