
NASA
SPACESTATION
LIVE

1
00:00:08,549 --> 00:00:06,470
so as we've talked about quite a bit

2
00:00:10,549 --> 00:00:08,559
this week a lot of preparations for an

3
00:00:13,190 --> 00:00:10,559
upcoming russian spacewalk currently

4
00:00:15,110 --> 00:00:13,200
targeted to take place on august 10th

5
00:00:17,029 --> 00:00:15,120
today in mission control i'm joined by

6
00:00:18,790 --> 00:00:17,039
one of our resident spacewalk specialist

7
00:00:20,150 --> 00:00:18,800
devin balch who's here to tell us a

8
00:00:22,230 --> 00:00:20,160
little bit more about what they're going

9
00:00:24,470 --> 00:00:22,240
to be doing uh during the planned six to

10
00:00:25,990 --> 00:00:24,480
six and a half hour spacewalk on monday

11
00:00:27,990 --> 00:00:26,000
so devin first off thanks so much for

12
00:00:29,910 --> 00:00:28,000
joining me it's always great to get

13
00:00:31,990 --> 00:00:29,920

insight because we don't you know always

14
00:00:33,910 --> 00:00:32,000
know exactly it's tough to my russian

15
00:00:36,069 --> 00:00:33,920
isn't too good so i have trouble reading

16
00:00:38,229 --> 00:00:36,079
the ops notes um but i really appreciate

17
00:00:39,830 --> 00:00:38,239
you being here um starting off you know

18
00:00:42,229 --> 00:00:39,840
they have a lot of tasks like every

19
00:00:43,510 --> 00:00:42,239
spacewalk's always packed usually

20
00:00:44,869 --> 00:00:43,520
starting off with some of the science

21
00:00:47,110 --> 00:00:44,879
work that they're going to be doing what

22
00:00:48,549 --> 00:00:47,120
are some of the external experiments

23
00:00:51,750 --> 00:00:48,559
that they're going to be interacting

24
00:00:53,590 --> 00:00:51,760
with or replacing sure so uh

25
00:00:56,630 --> 00:00:53,600
one of the first ones they'll be working

26
00:00:58,790 --> 00:00:56,640
with is the test experiment which is a

27
00:01:01,670 --> 00:00:58,800
a way that they can take samples they

28
00:01:03,110 --> 00:01:01,680
have this swab device that is in a

29
00:01:06,070 --> 00:01:03,120
airtight container and they can go

30
00:01:08,149 --> 00:01:06,080
around space station if they deem fit to

31
00:01:09,670 --> 00:01:08,159
swab an area that they need an analysis

32
00:01:12,870 --> 00:01:09,680
on say

33
00:01:16,789 --> 00:01:12,880
underneath a thermal blanket or a micro

34
00:01:18,550 --> 00:01:16,799
meteorite shield or if a vent is

35
00:01:20,550 --> 00:01:18,560
showing something

36
00:01:23,350 --> 00:01:20,560
maybe swipe that they put it in their

37
00:01:24,789 --> 00:01:23,360
container and then bring it home and

38
00:01:26,950 --> 00:01:24,799

bring it to the ground and then they can

39
00:01:28,550 --> 00:01:26,960
do their analysis on it so and they're

40
00:01:30,870 --> 00:01:28,560
going to swipe

41
00:01:33,270 --> 00:01:30,880
a radiator and a solar array this time

42
00:01:34,950 --> 00:01:33,280
to see if there's anything deposited on

43
00:01:37,270 --> 00:01:34,960
it that is

44
00:01:38,469 --> 00:01:37,280
shows concern okay and there's other

45
00:01:39,749 --> 00:01:38,479
experiments i know there's one that

46
00:01:40,870 --> 00:01:39,759
they're going to be photographing and

47
00:01:43,030 --> 00:01:40,880
one that they're actually going to be

48
00:01:44,710 --> 00:01:43,040
kind of reorienting and working with

49
00:01:47,590 --> 00:01:44,720
that's correct so um

50
00:01:50,710 --> 00:01:47,600
the expose r they're going that's a

51
00:01:52,789 --> 00:01:50,720
materials uh witness test and it has

52
00:01:56,550 --> 00:01:52,799
quite a few different materials on it

53
00:01:58,469 --> 00:01:56,560
that they uh it's biological and organic

54
00:01:59,910 --> 00:01:58,479
materials and they've exposed that to

55
00:02:02,789 --> 00:01:59,920
space and they're going to take pictures

56
00:02:04,630 --> 00:02:02,799
of this just analyze those photographs

57
00:02:06,469 --> 00:02:04,640
to see how those are

58
