



1
00:00:00,930 --> 00:00:05,090

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

2
00:00:05,090 --> 00:00:10,060

Our James Webb Space Telescope is now out of the historic Chamber A vacuum facility

3
00:00:10,060 --> 00:00:15,980

at our Johnson Space Center in Houston, after completing cryogenic testing designed to ensure

4
00:00:15,980 --> 00:00:21,100

the telescope works well in the cold, airless environment of space.

5
00:00:21,100 --> 00:00:27,020

Set to launch in 2019, Webb will study every phase in the history of our Universe, starting

6
00:00:27,020 --> 00:00:32,189

with the first luminous glows following the Big Bang.

7
00:00:32,189 --> 00:00:37,040

The Mars 2020 rover we’re building looks a lot like its predecessor, Curiosity.

8
00:00:37,040 --> 00:00:41,690

The two share some of the same systems and hardware, but Mars 2020 will be even better

9
00:00:41,690 --> 00:00:45,620

equipped to seek out signs of ancient life on the Red Planet.

10
00:00:45,620 --> 00:00:51,270

Mars 2020 will carry new landing technology to avoid hazards, cutting-edge instruments

11
00:00:51,270 --> 00:00:56,790
to search for bio-signatures on a microbial scale, and ground-penetrating radar to map

12
00:00:56,790 --> 00:01:00,320
layers of water and ice up to 30 feet deep.

13
00:01:00,320 --> 00:01:06,320
It will also collect samples for possible return to Earth by a future mission.

14
00:01:06,320 --> 00:01:10,720
Expedition 54-55 – the next crew headed to the International Space Station – were

15
00:01:10,720 --> 00:01:15,430
in Star City, Russia, this week getting ready for their upcoming launch to the orbiting

16
00:01:15,430 --> 00:01:16,570
outpost.

17
00:01:16,570 --> 00:01:23,350
NASA astronaut Scott Tingle, Anton Shkaplerov of Roscosmos and Norishige Kanai of the Japan

18
00:01:23,350 --> 00:01:29,240
Aerospace Exploration Agency (JAXA) are set to launch on Dec. 17 from the Baikonur Cosmodrome

19
00:01:29,240 --> 00:01:30,240
in Kazakhstan.

20
00:01:30,240 --> 00:01:34,690
They'll spend four months aboard the Space Station.

21
00:01:34,690 --> 00:01:39,720
NASA and our commercial cargo partner, SpaceX

are set to launch the next resupply mission

22
00:01:39,720 --> 00:01:44,979
to the International Space Station on Friday,
Dec. 8 from the Cape Canaveral Air Force Station

23
00:01:44,979 --> 00:01:46,150
in Florida.

24
00:01:46,150 --> 00:01:51,740
SpaceX's Dragon spacecraft will deliver
about 4,800 pounds of cargo to the station,

25
00:01:51,740 --> 00:01:57,020
and critical science and research, including
experiments on synthetic bone material and

26
00:01:57,020 --> 00:02:04,600
fiber optics, a space debris sensor, and an
instrument to measure solar energy.

27
00:02:04,600 --> 00:02:09,549
Data from our Chandra X-ray Observatory and
ground-based telescopes have revealed new

28
00:02:09,549 --> 00:02:15,119
details about an intriguing source previously
thought to be part of the Andromeda galaxy

29
00:02:15,119 --> 00:02:18,499
– 2.5 million light years from Earth.

30
00:02:18,499 --> 00:02:24,449
New research shows that the source is actually
a very distant object that sits beyond Andromeda

31
00:02:24,449 --> 00:02:27,629
– about 2.6 billion light years from us.

32

00:02:27,629 --> 00:02:33,430

It likely also contains a pair of giant black holes in close orbit around each other.

33

00:02:33,430 --> 00:02:39,279

The estimated total mass for these two supermassive black holes is about two hundred million times

34

00:02:39,279 --> 00:02:40,659

that of our Sun.

35

00:02:40,659 --> 00:02:43,730

“Houston, Tranquility Base here.

36

00:02:43,730 --> 00:02:46,799

The Eagle has landed.”

37

00:02:46,799 --> 00:02:51,129

Our historic Apollo Mission Control Center at the Johnson Space Center in Houston is

38

00:02:51,129 --> 00:02:53,129

being completely restored.

39

00:02:53,129 --> 00:02:58,779

The restored room will provide a snapshot of how it looked during the Apollo 11 moon

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00:02:58,779 --> 00:03:05,079

landing, with the project set to finish in July 2019 – in time for the 50th anniversary

41

00:03:05,079 --> 00:03:07,730

of Apollo 11.

42

00:03:07,730 --> 00:03:09,829

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