



1

00:00:00,459 --> 00:00:03,280

A step toward sustainable lunar exploration

...

2

00:00:03,280 --> 00:00:05,890

Looking for science and tech delivery to the Moon ...

3

00:00:05,890 --> 00:00:09,840

And gearing up for some extreme conditions ... a few of the stories to tell you about

4

00:00:09,840 --> 00:00:11,950

– This Week at NASA!

5

00:00:11,950 --> 00:00:17,410

We're asking commercial companies to provide proposals for collecting of space resources

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00:00:17,410 --> 00:00:19,660

in support of the Artemis program.

7

00:00:19,660 --> 00:00:23,630

The requirements -- a company has to collect a small amount of Moon "dirt" from the

8

00:00:23,630 --> 00:00:28,269

lunar surface, provide imagery and data to NASA, and conduct an "in-place" transfer

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00:00:28,269 --> 00:00:31,559

of ownership of the material to NASA.

10

00:00:31,559 --> 00:00:35,969

We also asked our Commercial Lunar Payload Services partners for bids to fly a suite

11

00:00:35,969 --> 00:00:41,230

of science and technology payloads to the

Moon in 2022 that will help lay the foundation

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00:00:41,230 --> 00:00:43,879

for human missions to the lunar surface.

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00:00:43,879 --> 00:00:49,250

Next-generation lunar science and technology is a main objective for returning to the Moon

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00:00:49,250 --> 00:00:51,140

and preparing for Mars.

15

00:00:51,140 --> 00:00:56,190

A NASA project is developing special gears able to withstand extremely cold temperatures

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00:00:56,190 --> 00:00:59,699

on missions to the Moon and other destinations in our solar system.

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00:00:59,699 --> 00:01:04,320

The gears are housed inside a “metallic glass” material able to survive the extreme

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00:01:04,320 --> 00:01:07,950

cold without needing the usual heating.

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00:01:07,950 --> 00:01:12,850

As California experiences one of the worst wildfire seasons on record, NASA’s Earth-observing

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00:01:12,850 --> 00:01:18,159

instruments on spacecraft, satellites and aircraft are providing data to agencies responding

21

00:01:18,159 --> 00:01:23,150

to the emergency, including public health officials monitoring diminished air quality

22

00:01:23,150 --> 00:01:24,490
and visibility.

23
00:01:24,490 --> 00:01:29,840
The fires have burned more than 300,000 acres
since Aug. 16.

24
00:01:29,840 --> 00:01:34,240
This animation from our OSIRIS-REx mission
shows the trajectories of particles emitted

25
00:01:34,240 --> 00:01:39,079
from the surface of asteroid Bennu during
several months in 2019.

26
00:01:39,079 --> 00:01:43,479
Ongoing examination of Bennu and a sample
of the asteroid expected to be returned to

27
00:01:43,479 --> 00:01:48,149
Earth, could help the O-REx team learn exactly
why this phenomenon is occurring.

28
00:01:48,149 --> 00:01:53,680
The spacecraft is set to “touch” Bennu
and collect that sample on Oct. 20.

29
00:01:53,680 --> 00:01:57,990
Just in time for the new school year, the
Celebrating Station Science online resource

30
00:01:57,990 --> 00:02:03,810
is available to connect students and educators
to 20 years of space station experiments and

31
00:02:03,810 --> 00:02:04,810
research.

32
00:02:04,810 --> 00:02:09,440
Each month will have lesson plans, activities,

information on space station science, and

33

00:02:09,440 --> 00:02:12,750

other resources for the Artemis Generation
of explorers.

34

00:02:12,750 --> 00:02:14,400

Check it out at nasa.gov/stem/iss20.

35

00:02:14,400 --> 00:02:18,780

That's what's up this week @NASA ...