



1
00:00:01,776 --> 00:00:03,476
Good morning and welcome

2
00:00:03,476 --> 00:00:05,986
to today's International
Space Station update hour.

3
00:00:06,436 --> 00:00:07,866
You're joining us here inside

4
00:00:07,866 --> 00:00:09,996
of the International Space
Station flight control room

5
00:00:10,326 --> 00:00:12,476
at the Johnson Space
Center in Houston, Texas.

6
00:00:13,036 --> 00:00:15,706
Right now we're looking on as
the Orbit Two team is currently

7
00:00:15,706 --> 00:00:18,576
on console monitoring all
their respective systems

8
00:00:18,576 --> 00:00:20,246
on board the orbiting
laboratory.

9
00:00:21,666 --> 00:00:22,846
Today's team is being led

10
00:00:22,846 --> 00:00:26,296
by Flight Director Ron Spencer
there on the right and next

11
00:00:26,556 --> 00:00:29,946
at the Capcom position, serving

as the communication link

12

00:00:29,946 --> 00:00:32,826
between all the teams here on
the ground and the astronauts

13

00:00:32,826 --> 00:00:34,716
up in space, is Anna Fisher.

14

00:00:35,256 --> 00:00:40,256
And those astronauts right now
are the crew of Expedition 32,

15

00:00:40,736 --> 00:00:43,806
having been on board the
station since May 16.

16

00:00:44,236 --> 00:00:46,056
In the middle there
is Russian cosmonaut

17

00:00:46,056 --> 00:00:48,806
and Expedition 32
Commander Gennady Padalka.

18

00:00:49,216 --> 00:00:51,816
To the left, another Russian
cosmonaut Sergei Revin

19

00:00:51,816 --> 00:00:53,176
on his first spaceflight.

20

00:00:53,596 --> 00:00:55,996
On the right there is
NASA astronaut Joe Acaba

21

00:00:55,996 --> 00:01:00,476
on his second flight, veteran
of one shuttle mission, STS 119.

22

00:01:01,016 --> 00:01:05,596

Just getting straight into the crew's day today here we can see

23

00:01:05,866 --> 00:01:08,056

Acaba and some of the work he was doing

24

00:01:08,056 --> 00:01:09,656

in the Japanese Experiment Module

25

00:01:09,656 --> 00:01:12,156

with the SPHERES experiment, SPHERES standing

26

00:01:12,156 --> 00:01:15,796

for the Synchronized Position Hold, Engage, Reorient,

27

00:01:15,796 --> 00:01:17,066

Experimental Satellites.

28

00:01:17,636 --> 00:01:19,566

They're those bowling-ball-sized objects -

29

00:01:19,566 --> 00:01:21,536

you can see the orange one floating right there

30

00:01:21,536 --> 00:01:24,566

in the top middle of your screen - that are controlled

31

00:01:24,566 --> 00:01:26,926

by different algorithms to help scientists test

32

00:01:26,926 --> 00:01:29,196
out on different
autonomous docking

33
00:01:29,196 --> 00:01:30,716
and rendezvous operations.

34
00:01:31,366 --> 00:01:33,346
And all these satellites
are self-contained

35
00:01:33,346 --> 00:01:36,026
and contain their
own fuel sources

36
00:01:36,216 --> 00:01:38,396
and also electronics
and computers inside.

37
00:01:39,076 --> 00:01:43,226
Along with that SPHERES
experiment, he's been working

38
00:01:43,226 --> 00:01:47,676
on the hardware command
panel for the HTV spacecraft.

39
00:01:47,676 --> 00:01:49,346
He did a checkout earlier today.

40
00:01:49,736 --> 00:01:52,136
That HTV is the unmanned
cargo craft built

41
00:01:52,136 --> 00:01:55,416
by the Japanese space agency.

42
00:01:55,886 --> 00:01:59,186
It's scheduled to launch a
little bit later this month

43

00:01:59,186 --> 00:02:03,326
on July 22 and will be
delivering approximately 4.6

44

00:02:03,326 --> 00:02:06,136
tons of cargo to the
International Space Station.

45

00:02:06,516 --> 00:02:12,636
One other task for Acaba today
is doing a lens and battery swap

46

00:02:12,636 --> 00:02:14,216
on the EarthKAM, which is one

47

00:02:14,216 --> 00:02:15,926
of the Earth observation
experiments

48

00:02:15,926 --> 00:02:18,656
on board the International Space
Station that allows students

49

00:02:18,656 --> 00:02:21,466
from around the country to
control the camera and use it

50

00:02:21,526 --> 00:02:25,006
to a document and take a look
at different geological features

51

00:02:25,006 --> 00:02:27,966
across the planet using
controls via the Internet.

52

00:02:29,596 --> 00:02:32,796
Moving on Commander Padalka
immediately started his day

53

00:02:32,796 --> 00:02:37,776

today with a few
sample-taking activities

54

00:02:37,776 --> 00:02:40,636

for the Russian Immuno
experiment, which is looking

55

00:02:40,636 --> 00:02:42,616

to provide a better
understanding

56

00:02:42,616 --> 00:02:49,566

for how the body's immune system
is affected during long-duration

57

00:02:49,566 --> 00:02:53,626

missions in space and also is
increasing the understanding

58

00:02:54,196 --> 00:02:56,486

of the coupling between
stress and the functioning

59

00:02:56,486 --> 00:02:58,806

of the immune system,
which has direct relevance

60

00:02:58,806 --> 00:03:00,166

for people down here on Earth.

61

00:03:00,496 --> 00:03:06,086

He was also involved in some
repair and recovery work

62

00:03:06,086 --> 00:03:10,596

on the Russian Vozdukh
system, which is part

63

00:03:10,596 --> 00:03:13,686
of the atmosphere
revitalization systems

64
00:03:13,686 --> 00:03:15,436
on board the International
Space Station.

65
00:03:16,026 --> 00:03:21,286
It's been having a few issues,
so he tested one of vacuum pumps

66
00:03:21,286 --> 00:03:22,856
in it and found it
was not working.

67
00:03:22,856 --> 00:03:25,826
So they're going to go ahead
and replace that, and, again,

68
00:03:25,826 --> 00:03:28,476
that Vozdukh is used
to scrub carbon dioxide

69
00:03:28,476 --> 00:03:29,866
from the cabin atmosphere

70
00:03:30,256 --> 00:03:32,076
for these astronauts
on board the station.

71
00:03:32,586 --> 00:03:36,146
And our third and final
Expedition 32 crew member,

72
00:03:36,146 --> 00:03:39,876
right now Serge Revin was
assisting Padalka in taking some

73
00:03:39,876 --> 00:03:42,296

of those samples
earlier today for Immuno,

74

00:03:42,726 --> 00:03:44,526
is also doing some cleaning work

75

00:03:44,526 --> 00:03:46,646
on the ventilation
screens inside

76

00:03:46,976 --> 00:03:50,746
of the Russian Zarya
module, cleaning out some

77

00:03:50,746 --> 00:03:54,156
of the interior panels
and also a few panels

78

00:03:54,156 --> 00:03:55,686
on the gas-liquid
heat exchanger.

79

00:03:56,256 --> 00:03:57,936
He's also doing some
routine maintenance

80

00:03:57,936 --> 00:04:00,366
on the Russian Elektron
system, which is one

81

00:04:00,366 --> 00:04:02,246
of the oxygen generation systems

82

00:04:02,246 --> 00:04:05,826
on board the International Space
Station which splits water apart