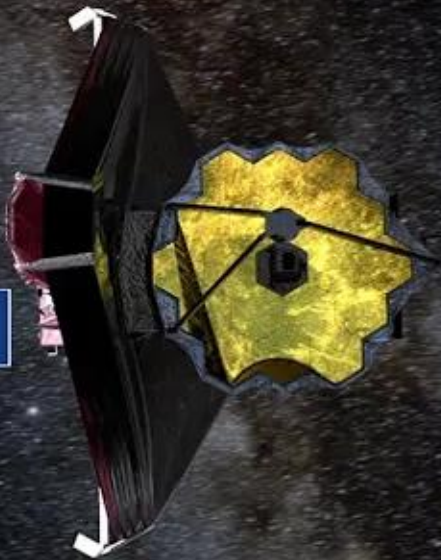


TW@N

THIS WEEK @ NASA



1
00:00:00,367 --> 00:00:03,603
A week of deployments for the James
Webb Space Telescope...

2
00:00:03,603 --> 00:00:05,839
Another remarkable achievement
for Hubble...

3
00:00:05,839 --> 00:00:08,108
And helping to improve launch safety...

4
00:00:08,341 --> 00:00:11,311
A few of the stories
to tell you about - This Week at NASA!

5
00:00:12,812 --> 00:00:15,949
The team for our James
Webb Space Telescope spent the week

6
00:00:15,949 --> 00:00:19,519
deploying various components
on the next-generation space observatory.

7
00:00:19,519 --> 00:00:21,421
On Jan. 4th,

8
00:00:21,421 --> 00:00:25,592
they finished deploying Webb's 70-foot
sunshield, which protects the telescope

9
00:00:25,592 --> 00:00:29,162
from the light and heat
emitted by the Sun, Earth, and Moon.

10
00:00:29,496 --> 00:00:32,265
The sunshield provides
a level of protection that would be on

11
00:00:32,265 --> 00:00:35,969

the order of more than SPF 1 million
if it were sunscreen lotion.

12

00:00:36,302 --> 00:00:39,939

The next day the team began operations
to deploy the Secondary Mirror

13

00:00:39,939 --> 00:00:41,274

Support Structure.

14

00:00:41,274 --> 00:00:44,644

The secondary mirror plays
an important role in reflecting the light

15

00:00:44,644 --> 00:00:45,845

from the primary mirror

16

00:00:45,845 --> 00:00:49,049

to the science instruments
that sit behind the primary mirror.

17

00:00:49,516 --> 00:00:52,352

There is another 5 1/2 months
of setup activities

18

00:00:52,352 --> 00:00:55,088

before Webb will be ready to deliver
its first images.

19

00:00:55,655 --> 00:01:00,393

Our "Where is Webb?"
site at [go.nasa.gov/whereiswebb](https://www.nasa.gov/whereiswebb) features

20

00:01:00,393 --> 00:01:04,164

an infographic that shows
the status of Webb as it makes its way

21

00:01:04,164 --> 00:01:07,767

to its final science destination
about one million miles from Earth.

22

00:01:09,969 --> 00:01:11,905

Our Hubble Space Telescope rang in

23

00:01:11,905 --> 00:01:14,574

the new year by officially
passing the one-billion

24

00:01:14,574 --> 00:01:17,343

second mark of its remarkable
mission in space.

25

00:01:17,911 --> 00:01:22,182

Hubble was deployed and began
operating on April 25, 1990,

26

00:01:22,182 --> 00:01:25,452

more than 31 years
or one billion seconds ago.

27

00:01:25,952 --> 00:01:29,355

Hubble's first one billion seconds
included five astronaut

28

00:01:29,355 --> 00:01:33,326

servicing missions to the telescope,
and more than 1.5 million

29

00:01:33,326 --> 00:01:35,695

scientific observations and counting!

30

00:01:37,097 --> 00:01:40,800

Our Ames Research Center
in California is using cutting-edge

31

00:01:40,800 --> 00:01:44,737

computational fluid dynamics
software and supercomputers

32

00:01:45,004 --> 00:01:49,709
to better understand how vibration levels
during various launch abort scenarios

33
00:01:49,943 --> 00:01:53,079
might affect the Orion spacecraft's
launch abort system.

34
00:01:53,713 --> 00:01:57,450
The colors in the visualizations
indicate different degrees of pressure.

35
00:01:57,784 --> 00:02:01,087
The launch abort system
is designed to safely pull Orion

36
00:02:01,087 --> 00:02:05,525
and astronauts inside the spacecraft
away from the Space Launch System rocket

37
00:02:05,525 --> 00:02:09,162
in a split-second
if an emergency happens during launch.

38
00:02:10,296 --> 00:02:13,833
In response to an inquiry from SpaceX,
NASA is preparing

39
00:02:13,833 --> 00:02:18,004
to conduct environmental assessments
to develop Launch Complex 49,

40
00:02:18,271 --> 00:02:22,041
a proposed new launch site
at our Kennedy Space Center in Florida.

41
00:02:22,509 --> 00:02:25,311
The 175-acre site, located north

42
00:02:25,311 --> 00:02:28,515

of Launch Complex 39B,
would support the launch

43

00:02:28,515 --> 00:02:32,485
and landing of the company's
Starship and Super Heavy launch vehicle.

44

00:02:32,485 --> 00:02:37,323
NASA and SpaceX are moving forward
with the initial environmental analysis

45

00:02:37,323 --> 00:02:40,360
before concluding a potential agreement
to develop the property.

46

00:02:41,294 --> 00:02:45,398
Recent upgrades to the flight
simulator for NASA's X-59 Quiet

47

00:02:45,398 --> 00:02:48,635
SuperSonic Technology
aircraft are helping test pilots

48

00:02:48,635 --> 00:02:51,504
at our Armstrong Flight
Research Center in California

49

00:02:51,804 --> 00:02:54,941
train in the most robust, realistic system
possible.

50

00:02:55,475 --> 00:02:59,445
The upgrades accurately replicate
the flight controls, instrumentation,

51

00:02:59,445 --> 00:03:03,716
avionics, and cockpit of the X-plane,
so that pilots can effectively

52

00:03:03,716 --> 00:03:07,086

practice flying in various situations
and scenarios.

53

00:03:07,754 --> 00:03:10,590

The X-59 is designed
to reduce the loudness

54

00:03:10,590 --> 00:03:13,493

of sonic booms
that can occur during supersonic flight.

55

00:03:13,893 --> 00:03:15,895

Research from the project could help

56

00:03:15,895 --> 00:03:19,098

open the future to commercial supersonic
flights over land.

57

00:03:19,699 --> 00:03:21,434

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