
OSO
ISO
CATO

1
00:00:00,506 --> 00:00:14,626
[Music]

2
00:00:15,126 --> 00:00:17,076
>> Good morning, and welcome
to Mission Control, Houston

3
00:00:17,076 --> 00:00:18,276
and Space Station Live.

4
00:00:19,366 --> 00:00:21,646
Although we're coming
to the end of busy week

5
00:00:21,746 --> 00:00:23,956
for the Expedition 36
crew, there's still more

6
00:00:23,956 --> 00:00:25,606
to come tomorrow with the launch

7
00:00:25,606 --> 00:00:29,416
of the Japanese Kounotori
H-II transfer vehicle number 4

8
00:00:29,946 --> 00:00:32,156
from the Tanegashima
Space Center in Japan.

9
00:00:32,436 --> 00:00:35,536
That is scheduled for
2:48 PM central time,

10
00:00:36,166 --> 00:00:36,856
but in the meantime,

11
00:00:36,856 --> 00:00:38,796
the International Space Station
[inaudible] control room --

12
00:00:39,176 --> 00:00:40,266
the control team is here

13
00:00:40,266 --> 00:00:41,906
in the Space Station's
[inaudible] control room,

14
00:00:42,456 --> 00:00:44,306
watching over all of
the crew's activities.

15
00:00:44,846 --> 00:00:48,526
Flight Director Tony Ceccacci
is leading them today,

16
00:00:48,526 --> 00:00:50,726
and Anna Fisher is
assisting as CAPCOM.

17
00:00:51,196 --> 00:00:56,946
The Expedition 36 crew
is now more than halfway

18
00:00:56,946 --> 00:01:00,136
through their day, which
began at 1:00 AM central time.

19
00:01:00,786 --> 00:01:04,616
They are Russian Commander Pavel
Vinogradov, US engineers --

20
00:01:05,036 --> 00:01:07,606
or Flight Engineers Chris
Cassidy and Karen Nyberg,

21
00:01:08,306 --> 00:01:11,396
European Space Agency Flight
Engineer Luca Parmitano,

22
00:01:11,896 --> 00:01:14,356
and Russian Flight
Engineers Aleksandr Misurkin

23
00:01:14,646 --> 00:01:15,636
and Fyodor Yurchikhin.

24
00:01:17,046 --> 00:01:20,046
Cassidy, Vinogradov, and
Misurkin launched into space

25
00:01:20,046 --> 00:01:22,396
on March 28 and docked
a few hours later,

26
00:01:22,666 --> 00:01:27,586
so they've now spent
126 days in space.

27
00:01:27,686 --> 00:01:29,836
Nyberg, Parmitano, and
Yurchikhin followed

28
00:01:29,836 --> 00:01:33,686
in their footsteps on May 28,
so they've now spent 65 days

29
00:01:33,686 --> 00:01:35,036
in space and at the
Space Station.

30
00:01:36,036 --> 00:01:38,826
Together, the crew is
currently orbiting 260 miles

31
00:01:38,826 --> 00:01:40,886
above the South Pacific Ocean

32
00:01:41,126 --> 00:01:42,796

and heading towards
the coast of Chile.

33
00:01:43,326 --> 00:01:47,106
This week has been a
long one for the crew

34
00:01:47,106 --> 00:01:49,526
since they didn't get much of a
weekend, thanks to the arrival

35
00:01:49,526 --> 00:01:52,846
of the Russian transfer
vehicle Progress 52 on Saturday.

36
00:01:53,946 --> 00:01:56,516
That vehicle brought almost
three tons of supplies

37
00:01:56,516 --> 00:01:57,656
and equipment when it docked

38
00:01:57,656 --> 00:02:01,436
to the Station's Pirs docking
compartment at 9:26 PM central,

39
00:02:01,886 --> 00:02:03,356
and the Russian members
of the crew,

40
00:02:03,356 --> 00:02:06,086
and Commander Pavel
Vinogradov in particular,

41
00:02:06,746 --> 00:02:09,826
have been working steadily to
unpack it since the hatches

42
00:02:09,826 --> 00:02:11,806
between the two vehicle

were opened on Sunday.

43
00:02:15,126 --> 00:02:16,996
Meanwhile, the crew
members the US side

44
00:02:16,996 --> 00:02:19,316
of the Space Station have spent
much of their week getting ready

45
00:02:19,316 --> 00:02:23,616
for the next vehicle
scheduled to visit, the HTV-IV.

46
00:02:24,006 --> 00:02:27,846
Its launch at 2:48 PM tomorrow
will begin a week-long journey

47
00:02:27,846 --> 00:02:30,306
to the Space Station
culminating in its birthing

48
00:02:30,306 --> 00:02:32,886
at 6:29 AM central on August 9.

49
00:02:34,206 --> 00:02:37,236
Flight engineers Karen Nyberg
and Chris Cassidy will be

50
00:02:37,236 --> 00:02:40,106
in charge of capturing it with
the Space Station's robotic arm,

51
00:02:40,236 --> 00:02:42,966
which you can see here how
that activity will work.

52
00:02:43,816 --> 00:02:45,626
And then they will bring it

53
00:02:45,626 --> 00:02:46,816
in for a birthing
to the [inaudible].

54
00:02:46,816 --> 00:02:51,036
They've been practicing
for that task all week

55
00:02:51,226 --> 00:02:55,436
with the Station's robotic
workstations inside.

56
00:02:58,296 --> 00:02:59,896
Another activity that
took up a good deal

57
00:02:59,896 --> 00:03:02,326
of time this week was the
ocular health experiment.

