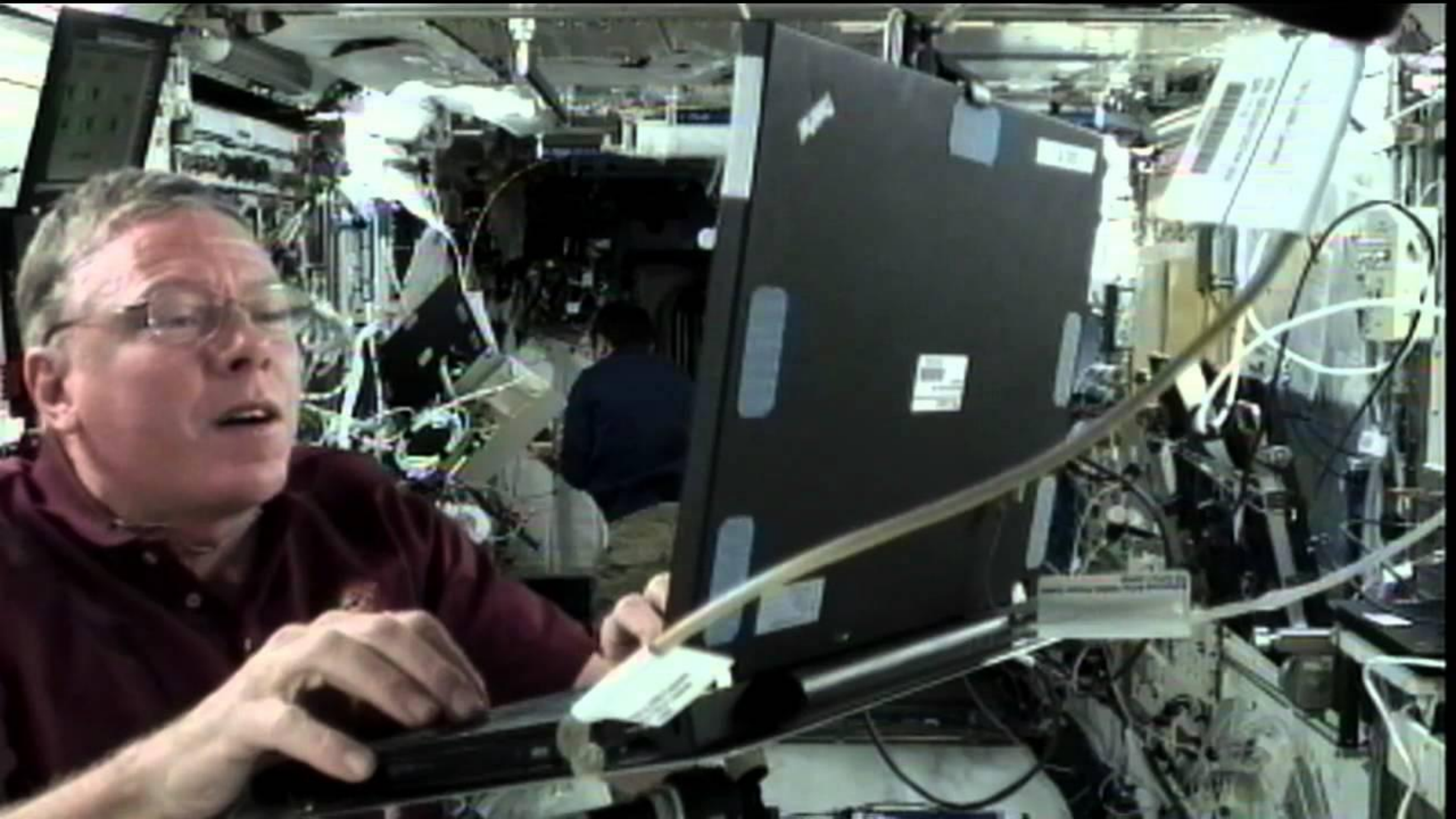

1
00:00:00,936 --> 00:00:04,776
Welcome. This is Mission Control at the
NASA Johnson Space Center in Houston,

2
00:00:04,776 --> 00:00:10,996
and this is the Expedition 29 ISS
update for today, Monday, October 24.

3
00:00:11,636 --> 00:00:15,586
The Orbit 2 team is on duty here in the
International Space Station flight control room.

4
00:00:15,586 --> 00:00:20,126
It's being led today [by] flight director
Jerry Jason and spacecraft communicator,

5
00:00:20,126 --> 00:00:23,296
also known as capcom, astronaut Shannon Lucid.

6
00:00:23,296 --> 00:00:29,096
After two days off to give the Expedition 29
crew members a respite from their busy schedule,

7
00:00:29,446 --> 00:00:32,966
they are back today packing trash
into that Progress 42 vehicle,

8
00:00:33,356 --> 00:00:35,406
readying it to undock on Saturday.

9
00:00:35,826 --> 00:00:38,176
Progress 45 will launch on Sunday.

