



**Space Tweep Plays Host**

1  
00:00:07,370 --> 00:00:08,830  
This Week at NASA...

2  
00:00:08,830 --> 00:00:14,350  
"You're looking straight into the camera,  
absolutely."

3  
00:00:14,350 --> 00:00:18,430  
Cosmonauts Fyodor Yurchikhin and Mikhail Kornienko  
spent nearly seven hours

4  
00:00:18,430 --> 00:00:23,070  
spacewalking to replace a video camera and  
improve cable connections to the

5  
00:00:23,070 --> 00:00:25,050  
International Space Station.

6  
00:00:25,050 --> 00:00:30,800  
The two Expedition 24 Flight Engineers outfitted  
the new Rassvet mini module to host

7  
00:00:30,800 --> 00:00:36,340  
automatic linkups with Russian vehicles arriving  
at the station. They also routed and

8  
00:00:36,340 --> 00:00:41,269  
mated Command and Data Handling cables on  
the Zvezda and Zarya modules.

9  
00:00:41,269 --> 00:00:46,850  
A video camera was removed and replaced on  
the aft end of Zvezda then successfully

10  
00:00:46,850 --> 00:00:52,680  
tested. It'll be used to provide television  
views of the final approach and docking of

11  
00:00:52,680 --> 00:01:00,179

future European Automated Transfer Vehicles carrying cargo to the complex.

12

00:01:00,179 --> 00:01:05,300

Aerospace engineers at the Ames Research Center are using wind tunnels to test a

13

00:01:05,300 --> 00:01:11,870

launch abort system, or LAS, for the Orion spacecraft. A six per cent scale model of

14

00:01:11,870 --> 00:01:15,040

the spacecraft, complex parts and all, is being

15

00:01:15,040 --> 00:01:20,890

used to mimic various launch conditions so researchers can better understand the aerodynamics

16

00:01:20,890 --> 00:01:23,390

of Orion's liftoff and climb to orbit.

17

00:01:23,390 --> 00:01:29,120

"We're looking at how the aerodynamics are affected as we do an abort and separation

18

00:01:29,120 --> 00:01:33,910

maneuver, and then how to control the vehicle as we go through the abort and recovery

19

00:01:33,910 --> 00:01:36,360

as it comes down and the shoots come out."

20

00:01:36,360 --> 00:01:42,500

Comprised of a tower and cover, Orion's LAS has a powerfully built launch abort motor

21

00:01:42,500 --> 00:01:47,360

which would quickly move the craft and its

human cargo away from the launch vehicle

22  
00:01:47,360 --> 00:01:53,500  
in an emergency. The ability to protect astronauts  
from a launch pad failure is a critical

23  
00:01:53,500 --> 00:01:58,560  
component of human spaceflight, and tests  
like these help maintain the safety of

24  
00:01:58,560 --> 00:02:03,060  
astronauts throughout their mission.

25  
00:02:03,060 --> 00:02:07,810  
Like proud parents watching their baby take  
its first steps, mission team members

26  
00:02:07,810 --> 00:02:12,310  
gathered in the gallery above the clean room  
at the Jet Propulsion Laboratory to

27  
00:02:12,310 --> 00:02:16,680  
witness the Mars Curiosity rover roll for  
the first time.

28  
00:02:16,680 --> 00:02:21,989  
Curiosity was guided by engineers and technicians  
in "bunny suits" as it made its first

29  
00:02:21,989 --> 00:02:26,230  
roll on the clean room floor, moving forward  
and backward about a meter.

30  
00:02:26,230 --> 00:02:32,469  
"It's gone from designs on napkins, to  
Power Point, to CAD drawings, to blueprints

31  
00:02:32,469 --> 00:02:33,870  
and  
now it's a rover."

32

00:02:33,870 --> 00:02:39,180

Curiosity, also known as the Mars Science Laboratory, will be the largest rover ever

33

00:02:39,180 --> 00:02:44,060

sent to the Red Planet. It'll carry ten instruments to detect places where life may

34

00:02:44,060 --> 00:02:46,780

have existed and whether they have the capacity

35

00:02:46,780 --> 00:02:52,400

to preserve the evidence. MSL is scheduled to launch in fall 2011 and set down

36

00:02:52,400 --> 00:02:56,469

on Mars the following August.

