

SSEP

Student Spaceflight
Experiments Program



1
00:00:12,509 --> 00:00:16,930
This Week at NASA...

2
00:00:16,930 --> 00:00:21,980
Expedition 36 Flight Engineers Chris Cassidy
of NASA and Luca Parmitano of the European

3
00:00:21,980 --> 00:00:27,689
Space Agency will venture outside the International
Space Station twice in July on spacewalks

4
00:00:27,689 --> 00:00:32,720
to prepare for a new Russian module and perform
additional installations on the station's

5
00:00:32,720 --> 00:00:33,720
backbone.

6
00:00:33,720 --> 00:00:39,720
The EVA's, scheduled for July 9 and July 16,
were previewed for the media during a briefing

7
00:00:39,720 --> 00:00:41,800
at the Johnson Space Center.

8
00:00:41,800 --> 00:00:48,879
NASA TV coverage of the spacewalks will begin
at 7 a.m. on both days.

9
00:00:48,879 --> 00:00:53,019
This time-lapse movie made from a sequence
of images captured by NASA's Hubble Space

10
00:00:53,019 --> 00:00:59,200
Telescope shows comet ISON, speeding toward
the sun at 48,000 miles per hour -- and resembling

11
00:00:59,200 --> 00:01:01,920
a skyrocket from a fireworks show.

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00:01:01,920 --> 00:01:07,720

Happy Fourth of July -- from the Cosmos!

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00:01:07,720 --> 00:01:12,570

Ames Research Center recently co-hosted the 10th annual International Planetary Probe

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00:01:12,570 --> 00:01:17,800

Workshop - or IPPW - at nearby San Jose State University.

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00:01:17,800 --> 00:01:23,080

The workshop included presentations related to planetary science, asteroids, comets and

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00:01:23,080 --> 00:01:29,530

moons, as well as a keynote address by NASA Ames Director of Engineering David Korsmeyer.

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00:01:29,530 --> 00:01:34,600

Invited participants also had an opportunity to tour facilities at Ames and meet some of

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00:01:34,600 --> 00:01:40,300

the people developing new designs and solutions for planetary entry systems, while San Jose's

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00:01:40,300 --> 00:01:45,170

Tech Museum of Innovation provided exhibits and displays for the general public featuring

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00:01:45,170 --> 00:01:49,920

thermal protection materials and models of spacecraft.

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00:01:49,920 --> 00:01:56,070

Young scientists participating in the Student Spaceflight Experiments Program discussed

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00:01:56,070 --> 00:02:00,520
their work with recent experiments on the
space shuttle and on the space station -- during

23
00:02:00,520 --> 00:02:05,870
the 2013 SSEP National Conference -- at the
Smithsonian National Air and Space Museum

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00:02:05,870 --> 00:02:06,870
in Washington.

25
00:02:06,870 --> 00:02:12,030
"NASA is a shining example of reaching out
through education and public outreach to get

26
00:02:12,030 --> 00:02:15,360
the next generation of scientists and engineers
excited.

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00:02:15,360 --> 00:02:20,500
And here we're making use of commercial access
to the International Space Station."

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00:02:20,500 --> 00:02:26,680
Launched in June 2010, SSEP is a national
Science, Technology, Engineering, and Mathematics

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00:02:26,680 --> 00:02:31,680
education initiative that typically gives
300-plus students an opportunity to design

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00:02:31,680 --> 00:02:37,269
and propose real experiments to fly in low
Earth orbit.

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00:02:37,269 --> 00:02:44,749
A small wing section has been undergoing flight
tests on an F-15B aircraft at NASA's Dryden

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00:02:44,749 --> 00:02:46,499

Flight Research Center.

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00:02:46,499 --> 00:02:50,879

The tests are designed to gauge the airfoil's ability to maintain smooth, laminar airflow

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00:02:50,879 --> 00:02:53,080

at supersonic speeds.

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00:02:53,080 --> 00:02:58,209

Flown in partnership with Aerion Corporation, the tests could lead to refined airfoil designs

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00:02:58,209 --> 00:03:03,049

that would increase aerodynamic efficiency while reducing fuel consumption of future

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00:03:03,049 --> 00:03:07,749

supersonic aircraft.

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00:03:07,749 --> 00:03:13,489

On July 7, 2003, Opportunity, the second of the two Mars Exploration Rovers, was launched

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00:03:13,489 --> 00:03:19,400

from Cape Canaveral aboard a Delta II rocket.

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00:03:19,400 --> 00:03:24,840

Opportunity landed on Mars on January 25, 2004 -- three weeks after its twin Spirit

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00:03:24,840 --> 00:03:26,860

touched down on the Red Planet.

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00:03:26,860 --> 00:03:32,989

While Spirit became immobile in 2009 and ceased communications in 2010, Opportunity remains

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00:03:32,989 --> 00:03:40,069

active and continues to gather scientific observations and report back to Earth.

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00:03:40,069 --> 00:03:44,370

Two moons orbiting Pluto recently discovered with the help of the Hubble Space Telescope

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00:03:44,370 --> 00:03:45,989

have new names.

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00:03:45,989 --> 00:03:51,489

The moon formerly designated as P4 -- found in 2011 has been named Kerberos, while the

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00:03:51,489 --> 00:03:57,189

new moniker of the former P5 -- a moon discovered in 2012 -- is Styx.

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00:03:57,189 --> 00:04:02,400

Like the rest of Pluto's moons, the names are from characters associated with the mythological

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00:04:02,400 --> 00:04:05,529

god Pluto -- ruler of the underworld.

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00:04:05,529 --> 00:04:10,419

Kerberos is the three-headed guard dog of the underworld, while Styx is the river that

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00:04:10,419 --> 00:04:13,719

separates the underworld from the world of mortals.

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00:04:13,719 --> 00:04:20,239

NASA's New Horizons spacecraft is scheduled to visit Pluto and its moons in July 2015.

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00:04:20,239 --> 00:04:21,530

And that's This Week @NASA.

