



SPACE TO GROUND

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00:00:00,940 --> 00:00:06,450

Dan: Welcome to Space to Ground, your weekly look at what's happening on board the International

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00:00:06,450 --> 00:00:07,450

Space Station.

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00:00:07,450 --> 00:00:08,450

I'm Dan Huot.

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00:00:08,450 --> 00:00:12,230

The Cygnus cargo ship is getting ready to launch from NASA's Wallops Flight Facility

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00:00:12,230 --> 00:00:13,369

in Virginia.

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00:00:13,369 --> 00:00:17,850

This will be Orbital Science's second resupply mission to the station, and Cygnus is loaded

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00:00:17,850 --> 00:00:22,320

with almost 3,300 pounds of supplies for the expedition 40 crew.

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00:00:22,320 --> 00:00:26,990

Onboard will be numerous science experiments, including 15 studies designed and built by

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00:00:26,990 --> 00:00:27,990

students.

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00:00:27,990 --> 00:00:31,580

Check for the latest mission updates at nasa.gov/orbital.

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00:00:31,580 --> 00:00:34,699

This week, we reach an exciting milestone for life in space.

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00:00:34,699 --> 00:00:40,370
July 12th marks 5,000 days and counting since the Expedition One crew of Bill Shepard, Sergei

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00:00:40,370 --> 00:00:44,050
Krikalev and Yuri Gidzenko arrived at the International Space Station.

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00:00:44,050 --> 00:00:49,489
With a crew on board every day since, more than 24,000 hours of scientific research has

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00:00:49,489 --> 00:00:53,109
been conducted by astronauts from 15 different countries.

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00:00:53,109 --> 00:00:56,420
5,000 days down, and a lot more to go.

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00:00:56,420 --> 00:01:01,519
Hurricane season is upon us, and the International Space Station is keeping an eye on the storms.

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00:01:01,519 --> 00:01:06,250
Reid Wiseman and Alexander Gerst captured striking views of Hurricane Arthur and Typhoon

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00:01:06,250 --> 00:01:10,180
Neoguri as they built up strength on different sides of the world, giving us a whole new

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00:01:10,180 --> 00:01:13,000
perspective on these monstrous storms.

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00:01:13,000 --> 00:01:17,150
The ISS crew is exploring the world of fluid physics this week with the Capillary Flow

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00:01:17,150 --> 00:01:18,350

Experiment.

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00:01:18,350 --> 00:01:22,270

Capillary action is the ability of a liquid to flow in narrow spaces without relying on

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00:01:22,270 --> 00:01:26,270

gravity, and it's something we experience every day, whether it's soaking up liquid

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00:01:26,270 --> 00:01:29,010

with a paper towel or wetting a paint brush.

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00:01:29,010 --> 00:01:33,920

Understanding this mechanism can help spacecraft designers create better means for moving fluids

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00:01:33,920 --> 00:01:38,480

in space, covering everything from astronauts' drinking water to a spacecraft's cryogenic

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00:01:38,480 --> 00:01:39,510

fuel.

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00:01:39,510 --> 00:01:43,410

This week's twitter question comes from Jan who asks: "What's the breathing air mix and

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00:01:43,410 --> 00:01:44,780

humidity on the ISS?"

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00:01:44,780 --> 00:01:49,730

Well, the station air is very similar to what we breathe here on Earth, about 78% nitrogen

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00:01:49,730 --> 00:01:51,600

and 21% oxygen.

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00:01:51,600 --> 00:01:55,180

For more, let's ask the ISS - Reid, how's the weather up there?

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00:01:55,180 --> 00:01:58,810

Wiseman: Today, I can say it's actually a little bit chilly in the U.S. laboratory where

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00:01:58,810 --> 00:02:04,520

I'm standing, but in general, our weather is perfectly constant - about 72 degrees and

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00:02:04,520 --> 00:02:07,560

maybe 10-15 percent humidity.

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00:02:07,560 --> 00:02:11,209

So it pretty much doesn't change for about 6 months.

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00:02:11,209 --> 00:02:12,710

Thanks Reid.