
12:46 03

1
00:00:07,049 --> 00:00:11,110
This Week at NASA...

2
00:00:11,110 --> 00:00:17,060
Views from above of the storm system associated
with the destructive May 20 EF-5 tornado in

3
00:00:17,060 --> 00:00:18,500
Oklahoma.

4
00:00:18,500 --> 00:00:24,380
An image from NASA's Moderate Resolution Imaging
Spectroradiometer (MODIS) instrument aboard

5
00:00:24,380 --> 00:00:30,489
the Aqua satellite shows the "supercell" thunderstorm
that spawned the deadly tornado.

6
00:00:30,489 --> 00:00:35,489
The red line depicts the track of the mile-wide
twister that passed just south of Oklahoma

7
00:00:35,489 --> 00:00:36,489
City.

8
00:00:36,489 --> 00:00:41,629
And this animation of images from NOAA's GOES-13
satellite shows the movement of the storm

9
00:00:41,629 --> 00:00:48,441
system across the south-central U.S. An EF-5
tornado generates winds of at least 200 miles

10
00:00:48,441 --> 00:00:51,800
per hour.

11
00:00:51,800 --> 00:00:55,859
NASA Administrator Charlie Bolden was updated
on the important work being on done at the

12
00:00:55,859 --> 00:00:58,739
agency's California centers recently.

13
00:00:58,739 --> 00:01:03,891
At Dryden Flight Research Center, in Edwards,
the Administrator toured Sierra Nevada Corporation

14
00:01:03,891 --> 00:01:06,980
Space Systems' Dream Chaser spacecraft.

15
00:01:06,980 --> 00:01:11,540
The Dream Chaser test article will be evaluated
later this year as part of NASA's Commercial

16
00:01:11,540 --> 00:01:16,640
Crew Program (CCP) to develop safe, reliable
and cost-effective access to and from the

17
00:01:16,640 --> 00:01:18,980
International Space Station and low-Earth
orbit.

18
00:01:18,980 --> 00:01:24,120
"I am personally excited about having Dream
Chaser here at Dryden.

19
00:01:24,120 --> 00:01:28,610
I can't think of a better place to be testing
a vehicle like this then bringing it right

20
00:01:28,610 --> 00:01:33,830
out here to the Edwards dry lake bed which
is very historic in its own right.

21
00:01:33,830 --> 00:01:35,870
"
During a stop at Pasadena's Jet Propulsion

22

00:01:35,870 --> 00:01:41,400
Laboratory, Bolden was briefed on new technology
being developed for NASA's initiative to capture

23
00:01:41,400 --> 00:01:47,190
and relocate an asteroid to Earth-Moon space
for study, sample collection and return by

24
00:01:47,190 --> 00:01:48,520
humans.

25
00:01:48,520 --> 00:01:53,990
"JPL continues to play a critical role in
our plans to develop a mission to identity,

26
00:01:53,990 --> 00:01:56,390
capture, and redirect an asteroid.

27
00:01:56,390 --> 00:02:02,200
This mission represents an unprecedented technological
challenge raising the bar for human & scientific

28
00:02:02,200 --> 00:02:03,820
exploration and discovery."

29
00:02:03,820 --> 00:02:09,930
And at Ames Research Center in Moffet Field,
Bolden saw work being done with additive manufacturing,

30
00:02:09,930 --> 00:02:15,550
also known as 3-D printing, a critical part
of President Obama's push for a strong American

31
00:02:15,550 --> 00:02:22,630
manufacturing sector and the PhoneSat nanosatellite
technology program, which builds small satellites

32
00:02:22,630 --> 00:02:27,860
with off-the-shelf cellular phone technology.

33
00:02:27,860 --> 00:02:36,260
On May 31, an asteroid believed to be about
1.7 miles long named 1998 QE2 will sail safely

34
00:02:36,260 --> 00:02:40,230
past Earth, about 3.6 million miles away.

35
00:02:40,230 --> 00:02:47,080
According to astronomers this encounter with
QE2 at 4:59pm Eastern Time will be the asteroid's

36
00:02:47,080 --> 00:02:50,530
closest approach to earth for at least the
next two centuries.

37
00:02:50,530 --> 00:02:56,000
"There is no threat to Earth from this close
approach, but it provides us a very good opportunity

38
00:02:56,000 --> 00:03:01,790
to learn more about this object; the size,
shape and rotation dynamics of this object."

39
00:03:01,790 --> 00:03:06,450
NASA's Near-Earth Object Program manages and
funds the search, study, and monitoring of

40
00:03:06,450 --> 00:03:11,710
asteroids and comets to facilitate a chief
NASA priority of protecting the planet from

41
00:03:11,710 --> 00:03:15,130
those objects.

42
00:03:15,130 --> 00:03:20,100
Jack Fischer was one of four NASA astronauts
to fly simulated landings of the Dream Chaser

43
00:03:20,100 --> 00:03:22,500

spacecraft at the Langley Research Center.

44
00:03:22,500 --> 00:03:23,750
"Everybody ready to go?"

45
00:03:23,750 --> 00:03:31,170
The three-day simulations in a mock-up cockpit
gave astronauts a feel for how the Sierra

46
00:03:31,170 --> 00:03:36,020
Nevada Corporation's winged vehicle will handle
from the moment it enters Earth's atmosphere

47
00:03:36,020 --> 00:03:37,890
through a runway landing.

