



1  
00:00:00,506 --> 00:00:09,546  
[ Music ]

2  
00:00:10,046 --> 00:00:13,196  
>> Greetings from Mission  
Control, Houston and welcome

3  
00:00:13,196 --> 00:00:14,436  
to the Space Station live.

4  
00:00:15,216 --> 00:00:16,946  
It's Thursday September 12,

5  
00:00:16,946 --> 00:00:20,006  
2013 and you're joining  
us here inside

6  
00:00:20,006 --> 00:00:22,346  
of the International Space  
Station flight control room

7  
00:00:22,636 --> 00:00:25,146  
located at the Johnson Space  
Center in Houston, Texas.

8  
00:00:25,536 --> 00:00:28,496  
Inside the room right  
now the Orbit 2 team

9  
00:00:28,496 --> 00:00:31,396  
on console monitoring the  
systems and the astronauts

10  
00:00:31,396 --> 00:00:33,226  
on board the International  
Space Station.

11  
00:00:33,846 --> 00:00:34,756  
They're being led today

12

00:00:34,786 --> 00:00:37,426  
by flight director Mike Lammers  
there on the right in the blue

13

00:00:38,076 --> 00:00:40,796  
and then speaking to him right  
now is today's cam com David

14

00:00:40,856 --> 00:00:44,196  
Saint-Jacques serving as the  
communication link between all

15

00:00:44,196 --> 00:00:45,756  
of our teams down  
here the ground

16

00:00:46,026 --> 00:00:47,596  
and the astronauts up in space.

17

00:00:48,516 --> 00:00:50,106  
Those astronauts  
right now the crew

18

00:00:50,106 --> 00:00:54,106  
of Expedition 37 the very early  
stages of their expedition

19

00:00:54,106 --> 00:00:57,206  
since three previously crew  
members just departed earlier

20

00:00:57,206 --> 00:01:00,686  
this week on board NASA  
astronaut Karen Nyberg.

21

00:01:01,206 --> 00:01:05,576  
Also Expedition 37 commander  
and Russian [inaudible]

22

00:01:05,576 --> 00:01:09,666

and then finally European space  
agency astronaut Luca Parmitano.

23

00:01:10,156 --> 00:01:13,086

The three have been on board  
the International Space Station

24

00:01:13,086 --> 00:01:16,496

since May 28th since  
launching from the [inaudible]

25

00:01:16,496 --> 00:01:21,046

in Kazakhstan and previously  
part of Expedition 36 now

26

00:01:21,046 --> 00:01:22,006

in the second full day

27

00:01:22,006 --> 00:01:26,156

of Expedition 37 the crew  
enjoyed an off duty day

28

00:01:26,156 --> 00:01:29,196

yesterday, but are back at  
various maintenance tasks

29

00:01:29,196 --> 00:01:31,666

and experiment work  
across the station complex.

30

00:01:32,566 --> 00:01:35,686

Starting off with current  
Expedition 37 commander Fyodor

31

00:01:35,686 --> 00:01:38,206

Yurchikhin was spending  
all of this time

32

00:01:38,206 --> 00:01:41,366  
over in the Russian  
segment today on the task

33

00:01:41,366 --> 00:01:44,186  
for him was some maintenance  
on the Russian electron system

34

00:01:44,556 --> 00:01:47,816  
which is one of two systems  
on for the station responsible

35

00:01:47,816 --> 00:01:50,586  
for generating breathable  
oxygen for the astronauts

36

00:01:50,586 --> 00:01:51,816  
and cosmonauts on board.

37

00:01:51,816 --> 00:01:55,446  
He'll also be doing  
some work with a number

38

00:01:55,446 --> 00:01:59,686  
of experiments doing some  
start up work on a few one

39

00:01:59,686 --> 00:02:03,166  
of them being the Russian  
[inaudible] experiment named

40

00:02:03,166 --> 00:02:07,986  
after the famous set of Russian  
nested dolls it's a radiation

41

00:02:08,086 --> 00:02:11,516  
experiment study that uses a  
series of sliced [inaudible]

42

00:02:11,596 --> 00:02:15,926

in a mannequin sized body to  
measure the radiation loads

43

00:02:15,926 --> 00:02:17,356

that these astronauts  
are exposed

44

00:02:17,356 --> 00:02:22,006

to while orbiting the earth from  
270 miles above the surface.

45

00:02:23,276 --> 00:02:27,596

Moving on European Space Station  
astronaut Luca Parmitano is

46

00:02:27,596 --> 00:02:30,666

getting his hands on some  
science today inside the micro

47

00:02:30,666 --> 00:02:31,986

gravity science club box.

