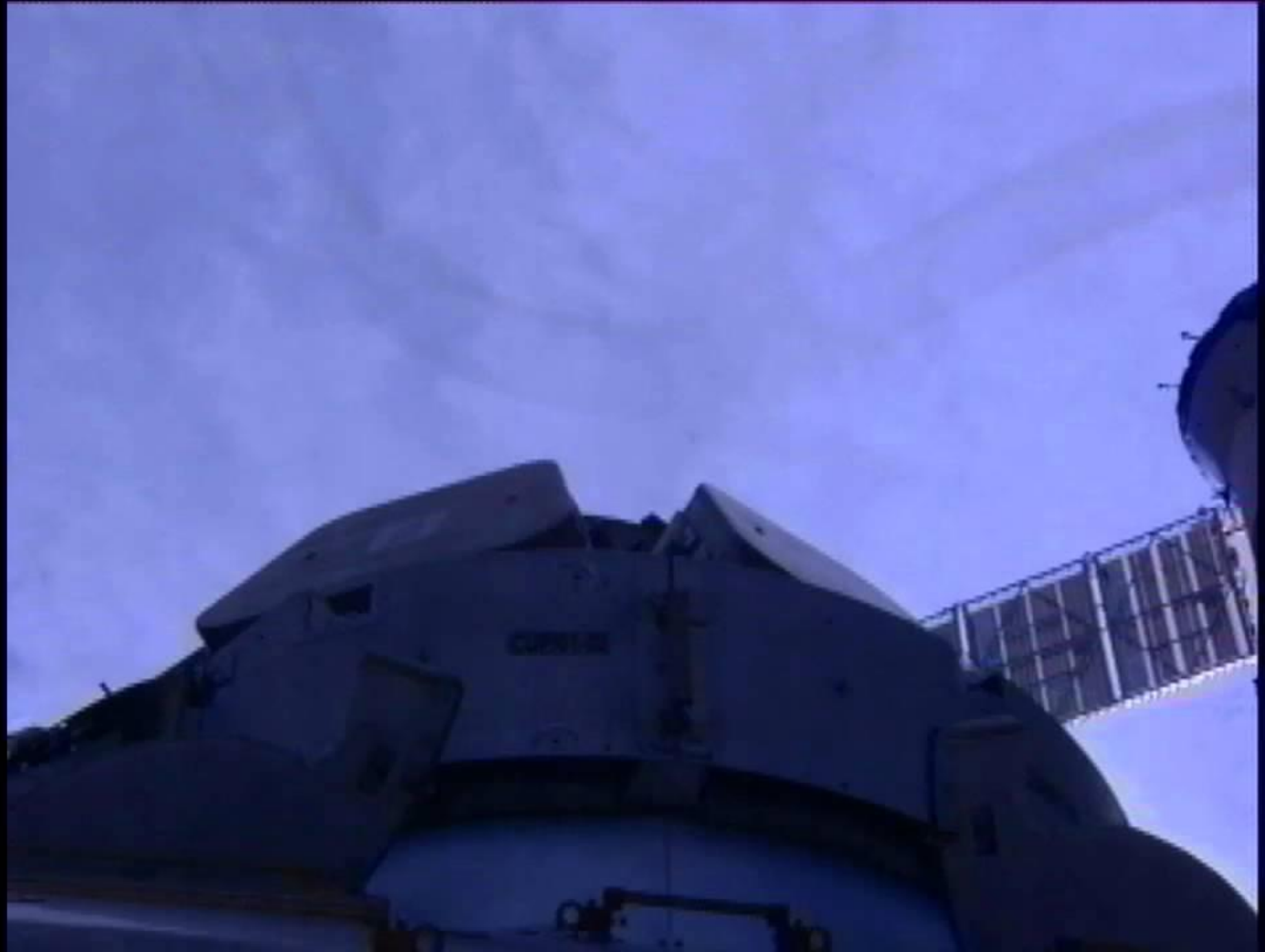

1
00:00:01,426 --> 00:00:05,636
Good day and welcome to Mission COntrol
Houston where flight controllers continue

2
00:00:05,636 --> 00:00:12,146
to follow the conduct of the crew of Expedition
29 aboard the International Space Station

3
00:00:12,146 --> 00:00:17,216
as it continues to circle the globe at
an altitude of about 230 statute miles.

4
00:00:17,866 --> 00:00:21,626
All systems onboard the International
Space Station working very well for this,

5
00:00:21,706 --> 00:00:25,036
now three-person crew, following
the recent departure

6
00:00:25,036 --> 00:00:29,426
of the three remaining Expedition
28 crew members who landed

7
00:00:29,426 --> 00:00:31,576
on the steppe of Kazakhstan last week.

8
00:00:32,066 --> 00:00:39,256
With the departure of NASA's Ron
Garan and Russia's Andrey Borisenko

9
00:00:39,256 --> 00:00:44,456
and Alexander Samokutyaev this crew
went down to a total size of three

10
00:00:44,746 --> 00:00:47,786
and have been spending the weekend getting used

11
00:00:47,786 --> 00:00:54,426

to their three-person crew status
onboard the International Space Station.

12
00:00:55,226 --> 00:00:59,316
Of course, the crew is made up of
Commander Mike Fossum from NASA,

13
00:00:59,316 --> 00:01:05,946
Flight Engineer Satoshi Furukawa from the Japan
Aerospace Exploration Agency and Sergei Volkov

14
00:01:05,946 --> 00:01:07,796
from the Russian Federal Space Agency.

15
00:01:08,516 --> 00:01:13,686
Due to the problems with the Progress
44 cargo craft which was launched

16
00:01:13,686 --> 00:01:16,746
to the International Space Station on Aug.

17
00:01:16,746 --> 00:01:22,776
24 the dates of some of the scheduled flights
to the International Space Station have changed.

