



1
00:00:01,770 --> 00:00:03,450
This is mission control Houston.

2
00:00:03,450 --> 00:00:03,870
You are looking

3
00:00:03,870 --> 00:00:06,770
at the International Space
Station flight control room

4
00:00:06,770 --> 00:00:08,870
as a team of flight
controllers watches

5
00:00:08,870 --> 00:00:12,280
over all the systems aboard
the International Space Station

6
00:00:12,280 --> 00:00:14,980
along with the Expedition
34 crew aboard.

7
00:00:14,980 --> 00:00:18,470
The team throughout
the daytime hours here

8
00:00:18,470 --> 00:00:23,490
in mission control is managed by
Flight Director Royce Renfrew,

9
00:00:23,490 --> 00:00:27,020
he is on console throughout
the day, and of course a team

10
00:00:27,020 --> 00:00:30,130
of flight controllers supports
International Space Station

11
00:00:30,130 --> 00:00:34,080

activities around the
clock every day of the year

12

00:00:34,080 --> 00:00:37,640

to support the ongoing
activities aboard the complex.

13

00:00:37,640 --> 00:00:42,260

A Soyuz spacecraft
docked to the Poisk module

14

00:00:42,260 --> 00:00:45,750

of the International Space
Station supports the three crew

15

00:00:45,750 --> 00:00:48,300

members on board right now.

16

00:00:48,300 --> 00:00:52,990

Those three crew members are
made up of Commander Kevin Ford

17

00:00:52,990 --> 00:00:57,710

and Flight Engineers Oleg
Novitskiy and Evgeny Tarelkin.

18

00:00:57,710 --> 00:01:01,600

Novitskiy and Tarelkin are on
their first voyages into space,

19

00:01:01,600 --> 00:01:04,700

and of course, long-duration
spaceflights.

20

00:01:04,700 --> 00:01:08,240

Kevin Ford is on his
second flight into space,

21

00:01:08,240 --> 00:01:11,990

his first flight as a

long-duration crew member.

22

00:01:11,990 --> 00:01:15,700

He previously flew to the
International Space Station

23

00:01:15,700 --> 00:01:22,490

on the STS-128 mission, a flight
of that occurred back in August

24

00:01:22,490 --> 00:01:24,860

and September of 2009.

25

00:01:24,860 --> 00:01:28,820

The crew members have
been aboard the station

26

00:01:28,820 --> 00:01:33,190

since October 25 and they
are awaiting the arrival

27

00:01:33,190 --> 00:01:37,620

of three more crew members
that are just about to head

28

00:01:37,620 --> 00:01:40,690

to the Baikonur Cosmodrome
in Kazakhstan.

29

00:01:40,690 --> 00:01:44,190

The three crew members heading
there are Dr. Tom Marshburn,

30

00:01:44,190 --> 00:01:45,590

you see on the left.

31

00:01:45,590 --> 00:01:48,680

In the center, Roman
Romanenko, who is the commander

32

00:01:48,680 --> 00:01:53,050
of the Soyuz spacecraft,
the TMA-07M,

33

00:01:53,050 --> 00:01:56,010
and Canadian astronaut
Chris Hadfield on the right.

34

00:01:56,010 --> 00:01:59,750
Those three crew members have
just been certified to continue

35

00:01:59,750 --> 00:02:02,820
with their training and
head toward the quarantine.

36

00:02:02,820 --> 00:02:05,570
They will be heading to
Baikonur on Thursday,

37

00:02:05,570 --> 00:02:08,530
December 6 for the
final two weeks or so

38

00:02:08,530 --> 00:02:11,260
of their training
activities out of their launch

39

00:02:11,260 --> 00:02:14,730
on Wednesday, December 19.

40

00:02:14,730 --> 00:02:16,760
Aboard the International
Space Station,

41

00:02:16,760 --> 00:02:18,870
the current crew members,
three crew members,

42

00:02:18,870 --> 00:02:21,950
spent a fairly quiet weekend.

43

00:02:21,950 --> 00:02:26,620
They checked on some
experiments onboard the station,

44

00:02:26,620 --> 00:02:30,020
conducted routine
housekeeping activities,

45

00:02:30,020 --> 00:02:34,350
conducted some Earth observation
and also visited long-distance

46

00:02:34,350 --> 00:02:37,860
with their families
out here on the ground.

47

00:02:37,860 --> 00:02:41,400
Monday, today, the crew
focused on experiment work

48

00:02:41,400 --> 00:02:43,390
and housekeeping as well.

