1
00:00:06,789 --> 00:00:04,870
good afternoon everybody and welcome to

2
00:00:08,230 --> 00:00:06,799
the johnson space center here in houston

3
00:00:09,990 --> 00:00:08,240
texas we're going to be giving you a

4
00:00:12,629 --> 00:00:10,000
look today at two spacewalks that are

5
00:00:14,070 --> 00:00:12,639
coming up for the crew of expedition 32

6
00:00:15,990 --> 00:00:14,080
the first one is going to be on august

7
00:00:17,830 --> 00:00:16,000
the 20th the second one is going to be

8
00:00:20,150 --> 00:00:17,840
on august the 30th here to give us more

9
00:00:22,150 --> 00:00:20,160
details about all of that is the lead

10
00:00:23,990 --> 00:00:22,160
flight director for expedition 32 dina

11
00:00:25,670 --> 00:00:24,000
contella as well as the spacewalk

12
00:00:26,870 --> 00:00:25,680
officer keith johnson we'll start off

13
00:00:27,990 --> 00:00:26,880

with dina

14
00:00:29,189 --> 00:00:28,000
well good afternoon thank you for

15
00:00:30,710 --> 00:00:29,199
joining us

16
00:00:32,709 --> 00:00:30,720
things are going extremely well on space

17
00:00:34,150 --> 00:00:32,719
station and our crew is in great spirits

18
00:00:36,709 --> 00:00:34,160
looking forward to our pair of space

19
00:00:37,670 --> 00:00:36,719
walks coming up

20
00:00:40,150 --> 00:00:37,680
the

21
00:00:41,590 --> 00:00:40,160
increments about halfway over and

22
00:00:44,310 --> 00:00:41,600
the first part of the increment was

23
00:00:47,110 --> 00:00:44,320
crammed full of visiting vehicles

24
00:00:49,430 --> 00:00:47,120
following the soyuz arrival we had

25
00:00:51,670 --> 00:00:49,440
the 47 progress that undocked and we

26
00:00:53,510 --> 00:00:51,680
were performing a coors

27
00:00:56,470 --> 00:00:53,520
navigational system

28
00:00:58,709 --> 00:00:56,480
redoc test and for that redoc test the

29
00:01:00,549 --> 00:00:58,719
first attempt was aborted

30
00:01:03,430 --> 00:01:00,559
and i'm sure you've heard that

31
00:01:06,149 --> 00:01:03,440
the the coors system did not activate

32
00:01:07,510 --> 00:01:06,159
properly and so while the while our

33
00:01:09,030 --> 00:01:07,520
russian colleagues

34
00:01:11,670 --> 00:01:09,040
worked on what we were going to do for a

35
00:01:14,950 --> 00:01:11,680
re-dock attempt we did go ahead and

36
00:01:17,109 --> 00:01:14,960
rendezvous and capture htv our japanese

37
00:01:19,350 --> 00:01:17,119
cargo vehicle and the ground and the

38
00:01:21,350 --> 00:01:19,360

crew did an excellent job with that and

39
00:01:23,749 --> 00:01:21,360
then they birthed it on the same day and

40
00:01:26,230 --> 00:01:23,759
the following day uh 47 progress did

41
00:01:27,270 --> 00:01:26,240
come in with a successful docking the

42
00:01:29,830 --> 00:01:27,280
course

43
00:01:31,670 --> 00:01:29,840
in ah that new system was warmed up

44
00:01:33,910 --> 00:01:31,680
inside the progress just a few degrees

45
00:01:35,429 --> 00:01:33,920
but enough to allow its activation and

46
00:01:38,789 --> 00:01:35,439
so that's how we were able to

47
00:01:41,190 --> 00:01:38,799
successfully dock 47 progress

48
00:01:44,550 --> 00:01:41,200
47 progress undock went extremely well

49
00:01:46,069 --> 00:01:44,560
and 47 progress or 48 progress uh launch

50
00:01:48,950 --> 00:01:46,079
and docking occurred on the same day

51
00:01:51,109 --> 00:01:48,960
which was a a new test of a four orbit

52
00:01:53,990 --> 00:01:51,119
rendezvous capability and that went

53
00:01:55,749 --> 00:01:54,000
exactly as according to plan

54
00:01:58,310 --> 00:01:55,759
since since then we've been doing a lot

55
00:01:59,990 --> 00:01:58,320
of research and also a lot of robotic

56
00:02:00,950 --> 00:02:00,000
operations associated with the exposed

57
00:02:02,870 --> 00:02:00,960
pallet

58
00:02:05,910 --> 00:02:02,880
to move some research that was

59
00:02:08,630 --> 00:02:05,920
externally brought up in htv over to the

60
00:02:11,589 --> 00:02:08,640
space station over to the japanese

61
00:02:13,110 --> 00:02:11,599
the japanese module exposed facility and

62
00:02:15,430 --> 00:02:13,120
also to

63
00:02:16,949 --> 00:02:15,440

out out on the truss and so those

64
00:02:18,309 --> 00:02:16,959
operations went very smoothly and we

65
00:02:21,670 --> 00:02:18,319
only had

66
00:02:24,150 --> 00:02:21,680
the only hiccup that has affected our

67
00:02:26,949 --> 00:02:24,160
operations has been um the

68
00:02:29,990 --> 00:02:26,959
uh a camera that failed on the ssrms

69
00:02:31,509 --> 00:02:30,000
canada arm 2. it's a boom camera and

70
00:02:32,869 --> 00:02:31,519
after some discussions we decided that

71
00:02:35,509 --> 00:02:32,879
we're going to change that out on this

72
00:02:37,430 --> 00:02:35,519
upcoming usc va and keith johnson will

73
00:02:38,710 --> 00:02:37,440
talk about about all those details

74
00:02:40,070 --> 00:02:38,720
coming up

75
00:02:42,949 --> 00:02:40,080
so but then to talk a little bit about

76
00:02:45,030 --> 00:02:42,959
um you know our crew and operations uh i

77
00:02:47,030 --> 00:02:45,040
wanted to point out that we are despite

78
00:02:48,229 --> 00:02:47,040
all the visiting vehicles um at this

79
00:02:50,550 --> 00:02:48,239
point anticipating that we're going to

80
00:02:51,910 --> 00:02:50,560
meet our research objectives for this

81
00:02:54,949 --> 00:02:51,920
part of

82
00:02:57,350 --> 00:02:54,959
the of the year and that's an incredibly

83
00:02:59,350 --> 00:02:57,360
big step because we have had a lot of

84
00:03:01,350 --> 00:02:59,360
systems type of work that we've had to

85
00:03:03,430 --> 00:03:01,360
do associated with the vehicles but

86
00:03:05,670 --> 00:03:03,440
we're very proud that we've enabled the

87
00:03:07,270 --> 00:03:05,680
crew with a lot of opportunity to

88
00:03:08,309 --> 00:03:07,280

get ahead the crew has been doing a

89
00:03:10,149 --> 00:03:08,319
great job

90
00:03:12,470 --> 00:03:10,159
and i think as an example we had a lot

91
00:03:14,470 --> 00:03:12,480
of ground control uh that was associated

92
00:03:15,910 --> 00:03:14,480
with robotic ops and this enabled the

93
00:03:17,110 --> 00:03:15,920
crew to focus on research and that sort

94
00:03:18,630 --> 00:03:17,120
of thing on board while the ground did a

95
00:03:21,110 --> 00:03:18,640
lot of the robotic operations so

96
00:03:23,030 --> 00:03:21,120
congratulations to our japanese canadian

97
00:03:25,270 --> 00:03:23,040
and houston robotics folks for that for

98
00:03:26,550 --> 00:03:25,280
uh helping us with that

99
00:03:27,750 --> 00:03:26,560
and so first i'm going to talk about the

100
00:03:29,670 --> 00:03:27,760
crew a little bit and then i'm going to

101
00:03:33,110 --> 00:03:29,680
