1
00:00:07,040 --> 00:00:19,650
This Week at NASA…

2
00:00:19,650 --> 00:00:24,380
Three weeks after its grand arrival at Los
Angeles International Airport atop a NASA

3
00:00:24,380 --> 00:00:27,430
747 Shuttle Carrier Aircraft …

4
00:00:27,430 --> 00:00:33,250
Space Shuttle Endeavour began the final leg
of its journey – a 2-day, 12-mile parade

5
00:00:33,250 --> 00:00:36,270
through the streets of L.A. to the California
Science Center …

6
00:00:36,270 --> 00:00:42,890
Endeavour’s route took it past several well-known
landmarks …

7
00:00:42,890 --> 00:00:46,210
... was captured from above by the Goodyear
Blimp...

8
00:00:46,210 --> 00:00:53,590
… and was witnessed by thousands upon thousands
of Angelinos who came out for a peek at NASA’s

9
00:00:53,590 --> 00:00:55,680
youngest space shuttle.

10
00:00:55,680 --> 00:01:00,360
In a city where celebrities are everywhere,
Endeavour’s roll through the neighborhood

11
00:01:00,360 --> 00:01:01,579
was the star attraction.

12
00:01:01,579 --> 00:01:02,579
“This is the most exciting thing.

13
00:01:02,579 --> 00:01:08,020
I missed it when it landed so I’m just so
happy I could be here to see it make its journey.

14
00:01:08,020 --> 00:01:09,190
It’s unbelievable.”

15
00:01:09,190 --> 00:01:14,320
“I’m an educator so I’m always looking
for history making events and it’s only

16
00:01:14,320 --> 00:01:18,540
going to happen once, so I had the time, why
not?”

17
00:01:18,540 --> 00:01:22,280
The California Science Center plans to open
its Space Shuttle Endeavour display to the

18
00:01:22,280 --> 00:01:26,820
public on October 30.

19
00:01:26,820 --> 00:01:34,240
Powering more than a hundred successful flights,
NASA's RS-25 engines were the workhorses of

20
00:01:34,240 --> 00:01:36,170
the Space Shuttle Program.

21
00:01:36,170 --> 00:01:40,780
Now, these engines will help power the core
stage of the agency's advanced heavy-lift

22
00:01:40,780 --> 00:01:43,600
rocket, the Space Launch System.

23
00:01:43,600 --> 00:01:48,659
SLS engineers at the Marshall Space Flight
Center are working on enhancements to its

24
00:01:48,659 --> 00:01:50,220
engine controller unit.

25
00:01:50,220 --> 00:01:58,060
The device exchanges data between the engine
and the rocket, and monitors engine performance.

26
00:01:58,060 --> 00:02:02,760
United Launch Alliance has reached the final
milestone in its development of a commercial

27
00:02:02,760 --> 00:02:07,570
spacecraft for transporting astronauts to
low-Earth orbit.

28
00:02:07,570 --> 00:02:13,490
Technical experts from ULA and NASA completed
their assessment of whether ULA's Atlas V

29
00:02:13,490 --> 00:02:17,650
rocket launch hardware would keep the crew
safe during launch and ascent.

30
00:02:17,650 --> 00:02:22,840
Two of three newly-funded NASA commercial
crew partners, Boeing and Sierra Nevada, will

31
00:02:22,840 --> 00:02:26,090
use the Atlas V as their launch vehicle.

32
00:02:26,090 --> 00:02:31,439
All of NASA's industry partners, including
ULA, continue to meet their established milestones

33

00:02:31,439 --> 00:02:37,290
in developing commercial crew transportation
capabilities.

34
00:02:37,290 --> 00:02:44,059
The mock-up of Boeing's CST-100 spacecraft
was put through water landing tests at Bigelow

35
00:02:44,059 --> 00:02:47,529
Aerospace headquarters near Las Vegas.

36
00:02:47,529 --> 00:02:51,680
Engineers dropped the capsule-shaped test
article from a crane into an outdoor pool

37
00:02:51,680 --> 00:02:56,169
to determine if the airbags will stabilize
the capsule during landings.

