
POPOVKIN
LIGHTFOOT

1
00:00:06,890 --> 00:00:08,980
This Week at NASA…

2
00:00:08,980 --> 00:00:14,980
“Station, Houston on space-to- ground two,
Dragon will be departing the 30 meter hold

3
00:00:14,980 --> 00:00:16,039
momentarily.”

4
00:00:16,039 --> 00:00:20,730
Two days after SpaceX launched its Dragon
spacecraft on a demonstration flight to the

5
00:00:20,730 --> 00:00:26,070
International Space Station, the company began
conducting a series of check-out procedures

6
00:00:26,070 --> 00:00:31,140
to validate the operation of Dragon’s sensors
and flight systems to demonstrate that the

7
00:00:31,140 --> 00:00:36,180
spacecraft could safely rendezvous and approach
the ISS.

8
00:00:36,180 --> 00:00:40,820
After successfully proving these capabilities
the capsule was cleared to be grappled by

9
00:00:40,820 --> 00:00:44,710
the station’s robotic arm …
“Capture is confirmed …(applause)”

10
00:00:44,710 --> 00:00:48,260
“Congratulations on a wonderful capture
you’ve made a lot of folks happy down here

11
00:00:48,260 --> 00:00:50,680

over in Hawthorne and right here in Houston,
great job guys."

12
00:00:50,680 --> 00:00:54,440
"Houston, station looks we've got us a
dragon by the tail."

13
00:00:54,440 --> 00:00:57,550
…and was berthed to the station's Harmony
node.

14
00:00:57,550 --> 00:00:59,929
"Second stage capture is complete."

15
00:00:59,929 --> 00:01:04,780
Following the momentous event, NASA Administrator
Charles Bolden made a call up to the station

16
00:01:04,780 --> 00:01:06,590
crew with words of congratulations.

17
00:01:06,590 --> 00:01:12,170
"I just want to take a moment to congratulate
all of you on a superb effort today.

18
00:01:12,170 --> 00:01:16,220
I think you know it but you made history today
and it firmly locked the future direction

19
00:01:16,220 --> 00:01:18,270
of the American Space Program in place."

20
00:01:18,270 --> 00:01:20,670
"Charlie thanks for those words.

21
00:01:20,670 --> 00:01:26,670
We're smiling ear to ear and we're really
grateful to be given the opportunity to be

22

00:01:26,670 --> 00:01:27,870
part of this day.”

23
00:01:27,870 --> 00:01:33,030
Under NASA's Commercial Orbital Transportation Services, or COTS program, which is designed

24
00:01:33,030 --> 00:01:38,271
to stimulate the commercial space industry in America, SpaceX becomes the first privately

25
00:01:38,271 --> 00:01:42,119
owned company to send a commercial spacecraft to the ISS.

26
00:01:42,119 --> 00:01:52,689
“This really is I think, going to be recognized as a significantly historical step forward

27
00:01:52,689 --> 00:01:58,039
in space travel and hopefully the first of many to come.”

28
00:01:58,039 --> 00:02:03,630
Video taken from the International Space Station documents the May 20 annular solar eclipse.

29
00:02:03,630 --> 00:02:09,320
While flying at about 240 statute miles above Earth, NASA astronaut Don Pettit captured

30
00:02:09,320 --> 00:02:14,680
the moon’s shadow being cast on the planet below as the moon lined up between sun and

31
00:02:14,680 --> 00:02:15,790
Earth.

32
00:02:15,790 --> 00:02:18,590
This was the first solar eclipse of 2012.

33
00:02:18,590 --> 00:02:25,260
The next one – a total eclipse is scheduled
to take place on November 13.

34
00:02:25,260 --> 00:02:28,590
Another rare celestial event is just on the
horizon.

35
00:02:28,590 --> 00:02:32,450
A transit of the planet Venus across the Sun
is scheduled for June 5.

36
00:02:32,450 --> 00:02:38,410
A transit takes place when a planet passes
directly between the Sun and Earth.

37
00:02:38,410 --> 00:02:43,590
In doing so, Venus will block a portion of
the Sun, much like a solar eclipse by the

38
00:02:43,590 --> 00:02:44,590
moon.

