TY@N

This Year @NASA

2018

1
00:00:00,130 --> 00:00:02,529
With our Moon to Mars effort underway ….

2
00:00:02,529 --> 00:00:04,950
A new administrator takes over to lead the
charge …

3
00:00:04,950 --> 00:00:06,350
“I will do my best to serve our storied
agency to the utmost of my abilities.”

4
00:00:06,350 --> 00:00:09,910
And – oh yeah … we stuck another nearly
flawless landing on Mars!

5
00:00:09,910 --> 00:00:14,380
All that and more as we mark our 60th anniversary
-- this year @ NASA.

6
00:00:14,380 --> 00:00:18,189
"I, James Bridenstine, do solemnly swear ..."

7
00:00:18,189 --> 00:00:23,800
Jim Bridenstine took office as our 13th administrator
in April, to oversee implementation of Space

8
00:00:23,800 --> 00:00:29,609
Policy Directive-1, which calls for sustainable
and long-term human and robotic exploration

9
00:00:29,609 --> 00:00:34,090
of the Moon as a precursor to eventual human
missions to Mars.

10
00:00:34,090 --> 00:00:38,020
Jim Morhard joined him as Deputy Administrator
in October.

11
00:00:38,020 --> 00:00:42,440

The administrator worked with the White House
and National Space Council, on a renewed commitment

12
00:00:42,440 --> 00:00:44,380
to American leadership in space.

13
00:00:44,380 --> 00:00:49,480
"The architecture that we're building now
is entirely different than any architecture

14
00:00:49,480 --> 00:00:52,730
we've ever built before in an effort to get
to the Moon."

15
00:00:52,730 --> 00:00:57,650
Progress developing that architecture in 2018
included our mobile launcher, which has been

16
00:00:57,650 --> 00:01:04,450
modified to support our massive Space Launch
System rocket, or SLS …

17
00:01:04,450 --> 00:01:09,520
Also, more successful testing of the rocket
engine that will power SLS when it launches

18
00:01:09,520 --> 00:01:13,060
astronauts aboard our Orion spacecraft to
deep space …

19
00:01:13,060 --> 00:01:17,659
Delivery of the European Service Module – that
will sustain Orion and its crew on missions

20
00:01:17,659 --> 00:01:21,060
– by providing propulsion, power and cooling
…

21
00:01:21,060 --> 00:01:24,920
Successful evaluations of Orion's parachute

system …

22
00:01:24,920 --> 00:01:29,990
And practice for recovering Orion, after it
splashes down in the Pacific Ocean.

23
00:01:29,990 --> 00:01:35,039
We also announced new partnerships with U.S.
companies to potentially deliver science payloads

24
00:01:35,039 --> 00:01:36,170
to the lunar surface.

25
00:01:36,170 --> 00:01:41,740
“We want multiple providers that are competing
on costs and innovation.

26
00:01:41,740 --> 00:01:42,740
So that we as NASA can do more than we’ve
ever been able to do before and advance the

27
00:01:42,740 --> 00:01:43,740
human spirit.”

28
00:01:43,740 --> 00:01:47,670
And we asked industry for input on supplying
our Gateway – a permanent spaceship in lunar

29
00:01:47,670 --> 00:01:52,560
orbit that will serve as home base for human
and robotic missions to the surface.

30
00:01:52,560 --> 00:01:57,420
“Touchdown confirmed (applause and cheering)
… we’re on the surface of Mars!”

31
00:01:57,420 --> 00:02:01,929
Our InSight lander touched down on Mars in
November, kicking off a mission to study the

32
00:02:01,929 --> 00:02:05,020
Red Planet’s interior.

33
00:02:05,020 --> 00:02:11,660
Within its first week, InSight recorded vibrations
caused by the Martian wind – the very first

34
00:02:11,660 --> 00:02:15,970
sounds ever sensed directly from the surface
of Mars.

35
00:02:15,970 --> 00:02:21,170
We also selected a landing site for Mars 2020,
and announced that rover will carry the first

36
00:02:21,170 --> 00:02:23,750
helicopter to the Red Planet.

37
00:02:23,750 --> 00:02:28,970
In June a massive dust storm on Mars sent
our solar-powered Opportunity rover –which

38
00:02:28,970 --> 00:02:33,110
has far exceeded its expected lifespan on
Mars -- into hibernation.

