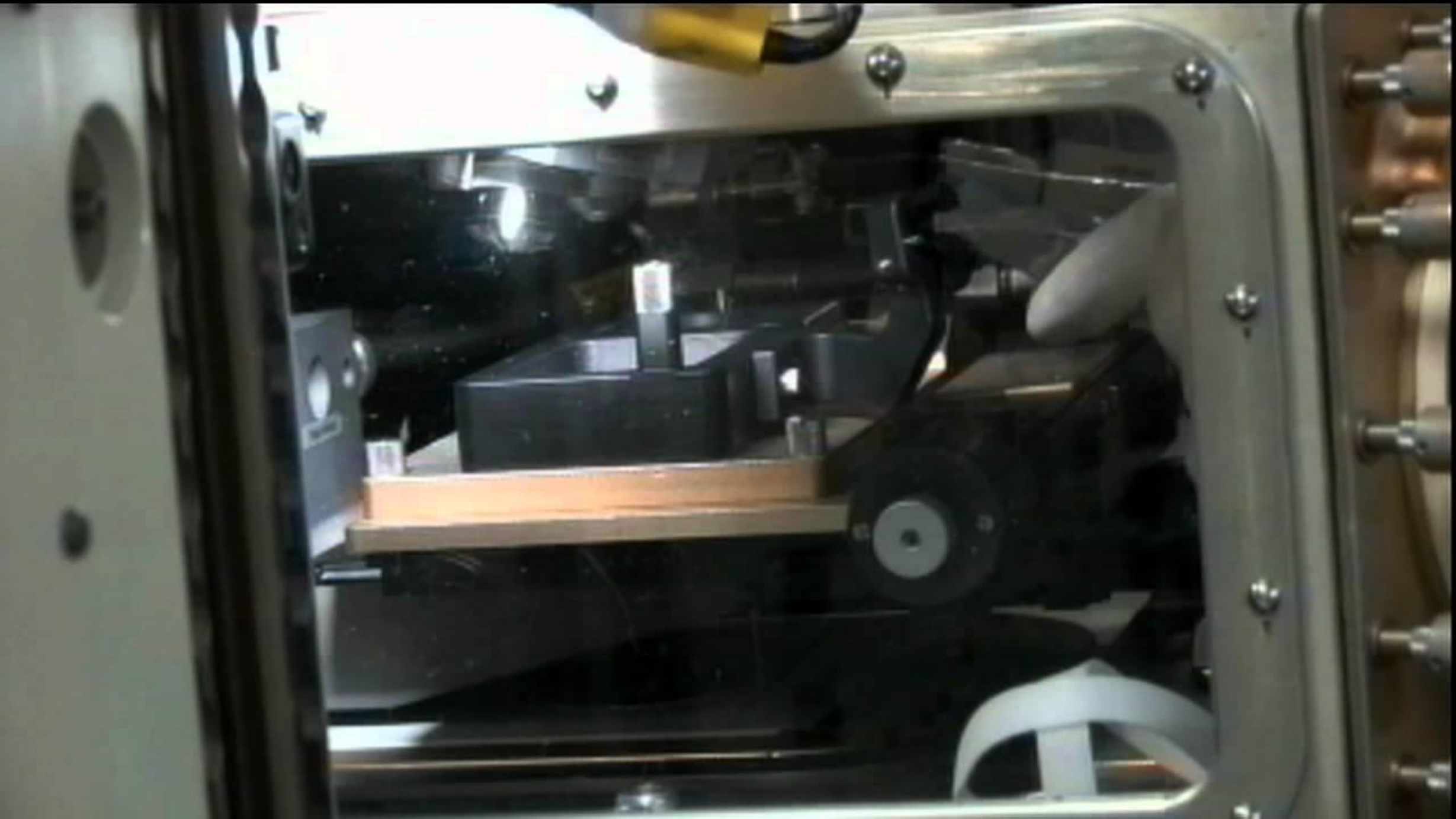

1
00:00:09,710 --> 00:00:11,510
Good morning, and welcome to Mission Control Houston.

