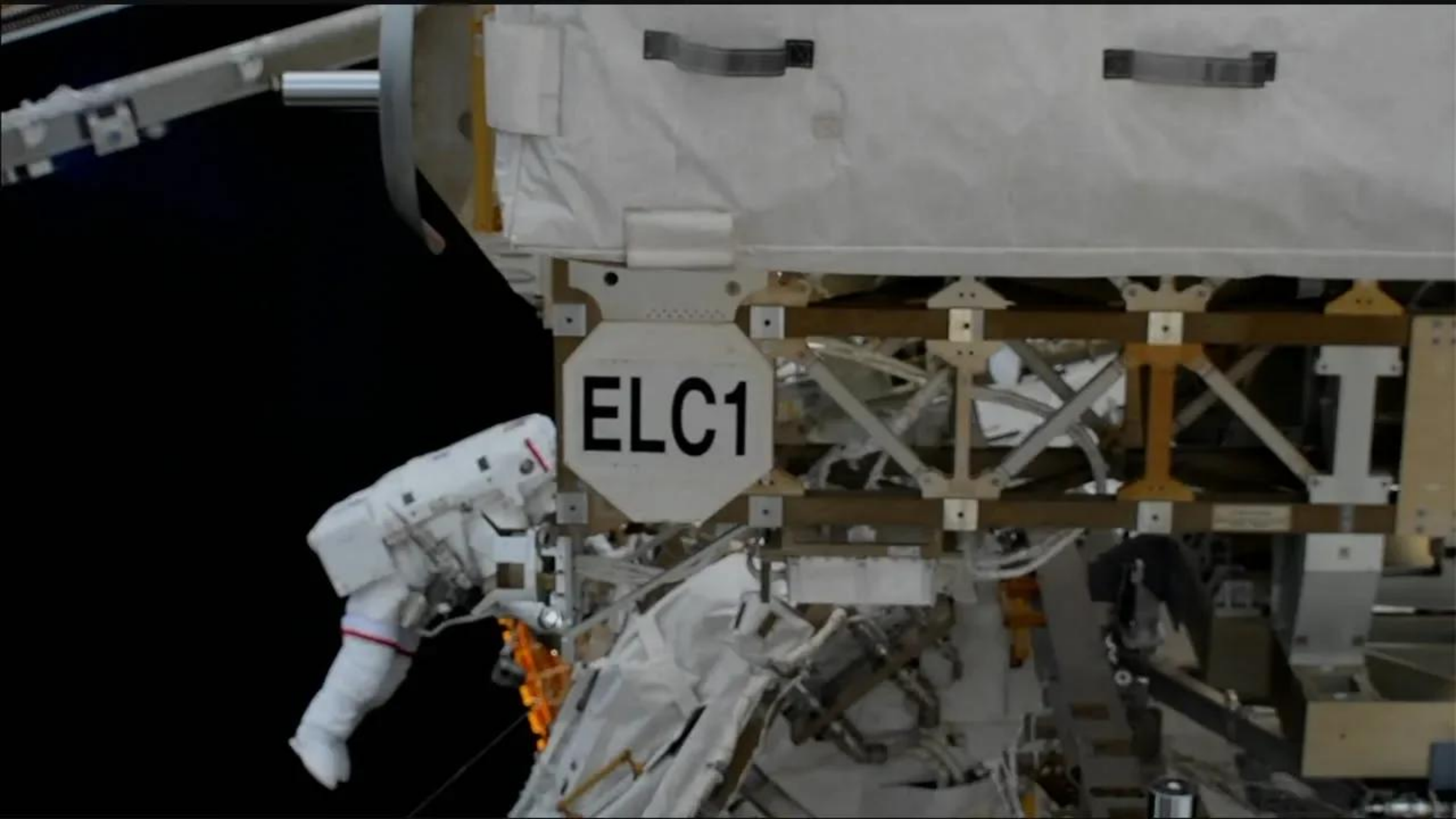
ELC1

1
00:00:00,179 --> 00:00:03,510
A spacewalk outside the space station …

2
00:00:03,510 --> 00:00:07,059
Testing a motor critical to the safety of
Orion …

3
00:00:07,059 --> 00:00:12,190
And some surprising findings about asteroid
Bennu … a few of the stories to tell you

4
00:00:12,190 --> 00:00:15,330
about – This Week at NASA!