39
00:02:33,110 --> 00:02:37,170
“We have arrived! (applause and cheering)”

40
00:02:37,170 --> 00:02:41,560
After traveling through space for more than
two years and two billion kilometers, our

41
00:02:41,560 --> 00:02:45,760
OSIRIS-REx spacecraft arrived at asteroid
Bennu, on Dec. 3.

42
00:02:45,760 --> 00:02:52,610
OSIRIS-REx will study the asteroid and return

a sample to Earth in September 2023.

43
00:02:52,610 --> 00:02:57,340
Our New Horizons spacecraft made its first
detection of Ultima Thule, the Kuiper Belt

44
00:02:57,340 --> 00:03:02,860
object it is scheduled to fly by on New Year's
Day, 2019 -- the farthest exploration of any

45
00:03:02,860 --> 00:03:05,150
planetary body in history.

46
00:03:05,150 --> 00:03:10,710
Our next planet hunter, TESS launched in April
and sent back this first image in May.

47
00:03:10,710 --> 00:03:15,260
TESS is expected to cover more than 400 times
as much sky as shown in the image during its

48
00:03:15,260 --> 00:03:17,800
initial two-year search for exoplanets.

49
00:03:17,800 --> 00:03:22,310
"A daring mission to shed light on the mysteries
of our closest star."

50
00:03:22,310 --> 00:03:26,760
Our Parker Solar Probe launched in August
to "touch the Sun" to gather data that

51
00:03:26,760 --> 00:03:28,890
could help us better understand space weather.

52
00:03:28,890 --> 00:03:33,890
It has already made the closest approach to
the Sun by a human-made object.

53

00:03:33,890 --> 00:03:37,930
And two groundbreaking spacecraft ended science operations in 2018.

54
00:03:37,930 --> 00:03:43,230
Dawn, which became the first mission to orbit two destinations beyond Earth – asteroid

55
00:03:43,230 --> 00:03:46,210
Vesta and dwarf planet Ceres –

56
00:03:46,210 --> 00:03:51,240
And Kepler, the prolific planet hunter which revealed our night sky to be filled with more

57
00:03:51,240 --> 00:03:53,770
planets than stars.

58
00:03:53,770 --> 00:03:58,760
Another veteran spacecraft, Voyager 2, entered the interstellar space beyond our Sun’s

59
00:03:58,760 --> 00:04:00,650
protective heliosphere.

60
00:04:00,650 --> 00:04:07,690
It joins its twin Voyager 1 as the only human-made objects to reach the space between the stars.

61
00:04:07,690 --> 00:04:12,100
Astronomers using Hubble and ground-based observatories found that the interstellar

62
00:04:12,100 --> 00:04:17,880
object known as Oumuamua had an unexpected speed boost passing through our solar system

63
00:04:17,880 --> 00:04:20,200
and may be a new type of comet.

64
00:04:20,200 --> 00:04:28,570
“For the first time since 2011 we are on
the brink of launching American astronauts,

65
00:04:28,570 --> 00:04:32,580
on American rockets, from American soil … (applause).”

66
00:04:32,580 --> 00:04:37,460
In August, we introduced the next astronauts
that will launch from American soil on the

67
00:04:37,460 --> 00:04:43,020
first flight tests and missions of American-made,
commercial spacecraft flying to and from the

68
00:04:43,020 --> 00:04:44,680
International Space Station.

69
00:04:44,680 --> 00:04:47,889
Those flights are set to begin in 2019.

70
00:04:47,889 --> 00:04:53,810
2018’s space station crews supported more
than 120 new U.S. science investigations,

71
00:04:53,810 --> 00:04:58,260
with a record-setting 100 hours of research
in one week in February.

72
00:04:58,260 --> 00:05:02,820
Our astronaut Nick Hague and Russian cosmonaut
Alexey Ovchinin, who were forced to abort

73
00:05:02,820 --> 00:05:08,380
their planned mission to the orbital laboratory,
were reassigned to the Expedition 59 mission,

74
00:05:08,380 --> 00:05:12,550
targeted to launch Feb. 28, 2019.

