



1
00:00:00,506 --> 00:00:14,156
[Music]

2
00:00:14,656 --> 00:00:16,516
>> It's Monday, July 22nd,

3
00:00:16,816 --> 00:00:20,356
the crew of expedition 36 has
launched a new week on orbit

4
00:00:20,726 --> 00:00:23,976
with a day filled with science
and station maintenance.

5
00:00:24,556 --> 00:00:25,986
After kicking off the day

6
00:00:26,066 --> 00:00:28,506
with the morning daily
planning conference,

7
00:00:28,686 --> 00:00:30,716
Commander Pavel Vinogradov
started

8
00:00:30,716 --> 00:00:33,346
with some routine
maintenance of supplies

9
00:00:33,346 --> 00:00:35,086
in the Russian segment
of the station.

10
00:00:35,576 --> 00:00:38,706
And then he was joined by Flight
Engineer Alexander Misurkin

11
00:00:38,986 --> 00:00:43,096
to assist him with an evaluation

of his cardiovascular function.

12

00:00:43,096 --> 00:00:45,296

This is done during a series

13

00:00:45,296 --> 00:00:48,356

of progressively more
strenuous exercises

14

00:00:48,546 --> 00:00:50,566

that are done using
a stationary bike.

15

00:00:50,566 --> 00:00:54,816

The information that's gathered
from that study adds to the data

16

00:00:54,816 --> 00:00:56,526

for the scientists
who are looking

17

00:00:56,526 --> 00:00:59,596

at ways the human body
is affected by being

18

00:00:59,596 --> 00:01:02,296

in the weightless environment
for an extended period of time.

19

00:01:02,846 --> 00:01:04,776

And ultimately, of
course, to find ways

20

00:01:04,776 --> 00:01:06,916

to counteract those bad affects

21

00:01:07,176 --> 00:01:09,586

so future explorers can
stay healthy while they're

22

00:01:09,586 --> 00:01:11,836
on longer exploration missions.

23

00:01:12,436 --> 00:01:17,096
Vinogradov finished off his
regular treadmill exercise today

24

00:01:17,096 --> 00:01:20,696
too and after lunch, he
focused on stowing items

25

00:01:20,696 --> 00:01:24,686
in the progress vehicle before
its undocking on Thursday.

26

00:01:25,126 --> 00:01:27,736
And then working on the
Russian TV documentary

27

00:01:27,736 --> 00:01:29,276
about life on board the station.

28

00:01:29,586 --> 00:01:32,836
Alexander Misurkin had
his own daily exercise

29

00:01:32,836 --> 00:01:36,436
as all crew members do each
day and spent part of his day

30

00:01:36,436 --> 00:01:39,266
on routine maintenance tasks
for the Russian segment.

31

00:01:39,696 --> 00:01:42,356
And his afternoon working
with Fyodor Yurchikhin

32

00:01:42,676 --> 00:01:45,506

on a Russian experiment
that's looking into new ways

33

00:01:45,756 --> 00:01:47,526
to identify the locations

34

00:01:47,946 --> 00:01:52,396
of where a pressurized space
station may be leaking some

35

00:01:52,396 --> 00:01:53,816
of its pressurization.

36

00:01:55,176 --> 00:01:58,606
Flight Engineer Karen Nyberg's
day had been devoted primarily

37

00:01:58,606 --> 00:02:00,636
to operations with the Robonaut.

38

00:02:01,086 --> 00:02:07,626
She setup the Robonaut 2, the R2
robot in the Destiny Laboratory

39

00:02:08,006 --> 00:02:12,246
as well as the teleoperations
equipment in destiny in order

40

00:02:12,246 --> 00:02:15,736
to monitor the operations
with the commanding of tasks

41

00:02:15,736 --> 00:02:17,466
to the Robonaut from the ground.

