



1
00:00:07,040 --> 00:00:12,780
This Week at NASA...

2
00:00:12,780 --> 00:00:22,550
"3-2-1-Zero and launch of the SpaceX Falcon
9 rocket

3
00:00:22,550 --> 00:00:31,439
In a historic moment for the nation, SpaceX
successfully launched its Falcon 9 rocket

4
00:00:31,439 --> 00:00:35,640
and Dragon cargo craft from Florida's Cape
Canaveral Air Force Station – marking the

5
00:00:35,640 --> 00:00:40,970
start of the first ever commercial cargo resupply
flight to the International Space Station

6
00:00:40,970 --> 00:00:46,320
The CRS-1 mission, the first of twelve such
flights under NASA's Commercial Resupply

7
00:00:46,320 --> 00:00:52,880
Services contract, also marks the return of
America's capability to independently resupply

8
00:00:52,880 --> 00:00:58,829
the orbiting laboratory – a feat not achievable
since the retirement of the space shuttle.

9
00:00:58,829 --> 00:01:03,250
"We're once again launching spacecraft
from American soil with the supplies our astronauts

10
00:01:03,250 --> 00:01:04,739
need in space.

11
00:01:04,739 --> 00:01:10,399

The SpaceX launch tonight marks the official start of commercial resupply missions by American

12
00:01:10,399 --> 00:01:15,740
companies operating out of U.S. space ports like the one right here in Florida.”

13
00:01:15,740 --> 00:01:20,530
While NASA is working with SpaceX and other U.S. industry partners to develop commercial

14
00:01:20,530 --> 00:01:26,291
spaceflight capabilities, the agency is also developing the Orion spacecraft and the Space

15
00:01:26,291 --> 00:01:33,000
Launch System (SLS), a crew capsule and heavy-lift rocket to provide an entirely new capability

16
00:01:33,000 --> 00:01:35,250
for human exploration.

17
00:01:35,250 --> 00:01:42,170
The SLS and Orion will expand human presence beyond low Earth orbit and enable new missions

18
00:01:42,170 --> 00:01:47,490
of exploration across the solar system.

19
00:01:47,490 --> 00:01:52,700
Discussing the Dragon mission via a Google Plus hangout were NASA Administrator Charlie

20
00:01:52,700 --> 00:01:56,670
Bolden and SpaceX CEO Elon Musk.

21
00:01:56,670 --> 00:02:01,979
Those who participated in the online video chat could also pose questions through Twitter

22

00:02:01,979 --> 00:02:02,979

and Facebook.

23

00:02:02,979 --> 00:02:06,050

"I think we've got 23 student experiments
– that's special.

24

00:02:06,050 --> 00:02:12,260

Some of them are making repeat flights and,
you know it's SpaceX meeting an obligation

25

00:02:12,260 --> 00:02:19,540

to students that – where we didn't get
around to doing all of them the first time."

26

00:02:19,540 --> 00:02:25,019

One of those science investigations going
up to station on Dragon, named Micro-6, will

27

00:02:25,019 --> 00:02:30,439

look at the effects of microgravity on a yeast
our bodies use to stay healthy.

28

00:02:30,439 --> 00:02:36,639

But, when our immune systems are stressed,
Candida albicans can grow out of control and

29

00:02:36,639 --> 00:02:41,139

produce infections in the mouth, throat, intestines,
and elsewhere.

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00:02:41,139 --> 00:02:47,040

By comparing cells grown in microgravity to
cells grown in normal gravity, researchers

31

00:02:47,040 --> 00:02:55,269

hope to learn how to better manage and treat
the runaway microbes.

32

00:02:55,269 --> 00:03:00,309

Another important milestone in NASA's partnership with industry to deliver cargo to the International

33

00:03:00,309 --> 00:03:04,010

Space Station has been reached at the Wallops Flight Facility.

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00:03:04,010 --> 00:03:10,090

A test version of Orbital Sciences Corporation's Antares rocket rolled out to the Mid-Atlantic

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00:03:10,090 --> 00:03:13,279

Regional Spaceport's launch Pad 0A.

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00:03:13,279 --> 00:03:17,639

Antares will carry Orbital's Cygnus cargo module to the ISS.

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00:03:17,639 --> 00:03:24,049

A hot-fire test of Antares's first stage is slated for later this year, to be followed

38

00:03:24,049 --> 00:03:31,019

first by an Antares test launch, then a demonstration flight of an Antares and Cygnus to the orbiting

39

00:03:31,019 --> 00:03:32,459

lab.

40

00:03:32,459 --> 00:03:35,059

Hi, my name is Daniel Limonadi.

41

00:03:35,059 --> 00:03:39,089

I'm the surface sampling and science phase lead, and this is your Mars Curiosity rover

42

00:03:39,089 --> 00:03:40,709

update.

