1
00:00:09,030 --> 00:00:06,550
good day and welcome to space station

2
00:00:12,070 --> 00:00:09,040
live and the christopher c craft junior

3
00:00:14,070 --> 00:00:12,080
mission control center in houston texas

4
00:00:16,390 --> 00:00:14,080
on board of course the international

5
00:00:19,189 --> 00:00:16,400
space station's expedition 36 crew is

6
00:00:21,750 --> 00:00:19,199
made up of nasa's chris cassidy a flight

7
00:00:23,990 --> 00:00:21,760
engineer for expedition 36

8
00:00:26,790 --> 00:00:24,000
russia's pavel vinogradov the commander

9
00:00:29,269 --> 00:00:26,800
of the expedition and russia's alexander

10
00:00:32,150 --> 00:00:29,279
misurkin another flight engineer the

11
00:00:33,670 --> 00:00:32,160
trio of uh astronauts and cosmonauts are

12
00:00:35,750 --> 00:00:33,680
going through a variety of different

13
00:00:38,069 --> 00:00:35,760

experiment work and space station

14
00:00:40,069 --> 00:00:38,079
maintenance activities today as they

15
00:00:41,990 --> 00:00:40,079
continue as a three-person crew awaiting

16
00:00:44,470 --> 00:00:42,000
the arrival of three more crew members

17
00:00:46,549 --> 00:00:44,480
the day after memorial day today chris

18
00:00:48,069 --> 00:00:46,559
cassidy is working with the capillary

19
00:00:49,670 --> 00:00:48,079
flow experiment

20
00:00:52,790 --> 00:00:49,680
that's a suite of fluid physics

21
00:00:54,709 --> 00:00:52,800
experiments that look at how they flow

22
00:00:57,110 --> 00:00:54,719
in the microgravity environment using

23
00:00:59,750 --> 00:00:57,120
containers and complex geometries

24
00:01:01,510 --> 00:00:59,760
according to mark weislogel the

25
00:01:03,349 --> 00:01:01,520
principal investigator for this uh the

26
00:01:06,950 --> 00:01:03,359
experiment being worked on today was

27
00:01:09,109 --> 00:01:06,960
involved with the vein gap experiment

28
00:01:12,390 --> 00:01:09,119
and that is involving chris cassidy

29
00:01:14,310 --> 00:01:12,400
helping to map measurements by trapping

30
00:01:16,469 --> 00:01:14,320
the advancing and receding fluids in

31
00:01:19,030 --> 00:01:16,479
different gaps formed

32
00:01:21,109 --> 00:01:19,040
by what they call the cassidy method

33
00:01:23,109 --> 00:01:21,119
using the approach cassidy quickly

34
00:01:25,429 --> 00:01:23,119
identified the advancing and receding

35
00:01:27,910 --> 00:01:25,439
limits of these fluids

36
00:01:29,830 --> 00:01:27,920
and we wrote them down on the ground to

37
00:01:31,830 --> 00:01:29,840
monitor that and understand better how

38
00:01:34,390 --> 00:01:31,840

those fluids flow in orbit

39
00:01:36,069 --> 00:01:34,400
overall the experiment is designed to

40
00:01:37,910 --> 00:01:36,079
help improve current computer models

41
00:01:41,030 --> 00:01:37,920
that are used by designers of low

42
00:01:42,950 --> 00:01:41,040
gravity fluid systems and may improve

43
00:01:45,910 --> 00:01:42,960
fluid transfer systems for future

44
00:01:47,830 --> 00:01:45,920
spacecraft chris cassidy also today is

45
00:01:49,990 --> 00:01:47,840
going to be replacing one of the hard

46
00:01:52,230 --> 00:01:50,000
drives on the space station support

47
00:01:54,310 --> 00:01:52,240
laptop computers and performing some

48
00:01:55,670 --> 00:01:54,320
routine checkouts of the crew medical

49
