



About International Space Station *Live!*

Live Data

Operations

Educators

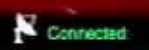
Resources

Interact



# Smarter About Station

International Space Station *Live!*



1  
00:00:06,890 --> 00:00:09,790  
This Week at NASA...

2  
00:00:09,790 --> 00:00:15,990  
A changing of the guard onboard the International Space Station as Expedition 31 Commander Oleg

3  
00:00:15,990 --> 00:00:21,520  
Kononenko handed over the reins of the orbiting outpost to cosmonaut Gennady Padalka during

4  
00:00:21,520 --> 00:00:23,749  
a change of command ceremony.

5  
00:00:23,749 --> 00:00:29,090  
The start of Padalka's tenure as the lead of Expedition 32 makes him the first three-time

6  
00:00:29,090 --> 00:00:31,159  
commander of the station.

7  
00:00:31,159 --> 00:00:36,060  
He's joined on the crew by NASA Flight Engineer Joe Acaba and Russian Flight Engineer Sergei

8  
00:00:36,060 --> 00:00:37,060  
Revin.

9  
00:00:37,060 --> 00:00:41,370  
"Alright see you – see you guys in September."

10  
00:00:41,370 --> 00:00:47,010  
Two days later, Kononenko and Flight Engineers Don Pettit of NASA and Andre Kuipers of the

11  
00:00:47,010 --> 00:00:52,899  
European Space Agency climbed into their Soyuz spacecraft and departed the station for the

12

00:00:52,899 --> 00:00:55,030

trip back to Earth.

13

00:00:55,030 --> 00:01:01,559

“Touchdown ... the Expedition 31 crew , Oleg Kononenko, Don Pettit, Andre Kuipers – home

14

00:01:01,559 --> 00:01:04,750

after 193 days in space.”

15

00:01:04,750 --> 00:01:10,210

The trio made a successful parachute-assisted landing on the steppe of Kazakhstan to cap

16

00:01:10,210 --> 00:01:19,360

off a six month stay onboard the ISS.

17

00:01:19,360 --> 00:01:24,010

Senator Barbara Mikulski, chairwoman of the Senate Appropriations Subcommittee on Commerce,

18

00:01:24,010 --> 00:01:30,659

Justice, Science, and Related Agencies, visited NASA’s Wallops Flight Facility recently.

19

00:01:30,659 --> 00:01:36,229

Joined by officials from NASA, Orbital Sciences Corporation and others the Senator was updated

20

00:01:36,229 --> 00:01:41,799

on the status of Orbital Sciences Corporation’s Antares rocket and the Mid-Atlantic Regional

21

00:01:41,799 --> 00:01:45,170

Spaceport’s new pad, from which the vehicle will launch.

22

00:01:45,170 --> 00:01:50,520

Antares is slated to carry Orbital’s Cygnus

pressurized cargo module on a demonstration

23

00:01:50,520 --> 00:01:56,810

flight under NASA's Commercial Orbital Transportation Services program in December 2012 and begin

24

00:01:56,810 --> 00:02:00,119

carrying supplies to the International Space Station in 2013.

25

00:02:00,119 --> 00:02:09,880

The first steps in preparing for NASA's Exploration Flight Test-1, or EFT-1 in 2014

26

00:02:09,880 --> 00:02:13,770

are underway at the Michoud Assembly Facility in New Orleans.

27

00:02:13,770 --> 00:02:18,319

As the Orion team completes its welding of the crew module, the spacecraft will next

28

00:02:18,319 --> 00:02:23,060

move to the Kennedy Space Center's Operations & Checkout Facility, where its processing

29

00:02:23,060 --> 00:02:25,790

will continue through final assembly and testing.

30

00:02:25,790 --> 00:02:30,690

"We've been here probably working on this for the last six or eight months and they've

31

00:02:30,690 --> 00:02:37,260

spent a lot of weekends and nights trying to get us to this point in the program."

32

00:02:37,260 --> 00:02:41,000

Engineers at Marshall Space Flight Center tested a Composite Crew Module (CCM) in the

33  
00:02:41,000 --> 00:02:46,180  
Environmental Test Facility vacuum chamber  
to gauge how a space structure fabricated

34  
00:02:46,180 --> 00:02:51,230  
with composite materials will react in a simulated  
space environment.

