1
00:00:07,040 --> 00:00:08,670
This Week at NASA...

2
00:00:08,670 --> 00:00:12,960
"Touchdown confirmed, we're safe on Mars.

3
00:00:12,960 --> 00:00:13,960
(applause)"

4
00:00:13,960 --> 00:00:20,449
Celebration, when the Curiosity Rover safely
found the surface of Mars on August 6, 2012

5
00:00:20,449 --> 00:00:25,290
... and celebration this week on Capitol Hill
as NASA and members of Congress mark the one

6
00:00:25,290 --> 00:00:30,140
year anniversary of the Martian landing and
showcase the ways the rover is helping us

7
00:00:30,140 --> 00:00:35,590
get to know Mars.

8
00:00:35,590 --> 00:00:39,800
During another event to celebrate Curiosity
at the Eisenhower Executive Office Building,

9
00:00:39,800 --> 00:00:44,370
members of the Curiosity team presented White
House officials with a replica of the plaque

10
00:00:44,370 --> 00:00:47,910
flown on the mission and signed by the President.

11
00:00:47,910 --> 00:00:51,760
Curiosity's landing ignited a new generation
of excitement which grew even more when the

12
00:00:51,760 --> 00:00:56,350
rover found evidence that Mars could've sustained life in the past.

13
00:00:56,350 --> 00:01:02,450
NASA and the rest of Earth looks forward to future finds on Mars from Curiosity and other

14
00:01:02,450 --> 00:01:04,190
missions.

15
00:01:04,190 --> 00:01:08,970
At Wallops Flight Facility, NASA Administrator Charlie Bolden and members of the NASA Advisory

16
00:01:08,970 --> 00:01:14,880
Council received a status report on two major launches scheduled from the Facility in September.

17
00:01:14,880 --> 00:01:20,120
The Lunar Atmosphere and Dust Environment Explorer or LADEE mission will launch September.

18
00:01:20,120 --> 00:01:24,740
6 -- followed by the demo flight of Orbital Sciences Corporation's Antares rocket and

19
00:01:24,740 --> 00:01:33,640
Cygnus cargo craft to the International Space Station in the September 14-19 timeframe.

20
00:01:33,640 --> 00:01:38,710
NASA has completed the first step toward a mission to find and capture a near-Earth asteroid,

21
00:01:38,710 --> 00:01:42,920
redirect it to a stable lunar orbit and send humans to study it.

22

00:01:42,920 --> 00:01:47,990
In preparation for fiscal year 2014, NASA
managers held a mission formulation review

23
00:01:47,990 --> 00:01:53,730
to examine internal studies on concepts and
alternatives for each phase of that mission.

24
00:01:53,730 --> 00:01:58,781
The agency also is evaluating about 400-plus
responses from industry, universities, and

25
00:01:58,781 --> 00:02:05,189
the public to a recent request for information,
or RFI put out by NASA for ideas on tackling

26
00:02:05,189 --> 00:02:07,450
the asteroid initiative.

27
00:02:07,450 --> 00:02:12,590
Managers plan to integrate the most highly-rated
ideas into an asteroid mission baseline concept

28
00:02:12,590 --> 00:02:15,299
to further develop in 2014.

29
00:02:15,299 --> 00:02:20,689
The asteroid mission is one step in NASA's
strategy to send humans to Mars in the 2030s.

30
00:02:20,689 --> 00:02:25,639
"So this is, this is Luca's Helmet."

31
00:02:25,639 --> 00:02:30,310
Aboard the International Space Station Chris
Cassidy pointed out where water entered crewmate

32
00:02:30,310 --> 00:02:34,099
Luca Parmitano's helmet during a July 16 spacewalk.

33
00:02:34,099 --> 00:02:40,640
"With water -- a mixture of water and air
getting into this vent port, the water bubbles

34
00:02:40,640 --> 00:02:44,669
started to build up behind his, behind this
white plastic."

35
00:02:44,669 --> 00:02:49,700
NASA still is investigating where the water
came from -- spacewalk specialists believe

36
00:02:49,700 --> 00:02:55,370
the problem is connected to the suit's Portable
Life Support System backpack.

37
00:02:55,370 --> 00:03:00,510
KSC's Vehicle Assembly Building turned 50
recently.

38
00:03:00,510 --> 00:03:05,361
Most space fans have seen pictures of a space
shuttle being stacked inside the VAB ... but

39
00:03:05,361 --> 00:03:10,520
this concept image is a possible glimpse into
the future and what stacking of NASA's Space

40
00:03:10,520 --> 00:03:14,090
Launch System rocket and Orion Spacecraft
will look like.

41
00:03:14,090 --> 00:03:18,769
While that plan comes together, crane operators
and technicians have been practicing lifting

42
00:03:18,769 --> 00:03:23,779
a full-size mock-up of Orion so they'll be
ready when it's time for the real thing in

43
00:03:23,779 --> 00:03:27,739
2017.

44
00:03:27,739 --> 00:03:31,319
And a major milestone for building of the
SLS.

45
00:03:31,319 --> 00:03:36,629
Passing the preliminary design review, or
PDR means the current design of NASA's next

46
00:03:36,629 --> 00:03:43,519
heavy-lift launch vehicle meets system requirements
with acceptable risk, cost and schedule constraints.

47
00:03:43,519 --> 00:03:47,379
Final details of the review will be presented
to Administrator Bolden for permission to

48
00:03:47,379 --> 00:03:51,340
move on from design phase to production.

