1
00:00:07,170 --> 00:00:10,720
This Week at NASA…

2
00:00:10,720 --> 00:00:16,240
New observations by the Hubble Space Telescope's
Cosmic Origins Spectrograph (COS), confirm

3
00:00:16,240 --> 00:00:23,230
the existence of a giant scorched planet traveling
extremely close to its star. Named HD 209458b,

4
00:00:23,230 --> 00:00:30,981
it's being called by astronomers a "cometary
planet" because it has the components of a

5
00:00:30,981 --> 00:00:36,739
planet - but with a trailing tail like a comet,
possibly the result of strong stellar winds

6
00:00:36,739 --> 00:00:40,970
sweeping off its super heated atmosphere.
Eric Smith SOT: "Mass is being stripped

7
00:00:40,970 --> 00:00:51,339
of at the rate of about 100,000 cars per second.
So, a typical big car plant on the Earth might

8
00:00:51,339 --> 00:00:57,760
make 100, 200, 300-thousand cars a year. That's
how many they're making. This planet's

9
00:00:57,760 --> 00:01:04,489
losing that much mass per second."
HD 209458B is 153 light years from Earth,

10
00:01:04,489 --> 00:01:10,770
weighs slightly less than Jupiter, and speeds
around its star in about 3 and1/12 days, which

11

00:01:10,770 --> 00:01:14,969
means one of our weeks is equal to two of
its years.

12
00:01:14,969 --> 00:01:18,700
Eric Smith SOT: “Up to just recently in
human history we’ve only known about the

13
00:01:18,700 --> 00:01:24,179
planets in our own solar system, and can study
those and so we developed theories about how

14
00:01:24,179 --> 00:01:30,179
stars and planets formed based upon that.
Now, there is just this incredible diversity

15
00:01:30,179 --> 00:01:36,579
of planet types, different stellar types,
different orbits, and it’s causing us to

16
00:01:36,579 --> 00:01:42,340
have to rethink entirely how we believe stars
and planets formed.”

17
00:01:42,340 --> 00:01:48,890
NASA's Stratospheric Observatory for Infrared
Astronomy, SOFIA, is currently conducting

18
00:01:48,890 --> 00:01:53,840
a second series of flight tests to prepare
for the airborne observatory’s early science

19
00:01:53,840 --> 00:01:54,840
missions.

20
00:01:54,840 --> 00:01:56,289
(nat up)

21
00:01:56,289 --> 00:02:02,729
This phase requires SOFIA to fly above 41,000

feet with the telescope assembly and aperture

22
00:02:02,729 --> 00:02:05,579
operating at its full range of vertical movement.

23
00:02:05,579 --> 00:02:06,810
(nat up)

24
00:02:06,810 --> 00:02:12,590
These tests will enable SOFIA to meet all
airworthiness requirements during the flying

25
00:02:12,590 --> 00:02:15,870
observatory's 20-year operational life expectancy.

26
00:02:15,870 --> 00:02:24,230
(nat up)
An Aerojet AJ26 rocket engine was delivered

27
00:02:24,230 --> 00:02:29,940
to the Stennis Space Center and installed
in its E-1 Test Stand. That’s where a series

28
00:02:29,940 --> 00:02:35,810
of tests will prove its readiness for use
in the Taurus II space launch vehicle currently

29
00:02:35,810 --> 00:02:42,470
under development by Orbital Sciences Corporation
of Dulles, Va. Two AJ26 rocket engines similar

30
00:02:42,470 --> 00:02:48,030
to this test engine will provide first stage
propulsion for the Taurus II and be flown

31
00:02:48,030 --> 00:02:54,860
in support of NASA's Commercial Orbital Transportation
Services, or COTS, cargo demonstration to

32

00:02:54,860 --> 00:02:57,900
the International Space Station.

33
00:02:57,900 --> 00:03:04,560
(nat applause)
Members of the STS-132 crew visited the Marshall

34
00:03:04,560 --> 00:03:10,810
Space Flight Center. Commander Ken Ham, Pilot
Tony Antonelli and Mission Specialists Garrett

35
00:03:10,810 --> 00:03:16,319
Reisman and Piers Sellers showed video highlights
from their May 14th mission to the International

36
00:03:16,319 --> 00:03:20,989
Space Station and participated in a question-and-answer
session with Marshall employees.