35  
00:02:51,230 --> 00:02:56,209  
During the test, the crew module was pressurized  
and filled with helium to allow engineers

36  
00:02:56,209 --> 00:02:57,700  
to inspect it for leaks.

37  
00:02:57,700 --> 00:03:03,130  
“Once we understand what that leak rate  
is we can then start to pursue understanding

38  
00:03:03,130 --> 00:03:08,580  
what’s contributing to that leak rate, whether  
it’s the fittings that are bolted through

39  
00:03:08,580 --> 00:03:13,299  
the surface or through the thickness of the  
crew module or whether it’s coming through

40  
00:03:13,299 --> 00:03:14,549  
the skin.”

41  
00:03:14,549 --> 00:03:20,069  
The crew module was designed to test new materials  
and fabrication techniques that might be used

42  
00:03:20,069 --> 00:03:24,440  
to construct future space structures from  
both metals and composites.

43

00:03:24,440 --> 00:03:33,209

The Composite Crew Module Project is led by NASA's Engineering and Safety Center at Langley.

44

00:03:33,209 --> 00:03:38,870

Expedition 31 flight engineer Don Pettit is nothing if not, A. passionate about conducting

45

00:03:38,870 --> 00:03:44,580

science research in space, and B. in possession of a healthy sense of humor.

46

00:03:44,580 --> 00:03:50,769

Combine the two and you have "Diary of a Space Zucchini," Pettit's spaceblog authored

47

00:03:50,769 --> 00:03:55,890

from the point of view of a squash growing from seed aboard the International Space Station.

48

00:03:55,890 --> 00:04:00,610

While the chronicles of the space zucchini may constitute an entertaining and educational

49

00:04:00,610 --> 00:04:03,799

novelty, (see the June 9th entry: "Great news!

50

00:04:03,799 --> 00:04:09,000

I have a baby brother sprout!"), important plant studies have long been conducted in

51

00:04:09,000 --> 00:04:10,000

space.

52

00:04:10,000 --> 00:04:15,159

Vegetation investigations on the ISS have had real scientific goals for Earth and space

53

00:04:15,159 --> 00:04:17,130

exploration benefits.

54  
00:04:17,130 --> 00:04:22,470  
From improved crop production on the ground  
to one day providing fresh produce on orbit,

55  
00:04:22,470 --> 00:04:27,440  
sprouts in space provide a bumper crop of  
data for research.

56  
00:04:27,440 --> 00:04:35,580  
You can now use the Internet and a smart-phone  
for an inside look at the groundbreaking science

57  
00:04:35,580 --> 00:04:40,700  
and technology research being done onboard  
the International Space Station!

58  
00:04:40,700 --> 00:04:43,080  
Log on to the agency's Space Station Live!

59  
00:04:43,080 --> 00:04:46,550  
Web page, or download the companion ISSLive!

60  
00:04:46,550 --> 00:04:52,290  
mobile app to get up-to-the-minute information  
on experiments NASA astronauts are conducting

61  
00:04:52,290 --> 00:04:56,820  
240 miles in space for the benefit of all  
on Earth!

62  
00:04:56,820 --> 00:05:02,140  
You can also take a virtual tour of the station  
and get a peek at the operator consoles inside

63  
00:05:02,140 --> 00:05:07,680  
ISS Mission Control at the Johnson Space Center!

64

00:05:07,680 --> 00:05:14,520

NASA's Ames Research Center hosted about 30 elementary school students for a one-week

65

00:05:14,520 --> 00:05:18,230

learning experience as part of the Greene Scholars Program.

66

00:05:18,230 --> 00:05:24,220

The Program is focused on developing and highlighting the academic skills of African American students

67

00:05:24,220 --> 00:05:26,880

with the goal of inspiring them to pursue higher education.

68

00:05:26,880 --> 00:05:33,510

"It's very fun I get to learn more about science and I really like science so, I think

69

00:05:33,510 --> 00:05:36,020

this have been a very good experience."

70

00:05:36,020 --> 00:05:41,530

Ames Deputy Director Lew Braxton met with the students to give them advice and encouragement.