75
00:05:12,550 --> 00:05:17,400
Observations of our home planet from above
included a rash of eruptions of Hawaii's

76
00:05:17,400 --> 00:05:19,100
Kilauea volcano …

77
00:05:19,100 --> 00:05:23,450
Major hurricanes, including powerful storms
Florence and Michael …

78
00:05:23,450 --> 00:05:26,210
And the wildfires in California.

79
00:05:26,210 --> 00:05:30,670
The ICESat-2 mission launched in September
with a laser instrument that fires 10,000

80
00:05:30,670 --> 00:05:36,110
pulses a second to measure the height of ice
sheets, glaciers, sea ice and vegetation on

81
00:05:36,110 --> 00:05:37,210
Earth.

82
00:05:37,210 --> 00:05:42,250
In October, our airborne Operation IceBridge
mission spotted a rectangular-shaped tabular

83
00:05:42,250 --> 00:05:47,160
iceberg during a pass over the northern Antarctic
Peninsula.

84
00:05:47,160 --> 00:05:52,919
We selected Lockheed Martin to build an experimental
aircraft named the X-59 QueSST – for Quiet

85
00:05:52,919 --> 00:05:54,800

Supersonic Technology.

86
00:05:54,800 --> 00:06:00,360
It could help open a new era of quiet, supersonic
air travel over land by reducing sonic booms

87
00:06:04,310 --> 00:06:01,360
…

88
00:06:04,310 --> 00:06:09,740
In June, our remotely-piloted Ikhana aircraft
successfully flew its first mission in the

89
00:06:09,740 --> 00:06:13,440
National Airspace System without a safety
chase aircraft.

90
00:06:13,440 --> 00:06:18,290
The historic flight moves the country a step
closer to normalizing unmanned commercial

91
00:06:18,290 --> 00:06:21,300
and private aircraft operations.

92
00:06:21,300 --> 00:06:27,120
And we continued testing concepts and technologies
for Urban Air Mobility, a safe and efficient

93
00:06:27,120 --> 00:06:32,190
system for passenger and cargo air transportation
in and around an urban area.

94
00:06:32,190 --> 00:06:38,530
We’re developing new technologies to enable
exploration, including this September test

95
00:06:38,530 --> 00:06:44,770
of a heatshield that folds like an umbrella
for launch and unfurls once deployed in space.

96
00:06:44,770 --> 00:06:49,300
We partnered with the Department of Energy
on the Kilopower project, which aims to develop

97
00:06:49,300 --> 00:06:54,590
nuclear power technologies that could provide
power for long-duration stays on planetary

98
00:06:54,590 --> 00:06:56,120
surfaces.

99
00:06:56,120 --> 00:07:00,840
And the twin Mars Cube One, or MarCO CubeSats
that launched with our InSight spacecraft

100
00:07:00,840 --> 00:07:05,980
to Mars as a tech demo, not only successfully
helped relay landing signals from InSight

101
00:07:05,980 --> 00:07:11,180
and other data back to Earth – but also
captured some incredible images – including

102
00:07:11,180 --> 00:07:15,229
the first ever image of the Red Planet captured
by a CubeSat.

103
00:07:15,229 --> 00:07:19,760
Oct. 1 marked the 60th anniversary of NASA
opening for business …

104
00:07:19,760 --> 00:07:24,919
and we kicked off celebrations in June, with
a concert at the Kennedy Center in Washington.

105
00:07:24,919 --> 00:07:30,310
We also began celebrations of the 50th anniversary
of the Apollo missions, leading up to the

106

00:07:30,310 --> 00:07:34,820
anniversary of the Apollo 11 Moon landing
in July 2019.

107
00:07:34,820 --> 00:07:39,449
Restored Historic Mission Control consoles
were delivered to Houston – while we marked

108
00:07:39,449 --> 00:07:45,310
Apollo 8's Christmas 1968 mission with an
event at Washington National Cathedral.

109
00:07:45,310 --> 00:07:49,770
That's the highlights of 2018 – the year
at NASA.

110
00:07:49,770 --> 00:07:53,520
For more details, visit nasa.gov/2018.

111
00:07:53,520 --> 00:07:58,930
Happy Holidays, thanks for watching, and we're
looking forward to sharing more exciting exploration