00:01:57,910 --> 00:01:55,680
restraint system

50
00:01:59,670 --> 00:01:57,920
which would be used to hold down a crew

51
00:02:01,270 --> 00:01:59,680
member if they were to have a health

52
00:02:02,630 --> 00:02:01,280
problem or an injury and needed

53
00:02:04,789 --> 00:02:02,640
treatment in the microgravity

54
00:02:06,389 --> 00:02:04,799
environment meanwhile his russian

55
00:02:08,869 --> 00:02:06,399
colleagues pavel vinogradov and

56
00:02:11,029 --> 00:02:08,879
alexander misurkin are working on

57
00:02:12,390 --> 00:02:11,039
installing a new treadmill in the zvezda

58
00:02:14,150 --> 00:02:12,400
service module

59
00:02:16,550 --> 00:02:14,160
since the first

60
00:02:18,550 --> 00:02:16,560
early days of the space station the crew

61
00:02:20,949 --> 00:02:18,560
has used the treadmill vibration

62
00:02:24,229 --> 00:02:20,959
isolation system a u.s designed and

63
00:02:25,990 --> 00:02:24,239

built for specifically for space flight

64
00:02:28,070 --> 00:02:26,000
treadmill that is recessed in the floor

65
00:02:30,470 --> 00:02:28,080
of the zvezda service module

66
00:02:32,150 --> 00:02:30,480
that has gotten a little bit old and the

67
00:02:34,390 --> 00:02:32,160
russian crew members today are working

68
00:02:36,390 --> 00:02:34,400
on replacing it with a brand new russian

69
00:02:39,030 --> 00:02:36,400
manufactured treadmill

70
00:02:41,990 --> 00:02:39,040
that should help improve the exercise

71
00:02:44,390 --> 00:02:42,000
capabilities aboard the space station

72
00:02:46,790 --> 00:02:44,400
chris cassidy just completed an event in

73
00:02:47,910 --> 00:02:46,800
which he talked with students

74
00:02:50,390 --> 00:02:47,920
from the

75
00:02:52,790 --> 00:02:50,400
florida institute of technology as well

76
00:02:55,750 --> 00:02:52,800
as a professor associate professor heidi

77
00:02:57,509 --> 00:02:55,760
hatfield edwards who is at the florida

78
00:02:59,589 --> 00:02:57,519
institute of technology with students

79
00:03:02,070 --> 00:02:59,599
there who are working on a joint project

80
00:03:04,229 --> 00:03:02,080
with a florida today newspaper

81
00:03:06,390 --> 00:03:04,239
to look at long duration space flight

82
00:03:07,910 --> 00:03:06,400
effects on crew members

83
00:03:10,710 --> 00:03:07,920
later today cassie is going to have a

84
00:03:12,630 --> 00:03:10,720
ham radio or amateur radio pass with

85
00:03:14,630 --> 00:03:12,640
anacapa school in santa barbara

86
00:03:16,309 --> 00:03:14,640
california

87
00:03:18,149 --> 00:03:16,319
just recently the

88
00:03:19,990 --> 00:03:18,159

spartan flight controller tony vareja

89
00:03:21,190 --> 00:03:20,000
reported to flight director jed freiling

90
00:03:23,509 --> 00:03:21,200
that the

91
00:03:24,789 --> 00:03:23,519
power channel that was affected by last

92
00:03:28,949 --> 00:03:24,799
week's

93
00:03:31,670 --> 00:03:28,959
ammonia leak of a coolant pump on the 2b

94
00:03:33,830 --> 00:03:31,680
portion of the space station solar array

95
00:03:36,630 --> 00:03:33,840
grouping has been restored to full

96
00:03:38,949 --> 00:03:36,640
functionality that means that the 2b

97
00:03:41,910 --> 00:03:38,959
power channel is now back in

98
00:03:43,670 --> 00:03:41,920
the mix and providing a full eight solar

99
00:03:46,949 --> 00:03:43,680
arrays of power to the international

