
SACHSE/DACHS

1
00:00:07,370 --> 00:00:11,700
This Week at NASA...

2
00:00:11,700 --> 00:00:16,770
In his keynote address at the Aviation 2013
conference in Los Angeles, NASA Administrator

3
00:00:16,770 --> 00:00:21,020
Charlie Bolden shared a new strategic vision
for the agency's Aeronautics Research Mission

4
00:00:21,020 --> 00:00:25,670
Directorate designed to help address looming
challenges in global air transportation.

5
00:00:25,670 --> 00:00:32,009
"We built our foundation on understanding
emerging global trends, identifying the mega-drivers

6
00:00:32,009 --> 00:00:37,420
for aviation that result from those trends,
and focusing research on areas that respond

7
00:00:37,420 --> 00:00:38,810
to those drivers."

8
00:00:38,810 --> 00:00:43,010
The updated vision uses NASA's aeronautical
research programs to help America maintain

9
00:00:43,010 --> 00:00:48,609
its leadership in the sky and ensure aviation
continues as a key economic driver for the

10
00:00:48,609 --> 00:00:49,609
nation.

11
00:00:49,609 --> 00:00:53,589
The same day of Bolden's speech ... the Federal

Aviation Administration announced a new computer

12
00:00:53,589 --> 00:01:02,280
software tool developed by NASA may soon help
controllers better manage airline departures.

13
00:01:02,280 --> 00:01:06,390
While on the west coast the Administrator
also stopped by NASA's Jet Propulsion Laboratory

14
00:01:06,390 --> 00:01:12,220
to check out preparations for two Earth-observing
missions scheduled for launch next year.

15
00:01:12,220 --> 00:01:16,680
Bolden saw hardware for the Soil Moisture
Active Passive or SMAP mission -- targeted

16
00:01:16,680 --> 00:01:21,620
for an October 2014 launch and the International
Space Station RapidScat instrument, set to

17
00:01:21,620 --> 00:01:24,970
launch to the ISS in April 2014.

18
00:01:24,970 --> 00:01:29,010
These missions will add to NASA's suite of
space and airborne research that is helping

19
00:01:29,010 --> 00:01:35,280
us better understand weather and climate and
improve life on Earth.

20
00:01:35,280 --> 00:01:39,980
On Mars, NASA's Curiosity rover captured the
images in this animated sequence of the planet's

21
00:01:39,980 --> 00:01:44,830
two moons in motion -- with Phobos, the larger
moon, passing in front of the other moon,

22
00:01:44,830 --> 00:01:45,830
Deimos.

23
00:01:45,830 --> 00:01:50,740
It's the first time images from the surface
have caught one moon eclipsing the other.

24
00:01:50,740 --> 00:01:56,810
A NASA study on affects to our climate from
wildfires and other air pollution sources

25
00:01:56,810 --> 00:01:58,280
is underway.

26
00:01:58,280 --> 00:02:03,680
The Studies of Emissions, Atmospheric Composition,
Clouds and Climate Coupling by Regional Surveys

27
00:02:03,680 --> 00:02:08,840
or SEAC4RS mission got underway at Ellington
Field near Johnson Space Center.

28
00:02:08,840 --> 00:02:15,280
The campaign, the agency's most complex airborne
science study of the year, flies across the

29
00:02:15,280 --> 00:02:24,400
southern U.S. and uses observations from NASA
satellites, aircraft and ground sites.

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00:02:24,400 --> 00:02:28,810
During an August 16 spacewalk outside the
International Space Station, Flight Engineers

31
00:02:28,810 --> 00:02:34,180
Fyodor Yurchikhin and Alexander Misurkin -- wearing
Russian Orlan spacesuits -- installed equipment

32

00:02:34,180 --> 00:02:38,889
for the arrival of a new Russian module and
completed prep work for the installation later

33
00:02:38,889 --> 00:02:40,799
this year of an optical telescope.

34
00:02:40,799 --> 00:02:45,159
They're scheduled back outside on August 22
to install experiments designed to collect

35
00:02:45,159 --> 00:02:51,290
data on the effects of microgravity in low-Earth
orbit.

36
00:02:51,290 --> 00:02:56,139
NASA Administrator Charles Bolden put a new
spin on teaching at the 17th annual GLOBE

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00:02:56,139 --> 00:03:00,349
Partners Meeting at the University of Maryland
University College.

38
00:03:00,349 --> 00:03:05,620
Bolden spins student Panupasu Panpech from
Thailand to demonstrate the concept of mass

39
00:03:05,620 --> 00:03:10,609
and weight in space.

