



1
00:00:07,789 --> 00:00:05,990
foreign

2
00:00:10,250 --> 00:00:07,799
good morning from the International

3
00:00:12,230 --> 00:00:10,260
Space Station flight control room here

4
00:00:14,990 --> 00:00:12,240
at the Johnson Space Center in Houston

5
00:00:17,510 --> 00:00:15,000
Texas and welcome to Mission Control as

6
00:00:20,269 --> 00:00:17,520
we begin our coverage today of U.S

7
00:00:22,010 --> 00:00:20,279
spacewalk 87.

8
00:00:24,170 --> 00:00:22,020
you are looking live inside the

9
00:00:26,509 --> 00:00:24,180
equipment lock of the quest airlock of

10
00:00:28,670 --> 00:00:26,519
the International Space Station as two

11
00:00:33,049 --> 00:00:28,680
astronauts prepare to venture outside

12
00:00:36,229 --> 00:00:33,059
the quest airlock a short time from now

13
00:00:38,750 --> 00:00:36,239

on your screen you see on the left is

14
00:00:41,510 --> 00:00:38,760
NASA astronaut Woody hoberg and on the

15
00:00:46,790 --> 00:00:41,520
right is NASA astronaut Steve Bowen who

16
00:00:59,869 --> 00:00:49,790
Bowen is wearing the space suit with the

17
00:01:03,889 --> 00:01:02,450
again Bowen is on the right side of your

18
00:01:06,170 --> 00:01:03,899
screen and will be wearing that

19
00:01:08,210 --> 00:01:06,180
spacesuit with the red stripes and

20
00:01:16,810 --> 00:01:08,220
hoberg is on the left and is wearing the

21
00:01:21,590 --> 00:01:19,550
today's space walk is expected to last

22
00:01:23,690 --> 00:01:21,600
about seven hours the focus of which

23
00:01:26,210 --> 00:01:23,700
will be on the starboard truss of the

24
00:01:28,550 --> 00:01:26,220
International Space Station to install

25
00:01:32,870 --> 00:01:28,560
and monitor the deployment of one of the

26

00:01:35,390 --> 00:01:32,880

irosas or ISS rollout solar arrays which

27

00:01:37,609 --> 00:01:35,400

arrive on the SpaceX cargo Dragon

28

00:01:44,810 --> 00:01:37,619

resupply Craft on Monday to the

29

00:01:50,090 --> 00:01:48,230

today's spacewalk is the 264th in

30

00:01:52,249 --> 00:01:50,100

support of space station assembly

31

00:01:54,889 --> 00:01:52,259

maintenance and upgrades

32

00:01:57,289 --> 00:01:54,899

this will be the ninth spacewalk for

33

00:01:59,450 --> 00:01:57,299

NASA astronaut Steve Bowen and the first

34

00:02:01,490 --> 00:01:59,460

spacewalk for NASA astronaut Woody

35

00:02:03,530 --> 00:02:01,500

hoberg

36

00:02:06,889 --> 00:02:03,540

today's spacewalk will be the seventh

37

00:02:17,210 --> 00:02:06,899

spacewalk in 2023 in the fifth spacewalk

38

00:02:21,410 --> 00:02:19,790

what you're seeing on the screen here is

39

00:02:23,270 --> 00:02:21,420

the crew as they continue to step

40

00:02:25,010 --> 00:02:23,280

through procedures ahead of stepping out

41

00:02:26,270 --> 00:02:25,020

of the airlock a little later this

42

00:02:29,330 --> 00:02:26,280

morning

43

00:02:31,790 --> 00:02:29,340

right now they're completing in suit

44

00:02:36,530 --> 00:02:31,800

light exercises you can see them moving

45

00:02:41,330 --> 00:02:39,350

these movements help acclimate the

46

00:02:43,490 --> 00:02:41,340

crew's bodies to the lower pressure of

47

00:02:46,190 --> 00:02:43,500

the spacesuit and Purge excess nitrogen

48

00:02:47,930 --> 00:02:46,200

from their blood slowly this is required

49

00:02:51,110 --> 00:02:47,940

to avoid getting the bends or

50

00:02:53,150 --> 00:02:51,120

decompression sickness

51
00:02:54,970 --> 00:02:53,160
earlier this morning the crew worked

52
00:02:57,530 --> 00:02:54,980
through procedures to pre-breathe 100

53
00:03:05,530 --> 00:02:57,540
oxygen in order to purge that nitrogen

54
00:03:05,540 --> 00:03:25,009
pause exercise rest one minute

55
00:03:30,350 --> 00:03:28,070
so again today's space walk will see the

56
00:03:33,050 --> 00:03:30,360
crew members working to install the

57
00:03:35,270 --> 00:03:33,060
fifth irosa to the International Space

58
00:03:37,729 --> 00:03:35,280
Station this irosa will be on the 1A

59
00:03:40,729 --> 00:03:37,739
power channel on the starboard truss of

60
00:03:42,890 --> 00:03:40,739
the International Space Station

61
00:03:44,990 --> 00:03:42,900
and on June 15th we'll have an

62
00:03:50,210 --> 00:03:45,000
additional spacewalk to install the

63
00:03:56,030 --> 00:03:53,330

these new arrays are 60 feet long by 20

64

00:03:58,369 --> 00:03:56,040

feet wide and share a little more than

65

00:04:00,770 --> 00:03:58,379

half of the original arrays which as you

66

