



SPACE TO GROUND

1

00:00:00,919 --> 00:00:05,410

Josh Byerly: Welcome to Space To Ground, your weekly look at what's happening on board

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00:00:05,410 --> 00:00:06,410

the ISS.

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00:00:06,410 --> 00:00:07,410

I'm Josh Byerly.

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00:00:07,410 --> 00:00:11,040

This past weekend, the station crew sent down some congratulations to the cast and crew

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00:00:11,040 --> 00:00:12,372

of the movie Gravity.

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00:00:12,372 --> 00:00:16,180

Astronaut Rick Mastracchio: We want to congratulate the entire production and directing team and

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00:00:16,180 --> 00:00:21,410

the stars of Gravity for the honors they have earned from the Academy of Motion Picture

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00:00:21,410 --> 00:00:22,410

Arts and Sciences.

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00:00:22,410 --> 00:00:26,050

Byerly: And speaking of gravity, three crew members are about to experience it for the

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00:00:26,050 --> 00:00:27,600

first time in months.

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00:00:27,600 --> 00:00:31,890

Mike Hopkins, Sergei Ryazanskiy and Oleg Kotov will be returning to Earth on Monday.

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00:00:31,890 --> 00:00:36,469
Landing time is set for 11:24 p.m. Eastern,
and we'll have live coverage on NASA television

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00:00:36,469 --> 00:00:39,499
and nasa.gov at the times you see here.

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00:00:39,499 --> 00:00:43,469
The weather at the landing site in Kazakhstan
is expected to be bitterly cold with a whole

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00:00:43,469 --> 00:00:45,489
lot of snow on the ground.

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00:00:45,489 --> 00:00:47,640
The crew did a lot of work this week with
SPHERES Slosch.

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00:00:47,640 --> 00:00:51,139
As rockets have gotten much bigger and more
complex over the years, it's become a bit

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00:00:51,139 --> 00:00:55,109
tricky to predict how all that fuel in the
rocket tanks will move around.

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00:00:55,109 --> 00:00:56,899
So SPHERES Slosch is helping out.

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00:00:56,899 --> 00:01:00,499
The crew used two of the SPHERES satellites
on board, along with some green liquid in

21
00:01:00,499 --> 00:01:01,499
the middle.

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00:01:01,499 --> 00:01:05,479
As the satellites fly, the liquid sloshes
around and is photographed by high resolution

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00:01:05,479 --> 00:01:06,479
cameras.

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00:01:06,479 --> 00:01:10,610
This will ultimately help create better and
safer designs for future rockets.

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00:01:10,610 --> 00:01:12,460
The crew also worked on the Microbiome experiment.

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00:01:12,460 --> 00:01:16,380
This may sound weird, but there are actually
whole colonies of microbes growing on our

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00:01:16,380 --> 00:01:18,590
bodies....and there are good ones and bad
ones.

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00:01:18,590 --> 00:01:21,750
When we're under stress, the balance of
the two can get out of hand, which can lead

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00:01:21,750 --> 00:01:22,950
to disease.

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00:01:22,950 --> 00:01:26,380
Living in space definitely puts stress on
the body, so astronauts' microbes are sampled

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00:01:26,380 --> 00:01:27,840
as part of this study.

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00:01:27,840 --> 00:01:31,659
The hope is that this will lead to better
detection of diseases and a better understanding

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00:01:31,659 --> 00:01:33,159
of our immune system.

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00:01:33,159 --> 00:01:35,150

This week's social media question is from Stephen Smith.

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00:01:35,150 --> 00:01:39,420

He asks if all crew members have access to all parts of ISS?

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00:01:39,420 --> 00:01:40,420

Yes they do.

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00:01:40,420 --> 00:01:44,869

there are Russian, U.S., European and Japanese laboratories on board that all of the crewmembers

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00:01:44,869 --> 00:01:46,509

work in each day.

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00:01:46,509 --> 00:01:49,850

When it comes time to eat, the crew can meet up in the Unity node, which is where the American

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00:01:49,850 --> 00:01:51,840

segment meets the Russian segment.

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00:01:51,840 --> 00:01:55,619

The crew also exercise throughout the station, both in the U.S. and Russian segments.