1
00:00:07,020 --> 00:00:09,559
This Week at NASA…

2
00:00:09,559 --> 00:00:17,600
Ebb and Flow, NASA's Gravity Recovery And
Interior Laboratory, or GRAIL spacecraft,

3
00:00:17,600 --> 00:00:22,180
have officially begun collecting science data
as they orbit the moon.

4
00:00:22,180 --> 00:00:27,000
Scientists will use the information gathered
by the twin spacecraft to produce a high-resolution

5
00:00:27,000 --> 00:00:30,290
map of the lunar gravitational field.

6
00:00:30,290 --> 00:00:35,550
That should provide unprecedented detail about
the moon's internal structure and composition,

7
00:00:35,550 --> 00:00:39,680
and lead to a better understanding of how
Earth and other rocky planets in the solar

8
00:00:39,680 --> 00:00:41,460
system formed.

9
00:00:41,460 --> 00:00:47,380
Science activities are expected to conclude
on May 29.

10
00:00:47,380 --> 00:00:53,110
Aboard the International Space Station, flame
tests continued for the Structure and Liftoff

11
00:00:53,110 --> 00:00:56,280
In Combustion Experiment, or SLICE.

12
00:00:56,280 --> 00:01:00,150
The experiment investigates the nature of
flames in microgravity.

13
00:01:00,150 --> 00:01:04,479
I’m ready to light the flame.

14
00:01:04,479 --> 00:01:11,390
The station tests have yielded stable lifted
flames, which can be simpler to model numerically.

15
00:01:11,390 --> 00:01:16,859
This research in the world’s only laboratory
in microgravity could lead to reduced pollution

16
00:01:16,859 --> 00:01:21,189
emissions and more efficient burning by a
wide variety of industries.

17
00:01:21,189 --> 00:01:24,429
So why do we need engineers.

18
00:01:24,429 --> 00:01:28,969
The things that we want to do; the technology
development that we have to do to put humans

19
00:01:28,969 --> 00:01:33,679
beyond low earth orbit, which is our ultimate
goal, require people with engineering backgrounds.

20
00:01:33,679 --> 00:01:39,619
NASA Administrator Charlie Bolden was at Georgia
Tech to help kick off STAY WITH IT, a new,

21
00:01:39,619 --> 00:01:44,030
White House initiative to attract more U.S.
college students to engineering,

22

00:01:44,030 --> 00:01:51,799
\h
So stay with it, stay with it, stay with it.

23
00:01:51,799 --> 00:01:57,649
Along with Intel, MTV, Google and Facebook,
the online host for the announcement, the

24
00:01:57,649 --> 00:02:03,249
President's Council on Jobs and Competitiveness
has forged this new public-private partnership

25
00:02:03,249 --> 00:02:08,940
through which students can learn about engineering
internships, financial support and summer

26
00:02:08,940 --> 00:02:11,290
bridge programs for entering freshmen.

27
00:02:11,290 --> 00:02:17,410
More than 65 companies have aligned with STAY
WITH IT to double their engineering internships

28
00:02:17,410 --> 00:02:18,410
this year.

29
00:02:18,410 --> 00:02:29,180
That'll result in more than 7,000 opportunities
for hands-on, technical job experience.

30
00:02:29,180 --> 00:02:31,130
\h
Administrator Bolden has been honored with

31
00:02:31,130 --> 00:02:37,300
a Patriot Award for his support of employees
serving in the National Guard and Reserve.

32
00:02:37,300 --> 00:02:42,040
Guard and Reserve employees or their spouses

can nominate supervisors for the Department

33
00:02:42,040 --> 00:02:43,180
of Defense honor.

34
00:02:43,180 --> 00:02:47,900
I think it’s really important for us as
an organization to recognize the talent that

35
00:02:47,900 --> 00:02:54,150
they bring and find a way to get them back
into the workforce, if they left us to go

36
00:02:54,150 --> 00:02:59,090
off to do their reserve or their national
guard time, because they bring an incredible

37
00:02:59,090 --> 00:03:03,370
wealth and breadth of talent that we’re
always searching for.

