

# TW@N

THIS WEEK @ NASA



1  
00:00:00,100 --> 00:00:03,303  
Commemorating an historic event  
for human spaceflight ...

2  
00:00:03,303 --> 00:00:05,372  
“We choose to go to the moon ...”

3  
00:00:05,372 --> 00:00:07,774  
An update on plans for Artemis I ...

4  
00:00:07,774 --> 00:00:11,211  
And what our Perseverance  
rover is up to on Mars ...

5  
00:00:11,211 --> 00:00:14,581  
a few of the stories  
to tell you about – This Week at NASA!

6  
00:00:15,915 --> 00:00:18,818  
On Sept. 12, NASA and Rice University

7  
00:00:18,818 --> 00:00:22,022  
commemorated  
the 60th anniversary of John F. Kennedy’s

8  
00:00:22,022 --> 00:00:24,824  
historic speech at Rice in 1962.

9  
00:00:25,358 --> 00:00:28,461  
In that speech, the President recommitted  
the nation to the goal

10  
00:00:28,461 --> 00:00:33,833  
he had proposed to Congress in May 1961  
of landing astronauts on the Moon

11  
00:00:33,833 --> 00:00:37,404  
before the end of the decade  
and returning them safely to Earth.

12  
00:00:37,704 --> 00:00:41,841  
As NASA Administrator Bill Nelson  
pointed out during the keynote address

13  
00:00:41,841 --> 00:00:43,376  
at the event, the President's

14  
00:00:43,376 --> 00:00:47,180  
speech helped advance our leadership  
in human spaceflight back then,

15  
00:00:47,180 --> 00:00:51,584  
and it continues to inspire us today  
as we work to send humans

16  
00:00:51,584 --> 00:00:55,989  
back to the Moon and, eventually to Mars  
as part of our Artemis program.

17  
00:00:56,289 --> 00:01:00,293  
60 years ago,  
President Kennedy put wind in our sails

18  
00:01:00,293 --> 00:01:06,599  
on the new sea of space exploration  
and that mission is never-ending.

19  
00:01:06,599 --> 00:01:09,269  
It's a mission about science

20  
00:01:09,636 --> 00:01:14,908  
and the advancement of the human spirit  
to expand what is possible.

21  
00:01:16,176 --> 00:01:19,913  
A cryogenic demonstration test  
for our uncrewed Artemis I

22

00:01:19,913 --> 00:01:24,184  
flight test is now targeted  
for no earlier than Wednesday, Sept. 21.

23  
00:01:24,717 --> 00:01:28,121  
Meanwhile,  
the agency has requested a Sept. 27

24  
00:01:28,121 --> 00:01:31,991  
launch opportunity for the Space  
Launch System, or SLS rocket and

25  
00:01:31,991 --> 00:01:35,562  
Orion spacecraft, with a potential backup  
opportunity of

26  
00:01:35,562 --> 00:01:37,997  
Oct. 2 under review.

27  
00:01:37,997 --> 00:01:42,669  
During the cryogenic demonstration, teams  
will load super cold liquid oxygen

28  
00:01:42,669 --> 00:01:47,207  
and liquid hydrogen into the core stage  
and interim cryogenic propulsion

29  
00:01:47,207 --> 00:01:51,578  
stage of the SLS to confirm  
that a hydrogen leak has been fixed.

30  
00:01:52,078 --> 00:01:56,349  
Artemis I is the first integrated  
flight test with the SLS and Orion.

31  
00:01:56,683 --> 00:01:59,552  
The mission will send Orion  
beyond the Moon and return

32  
00:01:59,552 --> 00:02:01,421

the spacecraft back to Earth.

33

00:02:02,689 --> 00:02:05,458

NASA's  
Perseverance rover is collecting samples

34

00:02:05,458 --> 00:02:09,195

and analyzing the composition of rocks  
at an ancient river delta

35

00:02:09,195 --> 00:02:14,667

located in the Red Planet's Jezero Crater,  
an area long considered by scientists

36

00:02:14,868 --> 00:02:19,739

to be a top prospect for finding signs  
of possible ancient microscopic life.

37

00:02:20,240 --> 00:02:25,411

In its analysis of a sample from a rock  
named Wildcat Ridge, the rover's SHERLOC

38

00:02:25,411 --> 00:02:29,916

instrument registered the most abundant  
organic detections on the mission to date.

39

00:02:30,483 --> 00:02:32,886

Further conclusions  
about what is contained in this

40

00:02:32,886 --> 00:02:36,789

sample will have to wait until it's  
returned to Earth for in-depth study

41

00:02:37,056 --> 00:02:39,792

as part of the Mars  
Sample Return campaign,

42

00:02:40,026 --> 00:02:44,597

an international collaboration

led by NASA and the European Space Agency.

43

00:02:46,332 --> 00:02:47,834

Dr. Thomas Zurbuchen,

44

00:02:47,834 --> 00:02:51,104

the associate administrator

for our Science Mission Directorate,

45

00:02:51,104 --> 00:02:54,674

is planning to leave the agency

at the end of 2022.

46

00:02:55,208 --> 00:02:58,278

His six years at NASA

have included some of the agency's

47

00:02:58,278 --> 00:03:03,049

most inspirational moments, from sending

the first spacecraft to touch the Sun,

48

00:03:03,316 --> 00:03:07,387

to launching and sharing the first images

from the James Webb Space Telescope,

49

00:03:07,654 --> 00:03:12,225

to landing the Perseverance rover on Mars

along with the Ingenuity helicopter

50

00:03:12,392 --> 00:03:15,828

that went on to make the first powered,

controlled flight on another planet.

51

00:03:16,329 --> 00:03:19,933

The agency is conducting a nationwide

search and open competition

52

00:03:19,933 --> 00:03:22,068

for a new associate administrator.

53  
00:03:23,503 --> 00:03:28,107  
The team at our Armstrong Flight Research Center recently completed a flight series

54  
00:03:28,107 --> 00:03:32,845  
called CarpetDIEM which tested state-of-the-art ground recording stations

55  
00:03:32,845 --> 00:03:37,083  
designed to hear and record the unique sounds that will be generated

56  
00:03:37,083 --> 00:03:41,354  
during future supersonic flights by NASA's X-59 aircraft.

57  
00:03:41,955 --> 00:03:44,857  
The X-59's goal is to reduce the intensity

58  
00:03:44,857 --> 00:03:47,894  
of sonic booms,  
which are heard when an aircraft flies

59  
00:03:47,894 --> 00:03:51,364  
faster than the speed of sound,  
to a quiet sonic "thump".

60  
00:03:51,864 --> 00:03:55,802  
When the X-59 flies, NASA  
will record the sonic thumps

61  
00:03:55,802 --> 00:03:59,672  
as part of the effort  
to validate its quiet supersonic design.