
55 Cancri e

1
00:00:00,770 --> 00:00:05,130
“Here’s some of the stories trending This
Week at NASA!”

2
00:00:05,130 --> 00:00:10,520
Engineers at Johnson Space Center in Houston
are using a mockup of NASA’s Orion spacecraft

3
00:00:10,520 --> 00:00:15,300
to evaluate how well astronauts are able to
operate Orion’s rotational hand controller

4
00:00:15,300 --> 00:00:19,180
and cursor control device, while dressed in
spacesuits.

5
00:00:19,180 --> 00:00:23,440
The controllers operate the displays and control
system used to maneuver and interact with

6
00:00:23,440 --> 00:00:24,720
the spacecraft.

7
00:00:24,720 --> 00:00:29,170
The testing aims to provide data that can
be used to make adjustments needed to ensure

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00:00:29,170 --> 00:00:34,190
future Orion crews can interact appropriately
with the spacecraft’s control system during

9
00:00:34,190 --> 00:00:37,160
deep space missions.

10
00:00:37,160 --> 00:00:42,560
NASA recently completed a major milestone
on its journey to Mars, and the work to transform

11
00:00:42,560 --> 00:00:46,100

Florida’s Kennedy Space Center into the
spaceport of the future.

12
00:00:46,100 --> 00:00:50,700
A comprehensive critical design review and
an independent assessment have determined

13
00:00:50,700 --> 00:00:56,329
the agency’s Ground Systems Development
and Operations Program is on track, on schedule

14
00:00:56,329 --> 00:01:01,899
and on budget with plans to modernize facilities
and ground support systems at Kennedy needed

15
00:01:01,899 --> 00:01:06,939
to process the Space Launch System (SLS) rocket,
and the Orion spacecraft for missions to Mars

16
00:01:06,939 --> 00:01:09,759
and other deep space destinations.

17
00:01:09,759 --> 00:01:15,701
Engineers are upgrading Kennedy's iconic Vehicle
Assembly Building, crawler transporters, Launch

18
00:01:15,701 --> 00:01:23,759
Pad 39B and other launch infrastructure to
support the requirements of Orion and SLS.

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00:01:23,759 --> 00:01:29,450
On March 31, a Russian cargo spacecraft, stocked
with about three tons of food, fuel and supplies

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00:01:29,450 --> 00:01:34,759
launched from the Baikonur Cosmodrome in Kazakhstan,
on a mission to resupply the International

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00:01:34,759 --> 00:01:36,159
Space Station.

22
00:01:36,159 --> 00:01:40,750
The Progress is the second of three supply
ships scheduled to deliver cargo to the station

23
00:01:40,750 --> 00:01:42,670
in as many weeks.

24
00:01:42,670 --> 00:01:48,780
Orbital ATK's Cygnus spacecraft arrived
on March 26 with nearly 7,500 pounds of supplies

25
00:01:48,780 --> 00:01:54,859
and hardware, and SpaceX will launch its Dragon
cargo craft to the ISS no earlier than April

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00:01:54,859 --> 00:01:55,859
8.

27
00:01:55,859 --> 00:02:00,100
Among the items that Dragon will deliver is
the Bigelow Expandable Activity Module (BEAM)

28
00:02:00,100 --> 00:02:05,090
-- a technology demonstration to study the
radiation protection, thermal performance

29
00:02:05,090 --> 00:02:10,750
and general operations of expandable habitats
in space.

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00:02:10,750 --> 00:02:15,640
NASA has selected a team to build a new, cutting-edge
instrument that will detect planets outside

31
00:02:15,640 --> 00:02:19,390
our solar system, often referred to as exoplanets.

32
00:02:19,390 --> 00:02:24,780

The instrument, part of an observational research
partnership with the National Science Foundation,

33
00:02:24,780 --> 00:02:29,670
will measure the tiny back-and-forth wobble
of a star, caused by the gravitational tug

34
00:02:29,670 --> 00:02:34,750
of a planet in orbit around it – an indication
to researchers that a planet is orbiting a

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00:02:34,750 --> 00:02:35,890
star.

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00:02:35,890 --> 00:02:40,390
Measuring the size of the wobble can also
reveal how massive the planet is.

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00:02:40,390 --> 00:02:46,210
The new instrument, scheduled to be completed
in 2019, will be installed on the 3.5-meter

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00:02:46,210 --> 00:02:52,200
WIYN telescope at the Kitt Peak National Observatory
in Arizona.

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00:02:52,200 --> 00:02:57,350
Observations from NASA's Spitzer Space Telescope
have led to the first temperature map of a

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00:02:57,350 --> 00:03:00,860
rocky planet nearly two times as big as Earth.

41
00:03:00,860 --> 00:03:06,620
The map shows new evidence that instead of
a moisture-drenched atmosphere, the super-Earth-sized

42
00:03:06,620 --> 00:03:13,670
planet – named 55 Cancri e, is a world blanketed
with hot lava that sits very close to its

43
00:03:13,670 --> 00:03:14,670
star.

44
00:03:14,670 --> 00:03:19,260
55 Cancri e is about 40 light-years from Earth.

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00:03:19,260 --> 00:03:24,099
NASA's Green Propulsion Infusion Mission (GPIM)
recently passed a major flight readiness milestone

46
00:03:24,099 --> 00:03:29,580
– marking the successful completion of functional
and environmental testing of its systems and

47
00:03:29,580 --> 00:03:30,780
software.

48
00:03:30,780 --> 00:03:36,170
The milestone is a major step for the mission,
which is scheduled for launch in early 2017,

49
00:03:36,170 --> 00:03:41,240
to demonstrate the practical capabilities
of using a greener, less toxic propellant

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00:03:41,240 --> 00:03:46,630
than the hydrazine fuel used as a propellant
by many spacecraft.

51
00:03:46,630 --> 00:03:48,780
And that’s what’s up this week @NASA …