10
00:00:38,786 --> 00:00:43,016
Commander Mike Fossum and his
crew members Satoshi Furukawa

11
00:00:43,016 --> 00:00:47,806
and Sergei Volkov will be joined by

three new crew members on November 16.

12
00:00:48,436 --> 00:00:54,026
Anton Shkaplerov, Anatoly Ivanishin and
U.S. astronaut Dan Burbank are set to launch

13
00:00:54,026 --> 00:00:59,736
on November 13 on the Soyuz 28 docking
with the station on November 15.

14
00:01:00,496 --> 00:01:04,956
Fossum, Furukawa and Volkov will
return to Earth on November 22.

15
00:01:04,956 --> 00:01:10,596
Fossum will turn the command over to Burbank at
that point, and the crew becomes Expedition 30.

16
00:01:11,006 --> 00:01:14,316
They will work as a three-person
crew for 36 days,

17
00:01:14,366 --> 00:01:20,726
and the remainder of the Expedition 30 crew
- NASA's Don Pettit, Russian Oleg Kononenko

18
00:01:21,136 --> 00:01:26,516
and Europe's Andre Kuipers - will launch to
the station aboard the Soyuz 29 spacecraft on

19
00:01:26,516 --> 00:01:30,266
or about December 26 and dock
with the station two days later.

20
00:01:30,816 --> 00:01:34,976
In other activities today, the Russian flight
controllers will also conduct a routine checkout

21
00:01:34,976 --> 00:01:38,766
of the Kurs automated rendezvous

system for the both the passive side

22
00:01:38,766 --> 00:01:43,566
of that Zvezda service module and the
active side on the Progress 42 supply ship.

23
00:01:43,976 --> 00:01:47,276
This is part of the routine check of
that vehicle prior to the undocking.

24
00:01:47,776 --> 00:01:52,546
Fossum today will also conduct research
on the Binary Colloidal Alloy Test,

25
00:01:52,546 --> 00:01:56,406
known as the BCAT experiment, while
Furukawa continues maintenance

26
00:01:56,406 --> 00:01:59,996
on that Gradient Heating
Facility in the Kibo module.

27
00:02:00,876 --> 00:02:03,816
Fossum is working on the
first segment of the BCAT-6,

28
00:02:03,816 --> 00:02:07,806
which is the colloidal disc experiment test.

29
00:02:07,806 --> 00:02:12,216
It tests the organization of molecular
constituents in a new type of liquid crystal

30
00:02:12,216 --> 00:02:15,246
that is capable of rotating
the polarization of light.

31
00:02:15,626 --> 00:02:19,356
These experiments relate to the
applications and the design of nano-materials

32
00:02:19,896 --> 00:02:25,386
and new leading-edge materials designed
with molecular precision at the nano scale.

33
00:02:25,896 --> 00:02:29,316
[Binary Colloidal] Alloy Test experiments
lay the foundation for nano-technology

34
00:02:29,696 --> 00:02:31,796
and nano-mechanical systems in space.

35
00:02:32,316 --> 00:02:33,606
So how does that apply on Earth?

36
00:02:33,606 --> 00:02:39,136
Well, though direct applications
are not yet driven in the research,

37
00:02:39,256 --> 00:02:43,826
growth of these ordered colloidal phases
has attracted interest in such areas

38
00:02:43,906 --> 00:02:46,896
as ceramics, composites and optical fibers.

39
00:02:48,726 --> 00:02:55,886
Today Expedition 29 and 30 back at the Gagarin
Cosmonaut Training Center in Star City, Russia.

40
00:02:55,886 --> 00:03:00,886
Burbank, Shkaplerov and Ivanishin
conducted a news conference earlier today,

41
00:03:00,886 --> 00:03:04,366
and they are wrapping up their
tour of Red Square in Moscow

42
00:03:04,366 --> 00:03:09,086

where they laid commemorative
flowers at the Kremlin wall.

43
00:03:09,086 --> 00:03:13,716
The three crew members will fly to the
Baikonur Cosmodrome in Kazakhstan Monday

44
00:03:14,216 --> 00:03:16,936
for final preparations for
their launch to the station

45
00:03:16,936 --> 00:03:21,166
on the Soyuz TMA-22 spacecraft on November 14.

46
00:03:21,206 --> 00:03:23,216
That's November 13 on U.S. time.

47
00:03:23,836 --> 00:03:27,576
Also on tap today, the three crew members
are meeting over tea with the head

48
00:03:27,576 --> 00:03:31,596
of the Russian Federal Space
Agency Vladimir Popovkin.

49
00:03:31,886 --> 00:03:36,686
For more information on the space station,
Expedition 29 and the upcoming launch

50
00:03:36,686 --> 00:03:41,596
of the Progress 45 and the Soyuz that will
carry the remainder of the Expedition 29 crew,

51
00:03:42,036 --> 00:03:47,376
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gov forward slash station or follow us