00:02:09,430 --> 00:02:06,479
reacting to the space

59
00:02:13,589 --> 00:02:09,440
environment and also they're going to

60
00:02:15,589 --> 00:02:13,599
go up on and reorient this environmental

61
00:02:18,070 --> 00:02:15,599
experiment that is

62
00:02:19,910 --> 00:02:18,080
is studying the environments of space

63
00:02:23,190 --> 00:02:19,920

and they're going to reorient it to just

64
00:02:26,470 --> 00:02:23,200
get a different aspect of of data from

65
00:02:28,309 --> 00:02:26,480
the environments of space so okay and

66
00:02:29,510 --> 00:02:28,319
it's not just going to be science work

67
00:02:31,110 --> 00:02:29,520
for them out there they're going to be

68
00:02:32,790 --> 00:02:31,120
doing some maintenance work as well

69
00:02:34,309 --> 00:02:32,800
they're going to be installing some new

70
00:02:35,830 --> 00:02:34,319
items what are they going to be you know

71
00:02:37,350 --> 00:02:35,840
attaching to the outside of the station

72
00:02:39,030 --> 00:02:37,360
sure so

73
00:02:40,949 --> 00:02:39,040
one of their maintenance tasks is

74
00:02:42,790 --> 00:02:40,959
they're going to install some gap

75
00:02:44,470 --> 00:02:42,800
spanners which those are just soft

76
00:02:47,830 --> 00:02:44,480
handrails that

77
00:02:49,509 --> 00:02:47,840
create a a nicer translation path say

78
00:02:52,229 --> 00:02:49,519
the first one that they install is going

79
00:02:54,470 --> 00:02:52,239
to go around an experiment and so that

80
00:02:55,750 --> 00:02:54,480
takes them around the experiment so they

81
00:02:58,390 --> 00:02:55,760
don't come in contact with stuff

82
00:02:59,910 --> 00:02:58,400
climbing over it exactly correct yeah

83
00:03:02,470 --> 00:02:59,920
and then another one they're going to

84
00:03:04,470 --> 00:03:02,480
install that uh it just gives them a

85
00:03:07,830 --> 00:03:04,480
better translation path between two

86
00:03:09,990 --> 00:03:07,840
handrails so gap spanners are used to

87
00:03:12,949 --> 00:03:10,000
create translation paths and ease

88
00:03:14,390 --> 00:03:12,959

translation paths i guess so and also

89
00:03:17,350 --> 00:03:14,400
one of the other tasks one of the

90
00:03:19,830 --> 00:03:17,360
maintenance tasks is that on another a

91
00:03:22,470 --> 00:03:19,840
previous cva or spacewalk they went out

92
00:03:24,710 --> 00:03:22,480
and saw that one of the navigation

93
00:03:26,309 --> 00:03:24,720
antennas was missing its cover and so

94
00:03:28,470 --> 00:03:26,319
they went and looked at another cover

95
00:03:31,030 --> 00:03:28,480
and the fasteners or screws were coming

96
00:03:33,670 --> 00:03:31,040
out they were backing out so they built

97
00:03:35,190 --> 00:03:33,680
these what they call these fastener kits

98
00:03:36,630 --> 00:03:35,200
and they're going to go install these

99
00:03:39,509 --> 00:03:36,640
fastener kits on

100
00:03:42,309 --> 00:03:39,519
wall or what they call a wall antenna or

101
00:03:44,789 --> 00:03:42,319
navigation antenna one through five and

102
00:03:46,710 --> 00:03:44,799
they just inhibit the the fasteners from

103
00:03:48,550 --> 00:03:46,720
backing out so they don't lose another

104
00:03:49,830 --> 00:03:48,560
cover okay

105
00:03:51,030 --> 00:03:49,840
and then one of the other one of the

106
00:03:52,390 --> 00:03:51,040
things that i had saw that kind of

107
00:03:54,149 --> 00:03:52,400
caught my eye was they're actually going

108
00:03:56,229 --> 00:03:54,159
to be cleaning one of the windows on the

109
00:03:58,149 --> 00:03:56,239
russian segment so i mean what what's

110
00:04:00,470 --> 00:03:58,159
happening in that space environment that

111
00:04:01,670 --> 00:04:00,480
could cause a window to get dirty and

112
00:04:03,750 --> 00:04:01,680
what the heck are they doing to clear i

113
00:04:07,670 --> 00:04:03,760

mean there's no windex

114
00:04:09,509 --> 00:04:07,680
microgravity yeah so what happened is

115
00:04:11,670 --> 00:04:09,519
