1
00:00:04,390 --> 00:00:02,389
this has been a very busy week of

2
00:00:06,230 --> 00:00:04,400
scientific work for the expedition 34

3
00:00:08,470 --> 00:00:06,240
crew so busy in fact that by the end of

4
00:00:10,950 --> 00:00:08,480
the day they will have set a new record

5
00:00:13,270 --> 00:00:10,960
with 67 hours of crew time this week

6
00:00:15,749 --> 00:00:13,280
devoted to space station research those

7
00:00:17,189 --> 00:00:15,759
67 hours has been spread over a number

8
00:00:19,189 --> 00:00:17,199
of different experiments over the course

9
00:00:21,670 --> 00:00:19,199
of the week they started on monday with

10
00:00:24,790 --> 00:00:21,680
a capillary flow experiment which looks

11
00:00:26,790 --> 00:00:24,800
at how flows in oddly shaped containers

12
00:00:28,550 --> 00:00:26,800
passively separate fluids

13
00:00:30,550 --> 00:00:28,560

that could help researchers develop new

14
00:00:32,229 --> 00:00:30,560
systems for spacecraft plumbing that use

15
00:00:33,830 --> 00:00:32,239
surface tension to replace the missing

16
00:00:35,910 --> 00:00:33,840
effects of gravity

17
00:00:37,750 --> 00:00:35,920
other experiments they worked with over

18
00:00:40,389 --> 00:00:37,760
the course of the week include the in

19
00:00:42,069 --> 00:00:40,399
space ii experiment studying fluids that

20
00:00:43,510 --> 00:00:42,079
change properties in response to

21
00:00:45,350 --> 00:00:43,520
magnetic fields

22
00:00:48,790 --> 00:00:45,360
the results of that experiment should

23
00:00:52,069 --> 00:00:48,800
help improve brake systems and robotics

24
00:00:55,110 --> 00:00:52,079
also i serve a joint nasa and u-sun

25
00:00:57,430 --> 00:00:55,120
program that documents earth's disasters

26
00:00:59,110 --> 00:00:57,440
from the station's unique perspective

27
00:01:01,270 --> 00:00:59,120
and the crew spent a fair amount of time

28
00:01:03,029 --> 00:01:01,280
this week with robonaut 2 as well the

29
00:01:05,030 --> 00:01:03,039
robotic crewmate

30
00:01:07,270 --> 00:01:05,040
r2 was set up on thursday to perform

31
00:01:09,990 --> 00:01:07,280
some checkouts after a recent software

32
00:01:12,070 --> 00:01:10,000
upgrade and that work continued today

33
00:01:15,350 --> 00:01:12,080
with uh some

34
00:01:17,590 --> 00:01:15,360
looks in particular at uh the robot's

35
00:01:19,350 --> 00:01:17,600
left elbow which is uh

36
00:01:20,230 --> 00:01:19,360
experiencing some problems so they were

37
00:01:21,109 --> 00:01:20,240
working

38
00:01:23,030 --> 00:01:21,119

on

39
00:01:24,149 --> 00:01:23,040
comparing it to the right elbow and

40
00:01:26,070 --> 00:01:24,159
trying to

41
00:01:27,429 --> 00:01:26,080
pinpoint exactly what was causing the

42
00:01:29,270 --> 00:01:27,439
hang up

43
00:01:31,350 --> 00:01:29,280
crew also worked earlier this week and

44
00:01:33,670 --> 00:01:31,360
we'll continue with a short test today

45
00:01:36,390 --> 00:01:33,680
on the earthkin project that experiment

46
00:01:37,830 --> 00:01:36,400
is organized by university of california

47
00:01:39,590 --> 00:01:37,840
in san diego

48
00:01:41,350 --> 00:01:39,600
to enable thousands of students to

49
00:01:43,109 --> 00:01:41,360
photograph and examine earth from an

50
00:01:44,950 --> 00:01:43,119
astronaut's perspective

51
00:01:46,710 --> 00:01:44,960
using the internet students can control

52
00:01:48,310 --> 00:01:46,720
a special digital camera mounted on the

53
00:01:49,910 --> 00:01:48,320
space station allowing them to

54
00:01:51,429 --> 00:01:49,920
photograph the earth's coastlines

55
00:01:53,190 --> 00:01:51,439
mountain ranges and other interesting

56
00:01:55,590 --> 00:01:53,200
points from space

57
00:01:56,630 --> 00:01:55,600
the crew is wrapping up the work week

58
00:01:59,429 --> 00:01:56,640
with the

59
00:02:02,550 --> 00:01:59,439
work on the binary colloidal alloy test

60
00:02:04,469 --> 00:02:02,560
or bcat experiment this one looks at

61
00:02:06,870 --> 00:02:04,479
ways to control crystal growth from

62
00:02:08,389 --> 00:02:06,880
seeds in microgravity which gives us

63
00:02:09,830 --> 00:02:08,399

insight into the physical laws that

64
00:02:12,229 --> 00:02:09,840
affect the way

65
00:02:13,670 --> 00:02:12,239
matter organizes itself

66
00:02:15,190 --> 00:02:13,680
with the help of astronauts on the space

67
00:02:16,710 --> 00:02:15,200
station in this case flight engineer

68
00:02:18,070 --> 00:02:16,720
chris hadfield

69
00:02:20,229 --> 00:02:18,080
scientists on the ground can observe

70
00:02:23,510 --> 00:02:20,239
crystal growth mechanisms and crystal

71
00:02:25,350 --> 00:02:23,520
structures in space also commander kevin

72
00:02:27,750 --> 00:02:25,360
ford and flight engineer tom marshburn

73
00:02:29,910 --> 00:02:27,760
are both working today on some routine

74
00:02:32,070 --> 00:02:29,920
monitoring work that's being turned into

75
00:02:34,550 --> 00:02:32,080
an experiment they're both installing

76
00:02:36,710 --> 00:02:34,560
equipment for an ultrasonic background

77
00:02:38,710 --> 00:02:36,720
noise test behind racks in the destiny

78
00:02:40,790 --> 00:02:38,720
laboratory and they're doing it on their

79
00:02:42,790 --> 00:02:40,800
own with minimal or no interaction from

80
00:02:45,270 --> 00:02:42,800
flight controllers here on the ground as

81
00:02:47,750 --> 00:02:45,280
part of the istar experiment that stands

82
00:02:48,869 --> 00:02:47,760
for iss as a test bed for analog

83
00:02:50,229 --> 00:02:48,879
research

84
00:02:51,910 --> 00:02:50,239
working through procedures this way

85
00:02:53,509 --> 00:02:51,920
allows flight controllers to work on

86
00:02:55,190 --> 00:02:53,519
riding procedures that don't require

87
00:02:57,350 --> 00:02:55,200
interaction with the ground in

88
00:02:59,509 --> 00:02:57,360

preparation for future exploration when

89
00:03:01,509 --> 00:02:59,519
flight control teams will be so far away

90
00:03:03,030 --> 00:03:01,519
from the crew in space that

91
00:03:05,030 --> 00:03:03,040
communication delays will make normal

92
00:03:06,309 --> 00:03:05,040
conversations impractical

93
00:03:07,830 --> 00:03:06,319
once they've made their way through this

94
00:03:09,110 --> 00:03:07,840
looks of activities for the day the crew

95
00:03:11,030 --> 00:03:09,120
is going to have the weekend off with