



1
00:00:01,934 --> 00:00:03,536
This is Mission Control Houston.

2
00:00:03,536 --> 00:00:06,639
This is the International Space
Station flight control room

3
00:00:06,639 --> 00:00:10,743
for the week of January 21
aboard the International

4
00:00:10,743 --> 00:00:11,677
Space Station.

5
00:00:11,677 --> 00:00:13,946
The room this week
has been staffed

6
00:00:13,946 --> 00:00:17,950
by flight directors
supporting all of the activities

7
00:00:17,950 --> 00:00:21,320
in the room and on board the
International Space Station.

8
00:00:21,320 --> 00:00:26,192
Flight director Tony Ceccacci is
one of several flight directors

9
00:00:26,192 --> 00:00:29,829
that have watched over
the teams all week long.

10
00:00:29,829 --> 00:00:33,866
The teams have watched over the
crew's shoulders throughout a

11
00:00:33,866 --> 00:00:37,470

very busy week for the expedition crew, which is made

12

00:00:37,470 --> 00:00:40,172
up of Commander Kevin Ford,

13

00:00:40,172 --> 00:00:43,843
Russian cosmonauts Oleg Novitskiy, Evgeny Tarelkin

14

00:00:43,843 --> 00:00:48,681
and Roman Romanenko, along with Dr. Tom Marshburn

15

00:00:48,681 --> 00:00:52,451
and Canadian Space Agency astronaut Chris Hadfield.

16

00:00:52,451 --> 00:00:56,722
These six crew members will be together until mid-March,

17

00:00:56,722 --> 00:00:59,291
when the three you see on the left side

18

00:00:59,291 --> 00:01:02,495
of the logo return home on March 14.

19

00:01:02,495 --> 00:01:04,864
The other three on the right side will remain behind

20

00:01:04,864 --> 00:01:08,767
on the station as part of Expedition 35

21

00:01:08,767 --> 00:01:12,004
and will stay onboard

until mid-May.

22

00:01:12,004 --> 00:01:15,207

While the astronauts and cosmonauts worked inside,

23

00:01:15,207 --> 00:01:17,676

a weeklong demonstration took place each day

24

00:01:17,676 --> 00:01:20,613

to help prove the concept of refueling spacecraft

25

00:01:20,613 --> 00:01:23,516

in orbit robotically using the space station

26

00:01:23,516 --> 00:01:25,818

as a technology testbed.

27

00:01:25,818 --> 00:01:30,256

The Robotic Refueling Mission operations have been

28

00:01:30,256 --> 00:01:34,026

under way all week long and ended early Friday morning

29

00:01:34,026 --> 00:01:39,365

with the actual simulated transfer of fuel

30

00:01:39,365 --> 00:01:43,569

in the robotic refueling demonstration.

31

00:01:43,569 --> 00:01:46,205

The crew has been spread throughout the station

32

00:01:46,205 --> 00:01:49,074

performing human
research, biological

33

00:01:49,074 --> 00:01:52,011

and physical research
experiments including taking

34

00:01:52,011 --> 00:01:53,245

urine and blood samples --

35

00:01:53,245 --> 00:01:56,749

a periodic activity
that helps continue

36

00:01:56,749 --> 00:01:59,618

to learn how the
human body adapts

37

00:01:59,618 --> 00:02:02,955

and handles long-duration
stays in space.

38

00:02:02,955 --> 00:02:06,892

The crew also worked with the
Capillary Flow Experiment,

39

00:02:06,892 --> 00:02:10,763

which is designed to take a
close look at how fluids flow

40

00:02:10,763 --> 00:02:14,633

across surfaces with
complex geometries

41

00:02:14,633 --> 00:02:16,869

in the space environment.

42

00:02:16,869 --> 00:02:19,872
This will hopefully help improve
computer models that are used

43
00:02:19,872 --> 00:02:23,275
in designing fluid
transfer systems

44
00:02:23,275 --> 00:02:26,845
and fuel tanks on
future spacecraft.

