1
00:00:00,500 --> 00:00:03,520
[Music]

2
00:00:03,520 --> 00:00:04,860
>> This is Mission
Control Houston.

3
00:00:04,860 --> 00:00:07,330
Welcome. And thank you for
joining us for today's edition

4
00:00:07,330 --> 00:00:09,220
of Space Station Live.

5
00:00:09,220 --> 00:00:12,120
It's been a busy week
of scientific research,

6
00:00:12,120 --> 00:00:15,010
maintenance, and preparation
for the goings and comings

7
00:00:15,010 --> 00:00:16,200
of visiting cargo ships.

8
00:00:16,200 --> 00:00:18,510
As well as an upcoming
space walk

9
00:00:18,510 --> 00:00:19,920
at the International
Space Station

10
00:00:19,920 --> 00:00:22,520
for the Expedition
36 crew members.

11
00:00:22,520 --> 00:00:25,800
Flight Engineers Karen

Nyberg and Chris Cassidy

12
00:00:25,800 --> 00:00:28,870
and Luca Parmitano
got together to talk

13
00:00:28,870 --> 00:00:33,640
to public school students
from Douglas, Massachusetts.

14
00:00:33,640 --> 00:00:37,310
And all 6 Expedition 36 crew
members have performed an

15
00:00:37,310 --> 00:00:39,050
emergency drill on Monday.

16
00:00:39,050 --> 00:00:42,270
The on board training allows the
crew to practice communication

17
00:00:42,270 --> 00:00:46,410
and coordination skills during
a simulated emergency scenario.

18
00:00:46,410 --> 00:00:47,490
Chris Cassidy had worked

19
00:00:47,490 --> 00:00:50,820
on a science hardware insides
the fluids integrated rack.

20
00:00:50,820 --> 00:00:52,240
He then configured hardware

21
00:00:52,240 --> 00:00:55,290
for the advanced
colloids experiment.

22

00:00:55,290 --> 00:00:58,810
While Nyberg had removed
a depressurization hose

23
00:00:58,810 --> 00:01:02,040
in the tranquility nodes
urine processing assembly.

24
00:01:02,040 --> 00:01:04,380
And Parmitano replaced
a urine receptacle

25
00:01:04,380 --> 00:01:08,810
and filter inside
tranquility's waste and hygiene.

26
00:01:08,810 --> 00:01:12,910
Then on Tuesday, a trash-filled
progress 51 resupply craft,

27
00:01:12,910 --> 00:01:14,550
undocked from the aft in port

28
00:01:14,550 --> 00:01:16,500
of this Vesda service
module [phonetic].

29
00:01:16,500 --> 00:01:20,890
A Progress 51 had delivered
3.1 tons of food, fuel,

30
00:01:20,890 --> 00:01:23,940
and equipment for the
station crew on April 26.

31
00:01:23,940 --> 00:01:25,340
It had launched 2 days earlier

32
00:01:25,340 --> 00:01:28,040
from the Baikonur

Cosmodrome in Kazakhstan.

33
00:01:28,040 --> 00:01:30,670
However, reaching --
after reaching orbit,

34
00:01:30,670 --> 00:01:33,030
one of its antennas for the
crews automated rendezvous

35
00:01:33,030 --> 00:01:35,170
system did not deploy.

36
00:01:35,170 --> 00:01:38,040
As the Progress cargo
craft had departed,

37
00:01:38,040 --> 00:01:40,540
these ships external
cameras were focused

38
00:01:40,540 --> 00:01:44,010
on navigational sensors on
this Vesda docking port.

39
00:01:44,010 --> 00:01:45,530
Imagery was gathered to confirm

40
00:01:45,530 --> 00:01:47,440
that the sensors
were not damaged

41
00:01:47,440 --> 00:01:49,830
when the Progress arrived
at the station with one

42
00:01:49,830 --> 00:01:52,920
of its navigational antennas
folded against its side.

43
00:01:52,920 --> 00:01:56,090
These sensors are required
for a new cargo ship --

44
00:01:56,090 --> 00:02:00,780
the automated transfer
vehicle -- to dock properly.

