



# SPACE TO GROUND

1  
00:00:02,889 --> 00:00:03,889  
Welcome to Space-To-Ground.

2  
00:00:03,889 --> 00:00:06,130  
I'm Nicole Cloutier-Lemasters.

3  
00:00:06,130 --> 00:00:10,150  
Onboard the station, preparations are underway  
for a spacewalk scheduled for Monday...

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00:00:10,150 --> 00:00:14,740  
Cosmonauts Oleg Kotov and Sergey Ryazanskiy  
will venture outside the ISS to reinstall

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00:00:14,740 --> 00:00:18,270  
a pair of high-fidelity cameras on the station's  
Russian segment.

6  
00:00:18,270 --> 00:00:21,960  
The cameras were initially installed during  
a spacewalk in December, but had to be brought

7  
00:00:21,960 --> 00:00:23,759  
back inside for maintenance.

8  
00:00:23,759 --> 00:00:27,699  
To follow the spacewalk live, log on to [nasa.gov/ntv](http://nasa.gov/ntv).

9  
00:00:27,699 --> 00:00:29,630  
Coverage begins at 7:30 a.m.

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00:00:29,630 --> 00:00:31,119  
Central on Monday.

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00:00:31,119 --> 00:00:35,120  
Flight Engineer Mike Hopkins continued his  
participation in the Energy experiment this

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00:00:35,120 --> 00:00:40,030

week, which as the name implies, takes a look at how much energy astronauts use during long-duration

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00:00:40,030 --> 00:00:41,030

spaceflight.

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00:00:41,030 --> 00:00:45,280

A special mask is used to measure oxygen uptake, and results from this study will contribute

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00:00:45,280 --> 00:00:49,129

to crew health and performance and will also ensure that crew members are getting the proper

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00:00:49,129 --> 00:00:51,109

amount of food and exercise.

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00:00:51,109 --> 00:00:54,429

Well, this definitely isn't the ant farm you had in your third grade classroom...

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00:00:54,429 --> 00:00:56,269

It's Ants In Space!

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00:00:56,269 --> 00:00:59,890

The insects are part of a student experiment that's helping young scientists learn about

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00:00:59,890 --> 00:01:01,379

the scientific method.

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00:01:01,379 --> 00:01:05,860

Results from this research may provide insight into ant behavior or how the simple actions

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00:01:05,860 --> 00:01:08,430

of individuals add up to complex group behavior.

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00:01:08,430 --> 00:01:13,390

And that can help create mathematical procedures for solving complex human problems, like traffic

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00:01:13,390 --> 00:01:17,990

routing, scheduling air travel, and telecommunications efficiency.

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00:01:17,990 --> 00:01:23,160

And from twitter this week, @prognose asks us: "How many times do we reboost the station?"

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00:01:23,160 --> 00:01:24,480

Great question...

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00:01:24,480 --> 00:01:27,590

Space station boosters are fired about once a month, and reboosts are needed for a number

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00:01:27,590 --> 00:01:28,869

of different reasons.

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00:01:28,869 --> 00:01:33,060

sometimes we need to make up for the atmospheric drag that slowly tries to pull the ISS back

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00:01:33,060 --> 00:01:36,869

to earth; other times the space station's orbit must be adjusted to prepare for the

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00:01:36,869 --> 00:01:41,619

arrival or departure of vehicles; and reboosts are also performed to steer the station away

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00:01:41,619 --> 00:01:43,220

from space debris.

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00:01:43,220 --> 00:01:45,650

Many times one reboost will take care of several these things.

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00:01:45,650 --> 00:01:46,650

the ISS was reboosted 15 times in 2013.

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00:01:46,650 --> 00:01:47,650

Now let's hear from you!

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00:01:47,650 --> 00:01:48,920

keep the questions coming.