45
00:02:26,845 --> 00:02:32,184
Ultrasound scans of astronauts
on board have been taken out,

46
00:02:32,184 --> 00:02:36,121
carried out during part of the
week to help study the atrophy

47
00:02:36,121 --> 00:02:39,358
of the heart muscle and
try to understand how

48
00:02:39,358 --> 00:02:42,595
to maintain cardiovascular
systems

49
00:02:42,595 --> 00:02:45,864
for long-duration
stays in space as well.

50
00:02:45,864 --> 00:02:48,534
Russian crewmembers on the
station worked primarily

51
00:02:48,534 --> 00:02:50,502
in the Russian segment
performing maintenance

52

00:02:50,502 --> 00:02:53,372
on the station's
exercise treadmill.

53
00:02:53,372 --> 00:02:56,842
They replaced the controller in
the vibration isolation system

54
00:02:56,842 --> 00:03:00,813
of that treadmill and also
conducted an experiment studying

55
00:03:00,813 --> 00:03:03,115
the feasibility of
generating electricity

56
00:03:03,115 --> 00:03:06,151
through solar radiation,
which is reflected off

57
00:03:06,151 --> 00:03:09,221
of the Earth's surface.

58
00:03:09,221 --> 00:03:12,758
The work continued on the
Binary Colloidal Alloy Test

59
00:03:12,758 --> 00:03:16,862
or BCAT science experiment which
takes a look at different types

60
00:03:16,862 --> 00:03:19,431
of colloids -- microscopic
particles

61
00:03:19,431 --> 00:03:21,767
that are suspended in liquid.

62
00:03:21,767 --> 00:03:27,640
This helps investigators

understand how to improve them

63

00:03:27,640 --> 00:03:31,644

in the manufacturing
processes here on Earth.

64

00:03:31,644 --> 00:03:35,481

Spinal ultrasound scans also
were conducted this week

65

00:03:35,481 --> 00:03:39,485

and so were some eye tests

66

00:03:39,485 --> 00:03:41,620

between some of the
crew members.

67

00:03:41,620 --> 00:03:46,158

Crews also conducted a velocity,
air velocity measurement

68

00:03:46,158 --> 00:03:51,630

of the station's atmosphere to
help understand how to make sure

69

00:03:51,630 --> 00:03:55,601

that carbon dioxide doesn't form
in pockets in different areas

70

00:03:55,601 --> 00:03:59,071

of the station to
maintain a smooth airflow

71

00:03:59,071 --> 00:04:01,440

around all the equipment
onboard.

72

00:04:01,440 --> 00:04:05,577

The InSpace experiment
was carried

73

00:04:05,577 --> 00:04:08,447
out quite a bit throughout
the week as well

74

00:04:08,447 --> 00:04:11,016
to understand colloids
or liquids

75

00:04:11,016 --> 00:04:12,785
in the microgravity environment

76

00:04:12,785 --> 00:04:17,189
and how they are affected
by a magnetic field.

77

00:04:17,189 --> 00:04:20,459
And also the checkouts
of the US spacesuits

78

00:04:20,459 --> 00:04:23,529
in the airlock was
conducted, periodic checks,

79

00:04:23,529 --> 00:04:26,365
and also a heat exchanger
was swapped

80

00:04:26,365 --> 00:04:28,534
out of that airlock as well.

81

00:04:28,534 --> 00:04:30,736
So the crew's had
a very busy week.

82

00:04:30,736 --> 00:04:33,138
They'll spend the weekend
pretty much off-duty.

83

00:04:33,138 --> 00:04:35,140

They always have
housekeeping chores

84

00:04:35,140 --> 00:04:37,876

and some experiment
checks that are conducted.

85

00:04:37,876 --> 00:04:40,112

They'll talk with
their families as well

86

00:04:40,112 --> 00:04:44,416

and also have a conversations
with the ground obviously

87

00:04:44,416 --> 00:04:49,988

as needed and so they'll
pretty much have off-duty time

88

00:04:49,988 --> 00:04:52,458

available to them
over the weekend.

89

00:04:52,458 --> 00:04:55,994

So that's it aboard the aboard
International Space Station

90

00:04:55,994 --> 00:04:57,296

for this weekend.