POCC

1
00:00:00,859 --> 00:00:05,760
Here’s a look at some of the top NASA stories
of 2015 …

2
00:00:05,760 --> 00:00:09,620
In October, data from Mars Reconnaissance
Orbiter (MRO) found the strongest evidence

3
00:00:09,620 --> 00:00:10,620
yet …

4
00:00:10,620 --> 00:00:16,700
“That under certain circumstances, liquid
water has been found on Mars.”

5
00:00:16,700 --> 00:00:20,880
This was perhaps the year’s biggest single
story in our ongoing journey to Mars, but

6
00:00:20,880 --> 00:00:23,020
it’s certainly not the only one …

7
00:00:23,020 --> 00:00:27,620
Managers for Mars Atmosphere and Volatile
Evolution or (MAVEN) mission found that solar

8
00:00:27,620 --> 00:00:32,660
storms are responsible for the dramatic loss
of the Red Planet’s atmosphere – and maybe

9
00:00:32,660 --> 00:00:37,040
the vast amounts of water that may have been
there in the past.

10
00:00:37,040 --> 00:00:40,870
Opportunity and Curiosity continue to explore
the surface of the Red Planet…

11
00:00:40,870 --> 00:00:45,080

with data from Curiosity showing signs of
a form of nitrogen…

12
00:00:45,080 --> 00:00:50,399
further evidence that conditions on ancient
Mars may have been able to support life

13
00:00:50,399 --> 00:00:55,809
In October, we released a detailed roadmap
that outlined capabilities needed for humans

14
00:00:55,809 --> 00:01:00,510
to make the next giant leap from Earth to
Mars in the 2030s.

15
00:01:00,510 --> 00:01:05,130
In an important step on that journey, the
eight 2013 astronaut class candidates were

16
00:01:05,130 --> 00:01:07,900
promoted to full-time astronauts…

17
00:01:07,900 --> 00:01:13,670
… and in December, NASA opened a new search
for the next class of space explorers…

18
00:01:13,670 --> 00:01:19,500
Engineers used data from the Orion spacecraft's
successful December 2014 test flight to improve

19
00:01:19,500 --> 00:01:22,670
its design for the next mission beyond the
moon.

20
00:01:22,670 --> 00:01:26,590
In March – there was a successful ground
test with the Space Launch System (SLS) rocket

21
00:01:26,590 --> 00:01:28,580
that will power Orion into deep space …

22
00:01:28,580 --> 00:01:34,400
… the year also saw a new series of successful
tests to evaluate modifications to the former

23
00:01:34,400 --> 00:01:40,159
space shuttle RS-25 engines that will propel
the most powerful rocket ever built.

24
00:01:40,159 --> 00:01:44,659
And our technical expertise and guidance helped
power a Hollywood blockbuster.

25
00:01:44,659 --> 00:01:49,870
In the film “The Martian” we saw a dramatic
depiction of Mars exploration and how the

26
00:01:49,870 --> 00:01:54,299
agency’s “can do” spirit can overcome
the most desperate circumstances.

27
00:01:54,299 --> 00:01:55,299
“Woo!!!”

28
00:01:55,299 --> 00:02:01,070
2015 saw an active year of discoveries in
our solar system and beyond …

29
00:02:01,070 --> 00:02:06,110
The New Horizons mission made history by becoming
the first spacecraft to reach Pluto – a

30
00:02:06,110 --> 00:02:12,030
dramatic effort that is still returning breathtaking
imagery and a waterfall of new scientific

31
00:02:12,030 --> 00:02:13,200
data …

32

00:02:13,200 --> 00:02:17,760
In March, Dawn became the first spacecraft
ever to orbit a dwarf planet...

33
00:02:17,760 --> 00:02:23,000
Ceres, the largest object in the asteroid
belt… and found two strange white patches

34
00:02:23,000 --> 00:02:26,030
that scientists are still studying today.