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00:03:10,609 --> 00:03:15,170
GLOBE or Global Learning and Observations
to Benefit the Environment, is an international

41
00:03:15,170 --> 00:03:20,359
science and education program connecting students,
teachers, and scientists to better understand,

42
00:03:20,359 --> 00:03:24,390
sustain, and improve Earth's environment.

43
00:03:24,390 --> 00:03:31,220
A flexible woven fabric heat shield is being
tested at Ames Research Center.

44
00:03:31,220 --> 00:03:36,230
Called the Adaptable, Deployable Entry and
Placement Technology, or ADEPT, this design

45
00:03:36,230 --> 00:03:41,540
is based on a carbon fabric already successfully
tested in the Center's Arc Jet facility.

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00:03:41,540 --> 00:03:46,010
When used on a mission, this heat shield would
be stowed in a more compact shape until deployed

47
00:03:46,010 --> 00:03:49,219
like an umbrella for entering a planet's atmosphere.

48
00:03:49,219 --> 00:03:54,270
Such a design would allow exploratory spacecraft
larger than the Curiosity rover to successfully

49
00:03:54,270 --> 00:04:01,080
land on Venus, Mars, or other planets in our
solar system.

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00:04:01,080 --> 00:04:06,189
NASA and the Navy invited the media to check
out key testing of splashdown recovery operations

51
00:04:06,189 --> 00:04:10,870
for the agency's Orion spacecraft at Naval
Station Norfolk in Virginia.

52
00:04:10,870 --> 00:04:15,180
The stationary recovery test was designed
to demonstrate and evaluate the procedures,

53
00:04:15,180 --> 00:04:20,070
hardware and personnel used to recover Orion
in a controlled environment in advance of

54
00:04:20,070 --> 00:04:22,880
a test in open waters next year.

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00:04:22,880 --> 00:04:27,410
Orion is America's new spacecraft that will
take astronauts to destinations not yet explored

56
00:04:27,410 --> 00:04:32,560
by humans, including an asteroid and Mars
-- and make its return to Earth with a splashdown

57
00:04:32,560 --> 00:04:33,560
landing.

58
00:04:33,560 --> 00:04:41,819
Orion will launch without astronauts on Exploration
Flight Test-1 in September 2014.

59
00:04:41,819 --> 00:04:46,310
Sierra Nevada Corporation's Dream Chaser flight
vehicle went through a series of ground tests

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00:04:46,310 --> 00:04:50,000
on the concrete runways at Dryden Flight Research
Center.

61
00:04:50,000 --> 00:04:54,360
The evaluations -- which included a 60 mile
per hour taxi tow test -- help the company

62
00:04:54,360 --> 00:05:01,400
assess the performance of Dream Chaser's landing
and braking systems.

63
00:05:01,400 --> 00:05:05,460

Sierra Nevada Corporation currently is one
of three companies working with NASA's Commercial

64
00:05:05,460 --> 00:05:10,389
Crew Program to restore America's capability
to launch astronauts to low-Earth orbit from

65
00:05:10,389 --> 00:05:12,320
U.S. soil.

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00:05:12,320 --> 00:05:19,060
NASA's Associate Administrator for Space Technology
Mike Gazarik was the keynote speaker at this

67
00:05:19,060 --> 00:05:23,669
year's Small Satellite Conference at the Utah
State University in Logan on August 12.

68
00:05:23,669 --> 00:05:28,520
Gazarik gave an overview of NASA's Small Spacecraft
Technology Program and the important role

69
00:05:28,520 --> 00:05:32,520
small satellites will play in NASA's future
exploration efforts.

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00:05:32,520 --> 00:05:38,220
NASA's "SmallSat" Program develops and demonstrates
new capabilities that employ the unique features

71
00:05:38,220 --> 00:05:45,120
of small spacecraft for science, exploration
and space operations.

72
00:05:45,120 --> 00:05:50,169
Remote plant production technology for NASA's
deep space habitat prototype was demonstrated

73
00:05:50,169 --> 00:05:54,370
at Kennedy Space Center by student developers

from the University of Colorado-Boulder.

74
00:05:54,370 --> 00:05:59,789
The robotic gardening device moves plants
under simulated sunlight for best exposure

75
00:05:59,789 --> 00:06:02,760
and feeds the greenery using robot arms.

76
00:06:02,760 --> 00:06:08,439
Future long duration space travelers would
be able to monitor the system via webcam.

77
00:06:08,439 --> 00:06:10,000
And that's This Week @NASA.