43

00:03:40,709 --> 00:03:42,090

Curiosity still is heading to Glenelg.

44

00:03:42,090 --> 00:03:46,109

We've just stopped at the Bathurst rock formation to check it out with the robotic

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00:03:46,109 --> 00:03:49,730

arm mounted instruments: a hand lens imager and a spectrometer.

46

00:03:49,730 --> 00:03:53,230

Got some great science data there for the science team and now we're moving to a new

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00:03:53,230 --> 00:03:54,699

rover location called Rocknest.

48

00:03:54,699 --> 00:03:58,919

And we've come to Rocknest because it has nice windblown sand drifts.

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00:03:58,919 --> 00:04:04,920

At the Rocknest location we really are entering a new phase in Mars exploration with Curiosity.

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00:04:04,920 --> 00:04:08,110

We're starting the surface sampling part of the mission.

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00:04:08,110 --> 00:04:12,120

The reason this is a one-ton rover with a 200-pound robotic arm, is

52

00:04:12,120 --> 00:04:17,160

because we have these tools to acquire bits of Mars, you know, either with a scoop or

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00:04:17,160 --> 00:04:22,570

a drill; process those samples for our very sensitive analytical lab instruments.

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00:04:22,570 --> 00:04:27,450

So our scoop – this is not a giant backhoe on Mars – we basically have more like a

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00:04:27,450 --> 00:04:32,780

oversized tablespoon attached to the end of the arm and we grab on the order of 20 grams

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00:04:32,780 --> 00:04:33,950

of material.

57

00:04:33,950 --> 00:04:40,920

And we position the arm over the soil target and then we just actuate the scoop, do a little

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00:04:40,920 --> 00:04:45,820

bit of vibration to kind of level out the sample and then raise the arm up, close the

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00:04:45,820 --> 00:04:49,100

scoop and carry on with our sampling activity.

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00:04:49,100 --> 00:04:52,810

Over the next two to three weeks we'll be doing the scooping and sampling analysis activities

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00:04:52,810 --> 00:04:58,870

and then from there we expect to spend a few more weeks driving over to the Glenelg area

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00:04:58,870 --> 00:05:03,850

proper, doing scratch and sniff science along the way with the robotic arm.

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00:05:03,850 --> 00:05:07,660

And once we get to Glenelg, we'll look forward to some exciting first time drilling activities.

64
00:05:07,660 --> 00:05:10,840
This has been your Mars Curiosity rover update.

65
00:05:10,840 --> 00:05:14,250
Check back for more reports.

66
00:05:14,250 --> 00:05:20,250
October is National Cybersecurity Awareness
Month, and the Chief Information Officer's

67
00:05:20,250 --> 00:05:26,630
IT Security Division at NASA headquarters
hosted a symposium to stress for employees

68
00:05:26,630 --> 00:05:30,280
the importance of Cybersecurity in our everyday
lives.

69
00:05:30,280 --> 00:05:37,500
"Not only is it such a special to be NASA
but we actually do have access to technologies

70
00:05:37,500 --> 00:05:42,530
and information that people who do not mean
us well would love to get."

71
00:05:42,530 --> 00:05:47,590
"The sophistication of attacks continue
to increase every day.

72
00:05:47,590 --> 00:05:52,750
NASA employees must be aware of these types
of attacks in order to protect and safeguard

73
00:05:52,750 --> 00:05:53,750
our information."

74
00:05:53,750 --> 00:06:00,560

To protect the Agency's IT infrastructure,
NASA workers are reminded to STOP and THINK

75

00:06:00,560 --> 00:06:03,280
before they CONNECT online.

76

00:06:03,280 --> 00:06:12,830
Several centers are conducting similar activities
this month to raise cybersecurity awareness.

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00:06:12,830 --> 00:06:17,780
The countdown continues for the next crew
to launch to the International Space Station.

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00:06:17,780 --> 00:06:23,960
Expedition 33/34 Soyuz Commander Oleg Novitskiy
of the Russian Federal Space Agency, NASA

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00:06:23,960 --> 00:06:29,450
Flight Engineer Kevin Ford and Russian Flight
Engineer Evgeny Tarelkin are scheduled to

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00:06:29,450 --> 00:06:33,400
ride a Soyuz spacecraft to the ISS mid-month.

81

00:06:33,400 --> 00:06:39,030
There they'll join Expedition 33 Commander
Suni Williams of NASA, Flight Engineer Aki

82

00:06:39,030 --> 00:06:45,500
Hoshide of the Japan Aerospace Exploration
Agency and Russian Flight Engineer Yuri Malenchenko

83

00:06:45,500 --> 00:06:53,490
aboard the world's only science lab in microgravity.