39
00:02:44,590 --> 00:02:50,190
Despite being almost four times larger, Venus
is much farther away than the moon, so the

40
00:02:50,190 --> 00:02:55,610
planet will be seen from Earth as a small,
dark disk moving slowly across the face of

41
00:02:55,610 --> 00:02:57,010
the Sun.

42
00:02:57,010 --> 00:03:01,620
Transits of Venus are among the rarest of
predictable astronomical phenomena, occurring

43

00:03:01,620 --> 00:03:07,810
in a pattern that repeats every 243 years,
with pairs of transits about eight years apart

44
00:03:07,810 --> 00:03:14,920
separated by long gaps of 121.5 years and
105.5 years.

45
00:03:14,920 --> 00:03:17,980
The most recent Transit of Venus happened
in June 2004.

46
00:03:17,980 --> 00:03:28,710
After 2012, the next transits of Venus will
be in December 2117 and December 2125.

47
00:03:28,710 --> 00:03:33,790
A set of guidelines developed by NASA to protect
the Apollo and other historic landing sites

48
00:03:33,790 --> 00:03:39,780
on the moon will be followed by contestants
in a Google-sponsored competition to space.

49
00:03:39,780 --> 00:03:44,900
That agreement in principle comes about as
26 teams worldwide continue their plans to

50
00:03:44,900 --> 00:03:50,400
build and send robots to the lunar surface
in hopes of claiming a share of the 30-million

51
00:03:50,400 --> 00:03:54,599
dollars in awards offered by The Google Lunar
X-Prize.

52
00:03:54,599 --> 00:03:59,939
The first privately-funded teams to safely
land a robot on the surface of the moon, have

53

00:03:59,939 --> 00:04:06,031
it travel 500 meters over the lunar surface,
and send HD video, images and data back to

54
00:04:06,031 --> 00:04:08,470
Earth, will claim the prizes.

55
00:04:08,470 --> 00:04:14,010
Bonus awards will go to those imaging the
six Apollo landing sites and others, including

56
00:04:14,010 --> 00:04:16,780
that of NASA's Surveyor spacecraft.

57
00:04:16,780 --> 00:04:25,140
All Google Lunar X-Prize monies must be claimed
by the end of 2015.

58
00:04:25,140 --> 00:04:29,760
NASA Administrator Charles Bolden was the
guest speaker at the second Goddard Veterans

59
00:04:29,760 --> 00:04:33,520
Memorial Day observance at Goddard Space Flight
Center.

60
00:04:33,520 --> 00:04:39,220
Bolden and Center Director Chris Scolese joined
active duty and retired service members to

61
00:04:39,220 --> 00:04:42,890
honor those who've made the ultimate sacrifice
for our country.

62
00:04:42,890 --> 00:04:49,700
"At Goddard as you all know we truly value
our diversity it captures a broad understanding

63
00:04:49,700 --> 00:04:54,381
of all the things that we are and that we

do and it makes Goddard a much better place

64
00:04:54,381 --> 00:04:57,950
and I think it makes NASA and the country
a better place."

65
00:04:57,950 --> 00:05:03,130
"People who, every day put on the uniforms
of our Armed Forces and risk their lives protecting

66
00:05:03,130 --> 00:05:08,470
the Freedoms and Liberties of this great Nation
of ours; I also know many of us have been

67
00:05:08,470 --> 00:05:14,600
personally touched by the loss of one of these
brave and selfless heroes, so this is also

68
00:05:14,600 --> 00:05:20,350
a day where we pause and honor the memories
of members of our own NASA family who have

69
00:05:20,350 --> 00:05:28,070
paid the ultimate sacrifice in service to
this great county."

70
00:05:28,070 --> 00:05:32,410
The annual event is presented by the Goddard
Veterans Advisory Committee.

71
00:05:32,410 --> 00:05:41,190
Invited guests included members of the group,
Wounded Warriors, and the Tuskegee Airmen.

72
00:05:41,190 --> 00:05:46,470
Again serving as guest speaker, NASA Administrator
Charles Bolden was behind the lectern at the

73
00:05:46,470 --> 00:05:52,100
Small Business Administration's annual Procurement

Awards Breakfast in Washington.

