

A photograph of an astronaut in a white spacesuit working on the exterior of the International Space Station. The astronaut is positioned in the upper center, with their body angled towards the right. The background shows the complex structure of the station, including various panels, cables, and equipment, all set against the dark void of space. The lighting is bright, highlighting the metallic surfaces and the astronaut's suit.

TW@N

THIS WEEK @ NASA

1

00:00:00,320 --> 00:00:05,120

A new source of power for the space station ...

Targeting a second Green Run hot fire test ...

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2

00:00:05,120 --> 00:00:09,280

And another major boost for our Space\h

Launch System rocket ... a few of the\h\h

3

00:00:09,280 --> 00:00:15,440

stories to tell you about – This Week at NASA!

On Feb. 1, our Mike Hopkins and Victor Glover\h\h

4

00:00:15,440 --> 00:00:20,640

completed a 5-hour-20 minute spacewalk outside\h

the International Space Station to replace\h\h

5

00:00:20,640 --> 00:00:26,240

batteries for the solar arrays and upgrade some\h

of the station's external cameras. The spacewalk\h\h

6

00:00:26,240 --> 00:00:31,440

capped off a four-year effort to replace aging\h

nickel-hydrogen batteries with new lithium-ion\h\h

7

00:00:31,440 --> 00:00:36,960

batteries. Two additional spacewalks planned for\h

the near future will focus on work needed for the\h\h

8

00:00:36,960 --> 00:00:41,840

installation of new solar arrays, which will\h

increase the station's existing power supply.

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9

00:00:42,560 --> 00:00:48,160

NASA is targeting the week of Feb. 21 for a\h

second Green Run hot fire test of the Space Launch\h\h

10

00:00:48,160 --> 00:00:54,320

System or SLS rocket's core stage, using the\h

B-2 Test Stand at our Stennis Space Center.\h\h

11
00:00:54,320 --> 00:00:58,960
The exact date for the test will be set\h
following a test readiness review. The hot\h\h

12
00:00:58,960 --> 00:01:04,000
fire is the final in a series of eight tests\h
to ensure the core stage is ready for Artemis\h\h

13
00:01:04,000 --> 00:01:09,520
I – the first uncrewed mission around the Moon\h
and back with the SLS and our Orion spacecraft.
\h

14
00:01:10,160 --> 00:01:14,880
Meanwhile, engineers have been busy moving\h
the SLS's twin solid rocket boosters onto\h\h

15
00:01:14,880 --> 00:01:19,600
the mobile launcher at our Kennedy Space Center.\h
The boosters will help power the rocket during the\h\h

16
00:01:19,600 --> 00:01:24,880
launch phase of Artemis I. Following the final\h
Green Run test at Stennis, the core stage will\h\h

17
00:01:24,880 --> 00:01:30,080
be shipped to Kennedy and integrated with the\h
boosters, the Orion spacecraft and other hardware\h\h

18
00:01:30,080 --> 00:01:35,600
in preparation for the Artemis I mission.
NASA and SpaceX are targeting a no earlier\h\h

19
00:01:35,600 --> 00:01:41,040
than April 20 launch for Crew-2 – the second\h
crew rotation mission to the International Space\h\h

20
00:01:41,040 --> 00:01:46,800

Station on an American rocket and spacecraft from the United States. The crew includes our Shane

21

00:01:46,800 --> 00:01:53,120

Kimbrough and Megan McArthur, as well as the Japan Aerospace Exploration Agency's Akihiko Hoshide,

22

00:01:53,120 --> 00:01:57,840

and Thomas Pesquet of the European Space Agency. This will be the first mission to

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00:01:57,840 --> 00:02:02,080

fly two international partner crew members as part of our Commercial Crew Program.

24

00:02:02,800 --> 00:02:07,040

Our Psyche mission is moving into the final phase of operations before its scheduled

25

00:02:07,040 --> 00:02:12,720

launch in August 2022. The mission will study a metal-rich asteroid orbiting the Sun in the

26

00:02:12,720 --> 00:02:17,920

main asteroid belt between Mars and Jupiter. It's believed this asteroid could be the heart

27

00:02:17,920 --> 00:02:23,840

of an early planet that lost its outer layers. Exploring the asteroid could lend valuable insight

28

00:02:23,840 --> 00:02:29,280

into how Earth and other planets formed. Our Mars 2020 Perseverance rover is scheduled

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00:02:29,280 --> 00:02:35,600

to land on the Red Planet Feb. 18. But technology that will land with it is already paying off on

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00:02:35,600 --> 00:02:41,440

Earth. For instance, technology used by the drill\h
the rover will use to collect samples of Martian\h\h

31

00:02:41,440 --> 00:02:47,440

soil is available to help geologists study our\h
home planet. Space-grade circuitry within the\h\h

32

00:02:47,440 --> 00:02:53,360

lander's camera system has led to innovations in\h
the manufacturing of printed circuit boards. And\h\h

33

00:02:53,360 --> 00:02:59,040

a laser used to identify organics and minerals\h
could revolutionize how we treat infections,\h\h

34

00:02:59,040 --> 00:03:04,640

clean wastewater, and more. For more about how\h
NASA brings space technology down to Earth,\h\h

35

00:03:04,640 --> 00:03:10,640

visit: spinoff.nasa.gov. For more on\h
Perseverance check out: mars.nasa.gov/mars2020.

36

00:03:13,600 --> 00:03:19,360

NASA is remembering Millie Hughes-Fulford, a\h
research scientist who became the first female\h\h

37

00:03:19,360 --> 00:03:28,320

payload specialist selected by NASA in June 1983.\h
In 1991 she flew aboard space shuttle Columbia\h\h

38

00:03:28,320 --> 00:03:33,520

on STS-40, the first Spacelab mission\h
dedicated to biomedical studies.\h\h

39

00:03:34,320 --> 00:03:39,040

That 9-day mission – the first NASA mission\h
with three women on its crew – brought\h\h

40

00:03:39,040 --> 00:03:46,240

back more medical data than any previous NASA's mission. Millie Hughes-Fulford was 75 years old.