35
00:02:26,030 --> 00:02:31,160
The Cassini spacecraft made the closest-ever
flyby of Saturn’s moon Enceladus in October

36
00:02:31,160 --> 00:02:36,590
– capturing valuable scientific data from
the plume of icy spray coming from the moon’s

37
00:02:36,590 --> 00:02:37,590
subsurface ocean …

38
00:02:37,590 --> 00:02:43,480
“ … and liftoff of the space shuttle Discovery
with the Hubble Space Telescope, our window

39
00:02:43,480 --> 00:02:44,480
on the universe.”

40
00:02:44,480 --> 00:02:49,630
… and we celebrated 25 years of amazing
scientific discoveries by the Hubble Space

41
00:02:49,630 --> 00:02:50,849
Telescope.

42
00:02:50,849 --> 00:02:53,380
Still returning history-making imagery…

43

00:02:53,380 --> 00:02:57,770
it remains one of the most valuable tools
in the history of space exploration.

44
00:02:57,770 --> 00:03:02,530
And there may be even more historic discoveries
in our future thanks to progress with missions

45
00:03:02,530 --> 00:03:05,709
currently under development.

46
00:03:05,709 --> 00:03:09,850
Things were also busy closer to home with
activities off the Earth, for the Earth aboard

47
00:03:09,850 --> 00:03:12,200
the International Space Station …

48
00:03:12,200 --> 00:03:17,690
In March, veteran NASA astronaut Scott Kelly
and Russian cosmonaut Mikhail Kornienko began

49
00:03:17,690 --> 00:03:23,100
the first-ever year-long mission to the orbiting
laboratory to help researchers plan deep space

50
00:03:23,100 --> 00:03:26,380
human missions -- including the journey to
Mars.

51
00:03:26,380 --> 00:03:30,959
November marked 15 years of continuous human
presence aboard the station…

52
00:03:30,959 --> 00:03:35,260
Our commercial partners continued to make
steady progress toward launching U.S. astronauts

53
00:03:35,260 --> 00:03:40,989
from American soil again by testing vital

systems and updating launch pads to make way

54
00:03:40,989 --> 00:03:43,319
for future crewed flights…

55
00:03:43,319 --> 00:03:45,540
In anticipation of this historic achievement…

56
00:03:45,540 --> 00:03:49,909
four veteran astronauts were selected to train
for the first Commercial Crew mission to the

57
00:03:49,909 --> 00:03:54,780
space station, and to work with the companies
developing spacecraft, systems and vital ground

58
00:03:54,780 --> 00:03:57,790
systems for the missions.

59
00:03:57,790 --> 00:04:02,870
We continued work in 2015 on one of our top
priorities -- improving life here on our home

60
00:04:02,870 --> 00:04:04,200
planet …

61
00:04:04,200 --> 00:04:08,129
Our Earth-observing satellites continued to
provide the world’s researchers and policy

62
00:04:08,129 --> 00:04:13,280
makers with critical science data crucial
to addressing the processes affecting our

63
00:04:13,280 --> 00:04:15,239
changing planet.

64
00:04:15,239 --> 00:04:19,309
Data collected from the vantage point of space

by our fleet of Earth-observing instruments

65
00:04:19,309 --> 00:04:20,309
helped produce …

66
00:04:20,309 --> 00:04:26,349
… maps of carbon dioxide -- the most significant
human-produced greenhouse gas driving global

67
00:04:26,349 --> 00:04:27,419
climate change.…

68
00:04:27,419 --> 00:04:32,740
… measurements of wind, clouds and airborne
particles called aerosols in the skies above

69
00:04:32,740 --> 00:04:36,119
our oceans and seas to study their potential
effect on the climate …

70
00:04:36,119 --> 00:04:42,319
… and a comprehensive picture of global
rainfall and snowfall – to improve our understanding

71
00:04:42,319 --> 00:04:47,819
of the planet’s fresh water supply and energy
cycles, and our ability to forecast extreme

72
00:04:47,819 --> 00:04:49,599
weather events ….

73
00:04:49,599 --> 00:04:54,430
We will continue to monitor Earth's vital
signs from space, from the ground and from

74
00:04:54,430 --> 00:05:00,099
the air to better understand and protect our
home planet.

