
International Space Station Flight Control Room
JOHNSON SPACE CENTER, HOUSTON, TEXAS

1
00:00:04,340 --> 00:00:02,180
this is Mission Control Houston welcome

2
00:00:07,160 --> 00:00:04,350
to today's ISS update it is Tuesday

3
00:00:08,450 --> 00:00:07,170
January 15 2013 this is a live view

4
00:00:10,790 --> 00:00:08,460
inside the space station flight control

5
00:00:13,220 --> 00:00:10,800
room here at the Johnson Space Center

6
00:00:14,990 --> 00:00:13,230
this team here today is being led by

7
00:00:16,189 --> 00:00:15,000
flight director Matt Abbott he is

8
00:00:18,800 --> 00:00:16,199
sitting there at the center console

9
00:00:20,870 --> 00:00:18,810
sitting beside him is Capcom clay

10
00:00:23,689 --> 00:00:20,880
Anderson veteran astronaut he is the

11
00:00:26,269 --> 00:00:23,699
voice up to the crew and will be serving

12
00:00:29,960 --> 00:00:26,279
as such threat the remainder of today in

13
00:00:31,790 --> 00:00:29,970

this orbit to shift the expedition 34

14
00:00:34,400 --> 00:00:31,800
crew onboard the space station has a

15
00:00:36,500 --> 00:00:34,410
busy day today Kevin Ford the commander

16
00:00:39,590 --> 00:00:36,510
of the crew has been working on an

17
00:00:41,590 --> 00:00:39,600
experiment called elite today this takes

18
00:00:44,540 --> 00:00:41,600
a look at the connection between brain

19
00:00:45,529 --> 00:00:44,550
visualization and motion while the crew

20
00:00:47,270 --> 00:00:45,539
is up onboard the space station

21
00:00:49,490 --> 00:00:47,280
obviously your motor skills and how you

22
00:00:51,290 --> 00:00:49,500
react to things is a little bit

23
00:00:52,700 --> 00:00:51,300
different up in space that it is here on

24
00:00:55,160 --> 00:00:52,710
earth so what they do is they set up a

25
00:00:57,049 --> 00:00:55,170
camera and record in three dimensions

26
00:00:59,959 --> 00:00:57,059
the motion of the crew members and how

27
00:01:01,400 --> 00:00:59,969
they react and going through this type

28
00:01:04,219 --> 00:01:01,410
of experiment they even take a look at

29
00:01:06,170 --> 00:01:04,229
how crew members would catch a baseball

30
00:01:08,840 --> 00:01:06,180
or something like that up on orbit

31
00:01:11,149 --> 00:01:08,850
because as it happens our brains are

32
00:01:13,130 --> 00:01:11,159
extremely wired to deal with gravity and

33
00:01:14,300 --> 00:01:13,140
even though the crew members know that

34
00:01:16,820 --> 00:01:14,310
they're up in space their brains

35
00:01:19,280 --> 00:01:16,830
sometimes still process process things

36
00:01:20,749 --> 00:01:19,290
as if gravity still had an effect on

37
00:01:22,969 --> 00:01:20,759
things what they do is they study this

38
00:01:25,730 --> 00:01:22,979

and hopefully will lead to a better

39
00:01:27,920 --> 00:01:25,740
ergonomics better spacecraft design in

40
00:01:29,660 --> 00:01:27,930
the future so Kevin Ford will continue

41
00:01:33,440 --> 00:01:29,670
to work on that for the next couple of

42
00:01:34,850 --> 00:01:33,450
hours Oleg novitskiy has been busy this

43
00:01:37,429 --> 00:01:34,860
morning working in the Russian segment

44
00:01:39,289 --> 00:01:37,439
on a crystal experiment that exists

45
00:01:41,480 --> 00:01:39,299
there he's also going to be working on

46
00:01:43,039 --> 00:01:41,490
the immuno experiment which takes a look

47
00:01:45,410 --> 00:01:43,049
at how stress and long-duration

48
00:01:48,620 --> 00:01:45,420
spaceflight affect the immune system and

49
00:01:50,690 --> 00:01:48,630
different pharmacological ways of

50
00:01:52,609 --> 00:01:50,700
dealing with that Evgeny tarelkin

51
00:01:54,230 --> 00:01:52,619
himself has also been busy in the

52
00:01:56,359 --> 00:01:54,240
Russian segment he has been taking some

53
00:01:58,219 --> 00:01:56,369
air samples which is done periodically

54