38
00:02:56,169 --> 00:03:00,800
The tests are part of Boeing's ongoing work
with NASA to develop a vehicle that can ferry

39
00:03:00,800 --> 00:03:13,249
astronauts between Earth and the International
Space Station.

40
00:03:13,249 --> 00:03:27,659
Meanwhile, from the Baikonur Cosmodrome in
Kazakhstan, a successful launch towards the

41
00:03:27,659 --> 00:03:35,559
International Space Station of the Soyuz spacecraft
carrying Expedition 33/34 Soyuz Commander

42
00:03:35,559 --> 00:03:41,290
Oleg Novitskiy of the Russian Federal Space
Agency, NASA Flight Engineer Kevin Ford and

43
00:03:41,290 --> 00:03:44,079

Russian Flight Engineer Evgeny Tarelkin.

44
00:03:44,079 --> 00:03:50,519
Novitskiy, Ford and Tarelkin are joining the
other members of Expedition 33 already onboard

45
00:03:50,519 --> 00:03:55,829
the station -- Commander Suni Williams of
NASA, Flight Engineer Aki Hoshide of the Japan

46
00:03:55,829 --> 00:04:01,389
Aerospace Exploration Agency and Russian Flight
Engineer Yuri Malenchenko – who have been

47
00:04:01,389 --> 00:04:03,409
in orbit since mid-July.

48
00:04:03,409 --> 00:04:07,749
The crew has plenty on its “to do” list
– including the transfer of supplies and

49
00:04:07,749 --> 00:04:12,790
materials from the SpaceX Dragon cargo craft
that arrived at the orbiting laboratory on

50
00:04:12,790 --> 00:04:14,239
October 10.

51
00:04:14,239 --> 00:04:18,360
Dragon is scheduled to remain at the station
until October 28.

52
00:04:18,360 --> 00:04:25,410
Hello, I’m Betina Pavri, payload downlink
coordinator, and this is your Curiosity rover

53
00:04:25,410 --> 00:04:27,660
update.

54

00:04:27,660 --> 00:04:30,760
Curiosity continues scooping at Rocknest this
week.

55
00:04:30,760 --> 00:04:36,410
The Mastcam and Navcam instruments provided
images and video used to assess the success

56
00:04:36,410 --> 00:04:39,890
of the scooping and sample processing activities.

57
00:04:39,890 --> 00:04:48,150
These images also provided confirmation that
the sampling system was successfully cleaned.

58
00:04:48,150 --> 00:04:52,640
Also this week, a soil sample was dropped
off to the rovers observation tray for assessment

59
00:04:52,640 --> 00:04:54,550
by the science team.

60
00:04:54,550 --> 00:04:59,230
This sample was determined to be suitable
for drop off to the CheMin instrument.

61
00:04:59,230 --> 00:05:05,000
The CheMin instrument uses X-rays in order
to image the sample and determine what minerals

62
00:05:05,000 --> 00:05:06,010
make it up.

63
00:05:06,010 --> 00:05:10,410
This helps geologists understand how the rock
formed and how it’s related to other rocks

64
00:05:10,410 --> 00:05:13,200
we’ve studied so far on Mars.

65
00:05:13,200 --> 00:05:17,260
Scientists identified numerous bright grains
in the soil.

66
00:05:17,260 --> 00:05:21,350
Because of this small piece of plastic from
the landing event that had been found earlier

67
00:05:21,350 --> 00:05:26,410
in the week, the team proceeded cautiously,
dumping the second scoop collected and imaging

68
00:05:26,410 --> 00:05:27,930
the bright grains.

69
00:05:27,930 --> 00:05:32,391
These bright grains were later determined
to be components of the Martian soil, and

70
00:05:32,391 --> 00:05:37,740
therefore, the sample was deemed to be suitable
for delivery to the CheMin instrument for

71
00:05:37,740 --> 00:05:38,740
analysis.