45
00:02:00,780 --> 00:02:02,860
Also on Tuesday,
flight engineers Nyberg

46
00:02:02,860 --> 00:02:04,280
and Cassidy had set up samples

47
00:02:04,280 --> 00:02:06,710
for the advanced
colloid experiment,

48
00:02:06,710 --> 00:02:08,690
which observes microscopic
solids

49
00:02:08,690 --> 00:02:10,780
that are suspended in a liquid.

50
00:02:10,780 --> 00:02:13,800
Results from that research
could benefit the manufacturing

51
00:02:13,800 --> 00:02:15,440
of smart materials
for space craft

52
00:02:15,440 --> 00:02:18,510
and improved household
products on earth.

53
00:02:18,510 --> 00:02:22,020

Then Nyberg had performed a
periodic fitness evaluation

54
00:02:22,020 --> 00:02:26,920
measuring her bone and heart
health on an exercise bicycle.

55
00:02:26,920 --> 00:02:28,490
Cassidy had also worked

56
00:02:28,490 --> 00:02:30,760
with tiny bowling
ball size satellites,

57
00:02:30,760 --> 00:02:33,230
also known as spheres,
which allow students

58
00:02:33,230 --> 00:02:35,510
to test their programming
skills.

59
00:02:35,510 --> 00:02:39,680
The 6 member Expedition 36 crew
then took a break on Wednesday,

60
00:02:39,680 --> 00:02:42,860
with an off-duty day in
observance of Russia Day,

61
00:02:42,860 --> 00:02:46,550
when the country declared
its sovereignty in 1990.

62
00:02:46,550 --> 00:02:48,910
Europe's fourth automated
transfer vehicle,

63
00:02:48,910 --> 00:02:51,480
the Albert Einstein,

had continued its trek

64
00:02:51,480 --> 00:02:52,820
to the International
Space Station

65
00:02:52,820 --> 00:02:56,870
for a June 15 docking
-- that's this Saturday.

66
00:02:56,870 --> 00:02:59,520
Two rendezvous burns were
scheduled on Wednesday

67
00:02:59,520 --> 00:03:04,870
to the station, where it will
dock Vesda service module's aft

68
00:03:04,870 --> 00:03:06,540
docking port.

69
00:03:06,540 --> 00:03:09,480
Flight engineer Parmitano
had assisted Cassidy,

70
00:03:09,480 --> 00:03:11,370
who hopped on an exercise bike

71
00:03:11,370 --> 00:03:12,910
and had his blood
pressure monitored

72
00:03:12,910 --> 00:03:14,860
for fitness evaluation.

73
00:03:14,860 --> 00:03:17,910
And Nyberg had monitored
her blood pressure as part

74

00:03:17,910 --> 00:03:21,440
of a periodic medical exam,
and collected her saliva sample

75
00:03:21,440 --> 00:03:23,970
for storage in a
science freezer.

76
00:03:23,970 --> 00:03:25,440
Meanwhile on Wednesday,

77
00:03:25,440 --> 00:03:28,520
Commander Pavel Vinogradov
had worked

78
00:03:28,520 --> 00:03:30,680
with the ongoing
Russian experiment known

79
00:03:30,680 --> 00:03:32,250
as Plasma Crystal.

80
00:03:32,250 --> 00:03:35,220
The study records plasma
crystal forming processes

81
00:03:35,220 --> 00:03:37,680
and parameters, such
as gas pressure,

82
00:03:37,680 --> 00:03:42,570
high frequency radiated power,
and the size of dust particles.

83
00:03:42,570 --> 00:03:44,330
Flight engineers
Alexander Misurkin

84
00:03:44,330 --> 00:03:47,880
and Luca Parmitano had spent

Thursday morning practicing the

85
00:03:47,880 --> 00:03:50,240
rendezvous procedures
and abort scenarios

86
00:03:50,240 --> 00:03:53,430
for the ATV IV cargo craft.