go into the russian segment eva so i

102
00:03:35,910 --> 00:03:33,120
could have the first graphic

103
00:03:38,309 --> 00:03:35,920
all right so on the left is akihiko

104
00:03:40,550 --> 00:03:38,319
hoshide and we call him aki

105
00:03:42,229 --> 00:03:40,560
and to his right is yuri malenchenko

106
00:03:43,830 --> 00:03:42,239
next to him is sunita williams and we

107
00:03:46,550 --> 00:03:43,840
call her sunny

108
00:03:48,789 --> 00:03:46,560
those three arrived in mid-july

109
00:03:50,390 --> 00:03:48,799
and next to sunny you see joe acaba who

110
00:03:51,750 --> 00:03:50,400
is currently leading the u.s portion of

111
00:03:53,830 --> 00:03:51,760
station

112
00:03:56,550 --> 00:03:53,840
followed by the iss commander gennady

113
00:03:57,670 --> 00:03:56,560

padalka and then sergei revin

114
00:03:59,190 --> 00:03:57,680
and four of those six are going to be

115
00:04:01,190 --> 00:03:59,200
performing spacewalks in the next couple

116
00:04:03,990 --> 00:04:01,200
of weeks gennady and uri will perform

117
00:04:06,309 --> 00:04:04,000
the russian spacewalk on august 20th

118
00:04:09,190 --> 00:04:06,319
and sunny and aki will perform the u.s

119
00:04:11,830 --> 00:04:09,200
spacewalk on august 30th

120
00:04:13,990 --> 00:04:11,840
so the next graphic please

121
00:04:16,310 --> 00:04:14,000
the russian segment eva will be in orlon

122
00:04:19,030 --> 00:04:16,320
space suits out of the piers module

123
00:04:21,509 --> 00:04:19,040
with egress happening monday at 9 40 a.m

124
00:04:24,310 --> 00:04:21,519
houston local time

125
00:04:27,189 --> 00:04:24,320
gennady will be ev-1 with a red stripe

126
00:04:28,629 --> 00:04:27,199
and he'll have the helmet camera on

127
00:04:30,150 --> 00:04:28,639
he's previously conducted eight

128
00:04:32,390 --> 00:04:30,160
spacewalks

129
00:04:34,150 --> 00:04:32,400
six on iss and two on the mir space

130
00:04:36,150 --> 00:04:34,160
station

131
00:04:37,510 --> 00:04:36,160
yuri will be ev2 with a blue stripe on

132
00:04:40,390 --> 00:04:37,520
his suit

133
00:04:43,270 --> 00:04:40,400
and he's performed four evas in the past

134
00:04:44,390 --> 00:04:43,280
one on sts-106 as well as another iss

135
00:04:51,909 --> 00:04:44,400
eva

136
00:04:53,590 --> 00:04:51,919
there's three main tasks and three get

137
00:04:55,430 --> 00:04:53,600
ahead tasks

138
00:04:56,710 --> 00:04:55,440

the crew will relocate a strela crane to

139
00:04:57,990 --> 00:04:56,720
move it off the docking compartment

140
00:04:59,909 --> 00:04:58,000
piers

141
00:05:01,430 --> 00:04:59,919
and over to the forward end of the zara

142
00:05:04,390 --> 00:05:01,440
module

143
00:05:07,270 --> 00:05:04,400
with the russian multipurpose logistics

144
00:05:10,310 --> 00:05:07,280
module nuaka when it comes up in 2013

145
00:05:12,150 --> 00:05:10,320
so that crane needs to move

146
00:05:14,310 --> 00:05:12,160
they'll also release a passive spherical

147
00:05:15,110 --> 00:05:14,320
satellite pronounced sphera or also

148
00:05:16,310 --> 00:05:15,120
called

149
00:05:17,590 --> 00:05:16,320
t vector

150
00:05:19,270 --> 00:05:17,600
that will allow our russian colleagues

151
00:05:22,469 --> 00:05:19,280
to evaluate ground station tracking and

152
00:05:24,790 --> 00:05:22,479
modeling for orbital debris

153
00:05:26,469 --> 00:05:24,800
the crew will install five micrometer

154
00:05:29,590 --> 00:05:26,479
orbital debris shields on the small

155
00:05:31,670 --> 00:05:29,600
diameter of the zvezda module

156
00:05:33,909 --> 00:05:31,680
and then as get aheads

157
00:05:34,950 --> 00:05:33,919
we've got three of those time permitting

158
00:05:36,950 --> 00:05:34,960
there's two

159
00:05:38,710 --> 00:05:36,960
external experiments

160
00:05:40,310 --> 00:05:38,720
and also there's an installation of some

161
00:05:41,510 --> 00:05:40,320
support struts for the eva ladder to

162
00:05:43,270 --> 00:05:41,520
make it more

163
00:05:45,270 --> 00:05:43,280

stable

164
00:05:47,350 --> 00:05:45,280
the expected eba duration is 6 hours and

165
00:05:49,029 --> 00:05:47,360
25 minutes

166
00:05:51,270 --> 00:05:49,039
and joe and sergey will be in the poisk

167
00:05:52,870 --> 00:05:51,280
module near their soyuz for the eva

168
00:05:58,390 --> 00:05:52,880
while sunny and aki will have access to

169
00:06:03,510 --> 00:06:00,390
next to next you'll see a video of the

170
00:06:06,950 --> 00:06:05,430
this is the aft in the station with the

171
00:06:08,550 --> 00:06:06,960
russian modules surrounding the piers

172
00:06:10,550 --> 00:06:08,560
airlock

173
00:06:12,390 --> 00:06:10,560
the hatch opens and you'll see yuri and

174
00:06:14,550 --> 00:06:12,400
then gennady egressing onto the eva

175
00:06:16,230 --> 00:06:14,560
ladder

176
00:06:17,909 --> 00:06:16,240
now looking from above you'll see

177
00:06:18,950 --> 00:06:17,919
gennady adjusting the strela 2 foot

178
00:06:21,430 --> 00:06:18,960
restraint

179
00:06:23,270 --> 00:06:21,440
and yuri on the tip of the strella boom

180
00:06:26,790 --> 00:06:23,280
riding it up to the other strela on the

181
00:06:28,309 --> 00:06:26,800
zenith part of iss on poisk

182
00:06:30,629 --> 00:06:28,319
the strela that's in motion is the one

183
00:06:32,870 --> 00:06:30,639
that will move over to zarya so

184
00:06:39,670 --> 00:06:32,880
gennady then retracts it as you see here

185
00:06:43,270 --> 00:06:41,510
zooming in on gennady you can see him

186
00:06:44,550 --> 00:06:43,280
here he's positioning a

187
00:06:46,830 --> 00:06:44,560
an attached foot restraint for the

188
00:06:49,510 --> 00:06:46,840

relocation and

189
00:06:51,430 --> 00:06:49,520
stowage at the top of the screen you'll

190
00:06:54,309 --> 00:06:51,440
see yuri adjusting his foot restraint so

191
00:06:57,189 --> 00:06:54,319
he can position the strela on poisk

192
00:06:59,270 --> 00:06:57,199
for its extension down to gennady

193
00:07:00,950 --> 00:06:59,280
so here's the positioning

194
00:07:02,230 --> 00:07:00,960
and now he's extending that upper strela

195
00:07:05,909 --> 00:07:02,240
down to gennady's work site for the

196
00:07:11,029 --> 00:07:07,589
the flashing area points out where the

197
00:07:14,790 --> 00:07:12,870
next you'll see yuri making his way down

198
00:07:16,790 --> 00:07:14,800
the upper strela boom

199
00:07:19,670 --> 00:07:16,800
to assist gennady in releasing strela 2

200
00:07:21,350 --> 00:07:19,680
from its mounting location on piers

201
00:07:24,629 --> 00:07:21,360
and they work together to get it into a

202
00:07:26,710 --> 00:07:24,639
good position for the relocation

203
00:07:29,510 --> 00:07:26,720
here they're rotating strela 2 so it's

204
00:07:31,189 --> 00:07:29,520
in line with strela 1

