1
00:00:00,200 --> 00:00:03,899
A safe conclusion to the latest long-duration
spaceflight …

2
00:00:03,899 --> 00:00:08,240
Calling on industry to help us accelerate
our return to the Moon …

3
00:00:08,240 --> 00:00:13,150
And practice makes perfect – before the
real thing … a few of the stories to tell

4
00:00:13,150 --> 00:00:16,120
you about – This Week at NASA!

5
00:00:16,120 --> 00:00:20,020
The International Space Station's Expedition
60 crew – including our Nick Hague – is

6
00:00:20,020 --> 00:00:24,460
back on Earth, after landing safely in Kazakhstan
Oct. 3.

7
00:00:24,460 --> 00:00:29,490
The landing capped off a 203-day mission on
the orbital complex for Hague and Alexey Ovchinin

8
00:00:29,490 --> 00:00:35,120
of Roscosmos, while Visiting Astronaut Hazzaa
Ali Almansoori of the United Arab Emirates

9
00:00:35,120 --> 00:00:37,080
spent 8 days on the station.

10
00:00:37,080 --> 00:00:41,900
Meanwhile, our Christina Koch, Andrew Morgan,
Jessica Meir, and others still aboard the

11
00:00:41,900 --> 00:00:47,260

station plan to conduct what may become a record pace of 10 spacewalks during the next

12
00:00:47,260 --> 00:00:48,510
three months.

13
00:00:48,510 --> 00:00:53,790
The series of spacewalks, which could kick off as soon as Oct. 6 will be used to replace

14
00:00:53,790 --> 00:00:59,380
some batteries for the solar arrays and to refurbish a scientific instrument that explores

15
00:00:59,380 --> 00:01:01,900
the fundamental nature of the universe.

16
00:01:01,900 --> 00:01:08,710
The Sept. 30 call out to American companies for proposals to design and develop human

17
00:01:08,710 --> 00:01:14,479
lunar landing systems for our Artemis program is expected to be our final solicitation for

18
00:01:14,479 --> 00:01:19,479
these systems that will send the first woman and next man to the surface of the Moon by

19
00:01:19,479 --> 00:01:21,119
2024.

20
00:01:21,119 --> 00:01:26,609
Based on industry feedback to earlier draft solicitations, NASA adjusted some requirements

21
00:01:26,609 --> 00:01:31,899
to help fast-track our return to the Moon, while preserving all the agency’s human

22
00:01:31,899 --> 00:01:33,009
safety measures.

23
00:01:33,009 --> 00:01:36,320
We expect to make multiple awards from the
solicitation.

24
00:01:36,320 --> 00:01:40,700
The first company to complete its lander will
carry astronauts to the surface of the Moon

25
00:01:40,700 --> 00:01:46,469
in 2024, and the second company will land
in 2025.

26
00:01:46,469 --> 00:01:50,810
We are currently designing and developing
a new spacesuit system, called the Exploration

27
00:01:50,810 --> 00:01:57,029
Extravehicular Mobility Unit or xEMU, for
use during Artemis missions at the Moon and

28
00:01:57,029 --> 00:02:00,169
adaptable for missions to other destinations.

29
00:02:00,169 --> 00:02:05,090
To that end, we've sent out a request for
information seeking input from industry on

30
00:02:05,090 --> 00:02:10,099
a strategy for production of lunar spacesuits
that will support a steady stream of Artemis

31
00:02:10,099 --> 00:02:14,579
missions over the next decade and beyond.

32
00:02:14,579 --> 00:02:19,730
The core stage pathfinder for our Space Launch

System or SLS rocket was delivered recently

33
00:02:19,730 --> 00:02:23,870
by our Pegasus barge to Kennedy Space Center
in Florida.

34
00:02:23,870 --> 00:02:28,819
The core stage pathfinder is one of three
full-scale mockups of SLS flight hardware

35
00:02:28,819 --> 00:02:34,810
that will be used to train crews on best practices
for moving, handling and lifting the various

36
00:02:34,810 --> 00:02:40,360
parts of the rocket in preparation for Artemis
I, an uncrewed flight test that is the first

37
00:02:40,360 --> 00:02:45,230
lunar mission of SLS and our Orion spacecraft.

38
00:02:45,230 --> 00:02:50,840
Data from our Cassini mission to Saturn – which
ended in Sept. 2017 – have discovered molecules

39
00:02:50,840 --> 00:02:56,069
of organic compounds on Saturn's moon Enceladus
that are similar to compounds involved in

40
00:02:56,069 --> 00:03:00,790
the production of amino acids – the building
blocks of life here on Earth.

41
00:03:00,790 --> 00:03:05,700
The newly-discovered molecules of nitrogen
and oxygen-bearing compounds were detected

42
00:03:05,700 --> 00:03:15,190
on material ejected from the moon’s core
into space by powerful hydrothermal vents.