75

00:05:00,099 --> 00:05:05,059
NASA continued engaging students, educators,
small business and others for help with achieving

76
00:05:05,059 --> 00:05:06,059
its goals …

77
00:05:06,059 --> 00:05:11,900
… with programs like its CubeSat Launch
Initiative – which provided hands-on experience

78
00:05:11,900 --> 00:05:14,899
designing, building and operating small research
satellites …

79
00:05:14,899 --> 00:05:20,400
… and with contract awards for companies
to provide Venture Class Launch Services (VCLS)

80
00:05:20,400 --> 00:05:24,349
to take these small satellites to space in
the future.

81
00:05:24,349 --> 00:05:30,610
NASA awarded $100,000 in prize money to student
engineers at its Sample Return Robot Challenge

82
00:05:30,610 --> 00:05:36,460
– the program encourages innovation in autonomous
navigation and robotics technologies.

83
00:05:36,460 --> 00:05:41,689
In June, another important step on the Journey
to Mars was made with the second Low Density

84
00:05:41,689 --> 00:05:47,180
Supersonic Decelerator (LDSD) test flight
to test revolutionary systems for future landings

85
00:05:47,180 --> 00:05:48,529

on Mars.

86
00:05:48,529 --> 00:05:55,250
A new seven-ton, two-story tall robot demonstrated
its ability to turn 3-D drawings into strong,

87
00:05:55,250 --> 00:05:59,759
light weight aircraft and spacecraft parts
using epoxy and carbon fibers …

88
00:05:59,759 --> 00:06:05,649
… and Administrator Charlie Bolden visited
a small weaving company in Pennsylvania that

89
00:06:05,649 --> 00:06:10,610
is producing the high-tech, multifunctional
thermal protection system padding for NASA's

90
00:06:10,610 --> 00:06:12,509
Orion spacecraft …

91
00:06:12,509 --> 00:06:18,770
NASA is the “onramp” for new transformative
capabilities because … Technology drives

92
00:06:18,770 --> 00:06:20,449
exploration.

93
00:06:20,449 --> 00:06:26,189
2015 showed our continued commitment to further
improving and building on our aeronautics

94
00:06:26,189 --> 00:06:28,589
and aviation achievements.

95
00:06:28,589 --> 00:06:32,840
In March, we marked the 100th anniversary
of our predecessor -- the National Advisory

96

00:06:32,840 --> 00:06:37,389
Committee for Aeronautics – established
by Congress to pursue excellence in aeronautics

97
00:06:37,389 --> 00:06:41,580
… which remains a core value for NASA today.

98
00:06:41,580 --> 00:06:45,990
Aeronautics research in 2015 included, the
successful first flight test of a new wing

99
00:06:45,990 --> 00:06:51,569
design that eliminates the weight and drag
of traditional-shaped wings.

100
00:06:51,569 --> 00:06:56,819
Innovative partnerships with commercial industries,
more than a dozen new technologies being tested

101
00:06:56,819 --> 00:06:58,930
with the ecoDemonstrator aircraft…

102
00:06:58,930 --> 00:07:04,449
Deputy Administrator, Dava Newman, who joined
the agency in May, was briefed on this vital

103
00:07:04,449 --> 00:07:05,449
research…

104
00:07:05,449 --> 00:07:11,099
including innovative non-stick coatings designed
to minimize fuel use and drag that can be

105
00:07:11,099 --> 00:07:14,809
created by insect residue on airplane wings.

106
00:07:14,809 --> 00:07:20,279
… and a series of crash tests provided important
information in making aircraft and air travel

107
00:07:20,279 --> 00:07:21,349
safer.

108
00:07:21,349 --> 00:07:26,649
So the next time you take to the skies … remember
NASA is with you when you fly.

109
00:07:26,649 --> 00:07:32,159
That’s a look back at some of the top NASA
stories of 2015 … Keep an eye out online

110
00:07:32,159 --> 00:07:38,919
and on air for a special glimpse at some exciting
things NASA has planned for 2016 as we continue

111
00:07:38,919 --> 00:07:40,770
to reach for new heights.