1
00:00:07,930 --> 00:00:13,940
NASA and the nation embark upon an ambitious
journey to take us farther into space than

2
00:00:13,940 --> 00:00:18,730
ever before.\h
As we reach out and explore the beyond, we'll

3
00:00:18,730 --> 00:00:24,400
create new jobs right here on Earth. Innovative,
cutting- edge research and development in

4
00:00:24,400 --> 00:00:31,539
aeronautics and space technology will fuel
the American economy far into the future – and

5
00:00:31,539 --> 00:00:37,910
inspire a new generation of scientists, engineers…
and explorers.

6
00:00:37,910 --> 00:00:42,510
We do a lot of great things in space. Spending
money is not one of them.

7
00:00:42,510 --> 00:00:50,170
85% of the NASA budget goes outside the agency
to American manufacturers and their partners

8
00:00:50,170 --> 00:00:55,620
so that we can help to produce the technologies
that are needed for the exploration and innovation

9
00:00:55,620 --> 00:00:57,290
that we do.

10
00:00:57,290 --> 00:01:01,260
NASA's best days are certainly in front
of us, as are America's best days.

11

00:01:01,260 --> 00:01:08,610
The investment in science and technology and
R & D returns unbelievable benefit to Americans

12
00:01:08,610 --> 00:01:16,220
and to our economy.
Despite having to make tough choices in these

13
00:01:16,220 --> 00:01:23,720
economic times, the fiscal year 20-13 budget
advances a dynamic aerospace program envisioned

14
00:01:23,720 --> 00:01:29,740
by the president and strongly supported by
a bipartisan majority in Congress. It will

15
00:01:29,740 --> 00:01:38,590
enable more remarkable discoveries here on
Earth… and deep in space.\h

16
00:01:38,590 --> 00:01:44,330
This budget proposal supports important progress
in building the next-generation, deep space

17
00:01:44,330 --> 00:01:50,229
crew capsule, Orion…
… and development of a heavy-lift rocket

18
00:01:50,229 --> 00:01:54,280
designed to carry astronauts beyond low-Earth
orbit..

19
00:01:54,280 --> 00:02:00,220
It’s pretty exciting seeing those vehicles
start to come to life and start to see where

20
00:02:00,220 --> 00:02:03,270
they’re no longer just concepts but actually
see hardware come together.

21

00:02:03,270 --> 00:02:06,479
So, that's a pretty exciting field as we're
really getting ready…

22
00:02:06,479 --> 00:02:10,269
…to go beyond low-Earth orbit to leverage
off what we've done with station and then

23
00:02:10,269 --> 00:02:16,700
push further out into the solar system.
It will enable expanded use of the International

24
00:02:16,700 --> 00:02:23,549
Space Station. This one-of-a-kind research
laboratory will improve life on Earth and

25
00:02:23,549 --> 00:02:29,620
make great leaps in scientific discovery…
and serve as the foundation for sending humans

26
00:02:29,620 --> 00:02:35,019
deeper into space than ever before.
We have a wide variety of science going on

27
00:02:35,019 --> 00:02:37,900
board.
We made an award to a non-profit organization

28
00:02:37,900 --> 00:02:40,829
to manage the National Lab portion of space
station.

29
00:02:40,829 --> 00:02:46,520
This opens the door, not just to other government
agencies but even private industry. Industry

30
00:02:46,520 --> 00:02:50,359
that might want to test vaccines or material
processes…

31

00:02:50,359 --> 00:02:54,249
for fighting disease, for manufacturing, for
potential technology spinoffs.

32
00:02:54,249 --> 00:03:01,269
I think the benefits are yet to come.
And to keep the space station fully crewed

33
00:03:01,269 --> 00:03:07,349
and supplied, NASA will continue vital investments
in its partnerships with American companies

34
00:03:07,349 --> 00:03:14,609
working to launch a new era of spaceflight…
one that will create jobs, stimulate the economy

35
00:03:14,609 --> 00:03:18,099
and decrease our reliance on foreign launch
providers.

36
00:03:18,099 --> 00:03:22,269
It’s a pretty dynamic time watching this
new industry come to life.

