
TW@N
THIS WEEK @ NASA

1
00:00:00,309 --> 00:00:02,651
A new Earth-observing mission launches to
space …

2
00:00:02,651 --> 00:00:05,230
A move to make room aboard the space station
…

3
00:00:05,230 --> 00:00:09,920
And some valuable space station science returns
to Earth … a few of the stories to tell

4
00:00:09,920 --> 00:00:12,520
you about – This Week at NASA!

5
00:00:12,520 --> 00:00:20,169
“And liftoff. Liftoff of an Altas V rocket
and Landsat 9!”

6
00:00:20,169 --> 00:00:26,619
On Sept. 27, our Landsat 9 satellite launched
from Vandenberg Space Force Base in California.

7
00:00:26,619 --> 00:00:30,739
This joint mission with the U.S. Geological
Survey (USGS) will capture images of Earth

8
00:00:30,739 --> 00:00:36,520
from space that will be added to the nearly
50 years of freely available Landsat data

9
00:00:36,520 --> 00:00:42,270
researchers and officials use to monitor the
health of Earth and manage essential resources.

10
00:00:42,270 --> 00:00:47,620
Learn more at nasa.gov/landsat9.

11
00:00:47,620 --> 00:00:52,121

On Sept. 28, aboard the International Space Station, three crew members, including our

12
00:00:52,121 --> 00:00:57,980
Mark Vande Hei, relocated their Soyuz spacecraft from the station’s Rassvet module to the

13
00:00:57,980 --> 00:01:02,870
brand new “Nauka” Multipurpose Laboratory Module. It is the first time a spacecraft

14
00:01:02,870 --> 00:01:08,400
has docked to Nauka. The move also frees up Rassvet for the Oct. 5 arrival of another

15
00:01:08,400 --> 00:01:10,439
Soyuz spacecraft.

16
00:01:10,439 --> 00:01:17,549
A SpaceX Dragon cargo resupply spacecraft left the space station on Sept. 30 to return

17
00:01:17,549 --> 00:01:23,490
more than 4,600 pounds of supplies and valuable science to Earth. The experiments include

18
00:01:23,490 --> 00:01:28,759
research on neurodegenerative diseases, such as Alzheimer’s, a study that could help

19
00:01:28,759 --> 00:01:34,720
treat muscle atrophy in elderly people on Earth, and more. This was SpaceX’s 23rd

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00:01:34,720 --> 00:01:39,710
Commercial Resupply Services mission for NASA.

21
00:01:39,710 --> 00:01:45,820
On Sept. 30, engineers at our Stennis Space Center conducted a hot fire test of an RS-25

22
00:01:45,820 --> 00:01:50,969
engine on the center’s A-1 test stand. This
was the seventh and final planned test of

23
00:01:50,969 --> 00:01:55,720
the current test series to support development
and production of the engine for our Space

24
00:01:55,720 --> 00:02:01,990
Launch System (SLS) rocket. Four RS-25s will
help power the SLS on future Moon missions,

25
00:02:01,990 --> 00:02:09,989
including Artemis I targeted for later this
year. For more details, visit: nasa.gov/SLS.

26
00:02:09,989 --> 00:02:14,659
For the next few weeks, we will be mostly
incommunicado with our fleet of spacecraft

27
00:02:14,659 --> 00:02:19,590
on and around Mars. This communications “time
out” happens about every two years during

28
00:02:19,590 --> 00:02:24,440
Mars solar conjunction – when Earth and
Mars are on opposite sides of the Sun, and

29
00:02:24,440 --> 00:02:28,629
can’t “see” each other. Sending radio
signal commands to spacecraft during this

30
00:02:28,629 --> 00:02:34,340
time is risky, because solar activity can
corrupt those commands and cause unexpected

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00:02:34,340 --> 00:02:37,480
behavior.

32
00:02:37,480 --> 00:02:41,959
Researchers using data from our Hubble Space Telescope have determined that the wind speeds

33
00:02:41,959 --> 00:02:47,939
just inside the boundary of Jupiter's Great Red Spot are accelerating. Their research

34
00:02:47,939 --> 00:02:53,019
shows that the average wind speed in this region of the storm increased by up to 8 percent

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00:02:53,019 --> 00:02:59,650
from 2009 to 2020. The massive storm spins counterclockwise at more than 400 miles per

36
00:02:59,650 --> 00:03:04,800
hour – and the vortex is bigger than Earth itself.

37
00:03:04,800 --> 00:03:10,650
NASA has transferred findings from the agency's Airspace Technology Demonstration 2 or (ATD-2)

38
00:03:10,650 --> 00:03:16,069
project to the Federal Aviation Administration (FAA) for nationwide implementation. Over

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00:03:16,069 --> 00:03:21,329
the past six years, the project demonstrated this suite of airport operations tools at

40
00:03:21,329 --> 00:03:27,140
several U.S. airports to save fuel, reduce carbon emissions, and increase information

41
00:03:27,140 --> 00:03:34,650
sharing between the FAA and industry. Find out more at nasa.gov/aeronautics.

42
00:03:34,650 --> 00:03:40,310
On Sept. 30, our Armstrong Flight Research Center marked its 75th year of innovation,

43
00:03:40,310 --> 00:03:45,359
milestones, and discoveries. In its early history, the center helped achieve the first

44
00:03:45,359 --> 00:03:51,049
supersonic flight. Today, Armstrong continues its groundbreaking aeronautics research, as

45
00:03:51,049 --> 00:03:56,709
well as work in space transportation and in many Earth and space science missions. Check

46
00:03:56,709 --> 00:04:03,310
out go.nasa.gov/armstrong75 for more about Armstrong’s 75th anniversary.