
SPACEX

1
00:00:00,320 --> 00:00:02,160
Critical cargo on the next space\h\h

2
00:00:02,160 --> 00:00:05,200
station resupply mission …
NASA is at a virtual Earth\h\h

3
00:00:05,200 --> 00:00:08,400
and space science meeting …
And a key piece of hardware\h\h

4
00:00:08,400 --> 00:00:13,440
installed on the Orion spacecraft … a few of the\h
stories to tell you about – This Week at NASA!
\h

5
00:00:14,560 --> 00:00:19,680
NASA partner SpaceX’s 21st commercial resupply\h
services mission to the International Space\h\h

6
00:00:19,680 --> 00:00:25,600
Station is using the company’s upgraded Dragon\h
spacecraft to deliver supplies and payloads,\h\h

7
00:00:25,600 --> 00:00:29,040
including the first commercially\h
funded space station airlock,\h\h

8
00:00:29,040 --> 00:00:33,840
and critical materials for the multitude\h
of science and research investigations\h\h

9
00:00:33,840 --> 00:00:37,840
that will be conducted by the\h
Expedition 64 and 65 crews.

10
00:00:39,040 --> 00:00:43,040
At this year’s virtual meeting of\h
the American Geophysical Union,\h\h

11
00:00:43,040 --> 00:00:48,240
NASA and researchers from around the world\h
are presenting new findings on Earth and space\h\h

12
00:00:48,240 --> 00:00:54,080
science topics. These include news about the Solar\h
Orbiter mission, findings about environmental\h\h

13
00:00:54,080 --> 00:00:59,760
trends due to the coronavirus pandemic,\h
an update on Jupiter’s cyclones and more.\h\h

14
00:00:59,760 --> 00:01:05,200
The virtual meeting runs through Dec. 17.\h
For more details check out nasa.gov/agu.

15
00:01:07,280 --> 00:01:12,550
The forward bay cover has been installed to\h
the top of the Orion spacecraft for our Artemis\h\h

16
00:01:12,550 --> 00:01:17,920
I mission, the first uncrewed flight of the\h
spacecraft around the Moon and back. This critical\h\h

17
00:01:17,920 --> 00:01:23,680
piece of hardware will protect Orion’s crew module\h
as it travels back through Earth’s atmosphere at\h\h

18
00:01:23,680 --> 00:01:30,960
speeds of more than 25,000 mph. The cover will\h
eventually be jettisoned to allow the three\h\h

19
00:01:30,960 --> 00:01:36,800
main parachutes to open and slow the capsule down\h
enough for a safe splashdown in the Pacific Ocean.

20
00:01:37,600 --> 00:01:42,640
Meanwhile, the Orion spacecraft Structural Test\h
Article is back at our Langley Research Center in\h\h

21
00:01:42,640 --> 00:01:48,400
preparation for another series of water impact\h
tests scheduled for early next year. Data from\h\h

22
00:01:48,400 --> 00:01:53,280
these tests will be used for final computer\h
modeling of the Orion capsule for Artemis II,\h\h

23
00:01:53,280 --> 00:01:58,320
the program’s first mission with astronauts\h
around the Moon and back. Artemis II will also\h\h

24
00:01:58,320 --> 00:02:03,680
pave the way to land the first woman and next\h
man on the Moon by 2024 during Artemis III.

25
00:02:05,040 --> 00:02:10,160
Our VIPER robot will be the first off-world\h
rover to have its brains split in two,\h\h

26
00:02:10,160 --> 00:02:15,680
effectively using on-board flight software and\h
software running from mission control on Earth,\h\h

27
00:02:15,680 --> 00:02:19,120
to help it search for water\h
ice on the surface of the Moon.\h\h

28
00:02:19,120 --> 00:02:23,760
Teams at our Ames Research Center recently\h
began putting the software through its paces\h\h

29
00:02:23,760 --> 00:02:28,480
using an engineering prototype of the\h
rover. VIPER is planned for delivery to\h\h

30
00:02:28,480 --> 00:02:34,000
the Moon as early as December 2022 through our\h
Commercial Lunar Payload Services initiative.

31
00:02:34,840 --> 00:02:39,280
Thanks to the Chandra X-ray\h
Center’s data sonification project,\h\h

32
00:02:39,280 --> 00:02:50,320
you can now see and listen to images\h
of some familiar cosmic objects.

33
00:02:50,320 --> 00:02:54,480
Data sonification takes information\h
collected by telescopes and converts it\h\h

34
00:02:54,480 --> 00:03:00,000
into sounds – with the data, in some cases,\h
being heard as various musical instruments\h\h

35
00:03:00,000 --> 00:03:03,280
and/or as sounds within\h
different audio frequencies.\h\h

36
00:03:03,840 --> 00:03:08,480
Imagery data from NASA's Chandra X-ray\h
Observatory, Hubble Space Telescope,\h\h

37
00:03:08,480 --> 00:03:13,600
and Spitzer Space Telescope are featured. You\h
can check it out at, go.nasa.gov/cosmicsounds.