37
00:03:22,269 --> 00:03:28,629
It is truly those partnerships that’re going
to allow us not only to reduce the cost of

38
00:03:28,629 --> 00:03:32,959
getting to and from space but to travel farther
than anyone has ever before.

39
00:03:32,959 --> 00:03:39,510
Instead of outsourcing our space program overseas
we intend to insource our space program and

40
00:03:39,510 --> 00:03:43,839
have Americans continuing to explore the space
frontier.

41

00:03:43,839 --> 00:03:48,159
American manufacturers producing American-made
vehicles to take our American and partner

42
00:03:48,159 --> 00:03:54,540
astronauts to low-Earth orbit.
I am very bullish on American industry.

43
00:03:54,540 --> 00:03:59,909
Next-generation technologies are needed to
safely send humans on long-term missions through

44
00:03:59,909 --> 00:04:08,099
deep space to places like asteroids and Mars.
NASA is investing in developing those capabilities

45
00:04:08,099 --> 00:04:14,199
with investments in research and high-risk,
high payoff technology projects.

46
00:04:14,199 --> 00:04:17,930
Some of the work that we are doing in the
Office of the Chief Technologist provides

47
00:04:17,930 --> 00:04:20,880
a means for entry, descent and landing at
Mars, for example.

48
00:04:20,880 --> 00:04:25,060
…and that kind of work is essential to being
able to execute our vision.

49
00:04:25,060 --> 00:04:30,860
Investment in creative awards and competitions
will spark game-changing thinking and innovation.

50
00:04:30,860 --> 00:04:36,389
It gives us the chance to sponsor small companies
through large companies through small business

51

00:04:36,389 --> 00:04:40,110
innovation research grants all the way up
to large-scale missions.

52
00:04:40,110 --> 00:04:41,250
Centennial Challenges.

53
00:04:41,250 --> 00:04:45,870
…bring in non-traditional contributors from
all across the nation to solve problems, hard

54
00:04:45,870 --> 00:04:53,699
problems, in the service of NASA and the nation.
NASA’s array of ground-breaking science

55
00:04:53,699 --> 00:05:00,110
missions will reach farther into our solar
system, reveal unknown aspects of our universe

56
00:05:00,110 --> 00:05:07,240
and provide critical data about our home planet.
The James Webb Space Telescope due to launch

57
00:05:07,240 --> 00:05:15,280
in 2018 will reach back in time to revolutionize
our understanding of the origins of the universe.

58
00:05:15,280 --> 00:05:22,430
And, NASA is working to better integrate and
coordinate its robotics and human exploration

59
00:05:22,430 --> 00:05:29,169
efforts to meet the goal of sending astronauts
to deep space, including asteroids and the

60
00:05:29,169 --> 00:05:34,990
Martian system in the 2030s.\h
As an astronaut and an astronomer, it makes

61
00:05:34,990 --> 00:05:39,600

perfect sense to me that our human spaceflight program and our science program would work

62
00:05:39,600 --> 00:05:45,699
together to meet our future exploration goals.
Even today, as MSL is on its way to Mars we're

63
00:05:45,699 --> 00:05:50,240
actually gathering radiation data.
That's one of the big unknowns that we really

64
00:05:50,240 --> 00:05:53,070
need to understand. 'How much shielding
do we need to put in our spacecraft?

65
00:05:53,070 --> 00:05:57,610
So, here we've got a chance to actually
capture data during a science mission that

66
00:05:57,610 --> 00:06:00,770
will have direct applications to a human mission
in the future.

67
00:06:00,770 --> 00:06:05,440
We also learn about the origins of Mars, the
origins of the solar system, even the origins

68
00:06:05,440 --> 00:06:08,789
Earth.
So I see the goals, really, very well aligned.

69
00:06:08,789 --> 00:06:12,909
It's not exploration about robotics or exploration
about humans.

70
00:06:12,909 --> 00:06:16,310
It's the combination of both that gives
us a much stronger program.

71
00:06:16,310 --> 00:06:23,520

And, to protect Earth, NASA is gathering critical
data that will help us understand our planet's

72
00:06:23,520 --> 00:06:30,810
changes, improve our response to natural disasters
and, in concert with other government agencies,

73
00:06:30,810 --> 00:06:40,510
monitor and address potential threats from
asteroids, solar flares, and other space phenomena.