49
00:03:51,340 --> 00:03:58,040
Meanwhile, Bolden named planetary geologist
Ellen Stofan the agency's chief scientist,

50
00:03:58,040 --> 00:04:03,219
Stofan will be Bolden's principal advisor
on the agency's science programs and science-related

51
00:04:03,219 --> 00:04:05,700
strategic planning and investments.

52
00:04:05,700 --> 00:04:08,829
Stofan begins her new role on Aug. 25.

53
00:04:08,829 --> 00:04:15,680
For over two decades, many exoplanets have
been observed passing in front of their parent

54
00:04:15,680 --> 00:04:16,970
stars.

55
00:04:16,970 --> 00:04:19,889
But not in X-ray vision -- until now!

56
00:04:19,889 --> 00:04:27,220
Thanks to the extraordinary alignment of planet
HD 189733b and its parent star, 63 light-years

57
00:04:27,220 --> 00:04:33,030
from Earth, the Chandra X-ray Observatory
was able to capture the first ever X-ray pictures

58
00:04:33,030 --> 00:04:36,000
of a planet eclipsing its sun.

59
00:04:36,000 --> 00:04:40,600
The planet -- similar in size to Jupiter -- is
more than 30 times closer to its parent star

60
00:04:40,600 --> 00:04:44,780
than we are to our sun.

61
00:04:44,780 --> 00:04:49,820
NASA's Commercial Crew Program is preparing
to enter its final phase of agency certification

62
00:04:49,820 --> 00:04:50,820
efforts.

63
00:04:50,820 --> 00:04:54,980
A Pre-Solicitation Conference was held at
Kennedy Space Center to involve industry in

64
00:04:54,980 --> 00:04:59,410
the draft Request for Proposal or RFP process.

65
00:04:59,410 --> 00:05:04,070
The conference aimed to provide a greater
understanding for all parties before the official

66
00:05:04,070 --> 00:05:06,190
RFP is released this fall.

67
00:05:06,190 --> 00:05:10,470
The Commercial Crew Transportation Capability
contract will include a commercial company

68
00:05:10,470 --> 00:05:14,790
completing at least one crewed flight test
to the International Space Station.

69
00:05:14,790 --> 00:05:18,940
This is all part of the agency's work with
U.S. companies to provide commercial spaceflights

70
00:05:18,940 --> 00:05:26,350
for NASA astronauts and others to low-Earth
orbit, including the space station.

71
00:05:26,350 --> 00:05:30,450
Astronaut Mike Hopkins, who's headed to the
International Space Station on September 25

72
00:05:30,450 --> 00:05:36,220
as a part of Expedition 37/38, gave kids at
Johnson Space Center an idea what it's like

73
00:05:36,220 --> 00:05:38,350
to Train Like an Astronaut.

74
00:05:38,350 --> 00:05:43,330
The Train Like an Astronaut program teaches
students physical activities that are a lot

75
00:05:43,330 --> 00:05:49,270

like exercises astronaut do in their actual workouts.

76
00:05:49,270 --> 00:05:54,840
High school interns with NASA's Independent Verification and Validation Program, or (IV&V)

77
00:05:54,840 --> 00:05:59,240
shared their Summer experience working at the West Virginia facility during presentations

78
00:05:59,240 --> 00:06:00,650
at NASA Headquarters.

79
00:06:00,650 --> 00:06:06,150
Established as a result of the Challenger accident IV&V focuses on agency safety and

80
00:06:06,150 --> 00:06:07,150
mission assurance.

81
00:06:07,150 --> 00:06:11,330
"We think we have a good program and hopefully you can say that there's something that you

82
00:06:11,330 --> 00:06:15,400
can take either back to high school or to college or wherever you're going."

83
00:06:15,400 --> 00:06:24,450
For the past 20 years, the IV&V program has helped expose interns to STEM careers at NASA.

84
00:06:24,450 --> 00:06:29,010
Also at headquarters, NASA's DEVELOP Program held an end-of-summer open house to show off

85
00:06:29,010 --> 00:06:34,810
presentations and examples of work by students and young professionals in the program.

86
00:06:34,810 --> 00:06:40,650
DEVELOP lets participants use NASA Earth observations
to address community concerns and public policy

87
00:06:40,650 --> 00:06:41,650
issues.

88
00:06:41,650 --> 00:06:48,010
For more information on NASA's DEVELOP Program,
visit http://develop.larc.nasa.gov/.

89
00:06:48,010 --> 00:06:57,720
And August 5 is the date the late great Neil
Armstrong was born 83 years ago in Wapakoneta,

90
00:06:57,720 --> 00:06:58,720
Ohio.

91
00:06:58,720 --> 00:07:04,840
The famed test pilot and NASA astronaut became
the first person to walk on the moon in July

92
00:07:04,840 --> 00:07:07,370
1969 during the Apollo 11 mission.

93
00:07:07,370 --> 00:07:12,420
We lost Neil last August -- but what he did
and the person he was continues to inspire

94
00:07:12,420 --> 00:07:15,960
and set the standard for those who've followed
him.

95
00:07:15,960 --> 00:07:25,610
"No one, no one -- but no one could've accepted
the responsibility of his remarkable accomplishment

96
00:07:25,610 --> 00:07:32,830

with more dignity and more grace than Neil Armstrong."

97
00:07:32,830 --> 00:07:34,710
And that's This Week @NASA.