74
00:05:52,100 --> 00:05:57,060
Joined by Glenn Delgado, the agency's Associate Administrator for Small Business Programs,

75
00:05:57,060 --> 00:06:02,350
Bolden noted the important roles played by entrepreneurs and small businesses not only

76
00:06:02,350 --> 00:06:08,180
in fueling the American economy, but also in NASA's past, present and future successes

77
00:06:08,180 --> 00:06:10,500
as envisioned by President Obama.

78
00:06:10,500 --> 00:06:14,150
The event was held as part of National Small Business Week.

79
00:06:14,150 --> 00:06:19,750
"To work on some of the technologies…"

80
00:06:19,750 --> 00:06:25,660
Also in Washington, at the Global Space Exploration Conference, or GLEX, Acting Associate Administrator,

81
00:06:25,660 --> 00:06:31,700
Robert Lightfoot, represented NASA in a roundtable discussion of international space agency leaders

82
00:06:31,700 --> 00:06:33,270
about future missions.

83
00:06:33,270 --> 00:06:38,940
Sponsored by the American Institute of Aeronautics and Astronautics, GLEX brought together senior

84

00:06:38,940 --> 00:06:45,530
leaders from the world’s major space agencies,
industry, governments, academia and non-governmental

85
00:06:45,530 --> 00:06:51,250
organizations to exchange ideas and discuss
opportunities presented by future human and

86
00:06:51,250 --> 00:06:53,650
robotic space exploration.

87
00:06:53,650 --> 00:07:01,320
Our This Week @NASA answer is: This television
game show celebrity is now hosting a public

88
00:07:01,320 --> 00:07:06,020
service announcement pointing out that much
of the technology we rely on in our daily

89
00:07:06,020 --> 00:07:10,930
lives comes from technologies developed by
NASA for space exploration.

90
00:07:10,930 --> 00:07:11,930
The correct response …

91
00:07:11,930 --> 00:07:14,840
“Hello everyone I’m Alex Trebek.”

92
00:07:14,840 --> 00:07:18,190
Who is “Jeopardy” quizmaster, Alex Trebek?

93
00:07:18,190 --> 00:07:23,810
Now for the This Week @NASA Daily Double … the
answer: Trebek’s new PSA can be seen on

94
00:07:23,810 --> 00:07:30,260
NASA Television, the NASA TV YouTube page,
and nasa.gov, along with similar videos featuring

95
00:07:30,260 --> 00:07:36,110
which other celebrities and musicians showing
how NASA Spinoffs benefit life here on Earth

96
00:07:36,110 --> 00:07:37,110
today?

97
00:07:37,110 --> 00:07:42,570
The Daily Double question: Who are recording
artists Will.i.am, Norah Jones and comedian

98
00:07:42,570 --> 00:07:43,570
Stephen Colbert?

99
00:07:43,570 --> 00:07:53,050
“If you’d like to learn more about how
NASA is improving our lives, visit www.nasa.gov.”

100
00:07:53,050 --> 00:07:59,960
NASA’s newest airborne science aircraft,
the C-23 Sherpa, has departed from the Wallops

101
00:07:59,960 --> 00:08:02,880
Flight Facility on its first mission.

102
00:08:02,880 --> 00:08:08,440
The flying science platform supports the Carbon
in Arctic Reservoirs Vulnerability Experiment,

103
00:08:08,440 --> 00:08:12,590
or CARVE, headquartered at the Jet Propulsion
Laboratory.

104
00:08:12,590 --> 00:08:18,190
CARVE will collect an integrated set of data
to provide unprecedented insights into Arctic

105
00:08:18,190 --> 00:08:23,680
carbon cycling, or the release and absorption

of carbon from Arctic ecosystems.

106
00:08:23,680 --> 00:08:31,020
The C-23 joined NASA’s crewed science aircraft
fleet in January, expanding the agency’s

107
00:08:31,020 --> 00:08:33,800
capabilities to conduct research worldwide.

108
00:08:33,800 --> 00:08:38,460
“Besides airborne research we can use it
for logistical support for cargo type missions,

109
00:08:38,460 --> 00:08:43,560
range surveillance, recovery operations for
balloon program or sounding rockets, or any

110
00:08:43,560 --> 00:08:46,150
other type of mission that somebody may be
able to think of.

111
00:08:46,150 --> 00:08:51,560
It’s a pretty versatile aircraft, easy to
modify, a lot of capability to the plane itself.”