they uh we have a lot of visiting

116
00:04:14,070 --> 00:04:11,680
vehicles and all those have

117
00:04:15,750 --> 00:04:14,080
rocket engines and they have an exhaust

118
00:04:18,150 --> 00:04:15,760
just like your car so

119
00:04:20,310 --> 00:04:18,160
it's stirring up particles and it's

120
00:04:23,110 --> 00:04:20,320
collected and they notice that

121
00:04:25,670 --> 00:04:23,120
that window looked hazy so they took a

122
00:04:27,830 --> 00:04:25,680
test experiment out there and swiped

123
00:04:30,790 --> 00:04:27,840
across it and left a big streak across

124
00:04:31,830 --> 00:04:30,800
it on a previous eba or a spacewalk and

125
00:04:34,310 --> 00:04:31,840
so they

126
00:04:37,110 --> 00:04:34,320
they did analysis and they decided we

127
00:04:39,909 --> 00:04:37,120
should clean that window and make it

128
00:04:42,469 --> 00:04:39,919
like it was when they flew it so

129
00:04:45,189 --> 00:04:42,479
they developed this this

130
00:04:47,510 --> 00:04:45,199
tool kit that has a swabs two swabs in

131
00:04:48,469 --> 00:04:47,520
it with handles on it and the swabs are

132
00:04:52,230 --> 00:04:48,479
kind of

133
00:04:55,990 --> 00:04:54,550
like terry cloth okay and it's just kind

134
00:04:57,430 --> 00:04:56,000
of they're going to go out there and

135
00:05:00,150 --> 00:04:57,440
buff the the

136
00:05:02,150 --> 00:05:00,160
little porthole window and then put it

137
00:05:04,310 --> 00:05:02,160
in its container take the next one out

138
00:05:06,629 --> 00:05:04,320

and buff that one it's kind of like

139
00:05:08,550 --> 00:05:06,639
similar to what you would use on your

140
00:05:10,790 --> 00:05:08,560
your car headlights when they get hazy

141
00:05:12,150 --> 00:05:10,800
to clean them so gotcha so i mean some

142
00:05:13,749 --> 00:05:12,160
of the other russian cosmonauts put

143
00:05:15,029 --> 00:05:13,759
their fingers in the sliding glass door

144
00:05:17,670 --> 00:05:15,039
and now they got to go clean that's

145
00:05:18,950 --> 00:05:17,680
right exactly okay well and one of the

146
00:05:20,790 --> 00:05:18,960
other things you had mentioned earlier

147
00:05:22,469 --> 00:05:20,800
was antennas they're going to be doing

148
00:05:24,390 --> 00:05:22,479
some replacement work on one they're

149
00:05:26,230 --> 00:05:24,400
also going to be jettisoning something

150
00:05:28,469 --> 00:05:26,240
aren't they that's what that that's

151
00:05:31,830 --> 00:05:28,479
always kind of fascinating

152
00:05:32,710 --> 00:05:31,840
what goes into you know actually jets so

153
00:05:35,430 --> 00:05:32,720
i mean they're basically kind of

154
00:05:36,550 --> 00:05:35,440
throwing something overboard they sure

155
00:05:38,390 --> 00:05:36,560
are so

156
00:05:39,990 --> 00:05:38,400
previously i stated that one of the

157
00:05:41,749 --> 00:05:40,000
navigation antennas

158
00:05:43,990 --> 00:05:41,759
was missing its cover

159
00:05:46,230 --> 00:05:44,000
so they're going to replace that that

160
00:05:48,710 --> 00:05:46,240
antenna so to get it back into its

161
00:05:50,870 --> 00:05:48,720
nominal configuration okay so

162
00:05:53,110 --> 00:05:50,880
the antenna is number six and they're

163
00:05:55,189 --> 00:05:53,120

gonna go out and the

164
00:05:56,950 --> 00:05:55,199
the antenna is hardwired so they have to

165
00:05:59,189 --> 00:05:56,960
cut the cable off of it

166
00:06:02,710 --> 00:05:59,199
and then they'll coil that up and then

167
00:06:04,710 --> 00:06:02,720
they have to go and and uh disconnect

168
00:06:05,510 --> 00:06:04,720
the connector at the other end

169
00:06:06,550 --> 00:06:05,520
and

170
00:06:09,510 --> 00:06:06,560
uh

171
00:06:11,270 --> 00:06:09,520
gennady will remove the old antenna and

172
00:06:12,790 --> 00:06:11,280
place the new antenna that has the

173
00:06:14,550 --> 00:06:12,800
hardwired cable on it and they'll

174
00:06:16,710 --> 00:06:14,560
reroute the cable and mate that cable