00:04:02,690 --> 00:04:00,780

can see in this graphic here they lie

67

00:04:05,630 --> 00:04:02,700

over top of them

68

00:04:09,470 --> 00:04:05,640

each new irosa will produce more than 20

69

00:04:16,490 --> 00:04:09,480

kilowatts of electricity and once all

70

00:04:22,370 --> 00:04:19,670

and once all those iroces are installed

71

00:04:24,110 --> 00:04:22,380

it will enable a 30 increase in power

72

00:04:48,129 --> 00:04:24,120

production over the station's current

73

00:04:52,310 --> 00:04:50,689

continuing to get some good views of the

74

00:04:53,930 --> 00:04:52,320

crew onboard the International Space

75

00:04:56,390 --> 00:04:53,940

Station as they step through those

76

00:05:08,689 --> 00:04:56,400

Insight in suit light exercise

77

00:05:14,510 --> 00:05:12,050

station Houston ons basic around one no

78

00:05:20,810 --> 00:05:14,520

action on that last caution grounds

79

00:06:25,490 --> 00:05:22,730

translation copy is not action on that

80

00:06:29,870 --> 00:06:28,070

and now coming into frame is NASA

81

00:06:31,249 --> 00:06:29,880

astronaut Frank Rubio who has been

82

00:06:32,629 --> 00:06:31,259

helping the crew step through their

83

00:06:47,890 --> 00:06:32,639

procedures and get suited up this

84

00:06:52,490 --> 00:06:50,689

Rubio is in the midst of long duration

85

00:06:54,830 --> 00:06:52,500

space flight by the time he lands this

86

00:06:56,870 --> 00:06:54,840

September he will have spent the longest

87

00:07:00,110 --> 00:06:56,880

single time in space By An American

88

00:07:01,730 --> 00:07:00,120

astronaut having accumulated 371

89

00:07:15,590 --> 00:07:01,740

consecutive days aboard the

90

00:07:21,350 --> 00:07:18,590

Houston Space around one just more words

91

00:07:23,710 --> 00:07:21,360

on that last enabled caution it was

92

00:07:27,350 --> 00:07:23,720

dealing with an S12

93

00:07:32,629 --> 00:07:27,360

MDM but no impacts to the Eva ground is

94

00:07:35,870 --> 00:07:34,010

hey Johnny we probably all thanks so

95

00:08:13,330 --> 00:07:35,880

much for the awards understand uh no

96

00:08:39,610 --> 00:08:16,010

the crew is continuing to work through

97

00:08:45,530 --> 00:08:42,110

they're like Houston Space ground one

98

00:08:48,230 --> 00:08:45,540

that completes the 10 cycles of in suit

99

00:09:03,170 --> 00:08:48,240

light exercise you are go for step five

100

00:09:12,110 --> 00:09:05,570

and the crew has completed their cycles

101

00:09:15,650 --> 00:09:14,090

the next steps for them will include

102

00:09:17,630 --> 00:09:15,660

continuing to step through procedures

103

00:09:19,730 --> 00:09:17,640

ahead of depressurization part of which

104

00:09:23,090 --> 00:09:19,740

will include getting their safers or

105

00:09:25,490 --> 00:09:23,100

simplified aid for EBA rescue installed

106

00:09:28,070 --> 00:09:25,500

on the back of their spacesuits

107

00:09:29,930 --> 00:09:28,080

the safer is essentially a jet pack that

108

00:09:31,610 --> 00:09:29,940

could be used in the very unlikely

109

00:10:58,030 --> 00:09:31,620

situation that a crew member were to

110

00:11:04,430 --> 00:11:01,190

and we also have United Arab Emirates

111

00:11:06,410 --> 00:11:04,440

astronaut Sultan alhayani floating

112

00:11:28,610 --> 00:11:06,420

or step seven and waiting on your go for

113

00:11:34,490 --> 00:11:32,210

again both Rubio and Olneyadi helping to

114

00:11:36,470 --> 00:11:34,500

step through procedures with the crew as

115

00:11:40,790 --> 00:11:36,480

they continue preparations to exit the

116

00:11:45,949 --> 00:11:43,310

Frank step 8 is in work it's going to

117

00:11:48,530 --> 00:11:45,959

take about 10 minutes you would go to

118

00:11:50,509 --> 00:11:48,540

proceed in Step nine well as you know

119

00:12:02,810 --> 00:11:50,519

when step 8 is complete

120

00:12:06,889 --> 00:12:05,090

and getting a good view of some of the

121

00:12:09,590 --> 00:12:06,899

tools that will be used during today's

122

00:12:11,389 --> 00:12:09,600

space walk you did see the space drill

123

00:12:13,610 --> 00:12:11,399

or the pistol grip tool which will be

124

00:12:16,790 --> 00:12:13,620

utilized quite heavily throughout

125

00:12:20,090 --> 00:12:19,130

you're also seeing some of the tethers

126
00:12:22,190 --> 00:12:20,100
float

127
00:12:23,329 --> 00:12:22,200
those will be utilized to ensure that

128
00:13:56,090 --> 00:12:23,339
the crew is attached to the

129