00:02:00,740 --> 00:01:58,229
they also take some surface samples as

55
00:02:02,480 --> 00:02:00,750
well just to make sure that the air and

56
00:02:04,399 --> 00:02:02,490
the surfaces that the astronauts and

57
00:02:08,389 --> 00:02:04,409
cosmonauts touch and interact with our

58
00:02:09,859 --> 00:02:08,399
clean and acceptable he's also going to

59
00:02:11,150 --> 00:02:09,869
be working later on this afternoon on

60
00:02:14,120 --> 00:02:11,160
the station's inventory management

61
00:02:16,620 --> 00:02:14,130
system this is a fairly extensive

62
00:02:18,090 --> 00:02:16,630
system that keeps track of where

63
00:02:21,210 --> 00:02:18,100

everything is on board the space station

64
00:02:23,100 --> 00:02:21,220
that is quite a large complex and making

65
00:02:24,690 --> 00:02:23,110
sure that the crew members know and the

66
00:02:27,410 --> 00:02:24,700
ground teams know where everything is is

67
00:02:31,970 --> 00:02:30,199
Chris Hadfield has been working with Tom

68
00:02:34,040 --> 00:02:31,980
Marshburn this morning on the I serve

69
00:02:35,150 --> 00:02:34,050
this is a new experiment onboard the

70
00:02:37,729 --> 00:02:35,160
space station that they are in the

71
00:02:39,620 --> 00:02:37,739
process of setting up this is an

72
00:02:41,710 --> 00:02:39,630
automated system that is designed to

73
00:02:44,030 --> 00:02:41,720
capture images of the Earth's surface

74
00:02:46,760 --> 00:02:44,040
from onboard the space station it is

75
00:02:49,309 --> 00:02:46,770
primarily a means to gain experience and

76
00:02:51,350 --> 00:02:49,319
expertise and automated data acquisition

77
00:02:52,640 --> 00:02:51,360
something that the crew members don't

78
00:02:54,860 --> 00:02:52,650
interact with but it's just

79
00:02:57,770 --> 00:02:54,870
automatically up and running but it is

80
00:02:59,720 --> 00:02:57,780
expected to provide some fairly unique

81
00:03:01,550 --> 00:02:59,730
and useful images of the ground below

82
00:03:04,100 --> 00:03:01,560
for disaster monitoring and assessment

83
00:03:05,360 --> 00:03:04,110
and also environmental issues down on

84
00:03:07,309 --> 00:03:05,370
the planet below but what they're doing

85
00:03:09,890 --> 00:03:07,319
is setting up the window observational

86
00:03:11,860 --> 00:03:09,900
research facility or Wharf which is a

87
00:03:14,479 --> 00:03:11,870
rack inside the Destiny laboratory

88
00:03:17,750 --> 00:03:14,489

they're going to be installing a 9.25

89
00:03:20,030 --> 00:03:17,760
inch telescope there in that window to

90
00:03:21,320 --> 00:03:20,040
appoint it down at the window below and

91
00:03:23,960 --> 00:03:21,330
there's also a digital camera that is

92
00:03:26,479 --> 00:03:23,970
set up with that telescope and then that

93
00:03:28,670 --> 00:03:26,489
experiment will be up and running it's

94
00:03:30,229 --> 00:03:28,680
due to run for about three to six weeks

95
00:03:32,210 --> 00:03:30,239
just depending on the weather patterns

96
00:03:34,610 --> 00:03:32,220
down on the earth below obviously they

97
00:03:37,640 --> 00:03:34,620
need some clear skies to capture images

98
00:03:39,380 --> 00:03:37,650
of the planet down below but there

99
00:03:41,810 --> 00:03:39,390
should be about 60 individual data

100
00:03:45,730 --> 00:03:41,820
acquisition takes of this I serve

101
00:03:49,930 --> 00:03:47,800
marshburn himself has also been working

102
00:03:51,130 --> 00:03:49,940
inside the laboratory on some routine

103
00:03:54,250 --> 00:03:51,140
maintenance on the combustion integrated

104
00:03:56,050 --> 00:03:54,260
rack this is one of the fire experiments

105
00:03:57,370 --> 00:03:56,060
onboard the space station the

106
00:03:59,050 --> 00:03:57,380
crewmembers periodically have to

107
00:04:01,870 --> 00:03:59,060
basically plug in some more fuel tanks

108
00:04:03,340 --> 00:04:01,880