175
00:06:19,029 --> 00:06:16,720
where the old one was and then they get

176
00:06:20,790 --> 00:06:19,039
in position they take the old antenna

177
00:06:23,110 --> 00:06:20,800
down and get in a

178
00:06:25,110 --> 00:06:23,120
certain position that the the all the

179
00:06:26,950 --> 00:06:25,120
scientists have analyzed

180
00:06:29,749 --> 00:06:26,960
exactly the direction that that needs to

181
00:06:32,070 --> 00:06:29,759
go and the speed and everything else so

182
00:06:34,629 --> 00:06:32,080
it's very a critical time you don't want

183
00:06:37,350 --> 00:06:34,639
it to come back and re-contact station

184
00:06:40,870 --> 00:06:37,360
somewhere so they have a specific angle

185
00:06:43,110 --> 00:06:40,880
and cone that they're going to to to

186
00:06:45,749 --> 00:06:43,120
exactly where yeah and there's some

187
00:06:47,990 --> 00:06:45,759
there's some play with it yeah it's not

188
00:06:50,550 --> 00:06:48,000

exactly they don't have a laser with

189
00:06:52,870 --> 00:06:50,560
intolerance exactly yes so and they'll

190
00:06:55,510 --> 00:06:52,880
jettison that and uh

191
00:06:58,070 --> 00:06:55,520
hopefully it will re-enter

192
00:07:00,309 --> 00:06:58,080
and fire you know it'll be a fiery ball

193
00:07:02,629 --> 00:07:00,319
and nothing will hit the ground all

194
00:07:04,390 --> 00:07:02,639
right and then one final task that i

195
00:07:05,830 --> 00:07:04,400
know they have is they're going to be

196
00:07:07,670 --> 00:07:05,840
taking a lot of pictures of the russian

197
00:07:09,589 --> 00:07:07,680
segment itself i mean why why do they

198
00:07:11,589 --> 00:07:09,599
need to go out and do this and what can

199
00:07:14,550 --> 00:07:11,599
people down here learn from them doing

200
00:07:17,510 --> 00:07:14,560
that well they take pictures every

201
00:07:18,550 --> 00:07:17,520
pretty much every spacewalk and so they

202
00:07:20,390 --> 00:07:18,560
do

203
00:07:22,870 --> 00:07:20,400
extensive uh

204
00:07:25,430 --> 00:07:22,880
analysis on those and they'll see that

205
00:07:27,110 --> 00:07:25,440
some thermal blankets have a

206
00:07:30,150 --> 00:07:27,120
discoloration or

207
00:07:32,150 --> 00:07:30,160
uh shield doesn't look quite right so

208
00:07:33,830 --> 00:07:32,160
they want to go and take a

209
00:07:36,870 --> 00:07:33,840
picture a close-up picture a

210
00:07:39,189 --> 00:07:36,880
high-definition picture of that area or

211
00:07:40,950 --> 00:07:39,199
they may have indications of an exhaust

212
00:07:42,550 --> 00:07:40,960
event it's not

213
00:07:44,230 --> 00:07:42,560

acting like they think it should so they

214
00:07:46,469 --> 00:07:44,240
may go and take a picture of that or

215
00:07:49,029 --> 00:07:46,479
that area and like i said they're going

216
00:07:51,510 --> 00:07:49,039
to take pictures of the expose r

217
00:07:52,950 --> 00:07:51,520
experiment that materials experiment to

218
00:07:55,430 --> 00:07:52,960
see

219
00:07:57,990 --> 00:07:55,440
how that's being affected by space so

220
00:07:59,589 --> 00:07:58,000
space is a harsh environment so there's

221
00:08:02,150 --> 00:07:59,599
things out there that we are still

222
00:08:04,230 --> 00:08:02,160
learning so give it a thorough look over

223
00:08:05,749 --> 00:08:04,240
and see if anything isn't looking like

224
00:08:07,110 --> 00:08:05,759
it's supposed to supposed to yeah all

225
00:08:08,950 --> 00:08:07,120
right well

226
00:08:09,830 --> 00:08:08,960
that's a i mean a rough preview of

227
00:08:11,350 --> 00:08:09,840
everything that they're going to be

228
00:08:13,749 --> 00:08:11,360
doing on monday be sure to watch the

229
00:08:15,909 --> 00:08:13,759
space walk live the coverage time at the

230
00:08:18,950 --> 00:08:15,919
bottom of your screen starting at 8 45

231
00:08:20,629 --> 00:08:18,960
a.m central time 9 45 a.m eastern devin

232
00:08:22,390 --> 00:08:20,639
balch again spacewalk specialist thanks