
DEWALT
NASA
FIRST Robotics Virginia Regional

1
00:00:06,890 --> 00:00:12,290
This Week at NASA…

2
00:00:12,290 --> 00:00:16,901
Administrator Charles Bolden joined other
NASA officials on Capitol Hill for an agency

3
00:00:16,901 --> 00:00:20,770
showcase called, "NASA Technology: Imagine.

4
00:00:20,770 --> 00:00:21,770
Innovate.

5
00:00:21,770 --> 00:00:22,770
Explore."

6
00:00:22,770 --> 00:00:27,650
The event, hosted by members of Congress,
included displays from various companies and

7
00:00:27,650 --> 00:00:34,040
six NASA centers that demonstrate how NASA
space and aeronautics technologies help enable

8
00:00:34,040 --> 00:00:40,079
agency goals while also creating or improving
products and services that benefit life here

9
00:00:40,079 --> 00:00:41,090
on Earth.

10
00:00:41,090 --> 00:00:43,620
“Technology development is the key to our
future.

11
00:00:43,620 --> 00:00:48,190
If you look at everything that we want to
do, whether it’s a heavy lift launch vehicle,

12
00:00:48,190 --> 00:00:54,420
Multi-purpose crew vehicle, commercial crew,
everything we do is dependent on improving

13
00:00:54,420 --> 00:00:56,340
on the technologies that we have today.

14
00:00:56,340 --> 00:01:00,850
Because we've got to go farther, faster
and we've got to find better ways to do

15
00:01:00,850 --> 00:01:01,850
it."

16
00:01:01,850 --> 00:01:05,489
"What you're seeing here today are not
only great ideas that benefit the space program,

17
00:01:05,489 --> 00:01:11,100
you're seeing great ideas that have turned
into products, services that bring wealth

18
00:01:11,100 --> 00:01:14,540
as Congressman Rohrabacher explained, bring
wealth to our country."

19
00:01:14,540 --> 00:01:19,820
Attendees also had an opportunity to discuss
space travel with astronauts Mike Massimino

20
00:01:19,820 --> 00:01:21,729
and Mike Good.

21
00:01:21,729 --> 00:01:27,659
He's been to Infinity and Beyond – but
now Buzz Lightyear is at the Smithsonian's

22
00:01:27,659 --> 00:01:31,860
National Air and Space Museum's Moving Beyond

Earth gallery.

23
00:01:31,860 --> 00:01:37,979
The museum hosted a presentation attended
by NASA and Pixar, creators of Buzz Lightyear

24
00:01:37,979 --> 00:01:42,890
and the animated Toy Story franchise, during
which the action figure, which flew on Space

25
00:01:42,890 --> 00:01:49,149
Shuttle Discovery to the International Space
Station in 2008, was donated to the museum.

26
00:01:49,149 --> 00:01:53,340
NASA Deputy Administrator Lori Garver was
there on behalf of the agency.

27
00:01:53,340 --> 00:01:58,969
“Innovative ways to communicate to students
and the Public about the value of the International

28
00:01:58,969 --> 00:02:03,119
Space Station is what this mission was all
about for us.

29
00:02:03,119 --> 00:02:08,050
This great little action figure was about
the real life saga of space exploration.”

30
00:02:08,050 --> 00:02:16,450
“It was a fantastic program between NASA
and Disney to send Buzz up and did a tremendous

31
00:02:16,450 --> 00:02:18,140
education program.

32
00:02:18,140 --> 00:02:21,900
You know, for children all over the world
and I was so proud.”

33
00:02:21,900 --> 00:02:26,900
A panel discussion during the event, included
NASA footage of Buzz in space.

34
00:02:26,900 --> 00:02:32,750
Buzz Lightyear will go on display in the gallery
later this year.

35
00:02:32,750 --> 00:02:38,480
During a recent visit to CFD Research Corporation
in Huntsville, Alabama, NASA Chief Technologist

36
00:02:38,480 --> 00:02:42,560
Mason Peck was briefed on some of the firm's
newest technologies.

37
00:02:42,560 --> 00:02:48,330
CFD Research, a woman-owned company, develops
technologies and provides innovative solutions

38
00:02:48,330 --> 00:02:54,580
for aerospace and defense, biomedical and
life sciences, energy, materials and other

39
00:02:54,580 --> 00:02:55,780
industries.

40
00:02:55,780 --> 00:03:01,080
It has received numerous NASA Small Business
Innovation Research awards to develop software

41
00:03:01,080 --> 00:03:08,780
solutions that enable NASA missions and have
potential for commercial applications.

42
00:03:08,780 --> 00:03:13,190
NASA Deputy Administrator Lori Garver spoke
to students at Luther Jackson Middle School

43
00:03:13,190 --> 00:03:19,129
in Falls Church, Virginia as part of the USA
Science and Engineering Festival’s Nifty

44
00:03:19,129 --> 00:03:21,530
Fifty (times 2) Program.