84

00:06:53,490 --> 00:06:58,281
Employees helping shape the future of their
center and NASA; that was the theme of the

85

00:06:58,281 --> 00:07:01,950

Kennedy Space Center's first Innovation Expo.

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00:07:01,950 --> 00:07:07,520

The day-long event to promote worker innovation and creativity featured examples of workplace

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00:07:07,520 --> 00:07:13,780

improvements by employees, pitch sessions for new ideas, and tours of laboratories and

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00:07:13,780 --> 00:07:19,639

other KSC facilities not usually open to the general work force.

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00:07:19,639 --> 00:07:24,870

Innovation Expo underscored for Kennedy's workforce that it is the center's prime

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00:07:24,870 --> 00:07:29,639

source of ingenuity.

91

00:07:29,639 --> 00:07:34,280

The mirror on NASA's Stratospheric Observatory for Infrared Astronomy was cleaned recently

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00:07:34,280 --> 00:07:38,830

in preparation for the first full cycle of science observations.

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00:07:38,830 --> 00:07:45,080

Because of the sensitive exposed optics, the telescope cavity of the heavily modified 747

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00:07:45,080 --> 00:07:47,680

is designed to serve as a clean room.

95

00:07:47,680 --> 00:07:51,580

However, contamination of the optics builds up over time.

96
00:07:51,580 --> 00:07:56,840
Thus, while the aircraft and its systems were upgraded at the Dryden Aircraft Operations

97
00:07:56,840 --> 00:08:03,430
Facility in Palmdale, California, telescope technicians used water, a mild detergent and

98
00:08:03,430 --> 00:08:09,990
a small filtered blower to remove dust and other material that had adhered to the mirror's

99
00:08:09,990 --> 00:08:10,990
surface.

100
00:08:10,990 --> 00:08:16,169
This is in preparation for the next astronomy observation period, known as Cycle 1, which

101
00:08:16,169 --> 00:08:23,639
will begin in late 2012 and continue through December 2013.

102
00:08:23,639 --> 00:08:29,580
The Enterprise Service Desk at the NASA Shared Services Center is now fully operational and

103
00:08:29,580 --> 00:08:31,419
supporting employees across the Agency.

104
00:08:31,419 --> 00:08:35,950
ESD provides support across the agency in Human Resources, Finance, Procurement, and

105
00:08:35,950 --> 00:08:36,950
IT.

106

00:08:36,950 --> 00:08:44,509

“We have self-service tools available and also IT call agents available 24 hours a day

107

00:08:44,509 --> 00:08:51,420

for the NASA employee to submit service requests for the NASA IT services such as computing

108

00:08:51,420 --> 00:08:58,459

seats, mobile devices, printers, firewall rules, static IP addresses, and even bundled

109

00:08:58,459 --> 00:08:59,680

services.”

110

00:08:59,680 --> 00:09:05,019

For more about ESD services and the NSSC, log onto: www.nssc.nasa.gov.

111

00:09:05,019 --> 00:09:17,430

The Langley Research Center celebrated its 95th

112

00:09:17,430 --> 00:09:25,470

anniversary by hosting some 10-thousand guests at its first open house in five years.

113

00:09:25,470 --> 00:09:31,480

Visitors could meet the first mom-in-space, astronaut Anna Fisher, talk with researchers

114

00:09:31,480 --> 00:09:38,660

about their projects, and take a tour of facilities like the center’s aircraft hangar.

115

00:09:38,660 --> 00:09:45,040

The day’s highlight: watching the 18,000-pound Orion Spacecraft test article drop 25 feet

116

00:09:45,040 --> 00:09:57,160
into Langley's hydro impact basin.

117

00:09:57,160 --> 00:10:02,069
In recognition of October as National Stamp
Collecting Month, NASA and the U.S. Postal

118

00:10:02,069 --> 00:10:08,160
Service held a ceremony at Goddard Space Flight
Center to unveil a series of new stamps.

119

00:10:08,160 --> 00:10:13,300
The 15 new Earthscape "Forever" stamps
depict America's diverse landscapes as seen

120

00:10:13,300 --> 00:10:15,380
from aerial and satellite perspectives.

121

00:10:15,380 --> 00:10:20,490
"Each stamp's unique perspectives makes
it a window into a world most of us never

122

00:10:20,490 --> 00:10:22,720
get to see, at least not from land."

123

00:10:22,720 --> 00:10:27,839
Two of the images, "Volcanic Crater" and
"Center-Pivot Irrigation" were captured

124

00:10:27,839 --> 00:10:32,899
by NASA and the U.S. Geological Survey's
Landsat 7 satellite.