72
00:05:38,740 --> 00:05:44,080
The science team requested Mastcam and Navcam
mosaics of outcrops in the direction of Glenelg,

73
00:05:44,080 --> 00:05:48,330
to plan Curiosity's journey to this next science
destination.

74
00:05:48,330 --> 00:05:51,030
This has been your Curiosity rover update.

75
00:05:51,030 --> 00:05:55,620
Please check back for future reports.

76
00:05:55,620 --> 00:06:01,300
NASA Chief Technologist Mason Peck paid a
visit to Emergent Space Technologies, a company

77
00:06:01,300 --> 00:06:06,360
that offers consulting and engineering services
to the civil, commercial, and military space

78
00:06:06,360 --> 00:06:07,830
industries.

79
00:06:07,830 --> 00:06:12,550
Located near the Goddard Space Flight Center
in Greenbelt, Maryland, Emergent provides

80
00:06:12,550 --> 00:06:17,370
advanced technology to Goddard and other NASA
centers around the country.

81
00:06:17,370 --> 00:06:22,960
Peck’s visit is part of NASA's ongoing recognition
of American small businesses that are developing

82
00:06:22,960 --> 00:06:29,030
new technologies to enable future missions,
while also creating new products, services

83
00:06:29,030 --> 00:06:32,490
and jobs.

84
00:06:32,490 --> 00:06:37,810
NASA engineers, students and amateur radio
enthusiasts around the world are listening

85
00:06:37,810 --> 00:06:40,900
for signals from “TechEdSat.”

86
00:06:40,900 --> 00:06:45,340

The small, cube-shaped satellite was launched
from the International Space Station into

87
00:06:45,340 --> 00:06:51,270
low-Earth orbit to evaluate, demonstrate,
and validate new technologies for future experiments

88
00:06:51,270 --> 00:06:53,880
aboard small space satellites.

89
00:06:53,880 --> 00:06:59,250
TechEdSat was developed by interns from San
Jose State University with mentoring help

90
00:06:59,250 --> 00:07:01,889
from employees at Ames Research Center.

91
00:07:01,889 --> 00:07:04,720
“It’s just great to get real science out
of really small CubeSats.

92
00:07:04,720 --> 00:07:09,030
And it’s really – it’s not something
that 23 year olds, like myself are often able

93
00:07:09,030 --> 00:07:13,900
to do and I think it’s really a great honor
and privilege.”

94
00:07:13,900 --> 00:07:20,490
Dr. Nancy Grace Roman, NASA’s first chief
astronomer and the first woman to hold an

95
00:07:20,490 --> 00:07:26,370
executive position at the agency, spoke about
the origins of NASA’s astronomy program

96
00:07:26,370 --> 00:07:29,420
during a recent History office lecture at
Headquarters.

97
00:07:29,420 --> 00:07:31,130
“NASA was a great place to work.

98
00:07:31,130 --> 00:07:33,930
I started with NASA when it was six months
old.

99
00:07:33,930 --> 00:07:36,730
It was a great place to work in the early
days.

100
00:07:36,730 --> 00:07:42,889
In the first place most of the technical staff
were the cream of the NCA engineers – a

101
00:07:42,889 --> 00:07:46,990
great group of people everybody was enthusiastic.”

102
00:07:46,990 --> 00:07:52,470
Roman was instrumental in the success of several
astronomical satellites including “OSO”,

103
00:07:52,470 --> 00:08:00,320
the Orbiting Solar Observatory, the Cosmic
Background Explorer and the Hubble Space Telescope.

104
00:08:00,320 --> 00:08:10,330
“4-3-2-1-we have ignition and liftoff of
Columbia on an ambitious 10-day international

105
00:08:10,330 --> 00:08:11,580
research flight.”

106
00:08:11,580 --> 00:08:18,270
Twenty years ago on October 22, 1992 space
shuttle Columbia began its 9-day mission on

107
00:08:18,270 --> 00:08:21,110

STS-52.