38
00:03:03,370 --> 00:03:08,430
Also receiving a Patriot Award but unable
to attend the NASA Headquarters ceremony was

39
00:03:08,430 --> 00:03:13,760
Associate Administrator for Human Exploration
and Operations, Bill Gerstenmaier.

40
00:03:13,760 --> 00:03:24,560
Accepting on his behalf was the directorate’s
John Olson.

41
00:03:24,560 --> 00:03:29,180
\h
The Center Operations Directorate is a mission

42
00:03:29,180 --> 00:03:35,870
support organization which provides security,
procurement, logistical, and technical information,

43
00:03:35,870 --> 00:03:39,290
and external relation support to the NASA
Glenn Research Center.

44
00:03:39,290 --> 00:03:44,710
I think NASA has been a place that has given
me a wealth of opportunities.

45
00:03:44,710 --> 00:03:49,930
\hUm, I came here as a Human Resources Director,
and I learned a lot about federal employment

46
00:03:49,930 --> 00:03:52,540
because I had never worked for the federal
government before.

47
00:03:52,540 --> 00:03:57,600
\hUm, and then moving into the senior executive
candidate development program, it’s the

48
00:03:57,600 --> 00:04:03,340
first time that someone had truly invested
an enormous amount in me for me to figure

49
00:04:03,340 --> 00:04:05,910
out what it is that I wanted to do.

50
00:04:05,910 --> 00:04:09,941
And so I think that opportunity in and of
itself is just—spoke volumes about, you

51
00:04:09,941 --> 00:04:13,430
know, what is available to you here at NASA.

52
00:04:13,430 --> 00:04:17,959
A number of people have inspired me, and I
like to believe that you know I get inspiration

53

00:04:17,959 --> 00:04:23,120
daily but most often I have to think of my
grandmother and my mother who are just fabulous

54
00:04:23,120 --> 00:04:24,120
role models.

55
00:04:24,120 --> 00:04:27,439
\hBut here at NASA, I've met just some phenomenal
women.

56
00:04:27,439 --> 00:04:31,789
\hI had the opportunity to meet Katherine
Johnson, who is referred to by many people

57
00:04:31,789 --> 00:04:33,029
as a human computer.

58
00:04:33,029 --> 00:04:37,560
\hAnd uh, people like Christine Darden and
Crystal Johnson—people who've gone into

59
00:04:37,560 --> 00:04:41,129
the senior executive service before me and
have really paved the way.

60
00:04:41,129 --> 00:04:44,360
\hSo, you know, inspiration is all around
me.

61
00:04:44,360 --> 00:04:48,150
\h
I hope that I am inspiring the next generation

62
00:04:48,150 --> 00:04:49,629
of women managers.

63
00:04:49,629 --> 00:04:55,620
\hUm, but also inspiring students to be lifelong
learners and realize that anything is possible

64
00:04:55,620 --> 00:05:00,100
with education and hard work.

65
00:05:00,100 --> 00:05:06,680
About 150 students from 18 schools in Mississippi
and Louisiana got an inside look at the Stennis

66
00:05:06,680 --> 00:05:10,030
Space Center during a Women's History Month
event.

67
00:05:10,030 --> 00:05:11,879
The outing was part of the G.E.M.S.

68
00:05:11,879 --> 00:05:15,930
program, for Girls Excited about Math and
Science.

69
00:05:15,930 --> 00:05:20,370
The students were treated to activities and
workshops – including a fashion show that

70
00:05:20,370 --> 00:05:26,770
featured business attire, an introduction
to Information Technology, a cryogenics demonstration

71
00:05:26,770 --> 00:05:31,879
and details about college and career planning.

