



1

00:00:00,820 --> 00:00:05,110

“Here’s some of the stories trending This Week at NASA!”

2

00:00:05,110 --> 00:00:10,620

On Oct. 19, NASA astronaut Shane Kimbrough and his Expedition 49-50 crewmates, Sergey

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00:00:10,620 --> 00:00:16,720

Ryzhikov and Andrey Borisenko, of the Russian Space Agency Roscosmos, launched aboard a

4

00:00:16,720 --> 00:00:22,500

Soyuz spacecraft to the International Space Station from the Baikonur Cosmodrome in Kazakhstan.

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00:00:22,500 --> 00:00:26,960

Two days later, when the trio arrived at the orbiting laboratory, they were welcomed aboard

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00:00:26,960 --> 00:00:32,950

by station Commander Anatoly Ivanishin of Roscosmos, Kate Rubins of NASA and Takuya

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00:00:32,950 --> 00:00:37,710

Onishi of the Japan Aerospace Exploration Agency – bringing the space station back

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00:00:37,710 --> 00:00:42,190

to its full complement of six crew members.

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00:00:42,190 --> 00:00:47,050

Orbital ATK's Cygnus cargo spacecraft launched successfully from NASA's Wallops Flight

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00:00:47,050 --> 00:00:53,300

Facility in Virginia on Oct. 17, aboard the company's upgraded Antares rocket.

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00:00:53,300 --> 00:00:58,079

This was the first launch from Wallops since an Antares rocket and a Cygnus spacecraft

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00:00:58,079 --> 00:01:01,329

were lost two years ago during a launch mishap.

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00:01:01,329 --> 00:01:07,189

The Cygnus is loaded with more than 5,100 pounds of cargo, including materials and equipment

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00:01:07,189 --> 00:01:12,420

to support dozens of new and existing science investigations aboard the space station.

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00:01:12,420 --> 00:01:17,270

The new experiments include studies on fire in space, the effect of lighting on sleep

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00:01:17,270 --> 00:01:21,300

and daily rhythms, and a new way to measure neutrons.

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00:01:21,300 --> 00:01:27,030

Cygnus is scheduled to arrive at the space station on Oct. 23.

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00:01:27,030 --> 00:01:31,390

Managers of NASA's Juno mission to Jupiter say a software performance monitor likely

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00:01:31,390 --> 00:01:37,730

induced a reboot of the spacecraft's onboard computer on Oct. 19 – causing Juno to cycle

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00:01:37,730 --> 00:01:39,250

into safe mode.

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00:01:39,250 --> 00:01:44,659

Although Juno restarted successfully and now

is healthy, safe mode prevented the collection

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00:01:44,659 --> 00:01:49,400

of science data during the spacecraft's second planned close flyby of Jupiter since

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00:01:49,400 --> 00:01:51,969

arriving at the gas giant in July.

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00:01:51,969 --> 00:01:57,579

But during an Oct. 19 news conference at the joint 48th meeting of the Division for Planetary

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00:01:57,579 --> 00:02:01,960

Sciences (DPS) and 11th European Planetary Science Congress (EPSC), near NASA's Jet

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00:02:01,960 --> 00:02:07,539

Propulsion Laboratory in Pasadena, California, mission managers shared imagery and observations

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00:02:07,539 --> 00:02:11,720

from Juno's first close flyby of Jupiter in August.

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00:02:11,720 --> 00:02:16,940

Scientists say data from that pass indicate Jupiter's magnetic fields and aurora are

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00:02:16,940 --> 00:02:19,820

bigger and more powerful than originally thought.

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00:02:19,820 --> 00:02:24,600

Also, Juno's Microwave Radiometer (MWR) instrument gave mission researchers their

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00:02:24,600 --> 00:02:27,660

first glimpse below Jupiter's swirling cloud deck.

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00:02:27,660 --> 00:02:33,120

The instrument is capable of seeing up to 250 miles below the planet's clouds.

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00:02:33,120 --> 00:02:39,160

Meanwhile, mission managers say Juno's upcoming Dec. 11 close flyby is the next opportunity

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00:02:39,160 --> 00:02:44,700

for a rocket motor burn designed to reduce the spacecraft's orbital period around Jupiter

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00:02:44,700 --> 00:02:48,290

from 53.4 to 14 days.

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00:02:48,290 --> 00:02:56,090

That burn, called the period reduction maneuver (PRM) was postponed prior to the Oct. 19 flyby.

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00:02:56,090 --> 00:03:00,760

NASA conducted a test of the agency's Unmanned Aircraft Systems (UAS) Traffic Management

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00:03:00,760 --> 00:03:04,780

(UTM) research platform, on Oct. 19 in Reno, Nevada.

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00:03:04,780 --> 00:03:10,000

During the exercise, members of the media watched on large video screens as five drones

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00:03:10,000 --> 00:03:14,980

flew beyond the line-of-sight of their operators to test the planning, tracking and alerting

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00:03:14,980 --> 00:03:16,790

capabilities of the system.

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00:03:16,790 --> 00:03:22,090

Currently, Federal Aviation Administration regulations require drone operators be able

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00:03:22,090 --> 00:03:27,810

to see other aircraft in order to avoid them, which limits many potential applications for

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00:03:27,810 --> 00:03:28,810

drones.

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00:03:28,810 --> 00:03:34,069

Together with the FAA, NASA will use data from this test to refine previous research

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00:03:34,069 --> 00:03:39,590

-- a critical step in developing the technology and procedures needed to safely manage drone

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00:03:39,590 --> 00:03:40,760

air traffic.

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00:03:40,760 --> 00:03:45,660

NASA's Ames Research Center is leading this research effort, in close collaboration with

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00:03:45,660 --> 00:03:50,340

the agency's Armstrong Flight Research Center, Glenn Research Center and Langley Research

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00:03:50,340 --> 00:03:52,660

Center.

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00:03:52,660 --> 00:03:54,700

And that's what's up this week @NASA ...