00:14:02,569 --> 00:13:58,730
and Rubio is working to get those tools

130
00:15:04,790 --> 00:14:02,579
secured to NASA astronaut

131
00:15:10,730 --> 00:15:07,850
and Rubio now moving over to get those

132
00:15:19,670 --> 00:15:10,740
tools in place on Steve Bowen's space

133
00:15:26,810 --> 00:15:22,730
and he's being assisted by UAE or United

134
00:15:29,030 --> 00:15:26,820
Arab Emirates astronaut sultan al-nayadi

135
00:17:06,949 --> 00:15:29,040
all night is on the left of your screen

136
00:17:12,350 --> 00:17:09,530
as the crew continues to step through

137
00:17:15,289 --> 00:17:12,360
those procedures to get tools secured

138
00:17:17,569 --> 00:17:15,299

safely to their spacesuits we do have a

139

00:17:20,270 --> 00:17:17,579

video that will be an overview of

140

00:17:22,669 --> 00:17:20,280

today's space walk where the duo will

141

00:17:24,949 --> 00:17:22,679

exit the station's Quest airlock to

142

00:17:27,289 --> 00:17:24,959

install an upgraded International Space

143

00:17:29,630 --> 00:17:27,299

Station rollout solar array on the 1A

144

00:17:31,610 --> 00:17:29,640

power channel on the starboard truss of

145

00:17:33,409 --> 00:17:31,620

the station so let's learn a little bit

146

00:17:37,370 --> 00:17:33,419

more about what the crew will do during

147

00:17:44,029 --> 00:17:39,890

this video is for the Isis roll out

148

00:17:47,330 --> 00:17:44,039

Solar Ray or a Rosa 1A install EBA Steve

149

00:17:49,130 --> 00:17:47,340

Bowen ev1 with the red stripes egresses

150

00:17:51,230 --> 00:17:49,140

and receives a crew lock bag and puts it

151

00:17:53,830 --> 00:17:51,240

on his body restraint tether

152

00:17:56,029 --> 00:17:53,840

ev2 with white stripes Woody hoberg

153

00:17:57,890 --> 00:17:56,039

egresses with the crew lock bag on his

154

00:17:59,930 --> 00:17:57,900

body restraint tether and closes the

155

00:18:02,330 --> 00:17:59,940

thermal cover

156

00:18:04,730 --> 00:18:02,340

ev1 translates up the forward face of

157

00:18:06,890 --> 00:18:04,740

the truss and goes starboard he stops to

158

00:18:09,409 --> 00:18:06,900

configure safety to others

159

00:18:11,690 --> 00:18:09,419

ev2 follows a similar translation path

160

00:18:13,669 --> 00:18:11,700

and goes to the port crew equipment

161

00:18:15,950 --> 00:18:13,679

translation Aid card to temporarily

162

00:18:19,190 --> 00:18:15,960

stose bag and retrieve an articulating

163

00:18:21,770 --> 00:18:19,200

portable foot restraint meanwhile ev-1

164

00:18:24,350 --> 00:18:21,780

translates to the irosa carrier stows

165

00:18:25,370 --> 00:18:24,360

his bag and retrieves his pistol grip

166

00:18:28,370 --> 00:18:25,380

tool

167

00:18:30,289 --> 00:18:28,380

ev1 begins preparing a Rosa for removal

168

00:18:32,870 --> 00:18:30,299

from the carrier first releasing a

169

00:18:36,230 --> 00:18:32,880

restraint bolt on the upper eye Rosa

170

00:18:37,850 --> 00:18:36,240

ev2 relocates the foot restraint and

171

00:18:39,350 --> 00:18:37,860

installs it on the Space Station's

172

00:18:42,470 --> 00:18:39,360

robotic arm

173

00:18:44,570 --> 00:18:42,480

ev2 ingresses the foot restraint and

174

00:18:46,370 --> 00:18:44,580

then the arm will move away from the

175

00:18:49,010 --> 00:18:46,380

Truss

176
00:18:51,289 --> 00:18:49,020
ev1 translates to lower Rosa and

177
00:18:54,409 --> 00:18:51,299
releases its first restraint bolt he

178
00:18:56,690 --> 00:18:54,419
releases both anti-rotation devices back

179
00:18:58,650 --> 00:18:56,700
on the upper eye Rosa and then we'll

180
00:19:06,470 --> 00:18:58,660
Stow them in the crew lock bag

181
00:19:13,130 --> 00:19:10,250
on the robotic arm ev2 is flown over to

182
00:19:15,590 --> 00:19:13,140
access two sets of bolts on the boom end

183
00:19:18,169 --> 00:19:15,600
of the upper irosa

184
00:19:20,570 --> 00:19:18,179
the first two bolts will allow the boom

185
00:19:22,250 --> 00:19:20,580
deployment system rollers to be moved

186
00:19:27,590 --> 00:19:22,260
into place to help with the array

187
00:19:32,870 --> 00:19:30,590
the second two bolts will release two of

188
00:19:35,090 --> 00:19:32,880

four mechanisms that hold the Arosa in

189

00:19:37,669 --> 00:19:35,100

its rolled up configuration

190

00:19:40,250 --> 00:19:37,679

ev1 partially releases the upper eye

191

00:19:42,470 --> 00:19:40,260

roses restraint pull and installs the

192

00:19:44,990 --> 00:19:42,480

first of two handling AIDS called scoops