72
00:05:31,879 --> 00:05:36,309
Air Force Flight Test Center commander General
Robert Nolan and other dignitaries recently

73
00:05:36,309 --> 00:05:41,460
dedicated a street at Edwards Air Force Base
in California to honor the late NACA test

74
00:05:41,460 --> 00:05:44,020

pilot Scott Crossfield.

75
00:05:44,020 --> 00:05:48,110
Crossfield became the first pilot to reach
Mach 2 – twice the speed of sound – in

76
00:05:48,110 --> 00:05:51,830
the Douglas Skyrocket on Nov. 20, 1953.

77
00:05:51,830 --> 00:05:54,229
\h
And when you talk about Scott Crossfield,

78
00:05:54,229 --> 00:05:57,849
think about the sacrifices and the risk that
he took.

79
00:05:57,849 --> 00:06:04,499
Think about flying Mach 2 in the 1950s.

80
00:06:04,499 --> 00:06:09,400
And then, think about a career dedicated to
aviation.

81
00:06:09,400 --> 00:06:14,770
In a related presentation, retired NASA Dryden
Flight Research Center research pilot Ed Schneider

82
00:06:14,770 --> 00:06:19,439
detailed Crossfield's contributions to the
advancement of aeronautics and flight research.

83
00:06:19,439 --> 00:06:22,360
\h
Scott had joined NACA at a time when the United

84
00:06:22,360 --> 00:06:27,509
States was fully committed to exploring the
world of supersonic flight and pushing the

85
00:06:27,509 --> 00:06:33,569
speed and the altitude of manned airplanes
to numbers that were really the stuff of fiction

86
00:06:33,569 --> 00:06:35,889
in 1945.

87
00:06:35,889 --> 00:06:40,039
Crossfield later helped design the cockpit
of the famed X-15 rocket plane while employed

88
00:06:40,039 --> 00:06:42,960
by North American Aviation in the late 1950s.

89
00:06:42,960 --> 00:06:48,809
He flew the first 14 developmental demonstration
flight tests of the craft before it was turned

90
00:06:48,809 --> 00:06:54,389
over to the Air Force and NASA for the joint
X-15 hypersonic flight research program.

91
00:06:54,389 --> 00:07:00,849
He received the 1961 Harmon Trophy and the
1962 Collier Trophy, the most prestigious

92
00:07:00,849 --> 00:07:06,439
awards for advancements in aeronautics, from
President John F. Kennedy in White House ceremonies.

93
00:07:06,439 --> 00:07:09,990
\h
We pilots think of him as one of the best

94
00:07:09,990 --> 00:07:12,830
to ever strap on an airplane.

95
00:07:12,830 --> 00:07:19,680
And perhaps I remember him best as an American

hero who always came across as an unassuming,

96
00:07:19,680 --> 00:07:20,960
well-mannered gentleman.

97
00:07:20,960 --> 00:07:25,110
It doesn’t always happen that way.

98
00:07:25,110 --> 00:07:29,009
Hey programs.

99
00:07:29,009 --> 00:07:34,500
NASA employees, family members and community
leaders recently gathered at the Space Coast

100
00:07:34,500 --> 00:07:38,419
Stadium in Viera, Fla., to celebrate Space
Day.

101
00:07:38,419 --> 00:07:44,090
Kennedy Space Center Director Bob Cabana threw
out the first pitch before a spring training

102
00:07:44,090 --> 00:07:48,779
game between the host Washington Nationals
and the Houston Astros.

103
00:07:48,779 --> 00:07:51,479
\h
NASA booths highlighted how agency research

104
00:07:51,479 --> 00:07:56,249
and development has contributed to sports,
transportation and everyday life.

105
00:07:56,249 --> 00:08:01,249
The public was also treated to an up-close
look at a full-scale test version of NASA’s

106

00:08:01,249 --> 00:08:05,349
new Orion spacecraft.