45
00:03:21,530 --> 00:03:26,620
The program sends more than 100 people who,
like Garver are considered to be leaders in

46
00:03:26,620 --> 00:03:31,849
the fields of science and engineering, into
Washington-area schools before the festival

47
00:03:31,849 --> 00:03:36,130
to inspire students' passion for science and
engineering.

48
00:03:36,130 --> 00:03:41,400
The event, which will take place April 28
and 29 at the Walter E. Washington Convention

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00:03:41,400 --> 00:03:47,450
Center in DC, is the country’s only national
science festival.

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00:03:47,450 --> 00:03:52,849
During a luncheon given by the Aero Club of
Washington at the Capital Hilton in DC, NASA

51
00:03:52,849 --> 00:03:58,459
Administrator Charles Bolden updated the audience
on the latest NASA initiatives and the agency's

52
00:03:58,459 --> 00:04:01,489
Fiscal Year 2013 budget request.

53
00:04:01,489 --> 00:04:07,209

The Aero Club fosters interest in aeronautics
and hosts regular forums to discuss issues

54
00:04:07,209 --> 00:04:08,659
with leaders in the field.

55
00:04:08,659 --> 00:04:14,049
NASA’s proposed budget would enable the
agency to continue the space exploration program

56
00:04:14,049 --> 00:04:20,120
outlined by President Obama, one that creates
jobs and stimulates the American economy well

57
00:04:20,120 --> 00:04:26,500
into the future while sending us farther into
space than ever before.

58
00:04:26,500 --> 00:04:33,100
The European Space Agency’s “Edoardo Amaldi”
Automated Transfer Vehicle-3 cargo craft automatically

59
00:04:33,100 --> 00:04:38,300
docked to the aft port of the International
Space Station’s Russian Zvezda service module

60
00:04:38,300 --> 00:04:39,650
on March 28.

61
00:04:39,650 --> 00:04:45,100
“Contact is confirmed at 5:31pm central
time …the Edoardo Amaldi has arrived.”

62
00:04:45,100 --> 00:04:50,410
After a five-day journey that began with its
launch from Kourou, French Guiana on March

63
00:04:50,410 --> 00:04:51,530
23.

64
00:04:51,530 --> 00:04:57,230
The cargo ferry, named Edoardo Amaldi for
the Italian physicist and spaceflight pioneer,

65
00:04:57,230 --> 00:05:02,570
is loaded with more than seven tons of food,
fuel and supplies for the six crew members

66
00:05:02,570 --> 00:05:04,090
on the orbital laboratory.

67
00:05:04,090 --> 00:05:08,840
It is expected to remain docked to Zvezda
for about six months.

68
00:05:08,840 --> 00:05:15,670
“2-1 –zero … we have launch of terrier
oriole.”

69
00:05:15,670 --> 00:05:20,730
The early morning skies above the Wallops
Flight Facility on Virginia’s Eastern Shore

70
00:05:20,730 --> 00:05:25,760
were lit up by the launch of five sounding
rockets in about five minutes to study the

71
00:05:25,760 --> 00:05:28,280
high-altitude jet stream.

72
00:05:28,280 --> 00:05:34,160
Wallops and Clemson University teamed up for
this Anomalous Transport Rocket Experiment,

73
00:05:34,160 --> 00:05:35,470
or ATREX.

74
00:05:35,470 --> 00:05:38,020
Each of the five rockets released a tracer.

75
00:05:38,020 --> 00:05:43,500
The milky, white trail-shaped clouds they
formed allowed scientists to “see” the

76
00:05:43,500 --> 00:05:45,260
high-altitude winds.

77
00:05:45,260 --> 00:05:51,960
The tracers were visible from South Carolina
to the northeastern states.

78
00:05:51,960 --> 00:05:57,320
NASA associate administrator for aeronautics
research, Jaiwon Shin and Ames Research Center

79
00:05:57,320 --> 00:06:02,880
Director Pete Worden recently signed an agreement
at Ames to establish the NASA Aeronautics

80
00:06:02,880 --> 00:06:07,220
Research Institute.

81
00:06:07,220 --> 00:06:13,090
The Institute will be comprised of multi-disciplinary,
multi-institutional teams seeking innovative

82
00:06:13,090 --> 00:06:19,300
ideas to address present and future technological
challenges faced by aviation and the U.S.

83
00:06:19,300 --> 00:06:25,710
air transportation system, such as reducing
air traffic congestion and environmental impacts,

84
00:06:25,710 --> 00:06:30,660
improving safety, and designing aircraft with
unconventional capabilities.