18
00:01:23,116 --> 00:01:26,496
That means that this three-person
crew will be onboard the space station

19
00:01:26,496 --> 00:01:33,646
for 61 days before the rest of the Expedition
29 crew members arrive at the space station.

20
00:01:34,006 --> 00:01:39,096
That will be NASA's Dan Burbank and Russia's
Anatoly Ivanishin and Anton Shkaplerov

21
00:01:39,446 --> 00:01:43,356
who will be launching from the Baikonur
Cosmodrome in Kazakhstan on Nov.

22
00:01:43,356 --> 00:01:46,826
14 and docking with the space station on Nov.

23
00:01:46,826 --> 00:01:54,296
16. It will be a quick handover
for the crew members

24
00:01:54,296 --> 00:01:56,896
that are going to be going back and forth.

25
00:01:57,086 --> 00:02:01,276
After that, because it will be time
for Fossum, Furukawa and Volkov

26
00:02:01,276 --> 00:02:04,586
to undock their Soyuz 27 spacecraft on Nov.

27
00:02:04,586 --> 00:02:09,756
22 and head back for home after
the conclusion of their Expedition.

28
00:02:10,526 --> 00:02:15,156
Onboard the International Space Station
today, it's been a busy day of experiment work

29
00:02:15,156 --> 00:02:23,356
for Mike Fossum who focused primarily
on his work on the VO2MAX experiment.

30
00:02:23,356 --> 00:02:29,576
That experiment is called the Evaluation of
Maximal Oxygen Uptake and Submaximal Estimates

31
00:02:29,576 --> 00:02:34,876
of VO2MAX Before, During and After Long-Duration
International Space Station Missions.

32
00:02:34,936 --> 00:02:38,916

And the bottom line of that
long-length explanation,

33
00:02:38,916 --> 00:02:44,746
they want to see how maximum oxygen
uptake works for crew members

34
00:02:44,746 --> 00:02:47,416
who exercise onboard the
International Space Station.

35
00:02:47,816 --> 00:02:51,676
Essentially, it requires them to
hook themselves up to some sensors

36
00:02:52,286 --> 00:02:59,846
and then they measure their maximum
oxygen intake and outgo as opposed

37
00:02:59,846 --> 00:03:04,426
to their normal intake and outgo while
they are riding on a stationary bicycle.

38
00:03:04,426 --> 00:03:07,496
Now, Fossum had some trouble
with the experiment today.

39
00:03:07,496 --> 00:03:11,746
He did a full session with VO2MAX and
then when he got back with the folks

40
00:03:11,746 --> 00:03:14,066
at the Payload Operations
Center in Huntsville, Ala.,

41
00:03:14,396 --> 00:03:17,966
they told him that for some reason they
did not get the data from the bicycle.

42
00:03:17,966 --> 00:03:24,206

He tried it again and did a little test,
followed all the switch throws one more time

43
00:03:24,596 --> 00:03:29,346
and the crew in Huntsville agreed
they were getting good data.

44
00:03:29,346 --> 00:03:34,106
So, we may have to repeat that run,
but in any event Fossum got a good run

45
00:03:34,106 --> 00:03:36,566
of exercise on the stationary bicycle.

46
00:03:36,936 --> 00:03:40,866
They are required to get about
two-and-a-half hours of exercise each day

47
00:03:41,216 --> 00:03:46,526
on the International Space Station to keep their
bodies in good shape for the work ahead of them

48
00:03:46,526 --> 00:03:51,336
on orbit, as well as to prepare their bodies
for the eventual return to one-gravity.

49
00:03:51,336 --> 00:03:57,236
That kind of exercise helps stave off the
potentially detrimental effects in the areas

50
00:03:57,236 --> 00:03:59,596
of bone and muscle density loss in particular.

51
00:03:59,966 --> 00:04:04,926
In addition to stationary bicycles they
also have advanced resistive exercise device

52
00:04:04,926 --> 00:04:06,416
and treadmill equipment on orbit.

53
00:04:08,746 --> 00:04:11,236
COming up later this week for the
crew onboard the space station,

54
00:04:11,236 --> 00:04:14,076
a full group of work for the crew.

55
00:04:14,076 --> 00:04:17,036
On Wednesday, they are going to
be changing out a router for part

56
00:04:17,036 --> 00:04:20,136
of the computer networking equipment to get rid

57
00:04:20,136 --> 00:04:24,406
of a problematic docking station
that the laptop was linked to.

58
00:04:24,406 --> 00:04:27,376
They are going to eliminate the docking
station and do that on Wednesday.

59
00:04:27,876 --> 00:04:31,546
On Thursday, we are going to have a radio
frequency identification scanner test.

60
00:04:31,546 --> 00:04:34,496
It's going to look at a new way to track
items throughout the space station.

61
00:04:34,496 --> 00:04:37,736
Thousands of items on the
space station, hard to track,

62
00:04:37,736 --> 00:04:41,426
and this inventory management system
tool is supposed to make that easier.

63
00:04:41,486 --> 00:04:44,856

And then Friday, the crew is going
to be doing some emergency training

64
00:04:44,856 --> 00:04:49,136
for rapid depressurization and some maintenance

65
00:04:49,136 --> 00:04:52,736
on the Combined Operational Load
Bearing Treadmill, called COLBERT,

66
00:04:52,976 --> 00:04:54,506
to make sure it keeps working well.

67
00:04:55,246 --> 00:05:02,836
Of course, the crew just finished their
special interactive event with famous scientist

68
00:05:02,836 --> 00:05:06,346
and primate researcher Jane
Goodall, Dr. Jane Goodall.

69
00:05:06,806 --> 00:05:13,496
We're going on to some additional exercise
for the crew and additional familiarization