1
00:00:02,735 --> 00:00:04,737
This is Mission Control Houston.

2
00:00:04,737 --> 00:00:09,542
The Expedition 34 crew has had
a busy Thursday taking care

3
00:00:09,542 --> 00:00:12,878
of their home on orbit while
participating in a range

4
00:00:12,878 --> 00:00:15,781
of research activities that
are designed to learn more

5
00:00:15,781 --> 00:00:18,818
about how people can
live in an environment

6
00:00:18,818 --> 00:00:20,453
that is absent of gravity.

7
00:00:20,453 --> 00:00:24,490
After rebooting the computers
in the Kibo laboratory

8
00:00:24,490 --> 00:00:27,893
and performing maintenance on
the Waste Hygiene Compartment,

9
00:00:27,893 --> 00:00:31,630
station Commander Kevin Ford
set up a camera in the lab

10
00:00:31,630 --> 00:00:34,967
to record the day's
activities of the Robonaut.

11
00:00:34,967 --> 00:00:38,938

That's a test bed for developing
new robotics capabilities

12
00:00:38,938 --> 00:00:40,372
in space.

13
00:00:40,372 --> 00:00:43,242
It's hoped that the
testing with Robonaut 2

14
00:00:43,242 --> 00:00:47,413
as you see here will lead
to machines that can assist

15
00:00:47,413 --> 00:00:51,817
with work tasks and actually
interact with human crewmembers.

16
00:00:51,817 --> 00:00:56,088
After working with flight
engineer Tom Marshburn

17
00:00:56,088 --> 00:00:57,523
to replace some piping

18
00:00:57,523 --> 00:01:02,428
in the Waste Hygiene Compartment
Ford returned to the lab

19
00:01:02,428 --> 00:01:06,165
to power down and
disassemble the Robonaut

20
00:01:06,165 --> 00:01:10,469
until its next experiment
operations.

21
00:01:10,469 --> 00:01:13,439
Flight Engineers Oleg
Novitskiy, Evgeny Tarelkin

22
00:01:13,439 --> 00:01:15,941
and Roman Romanenko
kicked off their day

23
00:01:15,941 --> 00:01:19,812
with two public affairs
interview and then Novitskiy

24
00:01:19,812 --> 00:01:22,348
and Tarelkin moved
on to shooting scenes

25
00:01:22,348 --> 00:01:24,383
for a documentary about life

26
00:01:24,383 --> 00:01:26,886
on board the International
Space Station.

27
00:01:26,886 --> 00:01:29,755
Roman Romanenko left them there

28
00:01:29,755 --> 00:01:32,925
to complete his first
exercise session

29
00:01:32,925 --> 00:01:36,562
of the day using the advanced
resistive exercise device

30
00:01:36,562 --> 00:01:39,398
and then moved on to some
routine maintenance --

31
00:01:39,398 --> 00:01:43,869
some filter cleaning
inside the Rassvet module

32

00:01:43,869 --> 00:01:45,037
of the space station.

33
00:01:45,037 --> 00:01:48,841
After lunch Romanenko
joined Tarelkin to work

34
00:01:48,841 --> 00:01:51,076
on the documentary about life

35
00:01:51,076 --> 00:01:54,847
in space while Novitskiy
continued his work installing

36
00:01:54,847 --> 00:01:57,850
new wall panels in
the Zvezda module.

37
00:01:57,850 --> 00:02:01,820
For flight engineers Chris
Hadfield and Tom Marshburn,

38
00:02:01,820 --> 00:02:04,490
their day began working
together to set

39
00:02:04,490 --> 00:02:07,426
up the MARES experiment
hardware.

40
00:02:07,426 --> 00:02:09,395
The Muscle Atrophy Research

41
00:02:09,395 --> 00:02:13,699
and Exercise System is a
European space agency project

42
00:02:13,699 --> 00:02:16,435
in human research and
countermeasures development

43
00:02:16,435 --> 00:02:19,505
that is just getting its
first tryout onboard the space

44
00:02:19,505 --> 00:02:23,075
station, being set
up for its first use.