205
00:07:33,029 --> 00:07:31,199
and that'll make it a more compact

206
00:07:37,189 --> 00:07:33,039
package on the end of the boom for the

207
00:07:40,790 --> 00:07:38,870
so after everything squared away yuri

208
00:07:42,550 --> 00:07:40,800
translates up up to the base of the

209
00:07:44,070 --> 00:07:42,560
upper strela so that he can manipulate

210
00:07:52,710 --> 00:07:44,080
the stroller mechanisms and begin the

211
00:07:58,469 --> 00:07:55,589
so gennady gets a really fantastic view

212
00:08:00,070 --> 00:07:58,479
as yuri pitches strela up

213
00:08:02,150 --> 00:08:00,080

and he also positions strela two by

214
00:08:03,830 --> 00:08:02,160
spinning it around

215
00:08:07,510 --> 00:08:03,840
and then he turns the entire strela to

216
00:08:11,029 --> 00:08:09,510
now you can see the move over to the

217
00:08:13,110 --> 00:08:11,039
forward end of zarya followed by an

218
00:08:14,710 --> 00:08:13,120
extension of the boom

219
00:08:20,230 --> 00:08:14,720
yuri is just using hand cranks to

220
00:08:23,510 --> 00:08:22,150
so yuri then translates forward on iss

221
00:08:25,510 --> 00:08:23,520
down the stroller to meet up with

222
00:08:28,309 --> 00:08:25,520
gennady and help with the removal of

223
00:08:30,150 --> 00:08:28,319
strela 2 and its installation

224
00:08:32,070 --> 00:08:30,160
and so after some manipulation they work

225
00:08:36,790 --> 00:08:32,080
together to install it onto an adapter

226
00:08:42,389 --> 00:08:38,709
yuri gets a short ride for the pitch

227
00:08:47,190 --> 00:08:44,550
and here you see him making his way

228
00:08:49,110 --> 00:08:47,200
aft on iss

229
00:08:51,030 --> 00:08:49,120
translating on strela

230
00:08:55,670 --> 00:08:51,040
and back to poisk so he can drive strela

231
00:08:58,710 --> 00:08:56,949
now that the work is done on zarya

232
00:09:00,710 --> 00:08:58,720
gennady hops on the end for his ride

233
00:09:04,470 --> 00:09:00,720
back

234
00:09:06,710 --> 00:09:04,480
and once again he'll get an amazing view

235
00:09:09,030 --> 00:09:06,720
strela is going to maneuver him

236
00:09:11,670 --> 00:09:09,040
back down to piers and this strella will

237
00:09:13,430 --> 00:09:11,680
manix will remain extended

238
00:09:17,350 --> 00:09:13,440

between poisk and piers at the end of

239
00:09:22,230 --> 00:09:20,630
so here's the attachment area

240
00:09:24,150 --> 00:09:22,240
and at this point gennady also has the

241
00:09:27,910 --> 00:09:24,160
opportunity to grab the first external

242
00:09:29,910 --> 00:09:27,920
experiment s kaka you see it flashing

243
00:09:32,150 --> 00:09:29,920
esca cause a materials experiment that

244
00:09:34,630 --> 00:09:32,160
allows for exposing multiple

245
00:09:36,870 --> 00:09:34,640
materials to space and it closes up like

246
00:09:38,870 --> 00:09:36,880
a small briefcase and it's brought

247
00:09:40,790 --> 00:09:38,880
inside

248
00:09:44,949 --> 00:09:40,800
so here you see it flashing and folding

249
00:09:47,670 --> 00:09:46,150
so gennady and yuri are going to make

250
00:09:49,829 --> 00:09:47,680
their way back to the eva ladder on

251
00:09:53,030 --> 00:09:49,839
piers to deploy the spherical satellite

252
00:09:54,550 --> 00:09:53,040
and here you see it flashing

253
00:09:56,310 --> 00:09:54,560
the satellite's about 21 inches in

254
00:09:59,030 --> 00:09:56,320
diameter it has a mass of about 20

255
00:10:00,389 --> 00:09:59,040
pounds it's completely passive

256
00:10:03,190 --> 00:10:00,399
in the right hand photo you see two

257
00:10:05,030 --> 00:10:03,200
items there's a mock-up of the sphere

258
00:10:06,790 --> 00:10:05,040
and also a tool to the right that holds

259
00:10:09,590 --> 00:10:06,800
the sphere while the crew egresses the

260
00:10:11,990 --> 00:10:09,600
airlock and gets into position

261
00:10:14,069 --> 00:10:12,000
before deploy the crew releases a strap

262
00:10:15,430 --> 00:10:14,079
on the tool so that just the fingers are

263
00:10:17,829 --> 00:10:15,440

gripping it

264
00:10:20,710 --> 00:10:17,839
and then they give the tool a push to

265
00:10:24,310 --> 00:10:22,710
it's deployed in the af nadir direction

266
00:10:28,630 --> 00:10:24,320
and it's expected to stay on orbit for

267
00:10:32,069 --> 00:10:30,470
next you see gennady and yuri retrieving

268
00:10:35,829 --> 00:10:32,079
the debris shields from the airlock in

269
00:10:39,590 --> 00:10:37,910
here you can see the installation sites

270
00:10:41,829 --> 00:10:39,600
on this graphic

271
00:10:43,269 --> 00:10:41,839
there's a total of five shields

272
00:10:45,030 --> 00:10:43,279
they're bundled in a package of three

273
00:10:46,710 --> 00:10:45,040
and a package of two

274
00:10:48,550 --> 00:10:46,720
the bundles get separated and the

275
00:10:50,230 --> 00:10:48,560
shields attached to the handrails on the

276
00:10:53,110 --> 00:10:50,240
small diameter compartment of the of

277
00:10:58,389 --> 00:10:54,790
so in this video you can see the three

278
00:11:00,069 --> 00:10:58,399
port side shield installation sites

279
00:11:02,230 --> 00:11:00,079
these shields are similar in design as

280
00:11:05,030 --> 00:11:02,240
what we've previously installed on on

281
00:11:06,630 --> 00:11:05,040
past evas

282
00:11:07,910 --> 00:11:06,640
so next you can see the second external

283
00:11:10,710 --> 00:11:07,920
experiment that the crew may bring

284
00:11:12,870 --> 00:11:10,720
inside if they have time

285
00:11:14,150 --> 00:11:12,880
this is called biorisk and it has

286
00:11:16,310 --> 00:11:14,160
experiments inside that have been

287
00:11:17,990 --> 00:11:16,320
exposed to space

288
00:11:19,430 --> 00:11:18,000

this is a photo of the pierce module on

289
00:11:23,190 --> 00:11:19,440
the right with a close-up view showing

290
00:11:26,389 --> 00:11:24,790
here you see a get ahead to install two

291
00:11:28,790 --> 00:11:26,399
struts on the eva ladder which should

292
00:11:30,230 --> 00:11:28,800
help for stability and this equipment

293
00:11:32,310 --> 00:11:30,240
will later move to the new airlock on

294
00:11:34,150 --> 00:11:32,320
nuwaka

295
00:11:38,870 --> 00:11:34,160
after that gennady and yuri will ingress

296
00:11:41,269 --> 00:11:40,470
so only one thing i wanted to add here

297
00:11:44,470 --> 00:11:41,279
is that

298
00:11:46,630 --> 00:11:44,480
for the lead iss flight director for the

299
00:11:49,430 --> 00:11:46,640
russian segment eva that will be jerry

300
00:11:51,030 --> 00:11:49,440
jason and for the u.s eva that will be

301
00:11:52,310 --> 00:11:51,040
advance ice

302
00:11:56,069 --> 00:11:52,320
and so with that i'll pass it over to

303
00:11:57,829 --> 00:11:56,079
keith johnson he'll describe us eva 18.

