

# TW@N

THIS WEEK @ NASA



1  
00:00:00,567 --> 00:00:03,236

An update on our  
Artemis I Moon mission ...

2  
00:00:03,236 --> 00:00:06,272

A first for our James  
Webb Space Telescope ...

3  
00:00:06,272 --> 00:00:09,876

And a new target launch date  
for the next commercial crew mission ...

4  
00:00:09,876 --> 00:00:13,013

A few of the stories  
to tell you about – This Week at NASA!

5  
00:00:14,447 --> 00:00:16,716

Our uncrewed Artemis I flight test

6  
00:00:16,716 --> 00:00:20,720

is the first integrated test of NASA's  
Orion spacecraft, Space

7  
00:00:20,720 --> 00:00:24,424

Launch System, or SLS,  
the most powerful rocket in the world,

8  
00:00:24,758 --> 00:00:28,495

and the ground systems at the agency's  
Kennedy Space Center in Florida.

9  
00:00:29,029 --> 00:00:33,166

Over the course of about 38 days,  
the mission will see Orion travel

10  
00:00:33,166 --> 00:00:35,168

thousands of miles beyond the Moon,

11  
00:00:35,435 --> 00:00:38,938

farther than any spacecraft  
built for humans has ever flown.

12

00:00:39,439 --> 00:00:43,576

Artemis I is the first in a series  
of increasingly complex missions

13

00:00:43,810 --> 00:00:48,782

that will provide a foundation for human  
deep space exploration and demonstrate

14

00:00:48,782 --> 00:00:53,920

our commitment and capability to extend  
human existence to the Moon and beyond.

15

00:00:54,554 --> 00:00:57,657

For the first time,  
astronomers have used our James

16

00:00:57,657 --> 00:01:00,960

Webb Space Telescope  
to take a direct image of an exoplanet.

17

00:01:01,461 --> 00:01:04,998

The planet, called HIP65426 b,

18

00:01:04,998 --> 00:01:09,536

is a gas giant about five to 10 times  
the mass of Jupiter.

19

00:01:10,036 --> 00:01:12,072

Taking direct images of exoplanets

20

00:01:12,072 --> 00:01:15,675

is challenging because stars  
are so much brighter than planets.

21

00:01:16,109 --> 00:01:19,646

But Webb has an instrument  
called a Coronagraph that blocks out

22

00:01:19,646 --> 00:01:24,484

starlight and makes it possible to capture direct images of certain exoplanets.

23

00:01:24,851 --> 00:01:28,054

This ability could help Webb reveal more information

24

00:01:28,054 --> 00:01:30,323

than ever before about exoplanets.

25

00:01:31,124 --> 00:01:33,560

NASA and SpaceX are now targeting

26

00:01:33,560 --> 00:01:37,764

no earlier than 12:45 p.m. EDT on Oct. 3,

27

00:01:37,764 --> 00:01:39,065

for the launch

28

00:01:39,065 --> 00:01:42,702

of the agency's Crew-5 mission to the International Space Station.

29

00:01:43,203 --> 00:01:46,973

The launch date adjustment was made to accommodate spacecraft traffic

30

00:01:47,107 --> 00:01:49,609

coming to and leaving from the space station.

31

00:01:50,110 --> 00:01:55,115

NASA astronauts Nicole Mann and Josh Cassada, Japan Aerospace Exploration

32

00:01:55,115 --> 00:02:00,153

Agency astronaut Koichi Wakata,

and Roscosmos cosmonaut Anna Kikina

33  
00:02:00,386 --> 00:02:05,592  
will launch aboard a SpaceX Crew Dragon  
spacecraft from our Kennedy Space Center.

34  
00:02:05,592 --> 00:02:10,697  
NASA, the French space agency,  
CNES, and SpaceX are now targeting Dec.

35  
00:02:10,697 --> 00:02:15,802  
5 for the launch of the Surface Water  
and Ocean Topography, or SWAT, satellite.

36  
00:02:16,336 --> 00:02:19,472  
SWOT is the first satellite mission  
that will survey nearly

37  
00:02:19,472 --> 00:02:22,942  
all water on Earth,  
at an unprecedented level of detail.

38  
00:02:23,510 --> 00:02:27,247  
The mission will help inform water equity  
and water management decisions,

39  
00:02:27,480 --> 00:02:31,017  
provide new insights into Earth's water  
and energy cycle,

40  
00:02:31,251 --> 00:02:35,421  
and help prepare communities  
for rising seas and changing coastlines

41  
00:02:35,421 --> 00:02:37,757  
resulting from climate change.

42  
00:02:37,757 --> 00:02:40,460  
Engineers have fixed an issue  
that was affecting

43

00:02:40,460 --> 00:02:43,163

data from NASA's Voyager 1 spacecraft.

44

00:02:43,563 --> 00:02:49,302

They discovered that Voyager 1's attitude articulation and control system, or AACCS,

45

00:02:49,302 --> 00:02:53,973

a critical system aboard the probe, had been sending garbled telemetry data

46

00:02:53,973 --> 00:02:57,810

through an onboard computer that stopped working correctly years ago.

47

00:02:58,344 --> 00:03:01,080

Consequently, that computer corrupted the information.

48

00:03:01,548 --> 00:03:05,685

Voyager 1 and Voyager 2 are celebrating an anniversary.

49

00:03:06,019 --> 00:03:09,889

The twin probes, which were launched weeks apart in late August and early

50

00:03:09,889 --> 00:03:15,695

September of 1977, have been exploring our solar system for 45 years.

51

00:03:16,462 --> 00:03:18,431

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