37

00:02:56,469 --> 00:03:01,189

A camera aboard NASA's Mars Odyssey spacecraft has helped develop the most

38

00:03:01,189 --> 00:03:07,049

accurate global Martian map ever. And not only can researchers access the map – so,

39

00:03:07,049 --> 00:03:13,090

can the public, explore and survey the entire surface of the Red Planet as well.

40

00:03:13,090 --> 00:03:18,260

The map is made from nearly 21,000 images taken by the Thermal Emission Imaging

41

00:03:18,260 --> 00:03:24,209

System, THEMIS, a multi-band infrared camera on Odyssey. The pictures have been

42  
00:03:24,209 --> 00:03:29,959  
smoothed, matched, blended and cartographically  
controlled to make a giant mosaic.

43  
00:03:29,959 --> 00:03:35,060  
Users can pan and zoom into the images, with  
some of the smallest surface details

44  
00:03:35,060 --> 00:03:41,779  
just 330 feet wide. Researchers at Arizona  
State University's Mars Space Flight Facility

45  
00:03:41,779 --> 00:03:46,209  
and the Jet Propulsion Laboratory have been  
compiling the map since THEMIS began

46  
00:03:46,209 --> 00:03:48,439  
observations eight years ago.

47  
00:03:48,439 --> 00:03:53,290  
While some portions of Mars have been mapped  
at higher resolution, this map is the

48  
00:03:53,290 --> 00:03:56,090  
most accurate one to cover the entire planet.

49  
00:03:56,090 --> 00:04:01,450  
"This 100 meter resolution map is going  
to be extremely helpful in making the planet

50  
00:04:01,450 --> 00:04:07,569  
accessible to everybody, and also for adding  
in higher resolution images."

51  
00:04:07,569 --> 00:04:20,650  
Explore Mars yourself by following the links  
at: [www.nasa.gov/mission\\_pages/odyssey](http://www.nasa.gov/mission_pages/odyssey).

52  
00:04:20,650 --> 00:04:24,710

“Welcome all, and thanks for coming, thanks for playing with us, and by all means,

53  
00:04:24,710 --> 00:04:26,490  
thanks for joining me through the Twitter-verse.”

54  
00:04:26,490 --> 00:04:32,500  
TJ Creamer, the first NASA astronaut to send a live message from space via the social

55  
00:04:32,500 --> 00:04:37,340  
messaging medium, Twitter, hosted a special Tweetup at NASA Headquarters.

56  
00:04:37,340 --> 00:04:40,720  
T “And here we are doing synchronized swimming.”  
(laughter)

57  
00:04:40,720 --> 00:04:45,150  
A Tweetup is an informal meeting of Tweepers, or people who use Twitter.

58  
00:04:45,150 --> 00:04:51,180  
“I understand part of your mission was to set up the live internet connection on the

59  
00:04:51,180 --> 00:04:52,840  
space station. Can you speak a little more about that?”

60  
00:04:52,840 --> 00:04:57,340  
While in space, Creamer set up the International Space Station’s live Internet

61  
00:04:57,340 --> 00:05:04,300  
connection and posted updates about his 161 day-stay aboard the complex to his

62  
00:05:04,300 --> 00:05:08,259  
Twitter account, sending the first live “tweet”

from orbit.

63  
00:05:08,259 --> 00:05:15,520  
“When I got up there; I made it a pet project.  
I did what any good geek does on a

64  
00:05:15,520 --> 00:05:18,960  
Saturday night, pizza and playing with stuff,  
trying different variables and poof – I

65  
00:05:18,960 --> 00:05:22,120  
got  
lucky! Once we were able to make that connection

66  
00:05:22,120 --> 00:05:26,930  
happen, the first thing I did was --  
“hey Twitterers.”

67  
00:05:26,930 --> 00:05:32,510  
Some 100 participants randomly-selected from  
Web registrants attended the event broadcast

68  
00:05:32,510 --> 00:05:40,349  
live on  
NASA Television.