58
00:03:02,326 --> 00:03:05,376
That's part of a new effort
to gather data on the effects

59
00:03:05,686 --> 00:03:08,536
that long stays in space
have on astronauts' vision.

60
00:03:09,316 --> 00:03:10,226
Over the course of the week,

61
00:03:10,306 --> 00:03:13,766
Nyberg and Flight Engineer Luca
Parmitano each performed regular

62
00:03:13,766 --> 00:03:16,336
eye chart exams of their
eyes, checked the pressure

63

00:03:16,336 --> 00:03:19,646
in their eyes with tonometers,
and looked inside their eyes

64
00:03:19,646 --> 00:03:21,346
with fundoscopes
and ultrasounds.

65
00:03:21,696 --> 00:03:24,576
They are the first to
participate in this new study

66
00:03:24,576 --> 00:03:27,326
and will be doing such checkups
every month while they are

67
00:03:27,326 --> 00:03:27,946
in space.

68
00:03:28,026 --> 00:03:30,826
They started in June, so this
was their second round of exams.

69
00:03:31,616 --> 00:03:32,826
The equipment they
used was delivered

70
00:03:32,826 --> 00:03:36,256
by Space X-II earlier this year,
and the experiment is expected

71
00:03:36,256 --> 00:03:37,816
to last about four years in all.

72
00:03:37,816 --> 00:03:44,996
Nyberg and Parmitano were also
taking part in other studies

73
00:03:44,996 --> 00:03:48,046
that looked at various aspects

of astronaut health this week.

74
00:03:48,586 --> 00:03:50,946
They've both been on
special diets for all or part

75
00:03:50,946 --> 00:03:53,306
of the week as part of the
pro-K study, which is aimed

76
00:03:53,306 --> 00:03:55,136
at determining whether changes

77
00:03:55,136 --> 00:03:57,776
in the astronaut's diet can
help decrease the amount

78
00:03:57,776 --> 00:04:01,146
of bone loss they experience
during long stays in space.

79
00:04:02,116 --> 00:04:03,956
And every morning right
after they wake up

80
00:04:03,956 --> 00:04:05,846
and every night before
they've gone to sleep,

81
00:04:05,936 --> 00:04:08,966
they've performed runs of the
reaction self-test experiment,

82
00:04:09,396 --> 00:04:11,986
which is aimed at trying
out a way for astronauts

83
00:04:11,986 --> 00:04:15,136
to objectively assess whether
fatigue might affect their

84
00:04:15,136 --> 00:04:19,396
performance in space.

85
00:04:19,626 --> 00:04:22,236
Nyberg did some work yesterday
getting the in-space III

86
00:04:22,236 --> 00:04:23,456
experiment set up, and today,

87
00:04:23,456 --> 00:04:25,596
she is starting a new
run in that experiment.

88
00:04:25,596 --> 00:04:28,346
It looks at how magnetic
fluids are influenced

89
00:04:28,346 --> 00:04:30,336
by magnetic fields
and microgravity,

90
00:04:30,736 --> 00:04:33,126
which could help engineers here
on the ground design structures,

91
00:04:33,466 --> 00:04:36,346
such as bridges and buildings,
to better withstand earthquakes.

92
00:04:37,246 --> 00:04:39,786
And both the US side
of the Space Station

93
00:04:39,786 --> 00:04:42,836
and the Russian side have been
doing some spacewalk-related

94

00:04:42,836 --> 00:04:44,386
work this week with Cassidy

95
00:04:44,386 --> 00:04:47,126
and Parmitano continuing
their efforts to help teams

96
00:04:47,126 --> 00:04:49,116
on the ground troubleshoot
the issue

97
00:04:49,116 --> 00:04:52,156
that Parmitano experience
during his spacewalk last month,

98
00:04:52,156 --> 00:04:54,516
where a water leak developed in
the suit and made it necessary

99
00:04:54,516 --> 00:04:57,096
for the spacewalkers
to end their day early.

100
00:04:58,456 --> 00:05:01,586
Cassidy spent some time in the
Quest airlock today, In fact,

101
00:05:01,586 --> 00:05:03,326
on an activity referred

102
00:05:03,326 --> 00:05:06,416
to as scrubbing the water
loops on their spacesuits.

103
00:05:06,866 --> 00:05:08,136
That's part of the
work necessary

104
00:05:08,136 --> 00:05:11,256
to keep the suits clean between

spacewalks and is also part

105
00:05:11,256 --> 00:05:12,706
of the continuing
troubleshooting effort.

106
00:05:14,006 --> 00:05:15,916
Meanwhile, on the Russian
side of the Station,

107
00:05:16,286 --> 00:05:17,926
Flight Engineers
Aleksandr Misurkin

108
00:05:17,926 --> 00:05:20,436
and Fyodor Yurchikhin
are making preparations

109
00:05:20,436 --> 00:05:22,226
for their spacewalk
on August 16.

110
00:05:23,396 --> 00:05:24,566
They will continue work started

111
00:05:24,566 --> 00:05:28,046
on their previous spacewalk
together to prepare for the --

112
00:05:28,046 --> 00:05:30,406
to prepare the Station
for the arrival

113
00:05:30,406 --> 00:05:32,336
of the Russian multipurpose
laboratory module.

114
00:05:32,996 --> 00:05:34,296
Today, they're gathering
tools for that.

115
00:05:34,296 --> 00:05:37,286
And that's what is going
on in space this week.