108
00:08:21,110 --> 00:08:25,810
Onboard – Commander Jim Weatherbee, Pilot
Michael Baker, Mission Specialists Charles

109
00:08:25,810 --> 00:08:33,200
Veach, Bill Shepherd and Tammy Jernigan and
Payload Specialist Steve MacLean of Canada.

110
00:08:33,200 --> 00:08:38,930
As well as deploying the Laser Geodynamic
Satellite-II and conducting several international

111
00:08:38,930 --> 00:08:48,399
experiments, Columbia also carried to space
ashes of Star Trek creator, Gene Roddenberry.

112
00:08:48,399 --> 00:08:55,450
Eleven years ago, on October 24, 2001, the
Odyssey spacecraft reached Mars to study and

113
00:08:55,450 --> 00:09:01,259
map the elemental composition of the planet’s
surface, and evaluate radiation in the Martian

114
00:09:01,259 --> 00:09:02,370
environment.

115
00:09:02,370 --> 00:09:07,290
Odyssey also was a communication relay for
most of the data sent home by the Phoenix

116
00:09:07,290 --> 00:09:11,389
Lander and the Mars Rovers, Spirit and Opportunity.

117
00:09:11,389 --> 00:09:16,860
It also became the middle link for continuous
observation of Martian weather by NASA's Mars

118
00:09:16,860 --> 00:09:20,490
Global Surveyor and the Mars Reconnaissance
Orbiter.

119
00:09:20,490 --> 00:09:33,129
In 2010, Odyssey became the longest-serving
spacecraft at the Red Planet.

120
00:09:33,129 --> 00:09:41,959
And five years ago, on October 23, Discovery
lifted off on STS-120, the 23rd shuttle mission

121
00:09:41,959 --> 00:09:47,309
to the International Space Station, Delivering
the Italian-built “Harmony” Node-2 module

122
00:09:47,309 --> 00:09:53,480
was Commander Pam Melroy, pilot George Zamka,
and Mission specialists Scott Parazynski,

123
00:09:53,480 --> 00:09:58,860
Doug Wheelock, Stephanie Wilson and European
Space Agency astronaut Paolo Nespoli, from

124
00:09:58,860 --> 00:09:59,860
Italy.

125
00:09:59,860 --> 00:10:04,959
Swapping places with Clay Anderson aboard
the ISS was astronaut Dan Tani.

126
00:10:04,959 --> 00:10:09,980
Melroy and station commander Peggy Whitson
became the first two female mission commanders

127
00:10:09,980 --> 00:10:14,720
in space at the same time.

128
00:10:14,720 --> 00:10:20,610

NASA Administrator Charlie Bolden helped kick
off the 2012 Combined Federal Campaign during

129
00:10:20,610 --> 00:10:21,860
an event at NASA Headquarters.

130
00:10:21,860 --> 00:10:28,740
Last year, NASA Headquarters raised more than
$400,000, with federal employees in the National

131
00:10:28,740 --> 00:10:31,740
Capitol Area contributing more than $62.7
million.

132
00:10:31,740 --> 00:10:38,640
“The commitment and the generosity of federal
workers like us has made the CFC one of the

133
00:10:38,640 --> 00:10:43,990
most successful philanthropic programs in
history and its impact is wide and deep.”

134
00:10:43,990 --> 00:10:49,950
Among several charitable organizations represented
was the Wilson Parrot Foundation, a Maryland

135
00:10:49,950 --> 00:10:53,439
group that rescues abused and abandoned pet
birds.

136
00:10:53,439 --> 00:11:00,220
Here the administrator, a former naval aviator,
poses with a few fellow flyers.

137
00:11:00,220 --> 00:11:02,170
“Oh my goodness…”

138
00:11:02,170 --> 00:11:13,779
You can browse the more than 44-hundred CFC
charities online at www.cfcnca.org.

139
00:11:13,779 --> 00:11:15,879
And that’s This Week @NASA.

140
00:11:15,879 --> 00:11:20,880
For more on these and other stories, or to
follow us on Facebook, Twitter and other social