304
00:12:00,949 --> 00:11:57,839
thank you dina

305
00:12:03,269 --> 00:12:00,959
well let's see this is uh the first usa

306
00:12:06,069 --> 00:12:03,279
in over a year the last dva that was

307
00:12:07,350 --> 00:12:06,079
performed on space station by the u.s

308
00:12:09,750 --> 00:12:07,360
team

309
00:12:11,990 --> 00:12:09,760
was by mike fossum and ron guerin during

310
00:12:14,230 --> 00:12:12,000
the sts-135 mission

311
00:12:16,710 --> 00:12:14,240
back in july

312
00:12:18,230 --> 00:12:16,720
our first slide we have pictures of our

313
00:12:20,230 --> 00:12:18,240

ev crew members

314
00:12:24,069 --> 00:12:20,240
we've already mentioned that

315
00:12:26,790 --> 00:12:24,079
sonny williams is ev1 on the cba she'll

316
00:12:29,190 --> 00:12:26,800
have the red stripes on her suit this is

317
00:12:30,310 --> 00:12:29,200
will be her fifth eva she's done four so

318
00:12:33,430 --> 00:12:30,320
far

319
00:12:36,550 --> 00:12:33,440
during expedition 14 and 15 totaling

320
00:12:38,389 --> 00:12:36,560
about 29 hours and 17 minutes of

321
00:12:39,110 --> 00:12:38,399
spacewalk time so she'll be adding to

322
00:12:40,790 --> 00:12:39,120
that

323
00:12:42,389 --> 00:12:40,800
our ev2

324
00:12:43,829 --> 00:12:42,399
for the upcoming eva

325
00:12:46,949 --> 00:12:43,839
is aki

326
00:12:48,470 --> 00:12:46,959
hoshida we call him aki and this is his

327
00:12:51,750 --> 00:12:48,480
first spacewalk

328
00:12:54,870 --> 00:12:51,760
he will be the third japanese astronaut

329
00:12:57,910 --> 00:12:54,880
to do a space walk following takao doi

330
00:12:59,670 --> 00:12:57,920
and suichi naguchi

331
00:13:02,150 --> 00:12:59,680
so let's see

332
00:13:05,509 --> 00:13:02,160
joe acaba is the

333
00:13:07,110 --> 00:13:05,519
ivy or the arm operator for the eva aki

334
00:13:09,670 --> 00:13:07,120
will be on the arm for the majority of

335
00:13:12,550 --> 00:13:09,680
the eba and then we have a ground-based

336
00:13:14,870 --> 00:13:12,560
iv crew member which is jack fischer and

337
00:13:16,470 --> 00:13:14,880
he's not done an eb eva before but he's

338
00:13:18,389 --> 00:13:16,480

helping out with the development of the

339
00:13:20,790 --> 00:13:18,399
eva

340
00:13:23,110 --> 00:13:20,800
i've got a slide that shows our list of

341
00:13:26,150 --> 00:13:23,120
tasks the first thing we're doing on the

342
00:13:28,310 --> 00:13:26,160
eva and the main reason for going eva is

343
00:13:30,710 --> 00:13:28,320
the main bus switching unit number one

344
00:13:33,269 --> 00:13:30,720
removal and replacement this particular

345
00:13:34,629 --> 00:13:33,279
box has failed in such a way that it's

346
00:13:37,110 --> 00:13:34,639
passing power

347
00:13:39,269 --> 00:13:37,120
but it can no longer be switched and in

348
00:13:41,030 --> 00:13:39,279
order to do future operations we need to

349
00:13:43,189 --> 00:13:41,040
take that box out and put one in that

350
00:13:45,189 --> 00:13:43,199
allows us to do that

351
00:13:47,110 --> 00:13:45,199
another task that we're doing on the eva

352
00:13:50,150 --> 00:13:47,120
is cable routing

353
00:13:52,230 --> 00:13:50,160
two primary and redundant power cables

354
00:13:53,350 --> 00:13:52,240
to the russian multi-purpose laboratory

355
00:13:55,509 --> 00:13:53,360
module

356
00:13:57,750 --> 00:13:55,519
that dina referred to

357
00:13:59,350 --> 00:13:57,760
we started on the u.s segment and run it

358
00:14:01,189 --> 00:13:59,360
over to the interface between the

359
00:14:02,870 --> 00:14:01,199
russian and u.s segment and then the

360
00:14:05,829 --> 00:14:02,880
russians will later on

361
00:14:09,590 --> 00:14:05,839
run their half of that cabling

362
00:14:12,230 --> 00:14:09,600
and just recently we had a failure of

363
00:14:14,230 --> 00:14:12,240

one of the cameras on the ssrms the the

364
00:14:15,829 --> 00:14:14,240
boom b camera

365
00:14:17,829 --> 00:14:15,839
this morning we had meetings with

366
00:14:19,670 --> 00:14:17,839
management and we decided that this is

367
00:14:21,430 --> 00:14:19,680
the next highest priority

368
00:14:24,629 --> 00:14:21,440
so that camera will be removed and

369
00:14:25,990 --> 00:14:24,639
replaced as our get-aheads and time

370
00:14:27,829 --> 00:14:26,000
permitting

371
00:14:29,750 --> 00:14:27,839
the next task we have is a protective

372
00:14:31,590 --> 00:14:29,760
cover installation on the pressurized

373
00:14:33,430 --> 00:14:31,600
mating adapter too

374
00:14:35,430 --> 00:14:33,440
which is at the forward end of station

375
00:14:38,470 --> 00:14:35,440
and we are covering it up so that we

376
00:14:39,670 --> 00:14:38,480
protect against a micro meteoroid debris

377
00:14:42,389 --> 00:14:39,680
and

378
00:14:44,629 --> 00:14:42,399
keep it safe until we fly up a new

379
00:14:46,069 --> 00:14:44,639
docking system that's coming up and then

380
00:14:48,389 --> 00:14:46,079
we'll take that cover off and install

381
00:14:50,150 --> 00:14:48,399
that in the future

382
00:14:52,550 --> 00:14:50,160
we do have other camera problems that

383
00:14:55,030 --> 00:14:52,560
we're looking at one of them is on the

384
00:14:57,829 --> 00:14:55,040
the mobile based system the mast camera

385
00:14:59,750 --> 00:14:57,839
and we in order to bring that home we

386
00:15:01,030 --> 00:14:59,760
will be removing that camera bringing it

387
00:15:03,750 --> 00:15:01,040
inside

388
00:15:05,990 --> 00:15:03,760

also there is a camera problem on the

389
00:15:08,389 --> 00:15:06,000
kibo exposed facility

390
00:15:09,990 --> 00:15:08,399
and we will be taking as a get ahead

391
00:15:11,110 --> 00:15:10,000
removing and replacing that if time

392
00:15:12,870 --> 00:15:11,120
permits

393
00:15:13,590 --> 00:15:12,880
and finally

394
00:15:17,110 --> 00:15:13,600
the

395
00:15:18,949 --> 00:15:17,120
pdgf

396
00:15:20,710 --> 00:15:18,959