193

00:19:46,310 --> 00:19:45,000

and prep for removing erosa from the

194

00:19:49,070 --> 00:19:46,320

carrier

195

00:19:51,470 --> 00:19:49,080

the arm flies ev2 over to the hinge end

196

00:19:53,390 --> 00:19:51,480

of the upper eye Rosa and both crew

197

00:19:56,330 --> 00:19:53,400

members work to release the final bolt

198

00:19:59,090 --> 00:19:56,340

holding it to the carrier eb1 installs a

199

00:20:00,310 --> 00:19:59,100

second scoop an ev2 lifts the eye Rosa

200

00:20:08,890 --> 00:20:00,320

off of the carrier

201
00:20:15,049 --> 00:20:11,810
after several Maneuvers on the robotic

202
00:20:18,049 --> 00:20:15,059
arm ev2 will arrive at the 1A mod kit

203
00:20:20,090 --> 00:20:18,059
work site during these Maneuvers ev1

204
00:20:22,490 --> 00:20:20,100
will pick up the temporarily stowed bag

205
00:20:25,250 --> 00:20:22,500
from the port cart and reconfigure both

206
00:20:27,650 --> 00:20:25,260
Cruise safety tethers on his way to meet

207
00:20:33,950 --> 00:20:27,660
ev2 at the mod kit

208
00:20:45,650 --> 00:20:35,870
both crew will then work to install

209
00:20:50,210 --> 00:20:48,350
the crew will release the scoops and ev2

210
00:20:52,490 --> 00:20:50,220
will move into position to release the

211
00:20:53,990 --> 00:20:52,500
final bolt holding iroza in its folded

212
00:20:56,570 --> 00:20:54,000
position

213
00:20:58,730 --> 00:20:56,580

once released ev1 will hold our Rosa

214

00:21:01,610 --> 00:20:58,740

closed while ev2 egresses his foot

215

00:21:03,590 --> 00:21:01,620

restraint and gets into position

216

00:21:05,630 --> 00:21:03,600

both crew will then work together to

217

00:21:07,970 --> 00:21:05,640

unfold irosa and secure the right side

218

00:21:11,270 --> 00:21:07,980

onto the mounting bracket

219

00:21:13,190 --> 00:21:11,280

once secured ev2 will drive two hinge

220

00:21:14,750 --> 00:21:13,200

bolts that hold our Rosa in the unfolded

221

00:21:17,630 --> 00:21:14,760

position

222

00:21:20,090 --> 00:21:17,640

ev2 will then move away from my Rosa to

223

00:21:23,150 --> 00:21:20,100

reconfigure safety tether on the arm

224

00:21:30,409 --> 00:21:23,160

ev1 Works to drive 8 bolts to fully

225

00:21:35,029 --> 00:21:32,930

both crew will then work to electrically

226

00:21:37,669 --> 00:21:35,039

connect the new irosa to the ISS power

227

00:21:40,370 --> 00:21:37,679

system they'll first attach four

228

00:21:42,590 --> 00:21:40,380

connectors to a Rosa then both will move

229

00:21:45,169 --> 00:21:42,600

to either side of the Legacy array to

230

00:21:47,570 --> 00:21:45,179

disconnect the old array and connect a y

231

00:21:50,029 --> 00:21:47,580

cable this will allow power to flow from

232

00:21:59,950 --> 00:21:50,039

both the new irosa and the Legacy array

233

00:22:05,149 --> 00:22:02,750

at this point ev1 moves into a

234

00:22:07,130 --> 00:22:05,159

deployment viewing position and ev2 will

235

00:22:09,710 --> 00:22:07,140

release the final two bolts restraining

236

00:22:12,409 --> 00:22:09,720

iroza in the undeployed position

237

00:22:13,310 --> 00:22:12,419

iroza will deploy over the next 6 to 10

238

00:22:16,730 --> 00:22:13,320

minutes

239

00:22:18,950 --> 00:22:16,740

during deployment ev1 translates back to

240

00:22:20,750 --> 00:22:18,960

the Rosa carrier to reconfigure the

241

00:22:23,149 --> 00:22:20,760

carrier beams that previously held the

242

00:22:25,310 --> 00:22:23,159

upper irosa

243

00:22:27,590 --> 00:22:25,320

these beams need to be rotated out of

244

00:22:32,090 --> 00:22:27,600

the way to allow access to the lower

245

00:22:36,649 --> 00:22:34,730

once deployment is complete ev2 will

246

00:22:38,930 --> 00:22:36,659

release two bolts that allow the erosa

247

00:22:42,070 --> 00:22:38,940

blankets to become tensioned

248

00:22:45,110 --> 00:22:42,080

ev2 then cleans up the mod kit worksite

249

00:22:47,149 --> 00:22:45,120

retrieving his crew lock bag and head to

250

00:22:48,770 --> 00:22:47,159

the carrier to help ev1 with the carrier

251
00:22:51,169 --> 00:22:48,780
beams

252
00:22:53,090 --> 00:22:51,179
[Music]

253
00:22:54,770 --> 00:22:53,100
the crew members work together to

254
00:22:57,049 --> 00:22:54,780
release the bolts holding the beams in

255
00:23:01,190 --> 00:22:57,059
place then they will rotate the beams

256
00:23:06,330 --> 00:23:01,200
out of the way and secure them back down

257
00:23:06,340 --> 00:23:11,710
[Music]