49

00:02:43,390 --> 00:02:47,460
That work included activity
with the water processing

50

00:02:47,460 --> 00:02:49,580
and water recovery
systems on board.

51

00:02:49,580 --> 00:02:51,610
It is one of the components

52

00:02:51,610 --> 00:02:53,540
of the elaborate
environmental control

53

00:02:53,540 --> 00:02:57,920
and life support system aboard
the International Space Station.

54

00:02:57,920 --> 00:02:59,580
In addition, some
experiment work

55

00:02:59,580 --> 00:03:03,120
at the microgravity sciences
glovebox has been taking place

56

00:03:03,120 --> 00:03:07,300
throughout Monday by Kevin
Ford as he focused on work

57

00:03:07,300 --> 00:03:08,890
with the investigating
the structure

58

00:03:08,890 --> 00:03:11,870
of paramagnetic aggregates
from colloidal emulsions.

59

00:03:11,870 --> 00:03:15,080
It is a long the acronym that
essentially is an experiment

60

00:03:15,080 --> 00:03:17,410
that studies the
fundamental behavior

61

00:03:17,410 --> 00:03:20,530
of magnetic colloidal
fluids under the influence

62

00:03:20,530 --> 00:03:23,160
of various types
of magnetic fields.

63

00:03:23,160 --> 00:03:26,900

These fluids are classified as smart materials which transition

64

00:03:26,900 --> 00:03:30,790

to solid like state by the formation and cross-linking

65

00:03:30,790 --> 00:03:33,810

of different microstructures in the presence

66

00:03:33,810 --> 00:03:36,610

of those magnetic fields here on Earth.

67

00:03:36,610 --> 00:03:40,470

These materials are used for vibration dampening systems

68

00:03:40,470 --> 00:03:42,510

that can be turned on and off.

69

00:03:42,510 --> 00:03:46,400

The hope is in the future, this technology has promise

70

00:03:46,400 --> 00:03:49,500

to improve the ability to design structures such as bridges

71

00:03:49,500 --> 00:03:53,660

and buildings to better withstand earthquake forces.

72

00:03:53,660 --> 00:03:56,470

The Russian crew members on board focused

73

00:03:56,470 --> 00:04:00,510
on Earth observation including
an ocean observation experiment

74

00:04:00,510 --> 00:04:04,330
that is designed to help
measure the shape, structures

75

00:04:04,330 --> 00:04:07,110
and characteristics and
color contrast of formations

76

00:04:07,110 --> 00:04:09,660
on the ocean that
can potentially help

77

00:04:09,660 --> 00:04:14,030
in what is known as bio
productive ocean areas

78

00:04:14,030 --> 00:04:18,690
for the sighting of sunlight
and sunlint on the ocean

79

00:04:18,690 --> 00:04:21,640
for the fishing industry.

80

00:04:21,640 --> 00:04:24,010
In and around timelined
activities,

81

00:04:24,010 --> 00:04:27,760
the crew members
exercise twice a day

82

00:04:27,760 --> 00:04:30,880
and perform their routine
cleaning activities of air,

83

00:04:30,880 --> 00:04:34,740
water filters on board as well.

84

00:04:34,740 --> 00:04:38,900

They also were given
a heads up today

85

00:04:38,900 --> 00:04:42,640

that the ground commanded
feeding

86

00:04:42,640 --> 00:04:47,010

of the Medaka fish experiment,
which is an aquatic facility

87

00:04:47,010 --> 00:04:50,480

in the Japanese experiment
module, is taking place.

88

00:04:50,480 --> 00:04:52,520

That is routine as well.

89

00:04:52,520 --> 00:04:55,710

And tomorrow, Tuesday, the crew
will take some water samples

90

00:04:55,710 --> 00:05:00,280

from that aquatic facility for
some water quality testing.

91

00:05:00,280 --> 00:05:03,330

The crew members will
end their day on Monday

92

00:05:03,330 --> 00:05:06,490

with a daily planning
conference, a long-distance talk

93

00:05:06,490 --> 00:05:08,120

with all of the flight

control teams

94

00:05:08,120 --> 00:05:10,380

around the world

supporting their mission,

95

00:05:10,380 --> 00:05:15,010

and then they will head to bed

at about 3:30 this afternoon,

96

00:05:15,010 --> 00:05:17,670

Monday afternoon, U.S.

CT, and they will wake