5
00:00:15,330 --> 00:00:20,530
On March 22, our Anne McClain and Nick Hague
conducted a spacewalk outside the International

6
00:00:20,530 --> 00:00:25,310
Space Station – the first of three planned
spacewalks in the coming weeks to upgrade

7
00:00:25,310 --> 00:00:27,340
the station’s power system.

8
00:00:27,340 --> 00:00:32,140
The first two excursions will complete the
replacement of nickel-hydrogen batteries with

9
00:00:32,140 --> 00:00:35,050
new, more powerful lithium-ion batteries.

10
00:00:35,050 --> 00:00:39,910
McClain and Christina Koch are scheduled to
continue the series with the first all-female

11
00:00:39,910 --> 00:00:41,890
spacewalk on March 29.

12
00:00:41,890 --> 00:00:48,740
Canada’s David Saint-Jacques will join Hague
for another spacewalk on April 8.

13
00:00:48,740 --> 00:00:53,560
Engineers conducted a static hot-fire test
of the motor on our Orion spacecraft’s Launch

14
00:00:53,560 --> 00:00:59,360
Abort System, on March 20 at a Northrop Grumman
facility in Elkton, Maryland.

15
00:00:59,360 --> 00:01:04,140
The 30-second test was the first in a series
of three, aimed at qualifying the motor for

16
00:01:04,140 --> 00:01:05,720
human spaceflight.

17
00:01:05,720 --> 00:01:11,140
The motor is designed to steer Orion and its
crew away to safety in the unlikely event

18
00:01:11,140 --> 00:01:14,659
of an emergency during launch.

19
00:01:14,659 --> 00:01:21,080
Our OSIRIS-REx spacecraft, which will return
a sample of near-Earth asteroid Bennu in 2023,

20
00:01:21,080 --> 00:01:26,170
has seen particle plumes erupting from Bennu
– the first-ever close-up observations of

21
00:01:26,170 --> 00:01:29,450
particle plumes erupting from an asteroid’s
surface.

22
00:01:29,450 --> 00:01:34,620

The spacecraft has also discovered Bennu’s surface is more rugged than expected – challenging

23
00:01:34,620 --> 00:01:39,820
the mission team to alter its flight and sample collection plans, due to the rough terrain.

24
00:01:39,820 --> 00:01:44,630
The OSIRIS-REx mission could help us learn more about the origins of our solar system,

25
00:01:44,630 --> 00:01:50,290
and improve our understanding of asteroids that could impact Earth.

26
00:01:50,290 --> 00:01:56,579
Astronomers have found a pulsar about 6,500 light-years away in the constellation Cassiopeia

27
00:01:56,579 --> 00:02:02,450
that is blazing through space at nearly 2.5 million miles an hour — so fast it could

28
00:02:02,450 --> 00:02:06,899
travel the distance between Earth and the Moon in just 6 minutes.

29
00:02:06,899 --> 00:02:14,469
The pulsar, dubbed PSR J0002, was discovered using our Fermi Gamma-ray Space Telescope

30
00:02:14,469 --> 00:02:19,590
and the National Science Foundation's Karl G. Jansky Very Large Array.

31
00:02:19,590 --> 00:02:26,000
Pulsars are superdense, rapidly spinning neutron stars left behind when a massive star explodes.

32
00:02:26,000 --> 00:02:31,709

This one spins 8.7 times a second, producing
a pulse of gamma rays with each rotation.

33
00:02:31,709 --> 00:02:35,409
That’s what’s up this week @NASA …