258
00:23:17,090 --> 00:23:14,210
both crew will clean up the work site

259
00:23:19,789 --> 00:23:17,100
and translate back to the airlock they

260
00:23:22,610 --> 00:23:19,799
will clean up their tethers on the way

261
00:23:25,549 --> 00:23:22,620
they will then work to Ingress and begin

262
00:23:28,909 --> 00:23:25,559
repressing the airlock this will finish

263
00:23:35,470 --> 00:23:28,919

the first of two Evas

264

00:23:42,230 --> 00:23:37,970

and that was an overview of what we can

265

00:23:46,549 --> 00:23:44,630

on your screen here on the top right you

266

00:23:48,590 --> 00:23:46,559

see NASA astronaut Frank Rubio

267

00:23:50,630 --> 00:23:48,600

continuing to step through procedures to

268

00:23:54,190 --> 00:23:50,640

get the crew ready to head out of the

269

00:23:58,669 --> 00:23:56,630

and towards the lower left of your

270

00:24:03,529 --> 00:23:58,679

screen you see United Arab Emirates

271

00:24:09,770 --> 00:24:06,289

he's working alongside Rubio to prepare

272

00:24:22,690 --> 00:24:09,780

to get the simplified aid for Eva rescue

273

00:24:26,930 --> 00:24:25,370

once the safers are installed on both

274

00:24:29,330 --> 00:24:26,940

hoberg and

275

00:24:31,630 --> 00:24:29,340

Bowen the crew will move

276

00:25:24,529 --> 00:24:31,640

through the airlock and start

277

00:25:24,539 --> 00:26:19,510

copy Frank zero zero zero nine

278

00:26:25,430 --> 00:26:22,310

getting a good view inside the back side

279

00:26:27,230 --> 00:26:25,440

of the extra vehicular Mobility unit or

280

00:26:29,149 --> 00:26:27,240

emu

281

00:26:30,830 --> 00:26:29,159

those are the spacesuits that the crew

282

00:26:32,330 --> 00:26:30,840

will be wearing during today's spacewalk

283

00:26:34,370 --> 00:26:32,340

they're essentially a mini life support

284

00:26:36,710 --> 00:26:34,380

system and provide all of the

285

00:26:38,330 --> 00:26:36,720

environment protection mobility and

286

00:28:26,110 --> 00:26:38,340

Communications for the crew members

287

00:28:30,950 --> 00:28:29,210

and as Rubio and alnayadi continue to

288

00:28:33,250 --> 00:28:30,960

step through those procedures

289

00:28:35,210 --> 00:28:33,260

ahead of getting the crew ready to begin

290

00:28:37,490 --> 00:28:35,220

depressurization we do have some

291

00:28:39,289 --> 00:28:37,500

statistics to go through today for our

292

00:28:41,330 --> 00:28:39,299

spacewalk

293

00:28:43,490 --> 00:28:41,340

today's space walk will be the ninth

294

00:28:44,510 --> 00:28:43,500

Space Walk for NASA astronaut Steve

295

00:28:48,110 --> 00:28:44,520

Bowen

296

00:28:51,230 --> 00:28:48,120

he has a total spacewalking time of 54

297

00:28:52,909 --> 00:28:51,240

hours and 19 minutes and for NASA

298

00:28:54,649 --> 00:28:52,919

astronaut Woody hoberg this will be his

299

00:28:57,350 --> 00:28:54,659

very first spacewalk

300

00:28:59,149 --> 00:28:57,360

today's space walk will be the 264th

301
00:29:01,909 --> 00:28:59,159
spacewalk in support of space station

302
00:29:03,409 --> 00:29:01,919
assembly maintenance and upgrades and

303
00:29:06,350 --> 00:29:03,419
will be the seventh space station

304
00:29:43,669 --> 00:29:06,360
spacewalk this year and this will be the

305
00:29:50,810 --> 00:29:46,610
Association on one for Step 11 time one

306
00:29:50,820 --> 00:31:30,070
and we copy Frank

307
00:31:33,889 --> 00:31:32,389
and if you're just joining us this

308
00:31:35,330 --> 00:31:33,899
morning we have two spacewalkers

309
00:31:38,210 --> 00:31:35,340
preparing to exit the International

310
00:31:42,889 --> 00:31:38,220
Space Station's Quest airlock to install

311
00:31:45,169 --> 00:31:42,899
a new ISS rollout solar array

312
00:31:46,909 --> 00:31:45,179
those spacewalkers are NASA astronaut

313
00:31:49,130 --> 00:31:46,919

Steve Bowen who you see in the center of

314

00:31:50,870 --> 00:31:49,140

your screen there

315

00:31:55,909 --> 00:31:50,880

I'm walking instead of test scores are

316

00:31:55,919 --> 00:32:07,250

thank you copy Frank good numbers

317

00:32:11,570 --> 00:32:10,010

and our other spacewalker today is NASA

318

00:32:19,930 --> 00:32:11,580

astronaut Woody hoberg who will be

319

00:32:25,130 --> 00:32:22,730

also in

320

00:32:27,830 --> 00:32:25,140

the equipment airlock is NASA astronaut

321

00:32:29,990 --> 00:32:27,840

Frank Rubio as well as

322

00:32:32,029 --> 00:32:30,000

United Arab Emirates astronaut sultan

323

00:32:33,350 --> 00:32:32,039

al-nayadi

324

00:32:35,029 --> 00:32:33,360

they're continuing to step through

325

00:32:37,190 --> 00:32:35,039

procedures with the crew ahead of

326

00:33:23,350 --> 00:32:37,200

getting them into the crew airlock for

327

00:33:28,130 --> 00:33:25,669

back in the International Space Station

328

00:33:30,409 --> 00:33:28,140

flight control room the orbit 2 team is

329

00:33:32,450 --> 00:33:30,419

ready to support today's spacewalk under

330

00:33:42,289 --> 00:33:32,460

the direction of flight director Diane

331

00:33:53,930 --> 00:33:46,009

decision on one for step 21 time one two

332

00:33:53,940 --> 00:34:37,629

and copy Frank

333

00:34:43,129 --> 00:34:40,430

in addition to flight director Diane