2
00:00:11,510 --> 00:00:16,130
We’re inside the International Space Station Flight Control Room where this team is monitoring

3
00:00:16,130 --> 00:00:21,200
systems onboard the station and following along with the activities of the Expedition

4
00:00:21,200 --> 00:00:23,720
29 crew.

5
00:00:23,720 --> 00:00:28,189
The crew onboard the space station is just wrapping up a midday meal, halfway through

6
00:00:28,189 --> 00:00:30,509
their day onboard the station.

7
00:00:30,509 --> 00:00:35,440
The crew includes the members we see here in this view.

8
00:00:35,440 --> 00:00:37,290
On the left, cosmonaut Sergei Volkov.

9
00:00:37,290 --> 00:00:40,510
In the center, NASA astronaut Mike Fossum, who is the commander.

10
00:00:40,510 --> 00:00:46,550
And on the right is Japanese astronaut Satoshi Furukawa.

11
00:00:46,550 --> 00:00:52,239
The crew members are working on various science

experiments and maintenance today.

12
00:00:52,239 --> 00:00:58,559
Fossum was working earlier on changing out
a sample in the PACE experiment, which stands

13
00:00:58,559 --> 00:01:01,719
for Preliminary Advanced Colloids Experiment.

14
00:01:01,719 --> 00:01:04,830
We see this video recorded earlier during
that activity.

15
00:01:04,830 --> 00:01:11,110
That experiment characterizes the resolution
of the High Magnification Colloid Experiments

16
00:01:11,110 --> 00:01:20,640
with the Light Microscopy Module to determine
the minimum size of the particles that can

17
00:01:20,640 --> 00:01:25,780
be resolved by the Advanced Colloids Experiment
which will be delivered to the station and

18
00:01:25,780 --> 00:01:29,890
will fly samples that may have an important
impact on our understanding of fundamental

19
00:01:29,890 --> 00:01:34,950
physics.

20
00:01:34,950 --> 00:01:43,210
Fossum will soon be working with Furukawa
to help set up the Robonaut 2 onboard the

21
00:01:43,210 --> 00:01:44,210
space station.

22

00:01:44,210 --> 00:01:47,509
That’s the first dexterous humanoid robot
in space.

23
00:01:47,509 --> 00:01:52,149
It has been powered up before onboard the
station since its delivery earlier this year

24
00:01:52,149 --> 00:01:55,210
but has not been moved yet.

25
00:01:55,210 --> 00:01:59,640
The crew members will be helping set it up
inside the Destiny laboratory module and then

26
00:01:59,640 --> 00:02:05,299
the engineers here on the ground can send
commands to do checkouts of each arm and check

27
00:02:05,299 --> 00:02:12,580
out its vision system.

28
00:02:12,580 --> 00:02:18,640
Earlier Fossum was also doing another checkout
of an experiment onboard with the Cubelab

29
00:02:18,640 --> 00:02:22,580
and checking out a microscope in that hardware.

30
00:02:22,580 --> 00:02:27,810
The Cubelabs allow for the easy access of
research onboard the space station.

31
00:02:27,810 --> 00:02:34,070
They’re small facilities for experiments
to be conducted in microgravity.

32
00:02:34,070 --> 00:02:40,890
Satoshi Furukawa also worked with an educational
activity.

33
00:02:40,890 --> 00:02:45,940
The Lego Bricks payload is a series of toy
Lego kits that are assembled onboard the space

34
00:02:45,940 --> 00:02:49,430
station and used to demonstrate scientific
concepts.

35
00:02:49,430 --> 00:02:56,960
Today's work involved assembling a satellite
Lego model.

36
00:02:56,960 --> 00:03:01,450
Another experiment onboard the station is
being conducted by Sergei Volkov in the Russian

37
00:03:01,450 --> 00:03:04,920
segment called Coulomb Crystal.

38
00:03:04,920 --> 00:03:11,230
Studies the dynamic and structural characteristics
of the Coulomb systems formed by charged dispersed

39
00:03:11,230 --> 00:03:21,410
diamagnetic macroparticles in the magnetic
trap and the Coulomb systems are structures

40
00:03:21,410 --> 00:03:26,150
following Coulomb's Law which is a law of
physics describing the electric electrostatic