45
00:02:23,075 --> 00:02:28,581
Exercise using that facility is
designed to provide researchers

46
00:02:28,581 --> 00:02:31,750
with some better
understanding about how living

47
00:02:31,750 --> 00:02:36,121
in zero gravity affects
the human muscular system

48
00:02:36,121 --> 00:02:41,327
and therefore to evaluate
just how well the existing

49
00:02:41,327 --> 00:02:44,730
countermeasures systems onboard
the space station are working

50
00:02:44,730 --> 00:02:50,936
to help prevent the decline
of the muscular system.

51
00:02:50,936 --> 00:02:54,974
Hadfield and Marshburn will keep
working with the ground teams

52
00:02:54,974 --> 00:02:57,676
on Friday to troubleshoot
an issue

53
00:02:57,676 --> 00:03:00,446
that they encountered
during the set up today

54
00:03:00,446 --> 00:03:03,349
when the MARES rack
shut down as soon

55
00:03:03,349 --> 00:03:05,317
as they began charging
the batteries.

56
00:03:05,317 --> 00:03:07,920
Hadfield will later

57
00:03:07,920 --> 00:03:11,156
and Marshburn together
had more time set aside

58
00:03:11,156 --> 00:03:14,026
for orientation for
new crew members.

59
00:03:14,026 --> 00:03:19,832
That's a standard line item in
the day's agenda for crewmembers

60
00:03:19,832 --> 00:03:23,502
who have just been at the space
station for a couple of weeks.

61
00:03:23,502 --> 00:03:29,541
After lunch Tom Marshburn went
to help Commander Kevin Ford

62
00:03:29,541 --> 00:03:32,678
with some maintenance work
in the Tranquility module

63
00:03:32,678 --> 00:03:34,346
where they replaced some piping

64
00:03:34,346 --> 00:03:37,149
for the Waste Hygiene
Compartment.

65
00:03:37,149 --> 00:03:42,054
Chris Hadfield was then sent
on to retrieve some detectors

66
00:03:42,054 --> 00:03:45,691
for the RaDI-N bubble
detector experiment.

67
00:03:45,691 --> 00:03:50,562
That's a Canadian experiment to
characterize neutron radiation

68
00:03:50,562 --> 00:03:53,132
in the environment
of the space station.

69
00:03:53,132 --> 00:03:56,969
After that he was to get started
in the destiny laboratory

70
00:03:56,969 --> 00:04:00,839
with a partial removal of the
station's agricultural camera

71
00:04:00,839 --> 00:04:04,443
from the Windows
Observational Research Facility.

72
00:04:04,443 --> 00:04:09,915
The agricultural camera known as
ISSAC, that project is complete.

73

00:04:09,915 --> 00:04:12,785
Plans are that once
ISSAC is removed

74
00:04:12,785 --> 00:04:16,922
from the WORF the window
will be inspected next week

75
00:04:16,922 --> 00:04:19,758
and then a new environmental
research

76
00:04:19,758 --> 00:04:23,929
and visualization system will
be installed in its place.

77
00:04:23,929 --> 00:04:28,000
The ISERV as it's known
is an automated system

78
00:04:28,000 --> 00:04:31,103
to acquire imagery, but
it's designed mostly

79
00:04:31,103 --> 00:04:36,175
to gain experience in automated
data acquisition on the station.

80
00:04:36,175 --> 00:04:39,778
In the process it will
also acquire useful imagery

81
00:04:39,778 --> 00:04:44,216
for disaster monitoring and for
environmental decision-making.

82
00:04:44,216 --> 00:04:47,553
The station crewmembers
are looking ahead to wrap

83

00:04:47,553 --> 00:04:50,656
up the short work week
with the troubleshooting

84
00:04:50,656 --> 00:04:54,526
and hopefully functional
testing of the MARES experiment

85
00:04:54,526 --> 00:04:57,896
on Friday as well as more
science operations throughout

86
00:04:57,896 --> 00:05:00,466
the station and another
ground commanded