334

00:34:44,990 --> 00:34:43,139

Daly the rest of the orbit 2 team is

335

00:34:50,149 --> 00:34:45,000

supporting here from Mission Control

336

00:34:52,310 --> 00:34:50,159

Houston as well to her right as the cap

337

00:34:55,129 --> 00:34:52,320

her right at the Capcom console is the

338

00:34:57,710 --> 00:34:55,139

ground IV and that is Canadian space

339

00:34:59,270 --> 00:34:57,720

agency astronaut Jenny Gibbons

340

00:35:01,310 --> 00:34:59,280

she'll serve as the spacewalk

341

00:35:02,990 --> 00:35:01,320

communicator who will talk directly with

342

00:35:04,790 --> 00:35:03,000

the crew during the spacewalk helping

343

00:35:05,930 --> 00:35:04,800

them choreograph timelines and

344

00:35:08,870 --> 00:35:05,940

procedures

345

00:35:12,770 --> 00:35:08,880

and to her right is NASA astronaut Nick

346

00:35:14,390 --> 00:35:12,780

Hague Who is the Capcom you'll hear him

347

00:35:16,010 --> 00:35:14,400

communicating with the crew up until the

348

00:35:18,050 --> 00:35:16,020

point of depressurization this morning

349

00:35:20,329 --> 00:35:18,060

at which point the ground IV will take

350

00:36:41,650 --> 00:35:20,339

over Community communicating with our

351

00:36:45,770 --> 00:36:44,089

everything continuing to go smoothly

352

00:36:47,390 --> 00:36:45,780

this morning the next major Milestone

353

00:36:49,790 --> 00:36:47,400

that we can look ahead to is the

354

00:36:52,490 --> 00:36:49,800

installation of the simplified aid for

355

00:36:55,670 --> 00:36:52,500

Eva rescue or safers essentially the

356

00:36:58,069 --> 00:36:55,680

space jet pack

357

00:36:59,870 --> 00:36:58,079

this is installed as a precautionary

358

00:37:02,450 --> 00:36:59,880

measure in the very unlikely event that

359

00:37:05,210 --> 00:37:02,460

a crew member were to become untethered

360

00:37:07,430 --> 00:37:05,220

from the International Space Station

361

00:37:17,109 --> 00:37:07,440

this jet pack would allow them to get

362

00:37:22,790 --> 00:37:20,030

following safer installation we can look

363

00:37:24,890 --> 00:37:22,800

ahead to depressurization

364

00:37:27,829 --> 00:37:24,900

first the crew will move to the crew

365

00:37:30,290 --> 00:37:27,839

lock section of the quest airlock

366

00:37:32,750 --> 00:37:30,300

and depressurization will occur in a

367

00:37:34,430 --> 00:37:32,760

two-stage fashion first the crew lock

368

00:37:35,990 --> 00:37:34,440

will be taken down to five pounds per

369

00:37:37,390 --> 00:37:36,000

square inch of pressure

370

00:37:39,650 --> 00:37:37,400

at this point they'll pause

371

00:37:41,630 --> 00:37:39,660

depressurization to do a systems check

372

00:38:20,810 --> 00:37:41,640

and then

373

00:38:29,630 --> 00:38:23,630

and we are seeing only audio and Rubio

374

00:38:35,630 --> 00:38:33,109

step eight uh we Ojo go your go to turn

375

00:38:37,250 --> 00:38:35,640

off the hecka it's a just you want to

376

00:38:40,370 --> 00:38:37,260

turn off Echoes on both EVS that'd be

377

00:38:40,380 --> 00:38:50,089

thanks so much

378

00:38:55,609 --> 00:38:52,849

again all neody and Rubio now working

379

00:38:58,310 --> 00:38:55,619

together to install the safer simplified

380

00:41:51,250 --> 00:38:58,320

aid for Eva rescue on NASA astronaut

381

00:41:58,010 --> 00:41:55,250

and Rubio and only working to get that

382

00:42:01,690 --> 00:41:58,020

safer installed on NASA astronaut Steve

383

00:42:06,589 --> 00:42:04,310

for today's space walk Bowen is

384

00:42:08,510 --> 00:42:06,599

designated ev1

385

00:42:10,370 --> 00:42:08,520

and he'll be wearing the spacesuit with

386

00:42:13,130 --> 00:42:10,380

the red stripes which you can see on

387

00:42:15,530 --> 00:42:13,140

your screen there Woody hoberg will be

388

00:43:30,910 --> 00:42:15,540

designated ev2 and would be wearing an

389

00:43:35,930 --> 00:43:34,130

once both safers are installed the next

390

00:43:38,030 --> 00:43:35,940

Milestone that we can look ahead to is

391

00:43:39,829 --> 00:43:38,040

depressurization and ultimately when the

392

00:43:44,510 --> 00:43:39,839

crew will then exit the International

393

00:43:49,250 --> 00:43:47,150

they'll then work together to install an

394

00:43:51,710 --> 00:43:49,260

upgraded International Space Station

395

00:43:54,470 --> 00:43:51,720

rollout solo array on the 1A power

396

00:44:11,990 --> 00:43:54,480

channel on the starboard truss of the

397

00:44:18,589 --> 00:44:15,190

the iroses were delivered on a SpaceX

398

00:45:58,089 --> 00:44:18,599

Dragon cargo resupply Craft on Monday to

399

00:46:03,410 --> 00:46:00,950

Rubio and olneyadi continuing to get the

400

00:46:05,630 --> 00:46:03,420

safer simplified aid for Eva rescue

401
00:46:07,550 --> 00:46:05,640
installed on NASA astronaut Steve

402
00:46:09,770 --> 00:46:07,560
Bowen's spacesuit

403
00:46:12,530 --> 00:46:09,780
following installation of the safer

404
00:47:12,170 --> 00:46:12,540
Bowen will be moved to the crew airlock

405
00:47:17,470 --> 00:47:15,050
and Bowen now being moved into the crew

406
00:47:20,089 --> 00:47:17,480
airlock

407
00:47:21,829 --> 00:47:20,099
