1
00:00:00,940 --> 00:00:05,190
“Here’s some of the stories trending This
Week at NASA!”

2
00:00:05,190 --> 00:00:09,490
During an October 15 spacewalk outside the
International Space Station – the second

3
00:00:09,490 --> 00:00:14,950
U.S. spacewalk in as many weeks – Expedition
41 Flight Engineers Reid Wiseman and Barry

4
00:00:14,950 --> 00:00:19,780
Wilmore of NASA, replaced a failed voltage
regulation device to restore the station’s

5
00:00:19,780 --> 00:00:22,070
electrical power output to full capacity.

6
00:00:22,070 --> 00:00:28,640
The pair also relocated camera and TV equipment
as part of a major reconfiguration to accommodate

7
00:00:28,640 --> 00:00:34,710
new docking adapters for use by U.S. commercial
crew spacecraft in the next few years.

8
00:00:34,710 --> 00:00:41,360
NASA's MAVEN spacecraft, which entered orbit
around Mars on Sept. 21, is testing its instruments

9
00:00:41,360 --> 00:00:44,640
– and sending back “first light” scientific
data.

10
00:00:44,640 --> 00:00:49,420
This includes a first look at a storm of energetic
solar particles produced by a recent solar

11

00:00:49,420 --> 00:00:54,589
flare, unprecedented ultraviolet images of
the oxygen and hydrogen coronas in the upper

12
00:00:54,589 --> 00:01:00,039
atmosphere, and the most comprehensive map
ever made of Martian atmospheric ozone.

13
00:01:00,039 --> 00:01:04,680
MAVEN, on a mission to learn more about the
history of the Red Planet’s climate and

14
00:01:04,680 --> 00:01:10,300
atmosphere, will officially start gathering
science in early to mid-November.

15
00:01:10,300 --> 00:01:16,240
With the help of a phenomenon known as gravitational
lensing, which acts like a giant cosmic magnifying

16
00:01:16,240 --> 00:01:20,990
glass, NASA’s Hubble Space Telescope has
spotted one of the farthest galaxies ever

17
00:01:20,990 --> 00:01:24,780
seen – some 13 billion light-years away.

18
00:01:24,780 --> 00:01:30,090
The tiny, faint galaxy offers a peek back
to the very early formative years of the universe,

19
00:01:30,090 --> 00:01:33,570
and astronomers say there may be more like
it.

20
00:01:33,570 --> 00:01:37,960
Gravitational lensing happens when the gravity
of a large galaxy cluster distorts and magnifies

21
00:01:37,960 --> 00:01:44,720

light from an object behind that cluster – making
that object appear more visible.

22
00:01:44,720 --> 00:01:50,840
A search team for NASA's New Horizons spacecraft
also used Hubble's distant vision to uncover

23
00:01:50,840 --> 00:01:56,120
three Kuiper Belt objects at the far fringe
of our solar system that New Horizons could

24
00:01:56,120 --> 00:02:00,900
potentially visit after it flies by Pluto
in July 2015.

25
00:02:00,900 --> 00:02:06,290
The Kuiper Belt is a vast rim of primordial
debris that circles our solar system.

26
00:02:06,290 --> 00:02:11,140
Kuiper Belt objects belong to a unique class
of solar system objects that has never been

27
00:02:11,140 --> 00:02:16,920
visited by spacecraft and which contain clues
to the origin of our solar system.

28
00:02:16,920 --> 00:02:22,380
NASA's Lunar Reconnaissance Orbiter has
provided strong evidence volcanic activity

29
00:02:22,380 --> 00:02:27,950
on our moon slowed gradually instead of stopping
abruptly a billion years ago, as researchers

30
00:02:27,950 --> 00:02:29,530
once believed.

31
00:02:29,530 --> 00:02:34,550
The spacecraft observed scores of distinctive

rock deposits that are estimated to be less

32
00:02:34,550 --> 00:02:40,010
than 100 million years old – which is about
the same time period that dinosaurs were prevalent

33
00:02:40,010 --> 00:02:41,040
on Earth.

34
00:02:41,040 --> 00:02:46,200
The findings have major implications for how
warm the moon’s interior is thought to be.

35
00:02:46,200 --> 00:02:52,670
LRO is managed by Goddard Space Flight Center
for NASA’s Science Mission Directorate.

36
00:02:52,670 --> 00:02:57,520
NASA research in unmanned aerial systems – commonly
referred to as drones -- could help detect

37
00:02:57,520 --> 00:03:00,400
and prevent multi-million dollar forest fires.

38
00:03:00,400 --> 00:03:05,130
Langley Research Center signed an agreement
with the U.S. Fish and Wildlife Service to

39
00:03:05,130 --> 00:03:11,480
test small flying drones equipped with cameras
and transmitters as a way to check for fires

40
00:03:11,480 --> 00:03:16,569
at the Great Dismal Swamp National Wildlife
Refuge on the Virginia-North Carolina border.

41
00:03:16,569 --> 00:03:21,209
The research is part of the NASA Aeronautics
Research Mission Directorate's UAS Integration

42
00:03:21,209 --> 00:03:25,040
in the National Airspace System project.

43
00:03:25,040 --> 00:03:26,930
And that’s what’s up this week @NASA …