85

00:06:30,660 --> 00:06:35,460
The institute will also seek to stimulate
collaboration among technical disciplines

86
00:06:35,460 --> 00:06:41,330
and between NASA, academic institutions, and
other government and industry organizations

87
00:06:41,330 --> 00:06:45,370
dedicated to aeronautics research.

88
00:06:45,370 --> 00:06:50,621
The annual FIRST Robotics competition is in
full swing with some 60-thousand high school

89
00:06:50,621 --> 00:06:55,570
students competing in regional challenges
using robots they built in six weeks from

90
00:06:55,570 --> 00:06:57,850
a common kit of parts.

91
00:06:57,850 --> 00:07:02,960
NASA Science chief and former astronaut John
Grunsfeld was at the DC Convention center

92
00:07:02,960 --> 00:07:05,480
to help kick off Washington's regional competition.

93
00:07:05,480 --> 00:07:08,550
"When I was growing up, there weren't
programs like this where I could get with

94
00:07:08,550 --> 00:07:12,830
like-minded kids and we could work on a project
together to build something great.

95
00:07:12,830 --> 00:07:17,251
For me, it was more a question of surviving
the process and still staying interested in

96
00:07:17,251 --> 00:07:18,251
science.

97
00:07:18,251 --> 00:07:22,870
And it’s so crucial today that we have programs
like this so that kids can grow together,

98
00:07:22,870 --> 00:07:25,100
to grow stronger and to help our nation.”

99
00:07:25,100 --> 00:07:31,270
NASA is the largest sponsor of the national
FIRST program, supporting five regional competitions

100
00:07:31,270 --> 00:07:32,500
and more than 280 teams.

101
00:07:32,500 --> 00:07:39,260
The DC region includes high schools teams
from Virginia, Maryland, Washington and several

102
00:07:39,260 --> 00:07:40,960
other states.

103
00:07:40,960 --> 00:07:46,340
FIRST stands for “For Inspiration and Recognition
of Science and Technology.”

104
00:07:46,340 --> 00:07:51,780
Here’s a look at some of the competition
from around the country.

105
00:07:51,780 --> 00:07:57,330
Since January high school FIRST Robotics teams
across the country have worked tirelessly

106
00:07:57,330 --> 00:08:04,180
to build, program and test robots in preparation

for upcoming regional and national tournaments.

107
00:08:04,180 --> 00:08:09,180
In Hampton Roads, the NASA Knights and Triple Helix teams, both sponsored by NASA Langley,

108
00:08:09,180 --> 00:08:14,430
spent nights and weekends getting their 120-pound robot ready for this year's challenge called

109
00:08:14,430 --> 00:08:15,430
Rebound Rumble

110
00:08:15,430 --> 00:08:22,970
"What it basically is is shooting foam basketballs up into basketball hoops that are arranged

111
00:08:22,970 --> 00:08:28,620
in a diamond pattern at both ends of the field – the higher baskets are worth more points

112
00:08:28,620 --> 00:08:30,930
"

113
00:08:30,930 --> 00:08:35,250
Around sixty robotics teams competed in the Virginia Regional tournament held at Virginia

114
00:08:35,250 --> 00:08:39,460
Commonwealth University's Siegel Center all with the hopes of making it to the national

115
00:08:39,460 --> 00:08:42,250
tournament in St. Louis this April.

116
00:08:42,250 --> 00:08:46,570
This year's game presented new challenges, even for a seasoned team like the NASA Knights.

117

00:08:46,570 --> 00:08:50,950
“This year had a lot of neat challenges,
we actually got a vision tracking system working

118
00:08:50,950 --> 00:08:54,380
where we could use a camera and see where
the backboard is and then judge our distance

119
00:08:54,380 --> 00:08:57,870
by the size of the backboard and spin our
motors up accordingly, which is something

120
00:08:57,870 --> 00:09:02,020
we’ve never really done before and it’s
really neat to figure out how all of that

121
00:09:02,020 --> 00:09:03,020
works.”

122
00:09:03,020 --> 00:09:06,220
Both the NASA Knights and Triple Helix feel
confident about their robots and are looking

123
00:09:06,220 --> 00:09:07,900
forward to making it to nationals.

124
00:09:07,900 --> 00:09:11,400
“I’m excited, I think we did really well
this year, and I’m looking forward to seeing

125
00:09:11,400 --> 00:09:12,940
how everything pans out.”

126
00:09:12,940 --> 00:09:19,280
The experience of FIRST is not only fun but
offers students real engineering experience

127
00:09:19,280 --> 00:09:22,290
and may inspire them to pursue careers in
STEM.

128
00:09:22,290 --> 00:09:26,400
“I had no idea what I wanted to be before
I joined the team, but now I want to be a

129
00:09:26,400 --> 00:09:30,950
chemistry major, so, and I would’ve been
interested in chemistry, but if not for robotics

130
00:09:30,950 --> 00:09:35,370
I probably wouldn’t have considered it for
a career.”