100
00:03:48,550 --> 00:03:46,959
space station systems the chris cassidy

101
00:03:50,070 --> 00:03:48,560
along with

102
00:03:52,710 --> 00:03:50,080
recently uh

103
00:03:55,030 --> 00:03:52,720
departed tom marshburn conducted a five

104
00:03:57,270 --> 00:03:55,040
and a half hour spacewalk just two days

105
00:03:59,509 --> 00:03:57,280
after the ammonia leak was noticed in

106
00:04:01,190 --> 00:03:59,519
that area on the port side of the space

107
00:04:03,910 --> 00:04:01,200
station's truss structure and

108
00:04:05,110 --> 00:04:03,920
successfully replaced a pump control

109
00:04:06,949 --> 00:04:05,120
module

110
00:04:08,630 --> 00:04:06,959
and so far the flight controllers that

111
00:04:11,429 --> 00:04:08,640
are monitoring that systems are seeing

112
00:04:12,630 --> 00:04:11,439
no signs of any leaks they have seen

113
00:04:15,910 --> 00:04:12,640

that the

114
00:04:18,310 --> 00:04:15,920
replaced pump module the old pump module

115
00:04:21,189 --> 00:04:18,320
has completely leaked out its ammonia

116
00:04:24,469 --> 00:04:21,199
supply and is no longer leaking anymore

117
00:04:26,150 --> 00:04:24,479
that ammonia they have seen no new leaks

118
00:04:27,990 --> 00:04:26,160
reported from the

119
00:04:30,469 --> 00:04:28,000
the new pump module which is working

120
00:04:32,870 --> 00:04:30,479
well and allowing that

121
00:04:35,189 --> 00:04:32,880
to be channeled to be put back into the

122
00:04:36,710 --> 00:04:35,199
power systems of the space station it's

123
00:04:39,270 --> 00:04:36,720
going to take a month and a half or so

124
00:04:40,710 --> 00:04:39,280
before they can validate that all leaks

125
00:04:43,909 --> 00:04:40,720
have been

126
00:04:45,189 --> 00:04:43,919
very small pesky leak that they want to

127
00:04:46,950 --> 00:04:45,199
make sure and it's going to take some

128
00:04:48,550 --> 00:04:46,960
trending data to determine whether

129
00:04:49,909 --> 00:04:48,560
that's fixed

130
00:04:51,430 --> 00:04:49,919
during crew sleep tonight mission

131
00:04:53,430 --> 00:04:51,440
control is going to be performing a

132
00:04:55,749 --> 00:04:53,440
checkout of the backup control center in

133
00:04:57,510 --> 00:04:55,759
huntsville alabama that control center

134
00:04:59,909 --> 00:04:57,520
associated with the payload operations

135
00:05:01,749 --> 00:04:59,919
integration center is the second tier of

136
00:05:04,469 --> 00:05:01,759
backup locations where mission control

137
00:05:07,029 --> 00:05:04,479
houston would relocate in the event of a

138
00:05:08,629 --> 00:05:07,039

hurricane or another disaster here in

139
00:05:10,150 --> 00:05:08,639
houston on the which is on the gulf

140
00:05:11,909 --> 00:05:10,160
coast

141
00:05:14,230 --> 00:05:11,919
and meanwhile at the baikonur cosmodrome

142
00:05:17,110 --> 00:05:14,240
in kazakhstan nasa's karen nyberg the

143
00:05:19,029 --> 00:05:17,120
european space agency's luca parmitano

144
00:05:21,350 --> 00:05:19,039
and russian soyuz commander fyodor

145
00:05:22,790 --> 00:05:21,360
yuchikan are making final preparations

146
00:05:25,670 --> 00:05:22,800
for their launch to the international

147
00:05:27,350 --> 00:05:25,680
space station on mark on may 28

148
00:05:29,430 --> 00:05:27,360
when they will join the trio that's on