



1
00:00:00,669 --> 00:00:04,100
A critical milestone for commercial crew ...

2
00:00:04,100 --> 00:00:06,790
Resupply spacecraft delivers to the space
station ...

3
00:00:06,790 --> 00:00:11,330
And a new wide-eyed view of the southern sky
... a few of the stories to tell you about

4
00:00:11,330 --> 00:00:14,630
– This Week at NASA!

5
00:00:14,630 --> 00:00:21,210
On Nov. 4, our commercial partner Boeing successfully
completed its first flight test with its CST-100

6
00:00:21,210 --> 00:00:25,369
Starliner, as part of NASA's Commercial
Crew Program.

7
00:00:25,369 --> 00:00:30,529
The Pad Abort Test at the U.S. Army's White
Sands Missile Range in New Mexico was a critical

8
00:00:30,529 --> 00:00:36,210
safety milestone, designed to verify that
each of Starliner's systems will function

9
00:00:36,210 --> 00:00:41,620
not only separately, but also together, to
carry astronauts safely away from the launch

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00:00:41,620 --> 00:00:46,069
pad in the unlikely event of an emergency
prior to liftoff.

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00:00:46,069 --> 00:00:51,469

With Boeing and SpaceX, our other commercial crew partner, we are working to return human

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00:00:51,469 --> 00:00:57,530

spaceflight launches to the International Space Station from American soil.

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00:00:57,530 --> 00:01:02,489

In the early hours of Nov. 4, our commercial resupply services partner, Northrop Grumman's

14

00:01:02,489 --> 00:01:07,380

Cygnus cargo spacecraft arrived at the International Space Station, two days after launching from

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00:01:07,380 --> 00:01:10,310

our Wallops Flight Facility in Virginia.

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00:01:10,310 --> 00:01:15,020

The uncrewed Cygnus – loaded with about 8,200 pounds of research, crew supplies, and

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00:01:15,020 --> 00:01:20,820

hardware – was captured by our Jessica Meir and Christina Koch controlling the Canadarm2

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00:01:20,820 --> 00:01:23,420

robotic arm from inside the station.

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00:01:23,420 --> 00:01:30,460

The Cygnus was later attached to the station through commands sent by ground controllers.

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00:01:30,460 --> 00:01:36,609

This new mosaic of the southern sky was stitched together with 208 images taken by our Transiting

21

00:01:36,609 --> 00:01:42,409

Exoplanet Survey Satellite, or TESS during its first year of science operations – which

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00:01:42,409 --> 00:01:45,270

it completed in July 2019.

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00:01:45,270 --> 00:01:50,540

The mission divided the southern sky into 13 sectors, and imaged each sector for nearly

24

00:01:50,540 --> 00:01:51,700

a month.

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00:01:51,700 --> 00:01:56,649

Some notable objects visible in the image include the Milky Way – our home galaxy,

26

00:01:56,649 --> 00:02:03,080

which is seen edgewise on the left, the Orion Nebula, seen near the top, and near the center

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00:02:03,080 --> 00:02:09,610

is the Large Magellanic Cloud – a nearby galaxy located about 163,000 light-years from

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00:02:09,610 --> 00:02:10,759

Earth.

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00:02:10,759 --> 00:02:16,659

TESS also discovered 29 exoplanets, or worlds beyond our solar system in this scene, and

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00:02:16,659 --> 00:02:23,489

more than 1,000 candidate planets astronomers are now investigating.

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00:02:23,489 --> 00:02:29,180

On Nov. 5, an untouched rock and soil sample brought back from the Moon on Apollo 17 was

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00:02:29,180 --> 00:02:33,959

opened in the Lunar Curation Laboratory at our Johnson Space Center in Houston.

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00:02:33,959 --> 00:02:39,159

This marked the first time in more than 40 years a pristine sample of rock and regolith

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00:02:39,159 --> 00:02:45,129

from the Apollo era has been opened, and sets the stage for scientists to practice techniques

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00:02:45,129 --> 00:02:48,730

to study samples collected on future Artemis missions.

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00:02:48,730 --> 00:02:53,640

The sample, collected by astronauts Eugene Cernan and Harrison Schmitt, was opened as

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00:02:53,640 --> 00:02:59,049

part of an initiative to study Apollo samples using new tools that were not available when

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00:02:59,049 --> 00:03:01,629

the samples were originally returned to Earth.

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00:03:01,629 --> 00:03:06,269

“Apollo never ended for lunar scientists because of the advance of new technologies;

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00:03:06,269 --> 00:03:09,020

the advance of ideas that people have.

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00:03:09,020 --> 00:03:15,250

So it’s really an amazing foresight to have preserved samples so these new analytical

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00:03:15,250 --> 00:03:18,180

technologies can be employed.”

43
00:03:18,180 --> 00:03:23,069
Former NASA astronaut and pilot Fred Haise gave a presentation at an event hosted by

44
00:03:23,069 --> 00:03:29,159
our Armstrong Flight Research Center in California, to highlight our famed Apollo program and

45
00:03:29,159 --> 00:03:32,130
our plans to return to the Moon by 2024.

46
00:03:32,130 --> 00:03:37,790
Haise, once a research pilot at the center, shared his experiences from Apollo – including

47
00:03:37,790 --> 00:03:43,890
the legendary Apollo 13 lunar mission, and also commented on the need for future human

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00:03:43,890 --> 00:03:48,820
space exploration efforts, such as our Artemis program that will send the first woman and

49
00:03:48,820 --> 00:03:51,269
next man to the Moon by 2024.

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00:03:51,269 --> 00:03:58,659
"I hope it's a - it's all a part of our psyche that agencies like NASA or even work going

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00:03:58,659 --> 00:04:06,069
on elsewhere, continues to look at inventing the new things to moving out in exploration.

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00:04:06,069 --> 00:04:12,819
I think it's a useful enterprise for humans - the good side of humans to be in the exploration

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00:04:12,819 --> 00:04:13,819

business.”

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00:04:13,819 --> 00:04:15,920

That's what's up this week @NASA ...