107
00:08:05,349 --> 00:08:12,779
Eighty-six years ago, on March 16, 1926, Robert Goddard successfully launched the world’s

108
00:08:12,779 --> 00:08:17,199
first liquid-fuel rocket from a field in Auburn, Massachusetts.

109
00:08:17,199 --> 00:08:22,029
Goddard continued his rocket development work throughout the remainder of his life, achieving

110
00:08:22,029 --> 00:08:27,369
numerous milestones, and helping pave the way for contemporary spaceflight.

111
00:08:27,369 --> 00:08:33,210
Established in 1959, the Goddard Space Flight Center in Greenbelt, Maryland was named in

112
00:08:33,210 --> 00:08:34,680
his memory.

113
00:08:34,680 --> 00:08:36,970
\h
3-2-1 ignition

114
00:08:36,970 --> 00:08:44,790
And, on that same date 46 years ago, the Gemini Titan 8 launched from Cape Canaveral, Florida,

115
00:08:44,790 --> 00:08:48,870
on its way to becoming NASA’s first manned docking mission.

116
00:08:48,870 --> 00:08:54,220
Astronauts Neil Armstrong and Dave Scott docked

their capsule with an unmanned Agena target

117
00:08:54,220 --> 00:08:55,520
vehicle.

118
00:08:55,520 --> 00:09:00,810
While docked, a thruster malfunction caused
a near-fatal tumbling of the craft.

119
00:09:00,810 --> 00:09:05,870
The crew was able to stabilize the vehicle,
but used up too much fuel in the process,

120
00:09:05,870 --> 00:09:09,250
scrapping plans for a spacewalk and other
activities.

121
00:09:09,250 --> 00:09:14,390
About ten hours after launch Armstrong and
Scott made the first emergency landing of

122
00:09:14,390 --> 00:09:21,690
a manned U.S. spacecraft as Gemini 8 splashed
safely down in the western Pacific Ocean.

123
00:09:21,690 --> 00:09:28,020
Thirty years ago, on March 22, 1982, Space
Shuttle Columbia launched from the Kennedy

124
00:09:28,020 --> 00:09:30,070
Space Center on STS-3.

125
00:09:30,070 --> 00:09:35,400
NASA's third space shuttle mission was one
of several test flights to qualify shuttle

126
00:09:35,400 --> 00:09:38,250
systems for operational flights.

127

00:09:38,250 --> 00:09:43,440
Commander Jack Lousma and Pilot C. Gordon
Fullerton tested the Canadarm Remote Manipulator

128
00:09:43,440 --> 00:09:49,460
System and gathered data on how Columbia handled
the sun's heat in various attitudes.

129
00:09:49,460 --> 00:09:55,820
STS-3 was the only shuttle mission to land
at the White Sands Space Harbor near Las Cruces,

130
00:09:55,820 --> 00:09:56,820
New Mexico.

131
00:09:56,820 --> 00:10:03,870
And, 16 years ago, on March 22, 1996, space
shuttle Atlantis launched from the Kennedy

132
00:10:03,870 --> 00:10:07,370
Space Center on STS-76.

133
00:10:07,370 --> 00:10:13,440
It was the first flight of the SPACEHAB pressurized
module to support shuttle-Mir dockings, and

134
00:10:13,440 --> 00:10:18,180
the third linkup between the U.S. spacecraft
and the Russian space station.

135
00:10:18,180 --> 00:10:22,910
The flight delivered Shannon Lucid to Mir
to become the first American woman to live

136
00:10:22,910 --> 00:10:29,460
on station, and kick off a continuous, two-year
U.S. presence in space.

137
00:10:29,460 --> 00:10:34,850
STS-76 was commanded by Kevin Chilton; Richard

Searfoss was its pilot.

138
00:10:34,850 --> 00:10:41,510
Mission Specialists were Linda Godwin, Michael Clifford and Ronald Sega.

139
00:10:41,510 --> 00:10:44,020
And that’s This Week @ NASA!