131
00:09:35,370 --> 00:09:41,390
The 21st Los Angeles regional FIRST Robotics
Competition at the Long Beach Convention Center

132
00:09:41,390 --> 00:09:44,330
proved to be a true battle of the minds.

133
00:09:44,330 --> 00:09:50,180
With support from volunteers from NASA’s
Jet Propulsion Laboratory and other institutions,

134
00:09:50,180 --> 00:09:56,210
sixty-six high school teams from California,
Nevada, Brazil and Chile put their student-designed

135
00:09:56,210 --> 00:09:57,410
robots to the test.

136
00:09:57,410 --> 00:10:00,540
“I learned so much because basically I always
wanted to go into engineering.

137
00:10:00,540 --> 00:10:04,630
So I just learned so much about robotics,
so much about the mechanics about it.”

138

00:10:04,630 --> 00:10:05,630
“I had so much fun.

139
00:10:05,630 --> 00:10:06,630
I’ve learned how to communicate.

140
00:10:06,630 --> 00:10:07,810
I learned how to build a robot.

141
00:10:07,810 --> 00:10:10,710
I learned how to problem solve and get things
done quickly.

142
00:10:10,710 --> 00:10:15,270
Well, like learning how to apply math and
science I’ve learned since I was a little

143
00:10:15,270 --> 00:10:16,270
kid.

144
00:10:16,270 --> 00:10:17,270
It’s the best thing ever.”

145
00:10:17,270 --> 00:10:21,740
The winners from this competition will represent
the Southern California region at the FIRST

146
00:10:21,740 --> 00:10:28,580
championships in April at the Edward Jones
Dome in St. Louis, against 51,000 other students

147
00:10:28,580 --> 00:10:31,600
on more than 2,400 teams.

148
00:10:31,600 --> 00:10:36,750
For a more detailed roundup of recent FIRST
Robotics action involving a NASA Center near

149
00:10:36,750 --> 00:10:45,550

you, stay tuned to NASA TV or check out nasa.gov
and NASA television's YouTube site.

150
00:10:45,550 --> 00:10:49,620
Students from Washington Elementary School
in San Jose, California had an opportunity

151
00:10:49,620 --> 00:10:55,800
to speak live with Expedition 30 astronauts
Dan Burbank and Don Pettit onboard The International

152
00:10:55,800 --> 00:11:01,910
Space Station during a "Destination Station"
downlink event at The Tech Museum of Innovation.

153
00:11:01,910 --> 00:11:07,150
The event was part of a NASA campaign to promote
space station research opportunities and to

154
00:11:07,150 --> 00:11:10,160
educate the public about the ISS.

155
00:11:10,160 --> 00:11:15,452
"Do you have internet in space or can you
take your iPods and iPads to space?"

156
00:11:15,452 --> 00:11:20,640
In conjunction with the event, Ames Research
Center held a Space Research Expo and Twitter

157
00:11:20,640 --> 00:11:24,500
Town Hall, featuring astronaut Rex Walheim.

158
00:11:24,500 --> 00:11:31,140
The event included activities and information
about how the station improves life on Earth.

159
00:11:31,140 --> 00:11:38,190
"3-2-1 and liftoff of space shuttle Columbia
with the microgravity science laboratory,

160
00:11:38,190 --> 00:11:40,910
our research bridge to the space benefits
of tomorrow.”

161
00:11:40,910 --> 00:11:47,890
15 years ago on April 4, 1997, Space Shuttle
Columbia launched from the Kennedy Space Center

162
00:11:47,890 --> 00:11:55,590
on STS-83, the first flight of the Microgravity
Science Laboratory-1, or MSL-1.

163
00:11:55,590 --> 00:12:02,140
The seven person crew -- Commander James Halsell,
Pilot Susan Still, Payload Commander Janice

164
00:12:02,140 --> 00:12:09,090
Voss, Mission Specialists Don Thomas and Mike
Gernhardt and Payload Specialists Roger Crouch

165
00:12:09,090 --> 00:12:14,800
and Greg Linteris -- were scheduled for 15
days of science activities in orbit.

166
00:12:14,800 --> 00:12:20,060
But a malfunction with one of Columbia’s
fuel cells caused the mission to be cut short.

167
00:12:20,060 --> 00:12:26,030
Columbia and its crew landed just 3-days and
23-hours later, marking only the third time

168
00:12:26,030 --> 00:12:29,580
in shuttle program history a mission ended
early.

169
00:12:29,580 --> 00:12:36,130
In July of ’97, Columbia and the same crew
re-flew the mission, re-designated STS-94,

170
00:12:36,130 --> 00:12:41,830
the first re-flight of a mission with the
same orbiter, crew and payload.

171
00:12:41,830 --> 00:12:44,080
And that’s This Week @ NASA!

172
00:12:44,080 --> 00:12:49,130
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