and clean up the different pieces that

109
00:04:05,410 --> 00:04:03,350
make up that combustion integrated rack

110
00:04:07,180 --> 00:04:05,420
so he is taking care of that today and

111
00:04:09,520 --> 00:04:07,190
also beginning later on this afternoon

112
00:04:11,110 --> 00:04:09,530
after we're off the air activities will

113
00:04:13,690 --> 00:04:11,120

continue on the robotic refueling

114
00:04:16,000 --> 00:04:13,700
mission or RRM that activity began

115
00:04:17,470 --> 00:04:16,010
yesterday will continue throughout the

116
00:04:19,390 --> 00:04:17,480
week it is out there on the far

117
00:04:22,570 --> 00:04:19,400
right-hand side of the station's truss

118
00:04:24,730 --> 00:04:22,580
structure and ground teams both here and

119
00:04:28,000 --> 00:04:24,740
at the Canadian Space Agency have been

120
00:04:30,390 --> 00:04:28,010
putting the Dexter robot along with the

121
00:04:33,100 --> 00:04:30,400
station's robotic arm through the paces

122
00:04:34,900 --> 00:04:33,110
what this RRM does is it's about the

123
00:04:36,220 --> 00:04:34,910
size of a washing machine and there's

124
00:04:37,800 --> 00:04:36,230
different tasks and different

125
00:04:40,570 --> 00:04:37,810
attachments there on the end of that

126
00:04:43,120 --> 00:04:40,580
Dexter goes up there and pretends like

127
00:04:46,030 --> 00:04:43,130
it's servicing a satellite far out in

128
00:04:47,740 --> 00:04:46,040
orbit it snips some wires it's removed

129
00:04:50,230 --> 00:04:47,750
some caps and later on this week it is

130
00:04:53,220 --> 00:04:50,240
going to be actually injecting some

131
00:04:55,510 --> 00:04:53,230
simulated fuel there into that our RM

132
00:04:57,970 --> 00:04:55,520
practice facility that's out there

133
00:05:00,970 --> 00:04:57,980
outside the station this is an important

134
00:05:03,250 --> 00:05:00,980
task for the space station to approve

135
00:05:05,590 --> 00:05:03,260
can be done because whenever you launch

136
00:05:07,630 --> 00:05:05,600
a satellite that satellite is limited by

137
00:05:10,000 --> 00:05:07,640
how long the parts are up and running

138
00:05:12,880 --> 00:05:10,010

and operational and healthy and also how

139
00:05:15,000 --> 00:05:12,890
much fuel is onboard the majority of

140
00:05:18,610 --> 00:05:15,010
satellites don't have the ability to be

141
00:05:20,770 --> 00:05:18,620
serviced or refuel but this our RM

142
00:05:24,070 --> 00:05:20,780
experiment is proving that that can be

143
00:05:26,679 --> 00:05:24,080
done as far out as 22,000 miles out away

144
00:05:29,259 --> 00:05:26,689
from Earth's orbit

145
00:05:31,299 --> 00:05:29,269
and finally today a reboost of the

146
00:05:33,999 --> 00:05:31,309
station is planned for Wednesday night

147
00:05:35,469 --> 00:05:34,009
that'll be tomorrow at 8 15 p.m. central

148
00:05:38,409 --> 00:05:35,479
time this will be a three minute 45

149
00:05:40,600 --> 00:05:38,419
second firing of the station's progress

150
00:05:42,249 --> 00:05:40,610
49 thrusters that is the cargo craft

151
00:05:44,589 --> 00:05:42,259
that is on the Russian segment of the

152
00:05:47,079 --> 00:05:44,599
station right now and that will increase

153
00:05:50,350 --> 00:05:47,089
the station's orbit by one statute mile

154
00:05:52,089 --> 00:05:50,360
this is setting up for the next progress

155
00:05:53,949 --> 00:05:52,099
resupply ship that is coming up in

156
00:05:55,869 --> 00:05:53,959
February that'll be the progress 50 and

157
00:05:58,149 --> 00:05:55,879
it should be attempting a single

158
00:05:59,769 --> 00:05:58,159
launched today docking with the

159
00:06:02,439 --> 00:05:59,779
International Space Station arriving at

160
00:06:04,449 --> 00:06:02,449
the complex on the same day that it

161
00:06:07,779 --> 00:06:04,459
launches the reboost should leave the