71

00:05:41,530 --> 00:05:45,910

During the week, the scholars participated in various math and science projects and at

72

00:05:45,910 --> 00:05:53,250

the end of the week each student received a graduation certificate to mark their achievement.

73

00:05:53,250 --> 00:05:58,100

Preparations for the launch of NASA's Lunar Atmosphere and Dust Environment Explorer,

74

00:05:58,100 --> 00:06:02,100

or LADEE, are in full gear at the Wallops Flight Facility.

75  
00:06:02,100 --> 00:06:08,070  
Erected on the Mid-Atlantic Regional Spaceport's Pad Zero-B, a mock-up of the vehicle allowed

76  
00:06:08,070 --> 00:06:13,500  
technicians to check out how the spacecraft will fit with its Air Force Minotaur V rocket

77  
00:06:13,500 --> 00:06:15,160  
and launcher.

78  
00:06:15,160 --> 00:06:19,400  
Additional fit and procedural checks were conducted at other Wallops facilities that

79  
00:06:19,400 --> 00:06:21,380  
will be used to process the vehicle.

80  
00:06:21,380 --> 00:06:29,440  
LADEE is scheduled to be launched from Wallops in mid-2013.

81  
00:06:29,440 --> 00:06:34,000  
Speaking before an enthusiastic crowd at the Smithsonian National Air and Space Museum

82  
00:06:34,000 --> 00:06:39,540  
in Washington, NASA Administrator Charles Bolden delivered this year's John H. Glenn

83  
00:06:39,540 --> 00:06:41,930  
Lecture in Space History.

84  
00:06:41,930 --> 00:06:47,470  
Bolden reflected on his career as a Marine aviator, a Space Shuttle pilot and commander,

85  
00:06:47,470 --> 00:06:50,350  
and his tenure as the leader of the nation's  
space agency.

86  
00:06:50,350 --> 00:06:55,520  
"It's been my honor to be a part of one  
of our nation's greatest successes and to

87  
00:06:55,520 --> 00:06:57,930  
help shepherd NASA to its next destinations.

88  
00:06:57,930 --> 00:07:03,740  
There are many bright days ahead for the nation's  
space program, and for civilization's progress

89  
00:07:03,740 --> 00:07:04,740  
into space.

90  
00:07:04,740 --> 00:07:11,130  
I hope every one of you here tonight is as  
excited and passionate as am I about ensuring

91  
00:07:11,130 --> 00:07:16,440  
we realize every potential of our times."

92  
00:07:16,440 --> 00:07:20,690  
Bolden was also presented the Excellence in  
Public Service Award by former Senator and

93  
00:07:20,690 --> 00:07:25,750  
astronaut John Glenn on behalf of the John  
Glenn School of Public Affairs at The Ohio

94  
00:07:25,750 --> 00:07:27,380  
State University.

95  
00:07:27,380 --> 00:07:32,300  
The Award honors a person who demonstrates  
outstanding dedication to public service.

96  
00:07:32,300 --> 00:07:36,430  
The award ceremony was held at the Koshland  
Science Museum of the National Academy of

97  
00:07:36,430 --> 00:07:41,000  
Sciences in Washington, D.C.

98  
00:07:41,000 --> 00:07:48,060  
And Bolden and Glenn were joined by another  
former Marine to take in some art at Air and

99  
00:07:48,060 --> 00:07:49,060  
Space.

100  
00:07:49,060 --> 00:07:54,130  
The museum's director, General Jack Dailey  
led the tour of the exhibit gallery featuring

101  
00:07:54,130 --> 00:07:55,910  
"Fly Marines!

102  
00:07:55,910 --> 00:07:58,820  
The Centennial of Marine Corps Aviation: 1912-2012."

103  
00:07:58,820 --> 00:08:03,740  
"That's a pretty picture, that's a good  
shot."

104  
00:08:03,740 --> 00:08:07,910  
The 91 works of art were selected from the  
more than 8-thousand pieces in the Marine

105  
00:08:07,910 --> 00:08:09,620  
Corps Art Program collection.

106  
00:08:09,620 --> 00:08:14,490  
"Take each string and hold it like this."