has a potential for another

397
00:15:22,550 --> 00:15:20,720
wire that is

398
00:15:26,470 --> 00:15:22,560
may cause problems and we may send the

399
00:15:28,870 --> 00:15:26,480
crew over to to pull that debris out

400
00:15:30,310 --> 00:15:28,880
so i've got a graphic that shows uh some

401
00:15:31,430 --> 00:15:30,320
footage of

402
00:15:34,230 --> 00:15:31,440
the uh

403
00:15:37,670 --> 00:15:34,240
the eva as we have it going

404
00:15:40,550 --> 00:15:37,680
so if you'll bring up then the next uh

405
00:15:43,430 --> 00:15:40,560
okay so the eva d press starts at about

406
00:15:46,710 --> 00:15:43,440
6 45 central time and with the crew

407
00:15:48,389 --> 00:15:46,720
coming out the hatch at about 7 15 a.m

408
00:15:50,310 --> 00:15:48,399
sunny williams is ev-1 she'll be the

409
00:15:51,670 --> 00:15:50,320
first one out of the hatch followed by

410
00:15:52,710 --> 00:15:51,680
uh

411
00:15:57,749 --> 00:15:52,720
aki

412
00:15:59,269 --> 00:15:57,759
sonny's first task is to hook up what we

413
00:15:59,990 --> 00:15:59,279

call a fish stringer which is a tether

414
00:16:02,310 --> 00:16:00,000
with

415
00:16:04,389 --> 00:16:02,320
many hooks on it and she'll attach bags

416
00:16:06,870 --> 00:16:04,399
and tools to that

417
00:16:08,949 --> 00:16:06,880
to in preparation for the eva kind of a

418
00:16:12,310 --> 00:16:08,959
staging ground after she's done with

419
00:16:16,790 --> 00:16:12,320
that she'll rotate around to face the

420
00:16:21,990 --> 00:16:19,430
which is where we have the spare

421
00:16:22,790 --> 00:16:22,000
main bus switching unit in preparation

422
00:16:24,790 --> 00:16:22,800
for

423
00:16:27,030 --> 00:16:24,800
stowing the failed unit we install

424
00:16:29,910 --> 00:16:27,040
what's called a multi-use tether end

425
00:16:31,350 --> 00:16:29,920
effector ball stack multi-use end

426
00:16:33,269 --> 00:16:31,360
effector it's kind of a grapple on one

427
00:16:35,350 --> 00:16:33,279
end grapple on the other i'll refer to

428
00:16:38,870 --> 00:16:35,360
that as the ball stack from here on out

429
00:16:44,069 --> 00:16:41,670
after she's done with that she'll remove

430
00:16:45,430 --> 00:16:44,079
straps on multi-layer insulation that's

431
00:16:47,430 --> 00:16:45,440
protecting

432
00:16:49,350 --> 00:16:47,440
the main bus switching unit

433
00:16:51,749 --> 00:16:49,360
as it's attached to a flight releasable

434
00:16:53,910 --> 00:16:51,759
attachment mechanism she undoes velcro

435
00:16:55,430 --> 00:16:53,920
straps peels that back gets it out of

436
00:16:58,790 --> 00:16:55,440
the way

437
00:17:00,550 --> 00:16:58,800
to expose the main bus switching unit

438
00:17:03,110 --> 00:17:00,560

she'll put a torque multiplier on the

439
00:17:05,270 --> 00:17:03,120
two bolts that hold this onto the fram

440
00:17:08,309 --> 00:17:05,280
and when she breaks the torque on those

441
00:17:11,590 --> 00:17:08,319
she'll install what we call a scoop

442
00:17:13,110 --> 00:17:11,600
which is a handling aid that allows aki

443
00:17:15,110 --> 00:17:13,120
to pull this out when he removes it

444
00:17:16,710 --> 00:17:15,120
later on in the eva

445
00:17:19,909 --> 00:17:16,720
once that's done

446
00:17:22,789 --> 00:17:19,919
sunny will turn around she'll grab a

447
00:17:26,710 --> 00:17:22,799
bundle of cable which is the the mlm

448
00:17:29,909 --> 00:17:26,720
power cable and she'll translate up to

449
00:17:33,590 --> 00:17:29,919
the lab node one interface and hook up

450
00:17:35,909 --> 00:17:33,600
one end of that cable to another cable

451
00:17:38,630 --> 00:17:35,919
and start routing that aft and you can

452
00:17:40,630 --> 00:17:38,640
see that highlighted in the in the video

453
00:17:42,549 --> 00:17:40,640
she'll temporarily stow it attached to

454
00:17:43,510 --> 00:17:42,559
one of the the handrails in the lower

455
00:17:45,750 --> 00:17:43,520
left

456
00:17:48,789 --> 00:17:45,760
and meanwhile aki will be doing a

457
00:17:51,270 --> 00:17:48,799
translation adaptation he'll take a bag

458
00:17:53,909 --> 00:17:51,280
with tools in it he'll translate

459
00:17:55,750 --> 00:17:53,919
up to the s0 truss

460
00:17:58,630 --> 00:17:55,760
phase 2 of the s0 truss you'll see a

461
00:18:00,950 --> 00:17:58,640
hand rail flashing in the graphic he'll

462
00:18:03,350 --> 00:18:00,960
attach his tools in the bag

463
00:18:06,230 --> 00:18:03,360

to that handrail and then he'll go over

464
00:18:07,830 --> 00:18:06,240
and he'll break torque on the failed

465
00:18:10,390 --> 00:18:07,840
main bus switching unit that you see

466
00:18:11,909 --> 00:18:10,400
over there to the left after those

467
00:18:13,990 --> 00:18:11,919
the torque is broken on both of those

468
00:18:16,070 --> 00:18:14,000
he'll install scoops which will provide

469
00:18:18,470 --> 00:18:16,080
him with a handling aid

470
00:18:21,190 --> 00:18:18,480
to therefore install an articulating

471
00:18:23,830 --> 00:18:21,200
portable foot restraint on the arm

472
00:18:25,029 --> 00:18:23,840
and then from there he will ingress the

473
00:18:26,150 --> 00:18:25,039
arm

474
00:18:33,110 --> 00:18:26,160
and

475
00:18:35,270 --> 00:18:33,120
power down up test on this box to see if

476
00:18:37,669 --> 00:18:35,280
it comes back to life um just to get

477
00:18:39,430 --> 00:18:37,679
kind of a science experiment on it um

478
00:18:41,590 --> 00:18:39,440
once that's done they'll power it down

479
00:18:44,549 --> 00:18:41,600
he'll drive the bolts and from there

480
00:18:46,390 --> 00:18:44,559
he'll back away with the mbsu

481
00:18:49,190 --> 00:18:46,400
and he'll start on

482
00:18:51,830 --> 00:18:49,200
what we call a joint automated or

483
00:18:53,430 --> 00:18:51,840
operator commanded automated sequence or

484
00:18:55,750 --> 00:18:53,440
joe caz

485
00:18:58,070 --> 00:18:55,760
