



1
00:00:00,500 --> 00:00:09,520
[Music]

2
00:00:09,520 --> 00:00:11,600
>> It's Thursday, July 25,

3
00:00:11,600 --> 00:00:14,670
the International Space
Station's Expedition 36 crew

4
00:00:14,670 --> 00:00:18,920
members have split their
attention today among continuing

5
00:00:18,920 --> 00:00:22,180
science operations, their
daily maintenance of their home

6
00:00:22,180 --> 00:00:25,140
on orbit, and preparations
for the departure

7
00:00:25,140 --> 00:00:27,170
of one of their cargo ships.

8
00:00:27,170 --> 00:00:32,070
The hatch to the Russian cargo
craft Progress 50 was closed

9
00:00:32,070 --> 00:00:35,390
on Wednesday morning after
the crew members had finished

10
00:00:35,390 --> 00:00:39,010
filling that vehicle with
trash and other items

11
00:00:39,010 --> 00:00:41,520
that are no longer

needed on board.

12

00:00:41,520 --> 00:00:44,710

On Thursday morning, station commander Pavel Vinogradov

13

00:00:44,710 --> 00:00:48,080

and flight engineer Fyodor Yurchikhin had a conference

14

00:00:48,080 --> 00:00:51,740

with the team at the Mission Control Center outside Moscow

15

00:00:51,740 --> 00:00:54,950

to review procedures that they might have to follow

16

00:00:54,950 --> 00:00:58,320

in the event that there was an issue during the undocking

17

00:00:58,320 --> 00:01:01,680

and the crew members had to take over manual control

18

00:01:01,680 --> 00:01:02,840

of that progress in order

19

00:01:02,840 --> 00:01:05,540

to re-dock the vehicle to the station.

20

00:01:05,540 --> 00:01:09,980

But they will be standing by when the 50P disengages

21

00:01:09,980 --> 00:01:12,160

from the Pirs docking compartment

22

00:01:12,160 --> 00:01:16,540
at 3:44 Houston time
this afternoon.

23

00:01:16,540 --> 00:01:20,100
The Progress vehicle will then
follow its programmed course

24

00:01:20,100 --> 00:01:23,780
to back away from the station
and begin the final leg

25

00:01:23,780 --> 00:01:27,080
of its journey, which will
end with a destructive entry

26

00:01:27,080 --> 00:01:30,290
into the atmosphere
above the Pacific Ocean.

27

00:01:30,290 --> 00:01:35,240
That docking port at the aft end
of the Pirs module will be taken

28

00:01:35,240 --> 00:01:39,030
by another Progress vehicle
this coming Saturday night,

29

00:01:39,030 --> 00:01:41,360
and since the crew
members will be working

30

00:01:41,360 --> 00:01:44,420
to support those docking
activities over the weekend,

31

00:01:44,420 --> 00:01:46,490
Vinogradov, Yurchikhin,

32

00:01:46,490 --> 00:01:50,260
and flight engineer Alexander
Misurkin all had a half a day

33

00:01:50,260 --> 00:01:52,920
off duty on Thursday
and are scheduled

34

00:01:52,920 --> 00:01:56,140
for a full day off
duty on Friday.

35

00:01:56,140 --> 00:01:59,210
Flight engineer Chris
Cassidy started his Thursday

36

00:01:59,210 --> 00:02:00,950
with science operations.

37

00:02:00,950 --> 00:02:05,100
He worked to set up hardware
in the Kibo laboratory module

38

00:02:05,100 --> 00:02:09,120
for upcoming runs with
the Marangoni experiment.

39

00:02:09,120 --> 00:02:10,530
In that investigation,

40

00:02:10,530 --> 00:02:14,170
scientists are using
the Marangoni confection

41

00:02:14,170 --> 00:02:17,610
to study the properties of
heat transfer that take place

42

00:02:17,610 --> 00:02:21,120

in a microgravity environment.

43

00:02:21,120 --> 00:02:23,910

Flight engineer Luca

Parmitano spent his morning

44

00:02:23,910 --> 00:02:26,480

at the combustion

integrated rack.

45

00:02:26,480 --> 00:02:30,190

He was working to install

new hardware components

46

00:02:30,190 --> 00:02:32,550

in an apparatus known as the

47

00:02:32,550 --> 00:02:35,910

"multiuser droplet

combustion apparatus,"

48

00:02:35,910 --> 00:02:38,440

which you see in his hands.

49

00:02:38,440 --> 00:02:42,610

He's installing new components

there for the next set

50

00:02:42,610 --> 00:02:44,840

of combustion experiment runs.

51

00:02:44,840 --> 00:02:48,590

There are several such

investigations currently

52

00:02:48,590 --> 00:02:51,440

on the schedule, all

of them dedicated

53

00:02:51,440 --> 00:02:55,850
to learning the details about
how different fuels burn

54
00:02:55,850 --> 00:02:57,570
in the absence of gravity.