next up Rubio and alniadi will work

408
00:48:51,370 --> 00:47:21,839
together to get

409
00:48:56,809 --> 00:48:54,109
and Rubio and al-nayadi now going to

410
00:48:59,990 --> 00:48:56,819
work together to get the safer installed

411
00:49:02,390 --> 00:49:00,000
on hoberg's spacesuit

412
00:49:04,309 --> 00:49:02,400
again he'll be designated ev2 and he's

413
00:50:42,010 --> 00:49:04,319

wearing the spacesuit with

414

00:50:46,730 --> 00:50:45,230

as Rubio and elnayadi continue to step

415

00:50:48,770 --> 00:50:46,740

through those procedures to get the

416

00:50:51,230 --> 00:50:48,780

safer installed we can take a quick look

417

00:50:54,349 --> 00:50:51,240

ahead at what's to come

418

00:50:56,870 --> 00:50:54,359

following getting the safer installed

419

00:50:59,870 --> 00:50:56,880

both crew will be moved into the airlock

420

00:51:02,569 --> 00:50:59,880

to begin the depressurization process

421

00:51:05,690 --> 00:51:02,579

the depressurization of the airlock is

422

00:51:07,370 --> 00:51:05,700

done in a two-stage process first the

423

00:51:10,670 --> 00:51:07,380

crew lock will be taken down to five

424

00:51:13,010 --> 00:51:10,680

pounds per square inch of pressure

425

00:51:15,530 --> 00:51:13,020

at this point depressurization will be

426
00:51:17,690 --> 00:51:15,540
paused to do a systems check following

427
00:51:20,030 --> 00:51:17,700
this depressurization will resume and

428
00:51:22,130 --> 00:51:20,040
continue all the way down to vacuum

429
00:51:24,710 --> 00:51:22,140
now once vacuum is reached the two space

430
00:51:27,349 --> 00:51:24,720
work space Walkers will complete suit

431
00:51:29,270 --> 00:51:27,359
and communication checks before placing

432
00:51:31,670 --> 00:51:29,280
their spacesuit on internal battery

433
00:51:34,970 --> 00:51:31,680
power which will officially Mark the

434
00:51:37,790 --> 00:51:34,980
start of today's spacewalk

435
00:51:39,410 --> 00:51:37,800
a U.S spacewalk start and end time is

436
00:51:41,450 --> 00:51:39,420
measured from the time the crew places

437
00:51:43,690 --> 00:51:41,460
their space suit on internal battery

438
00:51:46,309 --> 00:51:43,700

power all the way up until the time

439

00:51:47,809 --> 00:51:46,319

repressurization occurs and they're back

440

00:51:50,270 --> 00:51:47,819

inside the crew lock following

441

00:51:52,670 --> 00:51:50,280

completion of their spacewalk

442

00:52:40,870 --> 00:51:52,680

we are expecting today's space walk to

443

00:52:46,309 --> 00:52:44,150

and here in Mission Control Houston NASA

444

00:52:48,290 --> 00:52:46,319

flight director Diane Daly did just pull

445

00:52:50,390 --> 00:52:48,300

the team of flight controllers on

446

00:54:46,990 --> 00:52:50,400

console and everything is looking good

447

00:54:52,609 --> 00:54:49,970

Rubio now going to work to get Bowen

448

00:54:56,089 --> 00:54:52,619

moved into the crew airlock

449

00:56:15,609 --> 00:54:56,099

hoberg rather Boeing currently is in the

450

00:56:33,730 --> 00:56:18,650

both Bowen and hoberg now in the crew

451

00:56:38,569 --> 00:56:35,990

once they get situated and everything

452

00:58:21,950 --> 00:56:38,579

looks good we will see the hatch close

453

00:58:21,960 --> 00:58:41,569

Penn Station Houston uh when able on one

454

00:58:45,890 --> 00:58:44,270

hey Frank uh just uh we're trying to get

455

00:58:47,690 --> 00:58:45,900

in front of an Los with some ground

456

00:58:48,950 --> 00:58:47,700

commanding there's a couple steps that

457

00:59:07,809 --> 00:58:48,960

you're going to confirm later on we'd

458

00:59:07,819 --> 00:59:13,789

and that was the voice of

459

00:59:13,799 --> 00:59:23,089

Greg humor Emperor is closed and

460

00:59:23,099 --> 00:59:40,670

copy Frank thanks for doing this

461

00:59:45,549 --> 00:59:42,530

thank you

462

00:59:49,490 --> 00:59:45,559

and that was the voice of today's Capcom

463

00:59:51,950 --> 00:59:49,500

and NASA astronaut Nick Hague

464

00:59:54,470 --> 00:59:51,960

calling up to Rubio letting him know

465

00:59:56,630 --> 00:59:54,480

that there is a loss of signal coming up

466

01:01:24,230 --> 00:59:56,640

giving them the go to step through a

467

01:01:29,750 --> 01:01:27,770

and station Houston on one

468

01:01:30,950 --> 01:01:29,760

no action for you you can acknowledge

469

01:01:32,630 --> 01:01:30,960

with the thumbs up we're going to

470

01:01:51,349 --> 01:01:32,640

command so your go hop mic for the EV

471

01:01:56,630 --> 01:01:54,109

station Houston uh we're with you on one

472

01:01:57,890 --> 01:01:56,640

if you try to transmit last I want to

473

01:02:00,770 --> 01:01:57,900

let you know the crew is going to go hop

474

01:02:06,049 --> 01:02:00,780

my care shortly and also you've got to

475

01:02:11,630 --> 01:02:09,170

okay that copy uh crew will be high Mike

476
01:02:12,770 --> 01:02:11,640
and go on step 84 and then just be

477
01:02:42,470 --> 01:02:12,780
advised you're coming in a little bit

478
01:02:42,480 --> 01:02:50,569
foreign

479
01:02:50,579 --> 01:03:07,370
IV

480
01:03:07,380 --> 01:03:15,829
and your go to press

481
01:03:25,370 --> 01:03:18,470
and I copy Prime IV go to class thanks

482
