1
00:00:02,468 --> 00:00:05,938
Good day and welcome to Mission
Control Houston where a team

2
00:00:05,938 --> 00:00:07,440
of flight controllers watches

3
00:00:07,440 --> 00:00:11,243
over the activities aboard the
International Space Station

4
00:00:11,243 --> 00:00:14,780
Today on the International Space
Station the Expedition 34 crew

5
00:00:14,780 --> 00:00:17,550
is working on experiments
that look at plumbing concepts

6
00:00:17,550 --> 00:00:20,719
for future spacecraft, capillary
flow experiments that look

7
00:00:20,719 --> 00:00:23,355
at how fluids work
in microgravity,

8
00:00:23,355 --> 00:00:26,158
how liquids like paint and
milk react to microgravity

9
00:00:26,158 --> 00:00:29,161
and setting up a student
guided Earth camera

10
00:00:29,161 --> 00:00:31,597
and a long-term project
to look at giving crews

11

00:00:31,597 --> 00:00:34,834
in space more autonomy
the their work.

12
00:00:34,834 --> 00:00:38,170
For Capillary Flow Experiment-3
their work is starting some new

13
00:00:38,170 --> 00:00:40,806
experiments on flows
in weird containers

14
00:00:40,806 --> 00:00:43,309
that passively separate fluids.

15
00:00:43,309 --> 00:00:45,411
The researchers at the
Portland State University

16
00:00:45,411 --> 00:00:48,614
in Oregon intend to use the
results to guide development

17
00:00:48,614 --> 00:00:51,917
of a new system for spacecraft
that'll make plumbing more Earth

18
00:00:51,917 --> 00:00:53,285
plumbing where the effects

19
00:00:53,285 --> 00:00:56,355
of surface tension replace
the role of gravity.

20
00:00:56,355 --> 00:00:59,358
The colloid experiment that
works with solids suspended

21
00:00:59,358 --> 00:01:01,660
in fluid is called

Investigating The Structure

22
00:01:01,660 --> 00:01:03,462
Of Paramagnetic Aggregates

23
00:01:03,462 --> 00:01:07,366
From Colloidal Emulsions
2 or InSPACE-2.

24
00:01:07,366 --> 00:01:10,202
Researchers at the University
of Delaware will obtain data

25
00:01:10,202 --> 00:01:14,306
on fluids that change properties
in response to magnetic fields

26
00:01:14,306 --> 00:01:16,442
and see if they can
use that to improve

27
00:01:16,442 --> 00:01:19,245
or develop new braking
systems and robotics.

28
00:01:19,245 --> 00:01:21,947
Crew also setting up EarthKAM,
which is an experiment

29
00:01:21,947 --> 00:01:23,449
that is organized
by the University

30
00:01:23,449 --> 00:01:25,151
of California in San Diego.

31
00:01:25,151 --> 00:01:28,854
It enables thousands of
students, middle school mostly,

32
00:01:28,854 --> 00:01:30,456
to photograph and
examine the Earth

33
00:01:30,456 --> 00:01:32,758
from a space crew's perspective.

34
00:01:32,758 --> 00:01:34,160
They use the Internet

35
00:01:34,160 --> 00:01:37,029
and control a special digital
camera that's mounted inside the

36
00:01:37,029 --> 00:01:40,699
space station's observation
section and this enables them

37
00:01:40,699 --> 00:01:43,169
to photograph the Earth's
coastlines, mountain ranges

38
00:01:43,169 --> 00:01:45,538
and other geographic
items of interest

39
00:01:45,538 --> 00:01:47,673
from this unique vantage point.

40
00:01:47,673 --> 00:01:50,843
The International Space
Station as Testbed

41
00:01:50,843 --> 00:01:53,812
For Analog Research
experiment is working

42
00:01:53,812 --> 00:01:58,450
on a spacesuit cooling loop

maintenance activity today.

43
00:01:58,450 --> 00:02:01,020
They're working with the
extravehicular mobility unit,

44
00:02:01,020 --> 00:02:03,822
the US spacesuit that
they use for spacewalks

45
00:02:03,822 --> 00:02:08,127
and subdividing the spacesuit
maintenance jobs beyond normal

46
00:02:08,127 --> 00:02:10,029
blocks of time that
they would use

47
00:02:10,029 --> 00:02:12,097
if coordinating with
mission control.

48
00:02:12,097 --> 00:02:14,867
The idea is to develop
procedures for the future

49
00:02:14,867 --> 00:02:17,570
that allow the crew to
complete the work with minimal

50
00:02:17,570 --> 00:02:20,906
or no interaction with mission
control which will be important

51
00:02:20,906 --> 00:02:22,374
when time delays grow longer

52
00:02:22,374 --> 00:02:24,843
as voyages get farther
away from Earth.

53
00:02:24,843 --> 00:02:27,246
The crew also will be
replacing some bolts

54
00:02:27,246 --> 00:02:30,416
in the protein crystallization
research facility

55
00:02:30,416 --> 00:02:35,354
and doing several days of
Capillary Flow Experiment work.

56
00:02:35,354 --> 00:02:38,557
Coming up a little bit later
today the mobile servicing

57
00:02:38,557 --> 00:02:42,261
system elements --
Canadarm2 and Dextre--

58
00:02:42,261 --> 00:02:46,498
will begin a transfer of a
failed Main Bus Switching Unit

59
00:02:46,498 --> 00:02:48,767
from its temporary
storage location

60
00:02:48,767 --> 00:02:51,303
on the External Stowage
Platform 2

61
00:02:51,303 --> 00:02:53,539
which is outside
the quest airlock

62
00:02:53,539 --> 00:02:56,475
to the External Logistics
Carrier 2 which is

63
00:02:56,475 --> 00:02:59,712
on the starboard or
right side of the truss.

64
00:02:59,712 --> 00:03:03,449
The failed switching unit was
replaced last summer during

65
00:03:03,449 --> 00:03:07,219
spacewalks by Expedition
33's Commander Suni Williams

66
00:03:07,219 --> 00:03:10,422
and Flight Engineer Aki Hoshide,
and they're just moving back

67
00:03:10,422 --> 00:03:13,058
into the final storage location.

68
00:03:13,058 --> 00:03:15,628
Other than that there's a
lot of continued maintenance

69
00:03:15,628 --> 00:03:18,764
and other research going on the
International Space Station,