
NASA
528

1
00:00:01,100 --> 00:00:05,010
“Here’s some of the stories trending This
Week at NASA!”

2
00:00:05,010 --> 00:00:10,640
Outside the International Space Station, Expedition
50 Commander Shane Kimbrough of NASA and Flight

3
00:00:10,640 --> 00:00:16,990
Engineer Thomas Pesquet of the European Space
Agency conducted a spacewalk on Jan. 13, to

4
00:00:16,990 --> 00:00:22,400
complete an upgrade that included installing
adapter plates and hooking up electrical connections

5
00:00:22,400 --> 00:00:27,320
for six new lithium-ion batteries, which were
delivered to the station in December.

6
00:00:27,320 --> 00:00:32,140
Kimbrough and fellow NASA astronaut Peggy
Whitson began the upgrade work during a spacewalk

7
00:00:32,140 --> 00:00:35,239
on Jan. 6.

8
00:00:35,239 --> 00:00:39,989
NASA Deputy Administrator Dava Newman talked
about the innovation needed to enable NASA’s

9
00:00:39,989 --> 00:00:44,929
Journey to Mars at the American Institute
of Aeronautics and Astronautics (AIAA) SciTech

10
00:00:44,929 --> 00:00:48,719
Forum on Jan. 10 in Grapevine, Texas.

11
00:00:48,719 --> 00:00:54,559

The agency currently is developing the technologies and skills to send humans to Mars in the 2030s.

12
00:00:54,559 --> 00:00:59,749
Also – in recognition of Langley Research Center’s Centennial -- center Director David

13
00:00:59,749 --> 00:01:05,089
Bowles was joined by several former Langley directors to talk about the many contributions

14
00:01:05,089 --> 00:01:12,020
the center has made in its 100 years of research to achieve excellence in flight.

15
00:01:12,020 --> 00:01:15,670
Those contributions continue at Langley today.

16
00:01:15,670 --> 00:01:20,189
Engineers there are using a 56-year old wind tunnel, capable of producing winds speeds

17
00:01:20,189 --> 00:01:26,570
up to 900 mph, to understand how NASA’s Space Launch System (SLS) rocket will behave

18
00:01:26,570 --> 00:01:28,890
at speeds just below supersonic.

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00:01:28,890 --> 00:01:35,450
That’s the speed where shock waves can oscillate on the rocket and apply unsteady pressures.

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00:01:35,450 --> 00:01:39,930
Understanding how the rocket responds to these pressures is important to the rocket's structural

21
00:01:39,930 --> 00:01:43,450
strength and guiding it on a safe flight to orbit.

22
00:01:43,450 --> 00:01:49,409
SLS will send an Orion spacecraft to an asteroid
and other deep space destinations on the Journey

23
00:01:49,409 --> 00:01:51,960
to Mars.

24
00:01:51,960 --> 00:01:57,020
NASA will kick off three new Earth science
field experiments in 2017.

25
00:01:57,020 --> 00:02:01,969
The missions – part of the agency's globe-spanning
Earth Expeditions research campaign – get

26
00:02:01,969 --> 00:02:04,940
underway in January and February.

27
00:02:04,940 --> 00:02:10,870
One will collect data on coral reef health
and volcanic gas emissions, another will monitor

28
00:02:10,870 --> 00:02:16,580
the diversity of oceanic phytoplankton, and
their impact on the marine carbon cycle, and

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00:02:16,580 --> 00:02:21,970
the third is part of a multiyear effort to
determine how much water is stored in Earth's

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00:02:21,970 --> 00:02:24,420
terrestrial snow-covered regions.

31
00:02:24,420 --> 00:02:28,600
Earth Expeditions investigates some of the
most pressing questions about how our planet

32
00:02:28,600 --> 00:02:33,660

is changing and what impacts humans are having on it.

33
00:02:33,660 --> 00:02:38,440
The extreme weather affecting the western U.S. is clearly visible from space.

34
00:02:38,440 --> 00:02:43,970
The NASA/NOAA GOES project created a satellite animation of the system that brought extreme

35
00:02:43,970 --> 00:02:47,840
rainfall to that region Jan. 6 through 9.

36
00:02:47,840 --> 00:02:53,280
Meanwhile, an image captured by NASA's Aqua satellite showed widespread snow blanketing

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00:02:53,280 --> 00:02:58,300
Washington, Idaho, Oregon, northern California and Nevada.

38
00:02:58,300 --> 00:03:03,230
Predictions by the National Weather Service included flash flooding and extremely heavy

39
00:03:03,230 --> 00:03:05,420
snowfall.

40
00:03:05,420 --> 00:03:07,500
And that’s what’s up this week @NASA …