which is a pre-programmed arm

486
00:18:59,669 --> 00:18:58,080
translation to head him back down

487
00:19:02,549 --> 00:18:59,679
in the meantime

488
00:19:04,630 --> 00:19:02,559

sunny is going to take the other cable

489
00:19:07,909 --> 00:19:04,640
and go towards the interface between the

490
00:19:11,110 --> 00:19:07,919
russian and the u.s segment and attach

491
00:19:12,230 --> 00:19:11,120
the second cable for the mlm to a

492
00:19:14,230 --> 00:19:12,240
handrail

493
00:19:16,150 --> 00:19:14,240
and from there she starts unwinding it

494
00:19:19,750 --> 00:19:16,160
and making her way

495
00:19:21,909 --> 00:19:19,760
nader on space station around the pma

496
00:19:24,390 --> 00:19:21,919
she'll feed it underneath and then she

497
00:19:25,590 --> 00:19:24,400
has to go and move the u.s crane out of

498
00:19:29,669 --> 00:19:25,600
the way

499
00:19:32,150 --> 00:19:29,679
translation path so she'll get up and

500
00:19:34,230 --> 00:19:32,160
she'll do some manual maneuvering

501
00:19:36,710 --> 00:19:34,240
to get that out of the way then she

502
00:19:38,710 --> 00:19:36,720
heads back around and continues routing

503
00:19:39,909 --> 00:19:38,720
along node 1

504
00:19:41,990 --> 00:19:39,919
forward

505
00:19:44,470 --> 00:19:42,000
to the s0 truss and you'll see that

506
00:19:45,430 --> 00:19:44,480
blink on the graphic here she feeds it

507
00:19:49,590 --> 00:19:45,440
into

508
00:19:51,190 --> 00:19:49,600
the interior of the s0 truss

509
00:19:53,590 --> 00:19:51,200
at that point

510
00:19:54,310 --> 00:19:53,600
roughly aki will have made his way down

511
00:19:58,950 --> 00:19:54,320
to

512
00:20:01,990 --> 00:19:58,960
take the failed mbsu that he just

513
00:20:03,669 --> 00:20:02,000

removed and he'll temporarily stow it on

514
00:20:04,789 --> 00:20:03,679
the mud end effector that i pointed out

515
00:20:07,510 --> 00:20:04,799
before

516
00:20:08,630 --> 00:20:07,520
from there he'll maneuver into

517
00:20:10,789 --> 00:20:08,640
the spare

518
00:20:13,510 --> 00:20:10,799
mane by switching unit he'll drive the

519
00:20:16,549 --> 00:20:13,520
two bolts lift it out

520
00:20:19,669 --> 00:20:16,559
he'll ground call the arm back away from

521
00:20:24,149 --> 00:20:22,230
and then the arm will continue motion

522
00:20:28,149 --> 00:20:24,159
and he'll start another joe caz from

523
00:20:29,590 --> 00:20:28,159
this position back up for installation

524
00:20:32,950 --> 00:20:29,600
meanwhile

525
00:20:34,710 --> 00:20:32,960
sunny will be working on the s0 truss

526
00:20:37,430 --> 00:20:34,720
the next fun thing that she gets to do

527
00:20:41,510 --> 00:20:37,440
is pull back some mli that's on phase

528
00:20:44,149 --> 00:20:41,520
three of s0 it opens up a location where

529
00:20:46,230 --> 00:20:44,159
she can climb inside the truss

530
00:20:47,750 --> 00:20:46,240
and you can see the mli peeled out of

531
00:20:49,990 --> 00:20:47,760
the way in the opening that she gets to

532
00:20:51,990 --> 00:20:50,000
go inside next you see the graphic of

533
00:20:54,789 --> 00:20:52,000
her inside taking the cable bundle

534
00:20:57,430 --> 00:20:54,799
routing along some interior handrails

535
00:20:58,549 --> 00:20:57,440
and that comes over to a panel that's up

536
00:21:00,630 --> 00:20:58,559
inside

537
00:21:03,029 --> 00:21:00,640
you'll see the connector flashing

538
00:21:04,950 --> 00:21:03,039

she gets herself into position

539
00:21:07,430 --> 00:21:04,960
this was launched with some strings

540
00:21:09,190 --> 00:21:07,440
holding the bails in place you can see

541
00:21:10,710 --> 00:21:09,200
those three white strings she will cut

542
00:21:12,710 --> 00:21:10,720
those with scissors

543
00:21:15,430 --> 00:21:12,720
throw the bail in the center take that

544
00:21:16,789 --> 00:21:15,440
cap off and then connect the cable at

545
00:21:18,549 --> 00:21:16,799
that point

546
00:21:20,070 --> 00:21:18,559
when she's done with that she'll clean

547
00:21:21,669 --> 00:21:20,080
up the work site cover the mli and then

548
00:21:24,470 --> 00:21:21,679
she'll go over and provide a set of eyes

549
00:21:27,110 --> 00:21:24,480
for aki installing the spare main bus

550
00:21:29,430 --> 00:21:27,120
switching unit onto the s0 truss

551
00:21:30,870 --> 00:21:29,440
he puts that into position and he drives

552
00:21:32,950 --> 00:21:30,880
the two bolts

553
00:21:35,350 --> 00:21:32,960
and then sonny gets to leave and go do

554
00:21:37,110 --> 00:21:35,360
other work while he uh cleans up the

555
00:21:39,029 --> 00:21:37,120
work site

556
00:21:41,830 --> 00:21:39,039
one of the get-aheads that we have for a

557
00:21:45,590 --> 00:21:41,840
task if we're ahead is the

558
00:21:48,149 --> 00:21:45,600
the mbs mass camera will have aki fly up

559
00:21:49,750 --> 00:21:48,159
to that position it's a single bolt to

560
00:21:52,310 --> 00:21:49,760
remove that camera

561
00:21:54,549 --> 00:21:52,320
based on our recent priority change

562
00:21:56,149 --> 00:21:54,559
he'll just take that camera off and

563
00:21:58,310 --> 00:21:56,159

bring it back with him he won't install

564
00:22:00,870 --> 00:21:58,320
another camera in place of that then the

565
00:22:03,270 --> 00:22:00,880
arm will maneuver him back to the mbsu

566
00:22:05,909 --> 00:22:03,280
that has the scoops on it and he'll use

567
00:22:07,590 --> 00:22:05,919
that to egress the arm

568
00:22:09,110 --> 00:22:07,600
you'll see that down to the lower left

569
00:22:09,990 --> 00:22:09,120
you can see sunny

570
00:22:11,750 --> 00:22:10,000
at the

571
00:22:13,990 --> 00:22:11,760
failed mbsu sitting on the mutt ball

572
00:22:15,750 --> 00:22:14,000
stack she'll take that and she'll swing

573
00:22:18,230 --> 00:22:15,760
it around and install it back on the

574
00:22:20,470 --> 00:22:18,240
fram she'll drive the bolts

575
00:22:22,789 --> 00:22:20,480