125

00:10:32,899 --> 00:10:38,180
The Volcanic crater stamp depicts Mount St.
Helens as it continues to recover from its

126

00:10:38,180 --> 00:10:45,000
May 1980 eruption, while the latter shows
circular irrigation patterns of crops in Kansas.

127

00:10:45,000 --> 00:10:49,829

"Goddard Space Flight Center launched the first weather satellite Tiros 1 almost 50

128

00:10:53,930 --> 00:10:50,829

years ago.

129

00:10:53,930 --> 00:10:58,930

Using global imagery to understand how the Earth changes through time, and the implications

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00:10:58,930 --> 00:11:03,420

of these changes is a major focus for NASA's Earth science program.

131

00:11:03,420 --> 00:11:08,550

The next Landsat satellite, the Landsat Data Continuity Mission, is scheduled to launch

132

00:11:08,550 --> 00:11:09,550

in February 2013.

133

00:11:09,550 --> 00:11:19,720

"start ... 2-1 ... booster ignition and liftoff ..."

134

00:11:19,720 --> 00:11:26,430

Ten years ago, on October 7, 2002, Space Shuttle Atlantis launched from the Kennedy Space Center

135

00:11:26,430 --> 00:11:32,680

on STS-112 – the 15th shuttle flight to the International Space Station.

136

00:11:32,680 --> 00:11:37,809

STS-112 was the first shuttle flight to provide views of the launch from a camera mounted

137

00:11:37,809 --> 00:11:39,639
on the External Tank.

138

00:11:39,639 --> 00:11:46,819
Atlantis' crew - Commander Jeff Ashby, Pilot
Pam Melroy and Mission Specialists Sandy Magnus,

139

00:11:46,819 --> 00:11:53,209
Piers Sellers, David Wolf and Fyodor Yurchikhin
continued construction of the ISS by delivering

140

00:11:53,209 --> 00:11:57,059
the third segment of the station's 11-piece
truss.

141

00:11:57,059 --> 00:12:02,970
The crew also transferred cargo and used the
shuttle's thruster jets to raise the station's

142

00:12:02,970 --> 00:12:05,949
orbit.

143

00:12:05,949 --> 00:12:12,339
And October 5 is the 130th anniversary of
the birth of Dr. Robert Hutchings Goddard,

144

00:12:12,339 --> 00:12:15,429
the father of modern rocket propulsion.

145

00:12:15,429 --> 00:12:21,119
Goddard is credited with creating and building
the world's first liquid-fueled rocket, which

146

00:12:21,119 --> 00:12:28,069
he successfully launched on March 16, 1926
from a field in Auburn, Massachusetts.

147

00:12:28,069 --> 00:12:34,749
Goddard and his team launched 34 rockets between
1926 and 1941.

148

00:12:34,749 --> 00:12:39,970

Named for the noted scientist and rocketeer
is NASA's Goddard Space Flight Center in

149

00:12:39,970 --> 00:12:41,579

Greenbelt, Maryland.

150

00:12:41,579 --> 00:12:46,410

Hi, my name is Cassie Rodriguez.

151

00:12:46,410 --> 00:12:58,220

I grew up in Corpus Christi, Texas, which
is a bit south here of Houston, so a great

152

00:12:58,220 --> 00:12:59,360

city.

153

00:12:59,360 --> 00:13:01,954

It's where the Texas State Aquarium is (laughter).

154

00:13:01,954 --> 00:13:02,954

Being an "OSO".

155

00:13:02,954 --> 00:13:03,954

It's a console position in Mission Control.

156

00:13:03,954 --> 00:13:08,089

It stands for Operations Support Officer and
we're responsible for all the IVA maintenance

157

00:13:08,089 --> 00:13:11,199

that's done for the Space Station.

158

00:13:11,199 --> 00:13:19,829

Robonaut is fun -- he's on orbit, he was launched
in September of 2011 and what my project is,

159

00:13:19,829 --> 00:13:26,720

is we're working on developing the training products and the procedures to give him some

160

00:13:26,720 --> 00:13:27,790

legs.

161

00:13:27,790 --> 00:13:31,709

With these legs, he'll have the ability to move anywhere on station.

162

00:13:31,709 --> 00:13:38,009

I hope to continue supporting the International Space Station hopefully supporting future

163

00:13:38,009 --> 00:13:45,860

projects that help human exploration, hopefully getting us to the Moon or to Mars and helping

164

00:13:45,860 --> 00:13:49,470

design those vehicles so that they can be better maintained.

165

00:13:49,470 --> 00:13:54,910

I have a lot of maintenance practice working with the Space Station and we're going to

166

00:13:54,910 --> 00:13:58,500

need to be able to fix things if we do go to the Moon and Mars.

167

00:13:58,500 --> 00:14:05,439

So, I hope to contribute to that in the future.

168

00:14:05,439 --> 00:14:10,749

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