42

00:02:18,006 --> 00:02:21,856
The Robonaut is a test bed for
evolving robotic operations

43

00:02:21,856 --> 00:02:26,116
in space and demonstrating
what a robot can do as well

44

00:02:26,116 --> 00:02:28,866
as help the developers as
they test the boundaries

45

00:02:28,866 --> 00:02:30,556
of what a robot might do

46

00:02:30,706 --> 00:02:33,256
in the future including
help a human crew

47

00:02:33,256 --> 00:02:36,576
with tasks inside the
station and perhaps, someday,

48

00:02:36,576 --> 00:02:38,226
outside the station as well.

49

00:02:38,696 --> 00:02:41,736
Flight Engineer Luca
Parmitano kicked off his week

50

00:02:41,806 --> 00:02:44,666
in the European space
agency's Columbus Laboratory.

51

00:02:44,976 --> 00:02:47,536
He's reinstalling the microscope

52

00:02:47,536 --> 00:02:50,096
and the spectrophotometer
in the biolab.

53

00:02:50,526 --> 00:02:53,876
They were removed for
refurbishment back in 2011.

54

00:02:54,416 --> 00:02:57,946

The start of some biolab
maintenance is in advance

55

00:02:57,946 --> 00:03:01,276

of an extended period of ground
testing and commissioning

56

00:03:01,626 --> 00:03:03,666

to demonstrate that
facility's ability

57

00:03:03,666 --> 00:03:06,246

to support some upcoming
experiments

58

00:03:06,246 --> 00:03:11,136

on the effects microgravity on a
variety of biological organisms.

59

00:03:11,776 --> 00:03:15,096

Later in the day, Parmitano
used the station's amateur radio

60

00:03:15,096 --> 00:03:17,986

to talk with students in
Montevideo [phonetic], Uruguay.

61

00:03:18,436 --> 00:03:21,796

And spent his afternoon
getting in his daily exercise.

62

00:03:22,486 --> 00:03:24,796

Flight Engineer Chris
Cassidy started off the day

63

00:03:24,796 --> 00:03:28,326

with his exercise and then moved
to cleaning the smoke detectors

64

00:03:28,586 --> 00:03:30,356
in the Kibo Laboratory module.

65

00:03:30,836 --> 00:03:34,206
He also spent some of his
time helping Karen Nyberg

66

00:03:34,206 --> 00:03:37,106
with the Robonaut and
then moved onto setting

67

00:03:37,106 --> 00:03:38,916
up the fluids integration rack

68

00:03:39,296 --> 00:03:42,476
for the physical sciences
investigation called Advanced

69

00:03:42,476 --> 00:03:44,626
Colloids Experiment Operations.

70

00:03:45,066 --> 00:03:46,486
It's the first in a series

71

00:03:46,486 --> 00:03:50,086
of microscopic imaging
investigations of materials

72

00:03:50,086 --> 00:03:52,016
that contain colloidal
particles.

73

00:03:52,516 --> 00:03:54,716
They're looking into
the flow characteristics

74

00:03:54,716 --> 00:03:58,226
of these particles and the

ordering affects the particles

75

00:03:58,226 --> 00:04:00,386
have on the materials
in question.

76

00:04:01,336 --> 00:04:02,456
Looking ahead to Tuesday,

77

00:04:02,616 --> 00:04:04,546
there'll be more
Robonaut operations

78

00:04:04,576 --> 00:04:06,856
and biolab maintenance as well

79

00:04:06,856 --> 00:04:11,146
as packing progress number
50 prior to its undocking.

80

00:04:11,446 --> 00:04:12,996
And for the Russian
crew members,

81

00:04:13,076 --> 00:04:16,016
practice using the
manual control system

82

00:04:16,016 --> 00:04:20,426
for progress docking for the
new progress vehicle that is due

83

00:04:20,426 --> 00:04:22,756
to arrive at the
station late on Saturday.

84

00:04:23,176 --> 00:04:26,516
Also coming up on Tuesday
for Luca Parmitano,

85

00:04:26,516 --> 00:04:29,416

a public affairs event to
talk about what life is