take the scoops off

576
00:22:24,630 --> 00:22:22,799
clean up the mud end effector

577
00:22:26,789 --> 00:22:24,640
and then reinstall the multi-layer

578
00:22:28,789 --> 00:22:26,799
install insulation and that's

579
00:22:31,430 --> 00:22:28,799
ready to sit there until it's it has

580
00:22:33,510 --> 00:22:31,440
finds another use meanwhile aki is

581
00:22:35,190 --> 00:22:33,520
removing the articulating portable foot

582
00:22:37,110 --> 00:22:35,200
restraint

583
00:22:39,750 --> 00:22:37,120
and he'll reposition that into a

584
00:22:42,070 --> 00:22:39,760
worksite interface at this work site

585
00:22:43,909 --> 00:22:42,080
the arm will reposition and provide him

586
00:22:46,950 --> 00:22:43,919
with access to

587
00:22:49,110 --> 00:22:46,960
the boom camera you see highlighted here

588
00:22:50,390 --> 00:22:49,120

he will remove this camera and replace

589
00:22:52,390 --> 00:22:50,400
it with a spare that we will have

590
00:22:55,510 --> 00:22:52,400
brought out with us at the start of the

591
00:23:00,630 --> 00:22:58,310
and then as time permits

592
00:23:03,270 --> 00:23:00,640
he and sunny will translate out to the

593
00:23:05,669 --> 00:23:03,280
forward end of the space station

594
00:23:07,270 --> 00:23:05,679
and install the pressurized mating

595
00:23:08,630 --> 00:23:07,280
adapter

596
00:23:11,750 --> 00:23:08,640
ii cover

597
00:23:13,510 --> 00:23:11,760
it's just a multi-layer insulation

598
00:23:15,909 --> 00:23:13,520
that has some kevlar fiber in it that

599
00:23:18,390 --> 00:23:15,919
will protect those surfaces from micro

600
00:23:19,990 --> 00:23:18,400
meteoroid debris and they'll strap that

601
00:23:21,190 --> 00:23:20,000
to handrails that you see highlighted in

602
00:23:22,870 --> 00:23:21,200
the graphic

603
00:23:25,350 --> 00:23:22,880
when they're done with that

604
00:23:28,070 --> 00:23:25,360
again depending on time permitting

605
00:23:31,830 --> 00:23:28,080
they may be able to head over to

606
00:23:33,029 --> 00:23:31,840
kibo and the exposed facility

607
00:23:35,590 --> 00:23:33,039
and

608
00:23:38,710 --> 00:23:35,600
the forward camera on there has no

609
00:23:40,470 --> 00:23:38,720
lights on it and so as i get ahead they

610
00:23:43,029 --> 00:23:40,480
may be able to remove that camera and

611
00:23:44,789 --> 00:23:43,039
replace it with a spare

612
00:23:47,190 --> 00:23:44,799
it's planned for a six and a half hour

613
00:23:49,110 --> 00:23:47,200

eva so at this point they'll clean up

614
00:23:52,470 --> 00:23:49,120
their work sites and head back to the

615
00:23:55,669 --> 00:23:52,480
airlock and thus concludes um what we

616
00:23:57,669 --> 00:23:55,679
hope is a successful eva

617
00:23:59,029 --> 00:23:57,679
okay we'll take some questions now first

618
00:24:00,549 --> 00:23:59,039
uh here in houston then we'll go to the

619
00:24:02,950 --> 00:24:00,559
phone lines let's say we'll start with

620
00:24:04,070 --> 00:24:02,960
gina all right for either for both of

621
00:24:07,269 --> 00:24:04,080
you what do you view is the most

622
00:24:09,269 --> 00:24:07,279
challenging element on each spacewalk

623
00:24:11,029 --> 00:24:09,279
uh well i'll just say the uh on the

624
00:24:13,830 --> 00:24:11,039
russian space walk

625
00:24:15,029 --> 00:24:13,840
probably the smooth of the strela it's a

626
00:24:16,549 --> 00:24:15,039
pretty um

627
00:24:18,870 --> 00:24:16,559
big apparatus it's on the end of an

628
00:24:20,630 --> 00:24:18,880
almost 50-foot boom maneuvering that

629
00:24:22,070 --> 00:24:20,640
around in the past they've had some

630
00:24:24,549 --> 00:24:22,080
trouble where they ran long on this

631
00:24:26,070 --> 00:24:24,559
particular task before or a similar task

632
00:24:27,590 --> 00:24:26,080
of moving a strela

633
00:24:28,870 --> 00:24:27,600
but it wasn't necessarily due to

634
00:24:31,830 --> 00:24:28,880
anything in particular it just kind of

635
00:24:34,149 --> 00:24:31,840
ran long so it could be a timing thing

636
00:24:35,990 --> 00:24:34,159
associated with the strela that um could

637
00:24:37,350 --> 00:24:36,000
allow could cause you know trip them up

638
00:24:39,990 --> 00:24:37,360

a little bit and cause the eba to run

639
00:24:44,149 --> 00:24:41,590
well i would say from

640
00:24:46,390 --> 00:24:44,159
the the usa perspective the crew has

641
00:24:48,390 --> 00:24:46,400
seen this in the water several times so

642
00:24:51,110 --> 00:24:48,400
they've they've got good training

643
00:24:53,909 --> 00:24:51,120
but what ends up happening is um we

644
00:24:55,669 --> 00:24:53,919
change priorities and we change um the

645
00:24:56,950 --> 00:24:55,679
the tasks that that they're being asked

646
00:24:58,310 --> 00:24:56,960
that they looked at in their training a

647
00:24:59,990 --> 00:24:58,320
while ago

648
00:25:03,190 --> 00:25:00,000
but we think that by getting them the

649
00:25:05,750 --> 00:25:03,200
right information and um getting them

650
00:25:07,590 --> 00:25:05,760
talking with them before the eva that

651
00:25:09,669 --> 00:25:07,600
we've minimized that that particular

652
00:25:10,630 --> 00:25:09,679
aspect of of the eva

653
00:25:12,950 --> 00:25:10,640
so

654
00:25:14,710 --> 00:25:12,960
our risks are are similar in that we

655
00:25:17,510 --> 00:25:14,720
want to make sure that we we don't let

656
00:25:19,430 --> 00:25:17,520
the crew run long on a task and we've

657
00:25:21,750 --> 00:25:19,440
timelined it so that we can stop at

658
00:25:24,230 --> 00:25:21,760
various points to get them inside so

659
00:25:26,630 --> 00:25:24,240
we're comfortable with that

660
00:25:28,230 --> 00:25:26,640
there's been concern about gloves and

661
00:25:30,710 --> 00:25:28,240
they've been doing periodic checks on

662
00:25:33,190 --> 00:25:30,720
gloves during spacewalks is that still

663