112
00:08:51,560 --> 00:08:52,560
\h

113
00:08:52,560 --> 00:08:59,220
The C-23 will conduct investigations in Fairbanks,
Alaska through September.

114
00:08:59,220 --> 00:09:01,120
\h
It wasn't something you see every day – what

115
00:09:01,120 --> 00:09:05,840
looked like a Coast Guard jet arriving at
NASA's Langley Research Center in October,

116
00:09:05,840 --> 00:09:06,840
2011.

117
00:09:06,840 --> 00:09:11,190
But a closer look showed all official markings
- gone.

118
00:09:11,190 --> 00:09:16,030
That's because the HU-25C Guardian, which
had been at a Coast Guard base in Cape Cod,

119
00:09:16,030 --> 00:09:22,090
Massachusetts was about to join NASA Langley's
fleet in Hampton, Virginia.

120
00:09:22,090 --> 00:09:26,080
It took a few months to get the business jet
equivalent ready for its first NASA airborne

121
00:09:26,080 --> 00:09:29,100
mission doing atmospheric research.

122
00:09:29,100 --> 00:09:32,250
But changes the Coast Guard had made already
paid off.

123
00:09:32,250 --> 00:09:36,690
“This aircraft also has a number of modifications
the Coast Guard made to the aircraft which

124
00:09:36,690 --> 00:09:41,440
we can adapt for atmospheric science and for
aerospace/ aeronautical research.”

125
00:09:41,440 --> 00:09:46,590
They include a removable hatch in the bottom
and over-sized windows that can be used for

126
00:09:46,590 --> 00:09:48,910

optical imaging systems.

127
00:09:48,910 --> 00:09:52,350
It all adds up to a more versatile plane for
scientific research.

128
00:09:52,350 --> 00:09:59,410
“This is a big step forward in capability
– in power, range, altitude, speed and weight

129
00:09:59,410 --> 00:10:02,420
that we can carry that we could not carry
before.”

130
00:10:02,420 --> 00:10:08,000
The Guardian's first NASA mission is scheduled
for Greenland, but the crew hopes warmer climates

131
00:10:08,000 --> 00:10:11,930
are in the future

132
00:10:11,930 --> 00:10:17,090
The annual Marshall Space Flight Center Director's
Breakfast was held at the U.S. Space and Rocket

133
00:10:17,090 --> 00:10:18,090
Center.

134
00:10:18,090 --> 00:10:23,140
The theme of this year’s event, “People,
Progress, Partnerships,” focused on Marshall’s

135
00:10:23,140 --> 00:10:27,240
accomplishments over the past year and the
Center’s support of NASA’s mission and

136
00:10:27,240 --> 00:10:29,380
long-range strategy.

137

00:10:29,380 --> 00:10:34,560
Acting Center Director Gene Goldman discussed
Marshall’s activities with community leaders,

138
00:10:34,560 --> 00:10:38,150
elected officials and industry partners in
attendance.

139
00:10:38,150 --> 00:10:43,900
Goldman also handed out Marshall Center Contractor
Excellence Awards, given annually to prime

140
00:10:43,900 --> 00:10:48,800
contractors, subcontractors and suppliers
who’ve made significant contributions to

141
00:10:48,800 --> 00:10:54,090
Marshall-managed NASA projects, including
development of the agency’s new Space Launch

142
00:10:54,090 --> 00:11:05,350
System and its support of the commercial space
transportation industry.

143
00:11:05,350 --> 00:11:14,740
“My name is Fran Lawas-Grodek.

144
00:11:14,740 --> 00:11:19,710
I’ve been with NASA for, this will be my
29th year at NASA.

145
00:11:19,710 --> 00:11:24,410
I’m a computer engineer in the IT Security
Office here on the lab.

146
00:11:24,410 --> 00:11:29,810
I work with a group of people where we protect
the lab, labs data that flows through the

147
00:11:29,810 --> 00:11:30,810

computer networks.

148
00:11:30,810 --> 00:11:35,100
One of my main responsibilities is the firewall
team lead.