87
00:03:53,430 --> 00:03:55,400
Ground controllers had
reviewed the imagery

88
00:03:55,400 --> 00:03:58,050
of this Vesda docking port
for that possible damage

89
00:03:58,050 --> 00:04:00,440
to reflectors that could
prevent Saturdays docking

90
00:04:00,440 --> 00:04:02,350
of the Albert Einstein.

91
00:04:02,350 --> 00:04:04,920
Meanwhile Flight Engineer
Karen Nyberg had worked

92
00:04:04,920 --> 00:04:08,330
with the ongoing fluids
physics experiment known

93
00:04:08,330 --> 00:04:10,430
as "Capillary Flow Experiment".

94
00:04:10,430 --> 00:04:14,130
Also on Thursday Cassidy took
photographs of samples collected

95

00:04:14,130 --> 00:04:19,540
for the "Binary Colloidal Alloy
Test Experiment" known as BCAT.

96
00:04:19,540 --> 00:04:22,330
BCAT studies the effects
of microscopic solids

97
00:04:22,330 --> 00:04:23,930
that are suspended in a liquid

98
00:04:23,930 --> 00:04:26,630
that could benefit materials
fabrications processes here

99
00:04:26,630 --> 00:04:27,700
on earth.

100
00:04:27,700 --> 00:04:29,830
And on the Russian side
of the house on Thursday,

101
00:04:29,830 --> 00:04:33,470
Commander Pavel Vinogradov and
Misurkin had a partner together

102
00:04:33,470 --> 00:04:36,770
for more work with the
plasma crystal experiment.

103
00:04:36,770 --> 00:04:39,870
Vinogradov had also checked
the Russian laptop computers

104
00:04:39,870 --> 00:04:42,580
and reconfigured
communications gear.

105
00:04:42,580 --> 00:04:45,240
And Misurkin, along with

Theodore Yurchikhin,

106
00:04:45,240 --> 00:04:49,120
the two space walkers worked
together to gather more tools

107
00:04:49,120 --> 00:04:52,920
and equipment in preparation
for the June 24th space walk.

108
00:04:52,920 --> 00:04:55,840
Friday is an off duty day
for the US crewmembers

109
00:04:55,840 --> 00:04:59,840
of Expedition 36, since the
trio flight engineers, Cassidy,

110
00:04:59,840 --> 00:05:02,680
Parmitano, and Nyberg will
be working over the weekend

111
00:05:02,680 --> 00:05:03,620
to support the docking

112
00:05:03,620 --> 00:05:07,210
of the automated transfer
vehicle for resupply ship.

113
00:05:07,210 --> 00:05:08,790
Flight engineers Yurchikhin

114
00:05:08,790 --> 00:05:12,400
and Misurkin are preparing
their Orlan spacesuits and tools

115
00:05:12,400 --> 00:05:14,010
for their 6 hour space walk

116

00:05:14,010 --> 00:05:17,060
that will occur just outside
the pairs docking compartment

117
00:05:17,060 --> 00:05:18,690
on June 24th.

118
00:05:18,690 --> 00:05:20,590
During their 6 hour excursion,

119
00:05:20,590 --> 00:05:23,570
the two space walkers will
replace a fluid flow valve

120
00:05:23,570 --> 00:05:24,630
on Xaria [phonetic].

121
00:05:24,630 --> 00:05:26,130
Deploy and retrieve experiments

122
00:05:26,130 --> 00:05:27,550
from the Russian
segments modules,

123
00:05:27,550 --> 00:05:30,590
as well as string power
cables along Xaria

124
00:05:30,590 --> 00:05:31,770
for the eventual arrival

125
00:05:31,770 --> 00:05:34,160
of the new multi-purpose
laboratory module

126
00:05:34,160 --> 00:05:36,220
that is scheduled to launch
at the end of the year

127

00:05:36,220 --> 00:05:39,250
on a Russian proton rocket.

128
00:05:39,250 --> 00:05:42,790
Crew is scheduled to go to
bed at 4:30 pm Central time.