48
00:03:37,890 --> 00:03:42,880
Sierra Nevada Corporation is working with
NASA's Commercial Crew Program to refine the

49
00:03:42,880 --> 00:03:49,500
design of the Dream Chaser for future missions
to low-Earth orbit.

50
00:03:49,500 --> 00:03:54,250
NASA's Curiosity rover has drilled into its
second rock on the Red Planet.

51
00:03:54,250 --> 00:03:59,850
Curiosity drilled a 2-point-6 inch deep hole
into a rock called "Cumberland" -- located

52
00:03:59,850 --> 00:04:06,150
about nine feet east of "John Klein", the
rock Curiosity drilled into three months ago.

53
00:04:06,150 --> 00:04:10,730
Plans call for delivering portions of the
Cumberland sample to laboratory instruments

54
00:04:10,730 --> 00:04:16,440
inside the rover for analysis and comparison
to samples from John Klein, which indicated

55
00:04:16,440 --> 00:04:25,970
that long ago, conditions favorable for microbial
life existed in that area of Mars.

56
00:04:25,970 --> 00:04:31,870
At the Baikonur Cosmodrome in Kazakhstan,
Expedition 36/37, Soyuz Commander Fyodor Yurchikhin

57
00:04:31,870 --> 00:04:37,439
of the Russian Fedearl Space Agenc, NASA Flight
Engineer Karen Nyberg and Flight Engineer

58
00:04:37,439 --> 00:04:42,749
Luca Parmitano of the European Space Agency
continue preparations for their launch on

59
00:04:42,749 --> 00:04:48,370
May 29 Kazakhstan time for a six-hour trip
to the International Space Station.

60
00:04:48,370 --> 00:04:54,270
Meanwhile, a media event at the Johnson Space
Center to preview the mission included a NASA

61
00:04:54,270 --> 00:04:59,419
Social for the agency's social media followers
to highlight scientific research aboard the

62
00:04:59,419 --> 00:05:05,020
space station and a press briefing covering
mission priorities and objectives.

63
00:05:05,020 --> 00:05:10,479
Yurchikhin, Nyberg and Parmitano will join
Flight Engineer Chris Cassidy of NASA and

64
00:05:10,479 --> 00:05:15,520
station Commander Pavel Vinogradov and Flight Engineer Alexander Misurkin of the Russian

65
00:05:15,520 --> 00:05:27,550
Federal Space Agency, who've all been in orbit since late March.

66
00:05:27,550 --> 00:05:32,339
Following its launch on the Antares test rocket in April, the Ames-built PhoneSat-1 cubesat

67
00:05:32,339 --> 00:05:37,550
successfully deployed into orbit and demonstrated that a low cost, cell phone based satellite

68
00:05:37,550 --> 00:05:39,129
could work in space.

69
00:05:39,129 --> 00:05:44,340
During the flight, signals carrying image data from the cell phone cameras were transmitted

70
00:05:44,340 --> 00:05:46,419
back to the ground.

71
00:05:46,419 --> 00:05:52,240
Volunteer HAM radio operators worldwide recorded and uploaded the data to the research team

72
00:05:52,240 --> 00:05:55,819
at Ames to form a mosaic picture of the Earth.

73
00:05:55,819 --> 00:05:59,919
Researchers are already building the next generation of PhoneSat for launch later this

74
00:05:59,919 --> 00:06:02,819
year.

75
00:06:02,819 --> 00:06:07,960
Goddard Space Flight Center hosted traditional
media and NASA social media followers for

76
00:06:07,960 --> 00:06:14,120
a NASA Social about the Global Precipitation
Measurement mission and other NASA programs.

77
00:06:14,120 --> 00:06:18,509
GPM is an international network of satellites
that will measure rain and snowfall around

78
00:06:18,509 --> 00:06:22,949
the world and provide new insights into our
planet's water cycles.

79
00:06:22,949 --> 00:06:27,979
Participants heard from GPM scientists about
this cutting edge science and were treated

80
00:06:27,979 --> 00:06:32,419
tours of the facilities where GPM's core satellite
was tested.

81
00:06:32,419 --> 00:06:42,509
The core satellite is scheduled to launch
from Japan in 2014.

82
00:06:42,509 --> 00:06:49,810
On May 24, 1962, Mercury astronaut Scott Carpenter
launched from Cape Canaveral aboard the Aurora

83
00:06:49,810 --> 00:06:51,000
7 spacecraft.

84
00:06:51,000 --> 00:06:55,990
The flight was the second manned orbital mission
of the Mercury program, following John Glenn's

85
00:06:55,990 --> 00:06:59,020
Friendship 7 flight three months earlier.

86
00:06:59,020 --> 00:07:02,110
Like Glenn, Carpenter circled the Earth three times.

87
00:07:02,110 --> 00:07:07,669
The five-hour mission focused on science and included the first study of liquids in weightlessness

88
00:07:07,669 --> 00:07:09,009
and Earth photography.

89
00:07:09,009 --> 00:07:15,050
A targeting mishap during reentry took the spacecraft about 250-miles off course.

90
00:07:15,050 --> 00:07:20,370
However, Carpenter and Aurora 7 were safely recovered after splashdown in the Atlantic

91
00:07:20,370 --> 00:07:22,159
Ocean.

92
00:07:22,159 --> 00:07:23,940
And that's This Week @NASA.