149
00:11:35,100 --> 00:11:41,880
The firewall protects the data that comes
in and out of the lab from the public Internet

150
00:11:41,880 --> 00:11:47,100
and what I do with my part is to make sure
that the adequate protections, the sufficient

151
00:11:47,100 --> 00:11:49,950
protections are put in place within the firewall.

152
00:11:49,950 --> 00:11:54,840
What I like most about working at NASA is
the people that I've met and worked with

153
00:11:54,840 --> 00:11:55,960
along my way.

154
00:11:55,960 --> 00:12:01,050
We have such a great diversity of people,
people from all backgrounds, different races,

155
00:12:01,050 --> 00:12:04,840
different cultures, different beliefs and
we are all working together to achieve the

156
00:12:04,840 --> 00:12:05,940
same goal.

157
00:12:05,940 --> 00:12:09,090
I graduated from Cleveland State University.

158
00:12:09,090 --> 00:12:16,700

My major originally was, it was accounting,
but I found Computer Science to come fairly

159
00:12:16,700 --> 00:12:17,700
easily.

160
00:12:17,700 --> 00:12:21,330
I can say that my parents inspired me the
most when I was growing up.

161
00:12:21,330 --> 00:12:24,470
They came here and they had no family.

162
00:12:24,470 --> 00:12:29,151
So, knowing all those things that they've
had to deal with, the differences and the

163
00:12:29,151 --> 00:12:34,980
cultures, that they were able to succeed is
what's inspiring to me that I know that

164
00:12:34,980 --> 00:12:39,220
I can succeed if I want to try something different.

165
00:12:39,220 --> 00:12:43,610
What I would say to young people in preparing
for a career of their choice is to find the

166
00:12:43,610 --> 00:12:45,930
job that they would do for free.

167
00:12:45,930 --> 00:12:51,380
This would be the job they would have the
passion, and it would make them happy in doing

168
00:12:51,380 --> 00:12:58,240
it, and even better yet, is that they could
eventually and will be getting paid for it."

169

00:12:58,240 --> 00:13:04,830
“I believe that this nation should commit
itself to achieving the goal, before this

170
00:13:04,830 --> 00:13:10,100
decade is out, of landing a man on the moon
and returning him safely to the Earth.”

171
00:13:10,100 --> 00:13:16,520
51 years ago, on May 25, 1961 President John
F. Kennedy, in a speech before a special joint

172
00:13:16,520 --> 00:13:19,270
session of Congress, challenged the nation
to set its sights on sending an American to

173
00:13:19,270 --> 00:13:22,480
the moon.

174
00:13:22,480 --> 00:13:28,250
So directed, NASA ramped up its human spaceflight
effort, starting with Project Mercury, and

175
00:13:28,250 --> 00:13:30,690
continuing on through Gemini, and Apollo.

176
00:13:30,690 --> 00:13:34,300
“That’s one small step for man.

177
00:13:34,300 --> 00:13:37,310
One giant leap for mankind.”

178
00:13:37,310 --> 00:13:43,320
In July, 1969, Kennedy’s goal was realized
when joined by Apollo 11 crewmate Michael

179
00:13:43,320 --> 00:13:48,800
Collins, Neil Armstrong and Buzz Aldrin made
their safe return home after landing on the

180
00:13:48,800 --> 00:13:52,060
lunar surface.

181
00:13:52,060 --> 00:13:58,250
Thirteen years ago, on May 29, 1999, Discovery
made the first space shuttle docking to the

182
00:13:58,250 --> 00:14:00,589
International Space Station.

183
00:14:00,589 --> 00:14:06,930
STS-96, the second flight to the complex,
was commanded by Kent Rominger and was piloted

184
00:14:06,930 --> 00:14:08,540
by Rick Husband.

185
00:14:08,540 --> 00:14:15,120
Mission Specialists were Ellen Ochoa, Tamara
Jernigan, Daniel Barry, Julie Payette and

186
00:14:15,120 --> 00:14:17,030
Valery Tokarev.

187
00:14:17,030 --> 00:14:25,070
Also onboard: 3,567 pounds of material that
included clothing, sleeping bags, spare parts,

188
00:14:25,070 --> 00:14:31,430
medical equipment, supplies, hardware and
about 84 gallons of water.\h

189
00:14:31,430 --> 00:14:33,590
And that’s This Week @ NASA!

190
00:14:33,590 --> 00:14:38,760
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