55
00:02:57,570 --> 00:03:00,420
That's all designed
to improve fire safety

56
00:03:00,420 --> 00:03:02,550
and fire suppression techniques,

57
00:03:02,550 --> 00:03:06,040
but also to increase the
efficiency of engines

58
00:03:06,040 --> 00:03:09,170
which use liquid fuels.

59
00:03:09,170 --> 00:03:11,770
The plan for flight engineer
Karen Nyberg's morning was

60
00:03:11,770 --> 00:03:14,890
devoted to preparing
for next month's arrival

61
00:03:14,890 --> 00:03:19,410
of the H2 transfer vehicle;
that is the fourth cargo ship

62
00:03:19,410 --> 00:03:20,700
to the station provided

63
00:03:20,700 --> 00:03:24,020
by the Japan Aerospace
Exploration Agency.

64

00:03:24,020 --> 00:03:27,030

Nyberg and the Japanese
flight control team ran

65

00:03:27,030 --> 00:03:29,070

into some difficulties powering

66

00:03:29,070 --> 00:03:33,810

up the HTV's hardware control
panel on both the primary

67

00:03:33,810 --> 00:03:35,710

and the backup system.

68

00:03:35,710 --> 00:03:39,560

There is a cable that is
suspected of being bad.

69

00:03:39,560 --> 00:03:42,600

Well, there are several
other spare cables on board,

70

00:03:42,600 --> 00:03:46,590

but the troubleshooting of that
apparatus is still underway.

71

00:03:46,590 --> 00:03:50,210

Nyberg also spent time
checking out the laptop computer

72

00:03:50,210 --> 00:03:55,240

that she'll use in her refresher
training of HTV grapple

73

00:03:55,240 --> 00:03:56,910

and berthing operations.

74

00:03:56,910 --> 00:03:59,350

She'll be at the command

of the station's arm

75

00:03:59,350 --> 00:04:02,690
for those operations next month.

76

00:04:02,690 --> 00:04:05,670
After their lunch, Nyberg
and Cassidy took time to talk

77

00:04:05,670 --> 00:04:09,040
about the progress of their
mission in interviews with the

78

00:04:09,040 --> 00:04:13,110
"Washington Post" and the
Portland, Maine, "Press Herald,"

79

00:04:13,110 --> 00:04:16,280
a newspaper in Cassidy's
home state.

80

00:04:16,280 --> 00:04:19,010
Throughout the day, all
six crew members got

81

00:04:19,010 --> 00:04:22,920
in their two exercise sessions,
getting a workout either

82

00:04:22,920 --> 00:04:27,320
on a stationary bike, a
treadmill, or resisted exercise;

83

00:04:27,320 --> 00:04:30,370
something that all crew
members do every day in order

84

00:04:30,370 --> 00:04:34,280
to keep generally fit and
also to try to keep them

85

00:04:34,280 --> 00:04:38,000

in good shape for when they
encounter gravity again

86

00:04:38,000 --> 00:04:40,290

at the end of their missions.

87

00:04:40,290 --> 00:04:43,210

On Friday, the Russian crew
members will be off duty

88

00:04:43,210 --> 00:04:46,300

but will take care of their
weekly housecleaning that's

89

00:04:46,300 --> 00:04:48,690

usually scheduled for Saturday.

90

00:04:48,690 --> 00:04:52,390

Meanwhile, Chris Cassidy and
Karen Nyberg are scheduled

91

00:04:52,390 --> 00:04:55,310

to conduct more troubleshooting
on the spacesuit

92

00:04:55,310 --> 00:04:59,700

that leaked water into Luca
Parmitano's helmet during a

93

00:04:59,700 --> 00:05:04,100

spacewalk last week, as the crew
members work in coordination

94

00:05:04,100 --> 00:05:08,230

with the ground teams in Houston
to try to isolate the source

95

00:05:08,230 --> 00:05:10,870
of that leak, the
cause of the problem.

96
00:05:10,870 --> 00:05:12,680
Parmitano on Friday will work

97
00:05:12,680 --> 00:05:16,210
on the surface tele-robotics
experiment, and from orbit,

98
00:05:16,210 --> 00:05:20,110
he will remotely drive a
rover that's on a test ground

99
00:05:20,110 --> 00:05:22,720
at the Ames Research
Center in California.

100
00:05:22,720 --> 00:05:25,600
All of the crew members
looking forward to the arrival

101
00:05:25,600 --> 00:05:29,160
of a new load of supplies that
is due to arrive at the station

102
00:05:29,160 --> 00:05:31,780
in a new Progress
vehicle scheduled to dock