74
00:06:40,510 --> 00:06:47,160
NASA aeronautics continues its cutting-edge
research to enhance aviation safety and airspace

75
00:06:47,160 --> 00:06:52,030
efficiency while reducing the impact on our
environment.

76
00:06:52,030 --> 00:06:59,249
The near-term benefit will be improving air
traffic management to gain a lot of operational

77
00:06:59,249 --> 00:07:05,650
efficiency. In the mid-term, we are trying
to provide technologies that will address

78
00:07:05,650 --> 00:07:09,259
emerging needs, such as
…unmanned aerial systems.

79
00:07:09,259 --> 00:07:17,050
And in the far term, NASA Aeronautics research
will bring revolutionary concepts that may

80
00:07:17,050 --> 00:07:22,870
look completely different from today's aircraft.
\h

81
00:07:22,870 --> 00:07:31,229

Science, technology, engineering and mathematics:
The educational foundation of our future.

82
00:07:31,229 --> 00:07:37,300
NASA will continue to inspire young Americans
about careers in the STEM disciplines -- and

83
00:07:37,300 --> 00:07:44,360
pursuing their dreams as our next generation
of scientists, technologists, engineers and

84
00:07:44,360 --> 00:07:45,360
astronauts.

85
00:07:45,360 --> 00:07:47,289
Are spacesuits itchy?

86
00:07:47,289 --> 00:07:50,229
Every mission that we have has an education
component.

87
00:07:50,229 --> 00:07:52,419
Hello from Earth!

88
00:07:52,419 --> 00:07:55,870
We get sunrises and sunsets 16 times a day.

89
00:07:55,870 --> 00:08:00,099
Astronauts up on the International Space Station
that can beam into classrooms and having a

90
00:08:00,099 --> 00:08:04,490
student ask them questions about living and
working in the space environment.

91
00:08:04,490 --> 00:08:09,729
We also have a fantastic mission with Curiosity.
And this rover is gonna be able to traverse

92

00:08:09,729 --> 00:08:15,600
the Martian surface and take samples and make measurements that can be beamed back into

93
00:08:15,600 --> 00:08:21,729
classrooms...
…to inspire the next generation of explorers.

94
00:08:21,729 --> 00:08:33,000
The 20-13 budget proposal: Tough yet sustainable choices that provide stability and continuity

95
00:08:33,000 --> 00:08:40,099
to America’s aeronautics and space exploration programs – and sets the right pace for unfolding

96
00:08:40,099 --> 00:08:44,519
the next great chapter in humankind’s exploration of space.

97
00:08:44,519 --> 00:08:50,740
A lot of people focus on what can’t be done with limited resources. I choose to focus

98
00:08:50,740 --> 00:08:55,279
on what CAN be done, and incredible things can and WILL be done.

99
00:08:55,279 --> 00:08:59,930
It’s a sound budget for us and it keeps us moving forward and making good progress

100
00:08:59,930 --> 00:09:01,190
through this next year.

101
00:09:01,190 --> 00:09:05,280
Technology and innovation at NASA are central to our mission and central to what the nation

102
00:09:05,280 --> 00:09:06,280

needs.

103
00:09:06,280 --> 00:09:08,410
This budget will allow us to continue to make
great discoveries…

104
00:09:08,410 --> 00:09:10,650
…and unravel the mysteries of the universe.

105
00:09:10,650 --> 00:09:18,160
Thirty years from now, the small kid growing
up right now will say, ‘Wow! This was what

106
00:09:18,160 --> 00:09:20,690
NASA Aeronautics worked on 30 years ago.

107
00:09:20,690 --> 00:09:25,690
I’m still very excited about the opportunity
to inspire and motivate children because the

108
00:09:25,690 --> 00:09:26,920
children are our future.

109
00:09:26,920 --> 00:09:31,450
NASA carries the hopes and dreams of the country
and of the world.

110
00:09:31,450 --> 00:09:36,870
New ideas, innovative ideas, new things that
make life better for people here on Earth.

111
00:09:36,870 --> 00:09:47,029
NASA: continuing leadership in aerospace exploration,
scientific discovery, innovation and job creation,