

EXPEDITION 31

A portrait of Oleg Kononenko, the commander of Expedition 31, wearing a white and blue space suit. He is smiling and looking towards the camera. The background is a blue-tinted image of the International Space Station in orbit.

**OLEG KONONENKO**  
Commander

1  
00:00:01,740 --> 00:00:04,920  
Welcome to today's International  
Space Station update.

2  
00:00:04,920 --> 00:00:08,560  
You're joining us here in the  
flight control room in Houston Texas

3  
00:00:08,560 --> 00:00:12,160  
where the Orbit Two team is currently  
on console monitoring all the systems

4  
00:00:12,160 --> 00:00:14,970  
on board the orbiting laboratory.

5  
00:00:14,970 --> 00:00:17,110  
They're monitoring the systems  
onboard for the crew

6  
00:00:17,110 --> 00:00:20,500  
of Expedition 31 who's currently  
up there in space.

7  
00:00:20,500 --> 00:00:23,960  
Starting on the left we have  
NASA astronaut Don Pettit,

8  
00:00:23,960 --> 00:00:28,700  
and in the middle Expedition 31 Commander  
Oleg Kononenko from the Russian Space Agency.

9  
00:00:28,700 --> 00:00:33,930  
And then our third Expedition 31 crew  
member on the right is Andre Kuipers,

10  
00:00:33,930 --> 00:00:38,490  
a native of the Netherlands and a  
member of the European Space Agency.

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00:00:38,490 --> 00:00:44,060

As the crew onboard getting into quite a bit of heavy experiment work, taking a break from some

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00:00:44,060 --> 00:00:48,500

of the more time-consuming maintenance tasks that they've been doing all week.

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00:00:48,500 --> 00:00:55,290

Crew woke up today at about 1 AM central time and starting off with Commander Kononenko

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00:00:55,290 --> 00:00:59,700

who one of the first activities he did today was doing interactive event

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00:00:59,700 --> 00:01:04,770

with Russian television stations down on the ground, recording a few greetings.

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00:01:04,770 --> 00:01:10,660

Then following that he moved into the Russian segment for some maintenance activities,

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00:01:10,660 --> 00:01:15,270

starting off taking some electrical readings from a few of the Russian systems,

18

00:01:15,270 --> 00:01:18,910

checking the amps and frequency running through them, some standard checks

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00:01:18,910 --> 00:01:23,080

to ensure everything is working properly.

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00:01:23,080 --> 00:01:28,590

And then over the last few hours he's been doing some maintenance on the Russian toilet,

21

00:01:28,590 --> 00:01:32,680

one of the two toilets onboard  
the International Space Station.

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00:01:32,680 --> 00:01:36,540

His activities with those are  
replacing the urine receptacle

23

00:01:36,540 --> 00:01:39,660

and also the filter insert inside.

24

00:01:39,660 --> 00:01:43,970

Moving on we have European Space  
Agency astronaut Andre Kuipers.

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00:01:43,970 --> 00:01:49,790

He in his day doing some inventory work of  
the Human Research Facility supply kits,

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00:01:49,790 --> 00:01:55,740

and also doing some unloading of cargo  
from the Automated Transfer Vehicle-3

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00:01:55,740 --> 00:01:58,790

or ATV-3 currently docked to the station.

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00:01:58,790 --> 00:02:03,460

This'll be his third day doing such activities  
and tagging up with controllers down here

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00:02:03,460 --> 00:02:09,220

on the ground as he continues to track all of  
the cargo and packages and supplies and hardware

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00:02:09,220 --> 00:02:12,100

that he's been unloading from that vehicle.

31

00:02:12,100 --> 00:02:16,140

He'll also be doing some work  
with the SLAMMD which stands

32  
00:02:16,140 --> 00:02:23,170  
for Space Linear Acceleration Mass Measurement  
Device body mass measurements system.

33  
00:02:23,170 --> 00:02:24,040  
He'll be doing that.

34  
00:02:24,040 --> 00:02:29,120  
It's one of the few items onboard the station  
that the astronauts can actually use to record

35  
00:02:29,120 --> 00:02:35,000  
and track their mass or another word for that  
down here on Earth you could call is weight.

36  
00:02:35,000 --> 00:02:38,250  
Due to that microgravity environment  
they can't just stand on a scale.

37  
00:02:38,250 --> 00:02:42,790  
They use this kind of like a handle  
that accelerates into the wall,

38  
00:02:42,790 --> 00:02:46,270  
using the fundamental physics  
of behind acceleration and mass,

39  
00:02:46,270 --> 00:02:49,830  
the astronauts can then calculate  
just how big their body is.

40  
00:02:49,830 --> 00:02:54,410  
He'll also be doing some prepack  
work for items that'll be loaded

41  
00:02:54,410 --> 00:02:59,060  
onto the upcoming SpaceX Dragon  
capsule once it flies and docks

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00:02:59,060 --> 00:03:01,860

to the International Space  
Station later this month.

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00:03:01,860 --> 00:03:04,830

Also doing some routine cleaning  
of some bacteria filters

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00:03:04,830 --> 00:03:12,160

in the Atmosphere Revitalization System  
in nodes 1, 2 and 3 in the U.S. segment.

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00:03:12,160 --> 00:03:18,010

Then our final Expedition 31 crew member  
NASA astronaut Don Pettit doing quite a bit

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00:03:18,010 --> 00:03:23,000

of experiment work today, starting off  
with the Binary Colloidal Alloy Test

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00:03:23,000 --> 00:03:28,050

which uses these microscopic  
particles known as colloids as models

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00:03:28,050 --> 00:03:33,710

for studying the fundamental  
physics of the liquid crystal phase.

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00:03:33,710 --> 00:03:36,860

He's also spending some time working  
with the BASS experiment today.

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00:03:36,860 --> 00:03:40,210

BASS standing for the Burning  
And Suppression Of Solids.

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00:03:40,210 --> 00:03:42,760

See some video here of him working on that.

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00:03:42,760 --> 00:03:46,680

That is an investigation that examines the burning and extinction characteristics

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00:03:46,680 --> 00:03:50,510

of a wide variety of fuel samples in microgravity.

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00:03:50,510 --> 00:03:55,090

This experiment hopes to guide strategies for extinguishing accidental fires

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00:03:55,090 --> 00:03:59,420

in that microgravity environment onboard the station, but also could contribute

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00:03:59,420 --> 00:04:03,840

to different computational models used in the design of fire detection

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00:04:03,840 --> 00:04:10,150

and suppression systems not only in microgravity but also down here on Earth.

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00:04:10,150 --> 00:04:13,920

He'll also be relocating some emergency equipment prior

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00:04:13,920 --> 00:04:16,520

to the arrival of the next Soyuz vehicle.

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00:04:16,520 --> 00:04:20,720

And later this afternoon he'll be doing a ham radio pass, getting a chance to talk