00:25:36,149 --> 00:25:33,200

an operating procedure

664
00:25:38,470 --> 00:25:36,159
well from uh from the u.s eva yes we um

665
00:25:39,990 --> 00:25:38,480
we timeline glove inspections throughout

666
00:25:42,549 --> 00:25:40,000
the eva

667
00:25:45,110 --> 00:25:42,559
we are concerned we have enhanced the

668
00:25:47,590 --> 00:25:45,120
gloves and made them

669
00:25:48,789 --> 00:25:47,600
better to resist damage that we've seen

670
00:25:51,110 --> 00:25:48,799
in the past

671
00:25:53,190 --> 00:25:51,120
but we still do periodic checks to make

672
00:25:56,070 --> 00:25:53,200
sure that whatever they've been handling

673
00:25:58,310 --> 00:25:56,080
along the way is hasn't caused any

674
00:26:00,710 --> 00:25:58,320
damage to cause them to come inside

675
00:26:02,549 --> 00:26:00,720
um the other aspect of it that the

676
00:26:04,789 --> 00:26:02,559
station's been up there for a long time

677
00:26:06,789 --> 00:26:04,799
um so we have the crew watch where

678
00:26:08,950 --> 00:26:06,799
they're going and make sure that

679
00:26:10,390 --> 00:26:08,960
they don't do anything untoward on their

680
00:26:12,549 --> 00:26:10,400
gloves

681
00:26:13,909 --> 00:26:12,559
thank you okay thanks gina let's go to

682
00:26:15,669 --> 00:26:13,919
the phone lines and take some questions

683
00:26:17,350 --> 00:26:15,679
from there i think that we had denise

684
00:26:18,950 --> 00:26:17,360
ciao i think that we lost one person so

685
00:26:20,149 --> 00:26:18,960
let's see who is uh let's see who's

686
00:26:21,669 --> 00:26:20,159
there

687
00:26:23,029 --> 00:26:21,679
hi

688
00:26:25,909 --> 00:26:23,039

go ahead denise

689
00:26:28,950 --> 00:26:25,919
um just a couple um quick questions for

690
00:26:31,430 --> 00:26:28,960
the the usc va um will the astronauts be

691
00:26:33,269 --> 00:26:31,440
doing the institute light exercise prior

692
00:26:35,029 --> 00:26:33,279
to going out

693
00:26:36,870 --> 00:26:35,039
well that's a good question and and

694
00:26:39,590 --> 00:26:36,880
thank you for asking i i did have that

695
00:26:41,669 --> 00:26:39,600
in my notes and i did men mean to uh to

696
00:26:43,990 --> 00:26:41,679
bring that up yes that is correct and we

697
00:26:47,590 --> 00:26:44,000
will be doing the in-suit light exercise

698
00:26:49,909 --> 00:26:47,600
uh pre-breathe protocol and that is um

699
00:26:52,470 --> 00:26:49,919
currently um with the the ways and

700
00:26:55,029 --> 00:26:52,480
trades the best method for

701
00:26:57,990 --> 00:26:55,039
prolonged oxygen and

702
00:26:59,510 --> 00:26:58,000
it minimizes the the crew activity and

703
00:27:01,750 --> 00:26:59,520
they don't have to sleep out in the in

704
00:27:03,669 --> 00:27:01,760
the airlock so we find that it is the

705
00:27:06,070 --> 00:27:03,679
best protocol and that's what we will be

706
00:27:08,390 --> 00:27:06,080
utilizing

707
00:27:10,950 --> 00:27:08,400
thanks and also um for launching the

708
00:27:12,789 --> 00:27:10,960
sphere satellite um how much of a

709
00:27:14,230 --> 00:27:12,799
priority is that and if the russians

710
00:27:16,390 --> 00:27:14,240
don't get to in their eba is that

711
00:27:18,830 --> 00:27:16,400
something that might be considered as a

712
00:27:23,110 --> 00:27:18,840
get ahead task for the the american

713
00:27:25,029 --> 00:27:23,120

ebay for the u.s eva you said

714
00:27:27,750 --> 00:27:25,039
um yeah for the russian one the

715
00:27:30,310 --> 00:27:27,760
launching of the the sphere satellite is

716
00:27:31,430 --> 00:27:30,320
that something if the russian cosmonauts

717
00:27:32,470 --> 00:27:31,440
don't get to it is that something that

718
00:27:35,110 --> 00:27:32,480
might be

719
00:27:36,549 --> 00:27:35,120
added to the list of get ahead for the

720
00:27:38,870 --> 00:27:36,559
american epa

721
00:27:40,789 --> 00:27:38,880
um it's a purely russian experiment and

722
00:27:43,269 --> 00:27:40,799
so we would have no plans to add that to

723
00:27:44,630 --> 00:27:43,279
the u.s eva and it's specifically been

724
00:27:46,549 --> 00:27:44,640
designed you know the trajectory and

725
00:27:48,149 --> 00:27:46,559
everything that we've analyzed the crew

726
00:27:49,510 --> 00:27:48,159
will go out on the eva ladder and push

727
00:27:50,630 --> 00:27:49,520
it aft

728
00:27:51,990 --> 00:27:50,640
and so

729
00:27:55,430 --> 00:27:52,000
that doesn't really sink well with our

730
00:27:57,990 --> 00:27:55,440
u.s eva uh it is just a purely russian

731
00:28:00,389 --> 00:27:58,000
type experiment

732
00:28:02,789 --> 00:28:00,399
okay thanks okay thanks denise

733
00:28:04,950 --> 00:28:02,799
uh are there any us here tina

734
00:28:05,990 --> 00:28:04,960
okay we're gonna wrap it up uh before we

735
00:28:07,350 --> 00:28:06,000
step away let's take a look at our

736
00:28:09,190 --> 00:28:07,360
broadcast coverage here on nasa

737
00:28:11,510 --> 00:28:09,200
television for these two spacewalks the

738
00:28:14,149 --> 00:28:11,520

first one coming up on august 20th our

739
00:28:15,029 --> 00:28:14,159
coverage will begin at 9 00 a.m central

740
00:28:17,430 --> 00:28:15,039
time

741
00:28:19,269 --> 00:28:17,440
with the eva due to begin at 9 40 and

742
00:28:21,269 --> 00:28:19,279
again will last uh close to six six and

743
00:28:23,430 --> 00:28:21,279
a half hours uh we'll be back on august

744
00:28:25,510 --> 00:28:23,440
30th for the u.s spacewalk which our

745
00:28:28,149 --> 00:28:25,520
coverage will begin at six a.m central

746
00:28:29,590 --> 00:28:28,159
time uh 7 a.m eastern time

747
00:28:32,149 --> 00:28:29,600
the actual spacewalk itself will start

748
00:28:35,990 --> 00:28:32,159
about an hour and 15 minutes later at 7

749
00:28:37,830 --> 00:28:36,000
15 a.m central time 8 15 a.m eastern and

750
00:28:39,990 --> 00:28:37,840
again that will last about six and a