37
00:03:20,989 --> 00:03:30,740
We hear you during ascent talking back to
people in the control room. How hard or difficult

38
00:03:30,740 --> 00:03:33,610
is that?
Ken Ham: In the video, you heard some hooting

39
00:03:33,610 --> 00:03:38,400
and hollering; that's on the internal communications
system, (laughter) So, we're having hooting

40
00:03:38,400 --> 00:03:41,730
and hollering, and when it's time to talk,
it's important to get everybody to shut

41
00:03:41,730 --> 00:03:43,569
up." (laughter)
STS-132 was a 12-day mission that delivered

42
00:03:43,569 --> 00:03:50,370

a Russian Mini Research Module and other equipment
to the orbiting outpost.

43
00:03:50,370 --> 00:03:55,159
The Smithsonian's National Air and Space
Museum in Washington celebrated "Mars Day"

44
00:03:55,159 --> 00:03:59,640
with a smorgasbord of activities for everyone's
tastes.

45
00:03:59,640 --> 00:04:06,000
Among them, testing one's skills at maneuvering
a robotic rover or using a robotic arm; viewing

46
00:04:06,000 --> 00:04:13,000
a real meteorite from Mars; and looking at
the Red Planet in 3D. Visitors also discussed

47
00:04:13,000 --> 00:04:15,760
the latest NASA missions and discoveries with
research scientists.

48
00:04:15,760 --> 00:04:20,960
Jim Green SOT: " More people come to this
and look at what we do in space and aeronautics

49
00:04:20,960 --> 00:04:27,510
than any other museum in the world. It's
a fabulous opportunity for people to come

50
00:04:27,510 --> 00:04:31,690
and learn about our space program and what
we're doing both in human exploration, but

51
00:04:31,690 --> 00:04:38,720
also in our robotics missions and really participate
in the dream and the realities of exploring

52
00:04:38,720 --> 00:04:44,380

space as we have for the last 40 years.”
"Mars Day" is held annually at Air and Space

53
00:04:44,380 --> 00:04:51,880
to mark the July 1976 landing of Viking 1,
the first spacecraft to operate on Mars. A

54
00:04:51,880 --> 00:04:58,830
test version of Viking 1 is displayed in the
museum’s Milestones of Flight gallery.

55
00:04:58,830 --> 00:05:03,350
The Goddard Space Flight Center in Maryland
opened its doors to Girl Scouts from across

56
00:05:03,350 --> 00:05:04,530
the country for NASA's "Girls in Space" camp.
Mollie O’Day SOT: “I don’t know what

57
00:05:04,530 --> 00:05:09,330
the clean room is, but I’m excited about
seeing it.”

58
00:05:09,330 --> 00:05:14,020
The scouts spent four days learning about
NASA missions and how astronomers investigate

59
00:05:14,020 --> 00:05:16,940
the mysteries of the universe.
Bailey Gordon SOT: “It’s just really amazing

60
00:05:16,940 --> 00:05:20,710
that we can have this opportunity to come
here and learn everything about space.”

61
00:05:20,710 --> 00:05:25,560
Once home, these Girls Scouts will share their
new knowledge by, among other activities,

62
00:05:25,560 --> 00:05:28,970

helping form Girl Scout Astronomy clubs in
their hometowns.

63
00:05:28,970 --> 00:05:36,160
Announcer: “Let me introduce Leland and
Jose and their magical, mystery tour of outer

64
00:05:36,160 --> 00:05:39,520
space!”
Youngsters joined their parents at NASA Headquarters

65
00:05:39,520 --> 00:05:45,010
for Take Your Children to Work Day.
Kid question: “How do you keep food from

66
00:05:45,010 --> 00:05:50,210
floating away in space?”
Boys and girls ages 7 to 15, and their equally

67
00:05:50,210 --> 00:05:56,500
eager parents, participated in fun, educational,
and interactive events to learn more about

68
00:05:56,500 --> 00:06:01,210
space, astronauts, and working at the agency.
Kristen Erickson SOT: “I’m in planetary

69
00:06:01,210 --> 00:06:09,350
science and we have a lot of the content here;
our asteroid models are here, and our moon

70
00:06:09,350 --> 00:06:15,970
rocks, and our Mars meteorites.”
It’s hoped the unique experience of accompanying

71
00:06:15,970 --> 00:06:20,930
their moms and dads to work will leave children
with positive, lasting impressions on their

72
00:06:20,930 --> 00:06:24,040

lives and perhaps influence the careers they'll pursue.

73
00:06:24,040 --> 00:06:28,880
Jack Glowacki: "I want to be an astronaut."
And that's This Week at NASA!