48

00:02:31,986 --> 00:02:35,646

He's working on the in space  
three experiment which looks

49

00:02:35,646 --> 00:02:39,686

to obtain data on fluids that  
contain particles that are able

50

00:02:39,686 --> 00:02:42,416

to change the physical  
properties of those fluids

51

00:02:42,846 --> 00:02:46,366

when responding to  
varying magnetic fields.

52

00:02:47,006 --> 00:02:49,196

On earth such materials

53

00:02:49,226 --> 00:02:51,606

that respond this way  
are typically used

54

00:02:51,606 --> 00:02:55,836

for vibration dampening systems  
that can be turned on and off,

55

00:02:55,986 --> 00:02:59,536

this type of technology has  
a lot of promise down here

56

00:02:59,536 --> 00:03:01,136

on earth to improve the ability,

57

00:03:01,616 --> 00:03:04,886

to design structures  
mainly things like bridges

58

00:03:04,886 --> 00:03:07,726

and buildings to better  
withstand earthquake forces.

59

00:03:08,316 --> 00:03:11,456

So while taking place  
on a very small scale

60

00:03:11,456 --> 00:03:14,576

on board the International Space  
Station has the implication

61

00:03:14,576 --> 00:03:17,926

for some very far reaching  
effects down here on earth.

62

00:03:19,006 --> 00:03:23,146

Aside from that experiment  
today Luca will be joining

63

00:03:23,146 --> 00:03:26,846  
with Karen Nyberg to gather  
some items up in the disposal

64

00:03:27,026 --> 00:03:28,686  
of the upcoming [inaudible]  
flight

65

00:03:28,686 --> 00:03:30,156  
to the International  
Space Station.

66

00:03:30,686 --> 00:03:32,706  
That [inaudible] vehicle  
is scheduled to launch

67

00:03:32,776 --> 00:03:38,526  
under a week away from today  
on September 17th and dock

68

00:03:38,526 --> 00:03:40,866  
with the station  
on September 22nd,

69

00:03:40,866 --> 00:03:42,816  
it will be the first  
demonstration flight

70

00:03:42,816 --> 00:03:46,806  
of the Orbital sciences vehicle  
resupplying the International

71

00:03:46,806 --> 00:03:47,506  
Space Station.

72

00:03:47,916 --> 00:03:52,626  
You see a photo of that vehicle  
here throughout the week we've

73

00:03:52,626 --> 00:03:54,876  
been hearing from a  
number of the teams here

74

00:03:54,876 --> 00:03:57,626  
in Mission Control as  
they continue to prepare

75

00:03:57,626 --> 00:04:01,186  
for that flight we'll be hearing  
from one later this morning.

76

00:04:02,386 --> 00:04:04,916  
And then meanwhile on board  
the Space Station the third

77

00:04:04,916 --> 00:04:08,236  
and final crew member NASA  
astronaut Karen Nyberg has been

78

00:04:08,236 --> 00:04:11,256  
tasked with some routine  
maintenance necessary

79

00:04:11,256 --> 00:04:13,646  
for these crews on board the  
International Space Station.

80

00:04:14,136 --> 00:04:17,006  
She's been working inside the  
crew quarters doing a little bit

81

00:04:17,006 --> 00:04:21,476  
of housecleaning taking the  
intake and exhaust ducts out

82

00:04:21,476 --> 00:04:24,526  
and cleaning those out and also  
the fan and air flow sensors.

83

00:04:25,176 --> 00:04:29,366

May seem kind of  
mundane but those devices

84

00:04:29,366 --> 00:04:32,586

on the board the station  
very critical for the health

85

00:04:32,586 --> 00:04:34,716

and safety of these astronauts

86

00:04:34,716 --> 00:04:39,886

to maintain a breathable  
atmosphere moving expelled gas

87

00:04:39,886 --> 00:04:44,496

like carbon dioxide away from  
the astronauts inside the cabin

88

00:04:44,936 --> 00:04:47,636

as that micro gravity  
environment presents a very

89

00:04:47,636 --> 00:04:51,806

unique challenge to maintaining  
a breathable atmosphere aside

90

00:04:51,806 --> 00:04:54,416

from that work Nyberg  
also gathering some items

91

00:04:54,416 --> 00:04:56,236

up for eventual disposal  
on board [inaudible]

92

00:04:56,236 --> 00:05:00,446

and relocating a few hardware  
items across the U.S. segment

93

00:05:01,036 --> 00:05:05,056

but again just the second  
full day of Expedition 37

94

00:05:05,536 --> 00:05:08,746

as the crew continues to throw  
themselves back into a lot

95

00:05:08,746 --> 00:05:10,776

of science work and  
maintenance work