1
00:00:09,509 --> 00:00:08,150
good morning this is mission control

2
00:00:11,749 --> 00:00:09,519
houston welcome and thank you for

3
00:00:15,110 --> 00:00:11,759
joining us for today's edition of space

4
00:00:16,630 --> 00:00:15,120
station live this tuesday april 16th

5
00:00:18,390 --> 00:00:16,640
aboard the international space station

6
00:00:20,790 --> 00:00:18,400
is commander of the complex canadian

7
00:00:22,950 --> 00:00:20,800
space agency astronaut chris hadfield

8
00:00:26,070 --> 00:00:22,960
flight engineers russian cosmonaut roman

9
00:00:28,470 --> 00:00:26,080
romanenko nasa astronauts tom marshburn

10
00:00:31,589 --> 00:00:28,480
and chris cassidy and cosmonauts pavel

11
00:00:33,350 --> 00:00:31,599
vinogradov and alexander misurkin

12
00:00:35,990 --> 00:00:33,360
commander hadfield and flight engineer

13
00:00:38,069 --> 00:00:36,000

marshburn both spent some time with

14
00:00:39,750 --> 00:00:38,079
another round after yesterday's take of

15
00:00:42,229 --> 00:00:39,760
data collecting and recording that

16
00:00:44,869 --> 00:00:42,239
involves a water and urine sample

17
00:00:46,869 --> 00:00:44,879
collecting nph testing as well as at

18
00:00:48,950 --> 00:00:46,879
logging dietary consumption for two

19
00:00:51,110 --> 00:00:48,960
separate human body studies

20
00:00:52,150 --> 00:00:51,120
these studies are known as pro k and

21
00:00:54,630 --> 00:00:52,160
energy

22
00:00:57,029 --> 00:00:54,640
croquet seeks a dietary counter measure

23
00:00:59,029 --> 00:00:57,039
for bone loss while energy evaluates

24
00:01:00,790 --> 00:00:59,039
energy balance of a long duration space

25
00:01:02,869 --> 00:01:00,800
flight crew member

26
00:01:05,109 --> 00:01:02,879
hadfield and flight engineer chris

27
00:01:06,550 --> 00:01:05,119
cassidy worked together to perform

28
00:01:08,950 --> 00:01:06,560
regular maintenance to the environmental

29
00:01:10,789 --> 00:01:08,960
life support system by removing and

30
00:01:12,630 --> 00:01:10,799
replacing a recycle tank

31
00:01:14,789 --> 00:01:12,640
hadfield and cassidy also later today

32
00:01:17,109 --> 00:01:14,799
will conduct their individual periodic

33
00:01:19,670 --> 00:01:17,119
fitness evaluations flight engineer

34
00:01:21,270 --> 00:01:19,680
marshburn has spent much of his morning

35
00:01:23,190 --> 00:01:21,280
and will continue working throughout the

36
00:01:25,030 --> 00:01:23,200
day with that three bowling ball

37
00:01:27,590 --> 00:01:25,040
free-flying satellites

38
00:01:29,830 --> 00:01:27,600

known as spheres as part of ongoing

39
00:01:31,670 --> 00:01:29,840
research and microgravity his spheres

40
00:01:33,749 --> 00:01:31,680
are used to test techniques that could

41
00:01:36,630 --> 00:01:33,759
lead to advancements and automated

42
00:01:39,670 --> 00:01:36,640
dockings satellite servicing spacecraft

43
00:01:41,910 --> 00:01:39,680
assembly and emergency repairs

44
00:01:44,069 --> 00:01:41,920
light engineer chris cassidy had set up

45
00:01:46,630 --> 00:01:44,079
the combustion integrated rack in the

46
00:01:48,230 --> 00:01:46,640
microgravity science glove box for

47
00:01:50,069 --> 00:01:48,240
science operations

48
00:01:52,149 --> 00:01:50,079
cassidy then worked with his hands

49
00:01:54,950 --> 00:01:52,159
inside the microgravity science glove

50
00:01:56,630 --> 00:01:54,960
box working with the onboard research

51
00:01:58,870 --> 00:01:56,640
known as bass

52
00:02:00,550 --> 00:01:58,880
burning and suppression of solids that

53
00:02:03,590 --> 00:02:00,560
studies the characteristics of a wide

54
00:02:05,190 --> 00:02:03,600
variety of fuel samples and microgravity

55
00:02:07,030 --> 00:02:05,200
on the russian side of the house

56
00:02:08,949 --> 00:02:07,040
vinogradov and romanenko continue their

57
00:02:11,110 --> 00:02:08,959
preparations today for their spacewalk

58
00:02:13,350 --> 00:02:11,120
on friday outside the piers docking

59
00:02:15,510 --> 00:02:13,360
compartment airlock to install and

60
00:02:18,070 --> 00:02:15,520
retrieve several experiments and to

61
00:02:19,910 --> 00:02:18,080
replace a fully retro reflector on the

62
00:02:22,070 --> 00:02:19,920
aft end of zvezda

63
00:02:23,910 --> 00:02:22,080

that is part of a suite of navigational

64
00:02:27,190 --> 00:02:23,920
aids to be used by the european space

65
00:02:29,430 --> 00:02:27,200
agency's albert einstein the automated

66
00:02:31,990 --> 00:02:29,440
transfer vehicle 4 for its automated

67
00:02:34,550 --> 00:02:32,000
docking to the station later in june

68
00:02:36,949 --> 00:02:34,560
when groudov and romanenko donned their

69
00:02:39,030 --> 00:02:36,959
russian orlan spacesuits this morning to

70
00:02:41,190 --> 00:02:39,040
conduct translation exercises in the

71
00:02:42,550 --> 00:02:41,200
piers docking compartment airlock

72
00:02:44,790 --> 00:02:42,560
testing the crew's ability to move

73
00:02:45,910 --> 00:02:44,800
around in preparation for friday's space

74
00:02:48,229 --> 00:02:45,920
walk

75
00:02:50,790 --> 00:02:48,239
tomorrow they will don the suits again