69  
00:05:40,349 --> 00:05:46,080  
The Ames Research Center hosted Exploration  
Day featuring NASA’s out-of-this-world missions

70  
00:05:46,080 --> 00:05:49,330  
and  
technology programs. Fresh from her recent

71  
00:05:49,330 --> 00:05:52,409  
tour of the Johnson Space Center, “Star  
Trek” star

72  
00:05:52,409 --> 00:05:57,470  
Nichelle Nichols was the special guest at

Ames, meeting with students at a science poster

73

00:05:57,470 --> 00:06:01,030

session and  
touring several of the center's simulators.

74

00:06:01,030 --> 00:06:07,050

Youngsters were treated to a variety of hands-on  
educational experiences. Among them, the Traveling

75

00:06:07,050 --> 00:06:12,580

Space Museum, offering more than ten stations  
of fun and interesting activities.

76

00:06:12,580 --> 00:06:16,669

The day-long event was part of NASA's Summer  
of Innovation initiative.

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00:06:16,669 --> 00:06:22,349

"We're sharing with them just how exciting  
and how engaging science, technology, engineering,

78

00:06:22,349 --> 00:06:29,349

mathematics is, and we're doing it by giving  
them a first-hand, hands-on, front row seat

79

00:06:29,349 --> 00:06:35,080

in  
the

80

00:06:35,080 --> 00:06:36,080

experience."

81

00:06:36,080 --> 00:06:41,560

The STS-132 crew continued its road trip with  
a multi-site stop in Ohio and the nation's

82

00:06:41,560 --> 00:06:44,820

capital. Five  
crew members, including local native Michael

83

00:06:44,820 --> 00:06:48,130

Good, shared their mission highlights with an attentive

84

00:06:48,130 --> 00:06:53,240

crowd at the Rock and Roll Hall of Fame in Cleveland. They toured the iconic landmark

85

00:06:53,240 --> 00:06:57,280

and presented museum CEO Terry Stewart with several items

86

00:06:57,280 --> 00:06:59,909

that flew with the shuttle Atlantis crew to the

87

00:06:59,909 --> 00:07:05,330

International Space Station in May. These included the official Rock and Roll Hall of

88

00:07:05,330 --> 00:07:08,900

Fame flag, and copies of the lyrics for Jimi Hendrix's

89

00:07:08,900 --> 00:07:12,939

"Purple Haze" and Bruce Springsteen's "Born in the U.S.A."

90

00:07:12,939 --> 00:07:19,240

Joining Good for the event was Commander Ken Ham, Pilot Tony Antonelli and Mission Specialists

91

00:07:19,240 --> 00:07:21,879

Garrett Reisman and Steve Bowen.

92

00:07:21,879 --> 00:07:28,199

Good and crewmates also met with singer Jon Bon Jovi and band and later attended a concert

93

00:07:28,199 --> 00:07:29,770

by the  
rock group.

94

00:07:29,770 --> 00:07:35,680

In Washington, the five astronauts were joined  
by 132 Mission Specialist Piers Sellers and

95

00:07:35,680 --> 00:07:40,400

Expedition  
22/23 Flight Engineer T.J. Creamer to show

96

00:07:40,400 --> 00:07:44,370

mission highlights to NASA headquarters employees.

97

00:07:44,370 --> 00:07:49,629

They also participated in other events, including  
a presentation to the Smithsonian National

98

00:07:49,629 --> 00:07:53,050

Air and  
Space Museum of Dr. John Mather's Nobel

99

00:07:53,050 --> 00:07:58,219

Prize medal flown on their mission.

100

00:07:58,219 --> 00:08:04,160

Finally, the astronauts joined with 500 Headquarters  
and Goddard employees at Nationals Park for

101

00:08:04,160 --> 00:08:09,190

'NASA Night at the Nats,' where they took  
part in pre-game ceremonies of a baseball

102

00:08:09,190 --> 00:08:13,300

matchup  
between the visiting Atlanta Braves and the

103

00:08:13,300 --> 00:08:15,970

hometown Washington Nationals.

104

00:08:15,970 --> 00:08:18,240

And that This Week at NASA!