1
00:00:00,080 --> 00:00:03,389
Our Artemis I spacecraft is delivered for
some critical testing …

2
00:00:03,389 --> 00:00:07,049
A big step for our Commercial Crew program
…

3
00:00:07,049 --> 00:00:12,860
And a possible connection between dust storms
and water loss on Mars … a few of the stories

4
00:00:12,860 --> 00:00:15,769
to tell you about – This Week at NASA!

5
00:00:15,769 --> 00:00:21,730
The Orion spacecraft for our Artemis I mission
arrived in Ohio on Nov. 24 aboard our Super

6
00:00:21,730 --> 00:00:23,290
Guppy aircraft.

7
00:00:23,290 --> 00:00:27,920
The spacecraft, which is comprised of the
Orion crew module and European-built service

8
00:00:27,920 --> 00:00:32,470
module, will be tested at our Plum Brook Station
in Sandusky, Ohio.

9
00:00:32,470 --> 00:00:37,700
The four-month test campaign will subject
Orion to extreme environmental conditions

10
00:00:37,700 --> 00:00:42,110
similar to what it will experience during
its three-week mission around the Moon and

11
00:00:42,110 --> 00:00:48,620

back to confirm all components and systems
work properly under in-space conditions.

12
00:00:48,620 --> 00:00:54,740
Our partner Boeing has moved its CST-100 Starliner
spacecraft to the launch pad at Cape Canaveral

13
00:00:54,740 --> 00:00:59,610
Air Force Station in Florida, in preparation
for its journey to the International Space

14
00:00:59,610 --> 00:01:03,460
Station on the company’s uncrewed Orbital
Flight Test.

15
00:01:03,460 --> 00:01:07,800
It’s part of our Commercial Crew Program,
which will again launch astronauts from American

16
00:01:07,800 --> 00:01:08,800
soil.

17
00:01:08,800 --> 00:01:15,260
The flight test, targeted for Dec. 17, will
test Starliner, the Atlas V rocket, ground

18
00:01:15,260 --> 00:01:20,490
systems, and in-orbit docking and landing
operations ahead of crewed missions that will

19
00:01:20,490 --> 00:01:24,810
carry astronauts to and from the space station.

20
00:01:24,810 --> 00:01:30,520
Data gathered by our fleet of spacecraft during
the 2018 global dust storm on Mars is helping

21
00:01:30,520 --> 00:01:35,840
shed new light on a phenomenon called "dust
towers," and their possible role in the disappearance

22
00:01:35,840 --> 00:01:39,140
of water from the Red Planet for billions
of years.

23
00:01:39,140 --> 00:01:44,280
According to two recently published scientific
papers, scientists think that water vapor

24
00:01:44,280 --> 00:01:49,230
on Mars gets trapped in these “dust towers,”
and is then carried upward – as if riding

25
00:01:49,230 --> 00:01:54,940
an elevator to space – where the water vapor
is then lost through the upper atmosphere.

26
00:01:54,940 --> 00:01:59,270
Dust towers are seen throughout the Martian
year, but appear to form in greater numbers

27
00:01:59,270 --> 00:02:01,620
during global storms.

28
00:02:01,620 --> 00:02:06,950
Towers that reach heights of about 50 miles,
as seen during the 2018 global dust storm,

29
00:02:06,950 --> 00:02:10,869
can spread out to about the size of the state
of Nevada.

30
00:02:10,869 --> 00:02:17,200
A new video series celebrates our 20th year
of continuous human presence living off our

31
00:02:17,200 --> 00:02:18,200
home planet.

32

00:02:18,200 --> 00:02:23,950
“Down to Earth” features NASA astronauts
discussing a shift in worldview as a result

33
00:02:23,950 --> 00:02:27,810
of their time in space aboard the International
Space Station.

34
00:02:27,810 --> 00:02:33,340
Since the Nov. 2, 2000 arrival of Bill Shepherd,
Sergei Krikalev, and Yuri Gidzenko -- the

35
00:02:33,340 --> 00:02:37,590
station’s first resident crew, there has
been a continuous stream of humans living

36
00:02:37,590 --> 00:02:40,400
and working aboard the orbital outpost.

37
00:02:40,400 --> 00:02:46,450
For more about the video series go to nasa.gov/station.

38
00:02:46,450 --> 00:02:51,940
Our current space station astronauts – Jessica
Meir, Christina Koch, and Andrew Morgan – recorded

39
00:02:51,940 --> 00:02:56,480
a Thanksgiving message to talk about what
they’re thankful for, and about some items

40
00:02:56,480 --> 00:02:58,870
on the menu for their Turkey Day dinner.

41
00:02:58,870 --> 00:03:05,209
“We’ve got vegetables, of course – green
beans and potatoes that we’ll warm up”

42
00:03:05,209 --> 00:03:08,069
“And of course, uh – smoked turkey in
a pouch.”

43
00:03:08,069 --> 00:03:10,310
“Cornbread dressing – this will be great.

44
00:03:10,310 --> 00:03:13,440
We can maybe stuff it inside the turkey just
to make it like a real stuffing.”

45
00:03:13,440 --> 00:03:18,060
“I want to know who’s going to carve the
turkey once it comes out of that pouch?”

46
00:03:18,060 --> 00:03:22,099
“We also have some mashed potatoes and corn,
so it looks like we have a lot of good options

47
00:03:22,099 --> 00:03:23,300
– it’s going to be quite a feast.”

48
00:03:23,300 --> 00:03:24,920
“Happy Thanksgiving!”

49
00:03:24,920 --> 00:03:28,230
That’s what’s up this week @NASA …