107

00:08:14,490 --> 00:08:20,240

NASA teamed up with Vanderbilt University's Dyer Observatory in Brentwood, Tenn., to host

108

00:08:20,240 --> 00:08:25,240

a Summer of Innovation event for rising fifth and sixth graders from the Nashville area.

109

00:08:25,240 --> 00:08:30,900

The students enjoyed hands-on, Mars-related activities, and got to speak with NASA Associate

110

00:08:30,900 --> 00:08:37,600

Administrator for Education and former astronaut, Leland Melvin.

111

00:08:37,600 --> 00:08:42,570

The young attendees were also treated to an evening concert and stage presentation.

112

00:08:42,570 --> 00:08:48,720

Summer of Innovation aims to inspire and engage middle school students in science, technology,

113

00:08:48,720 --> 00:08:51,360

engineering and math, the STEM fields.

114

00:08:51,360 --> 00:09:02,500

This is the second year Dyer Observatory has partnered with NASA for Summer of Innovation.

115

00:09:02,500 --> 00:09:11,280

Aboard the International Space Station, Expedition 31 Flight Engineer Joe Acaba, a lifelong fan

116

00:09:11,280 --> 00:09:16,050

of the Los Angeles Angels, recently chatted with Angels' outfielder Torii Hunter, who

117

00:09:16,050 --> 00:09:20,850

was on the field at Angels Stadium in Anaheim, CA preparing for the team's game that night.

118

00:09:20,850 --> 00:09:21,850

"Station this is Torii Hunter, how do you hear me?"

119

00:09:21,850 --> 00:09:22,850

"Torii, this is Joe Acaba aboard the International Space Station, I hear you loud and clear."

120

00:09:22,850 --> 00:09:25,560

"I always encourage kids to go out and take away fear, worry and doubt and don't listen

121

00:09:25,560 --> 00:09:28,640

to anybody that's negative and tell you that you can't do anything.

122

00:09:28,640 --> 00:09:32,760

You can be an astronaut, you can be a Major League Baseball player – anything you want

123

00:09:32,760 --> 00:09:35,390

to be just put your mind to it and your heart into it."

124

00:09:35,390 --> 00:09:40,230

"Amen, I agree with you're a hundred percent and I know you and I are pretty good examples

125

00:09:40,230 --> 00:09:44,410

of people that you know, dreams can come true and we're living that right now."

126

00:09:44,410 --> 00:09:49,420

The conversation between Acaba and Hunter was replayed for the fans in Anaheim before

127

00:09:49,420 --> 00:09:57,540

the June 22 game with the L.A. Dodgers and was also aired on the Angels television network.

128

00:09:57,540 --> 00:10:06,020

15 years ago on July 4, 1997 the Mars Pathfinder landed on The Red Planet, seven months after

129

00:10:06,020 --> 00:10:07,440

it was launched.

130

00:10:07,440 --> 00:10:13,080

Pathfinder landed on Mars' Ares Vallis, in a region called Chryse Planitia in the Oxia

131

00:10:13,080 --> 00:10:14,790

Palus quadrangle.

132

00:10:14,790 --> 00:10:19,560

The mission carried a series of scientific instruments to analyze the Martian atmosphere,

133

00:10:19,560 --> 00:10:23,690

climate, geology and the composition of its rocks and soil.

134

00:10:23,690 --> 00:10:27,160

It was the second project from NASA's Discovery Program.

135

00:10:27,160 --> 00:10:32,920

Pathfinder consisted of a lander, renamed the Carl Sagan Memorial Station, and a lightweight

136

00:10:32,920 --> 00:10:35,650

robotic rover named Sojourner.

137

00:10:35,650 --> 00:10:40,300

In addition to scientific objectives, the mission was also a "proof-of-concept" for

138

00:10:40,300 --> 00:10:47,050

various technologies, such as the airbag-mediated  
touchdown and automated obstacle avoidance,

139

00:10:47,050 --> 00:10:51,570

both later used by the Mars Exploration Rovers.

140

00:10:51,570 --> 00:10:53,680

And that's This Week @NASA!

141

00:10:53,680 --> 00:10:58,710

For more on these and other stories, or to  
follow us on Facebook, Twitter and other social