01:03:29,690 --> 01:03:27,470
and we did just hear that confirmation

483
01:03:31,789 --> 01:03:29,700
from the ground that the crew is go to

484
01:03:33,470 --> 01:03:31,799
continued depressurization first up

485
01:03:35,690 --> 01:03:33,480
they'll close the hatch which all neody

486
01:03:50,270 --> 01:03:35,700
and Rubio are working together to do so

487
01:03:50,280 --> 01:04:28,150
foreign

488
01:04:35,569 --> 01:04:30,950

and you did see that hatch just get

489

01:04:41,809 --> 01:04:38,450

we are in an expected Handover between

490

01:04:43,730 --> 01:04:41,819

ground stations so we are not going to

491

01:04:45,170 --> 01:04:43,740

expect to have video of the crew on

492

01:04:47,710 --> 01:04:45,180

board the International Space Station

493

01:04:50,150 --> 01:04:47,720

for the next 11 and a half minutes

494

01:04:52,430 --> 01:04:50,160

however we do know that they're going to

495

01:04:53,930 --> 01:04:52,440

continue the depressurization process as

496

01:05:35,770 --> 01:04:53,940

they have the go from the ground to do

497

01:05:40,250 --> 01:05:38,270

and if you're just joining us this

498

01:05:43,130 --> 01:05:40,260

morning we have two spacewalkers who are

499

01:05:44,990 --> 01:05:43,140

suited up and in the process of

500

01:05:46,190 --> 01:05:45,000

working through depressurization

501
01:05:48,410 --> 01:05:46,200
procedures

502
01:05:51,410 --> 01:05:48,420
today they will exit the station's Quest

503
01:05:53,270 --> 01:05:51,420
airlock to install an upgraded irosa or

504
01:05:56,210 --> 01:05:53,280
International Space Station rollout

505
01:05:57,589 --> 01:05:56,220
solar array on the 1A power channel on

506
01:06:00,410 --> 01:05:57,599
the starboard truss of the International

507
01:06:02,510 --> 01:06:00,420
Space Station we do have an animation to

508
01:06:04,730 --> 01:06:02,520
walk us through what we can expect our

509
01:06:06,370 --> 01:06:04,740
space Walkers to complete today so let's

510
01:06:07,480 --> 01:06:06,380
take a quick look

511
01:06:13,870 --> 01:06:07,490
foreign

512
01:06:20,990 --> 01:06:17,329
Steve Bowen ev1 with the red stripes

513
01:06:26,750 --> 01:06:24,109

there ev2 with white stripes Woody

514

01:06:28,609 --> 01:06:26,760

hoberg egresses with the krillock bag on

515

01:06:30,770 --> 01:06:28,619

his body restraint Heather and closes

516

01:06:33,170 --> 01:06:30,780

the thermal cover

517

01:06:35,630 --> 01:06:33,180

ev1 translates up the forward face of

518

01:06:37,789 --> 01:06:35,640

the truss and goes starboard he stops to

519

01:06:40,309 --> 01:06:37,799

configure safety to others

520

01:06:42,589 --> 01:06:40,319

ev2 follows a similar translation path

521

01:06:44,809 --> 01:06:42,599

and goes to the port crew equipment

522

01:06:46,849 --> 01:06:44,819

translation Aid card to temporarily Stow

523

01:06:50,089 --> 01:06:46,859

his bag and retrieve an articulating

524

01:06:52,730 --> 01:06:50,099

portable foot restraint meanwhile ev-1

525

01:06:55,250 --> 01:06:52,740

translates to the iroza carrier stows

526

01:06:56,270 --> 01:06:55,260

his bag and retrieves his pistol grip

527

01:06:59,150 --> 01:06:56,280

tool

528

01:07:01,069 --> 01:06:59,160

ev1 begins preparing irosa for removal

529

01:07:03,770 --> 01:07:01,079

from the carrier first releasing a

530

01:07:07,130 --> 01:07:03,780

restraint bolt on the upper eye Rosa

531

01:07:08,750 --> 01:07:07,140

ev2 relocates the foot restraint and

532

01:07:10,250 --> 01:07:08,760

installs it on the Space Station's

533

01:07:13,430 --> 01:07:10,260

robotic arm

534

01:07:15,470 --> 01:07:13,440

ev2 ingresses the foot restraint and

535

01:07:17,270 --> 01:07:15,480

then the arm will move away from the

536

01:07:19,970 --> 01:07:17,280

Truss

537

01:07:22,250 --> 01:07:19,980

ev1 translates to lower Rosa and

538

01:07:25,309 --> 01:07:22,260

releases its first restraint fold he

539

01:07:27,589 --> 01:07:25,319

releases both anti-rotation devices back

540

01:07:37,609 --> 01:07:27,599

on the upper eye Rosa and then we'll

541

01:07:44,029 --> 01:07:41,150

on the robotic arm ev2 is flown over to

542

01:07:46,490 --> 01:07:44,039

access two sets of bolts on the boom end

543

01:07:49,069 --> 01:07:46,500

of the upper irosa

544

01:07:51,470 --> 01:07:49,079

the first two bolts will allow the boom

545

01:07:53,150 --> 01:07:51,480

deployment system rollers to be moved

546

01:07:58,029 --> 01:07:53,160

into place to help with the array

547

01:08:03,770 --> 01:08:01,490

the second two bolts will release two of

548

01:08:06,049 --> 01:08:03,780

four mechanisms that hold the Arosa and

549

01:08:08,630 --> 01:08:06,059

its rolled up configuration

550

01:08:11,150 --> 01:08:08,640

ev1 partially releases the upper eye

551
01:08:13,430 --> 01:08:11,160
Rosa's restraint pull and installs the

552
01:08:15,890 --> 01:08:13,440
first of two handling AIDS called scoops

553
01:08:17,209 --> 01:08:15,900
and prep for removing our Rosa from the

554
01:08:19,849 --> 01:08:17,219
carrier

555
01:08:22,309 --> 01:08:19,859
the arm flies ev2 over to the hinge end

556
01:08:24,169 --> 01:08:22,319
of the upper eye Rosa and both crew

557
01:08:27,169 --> 01:08:24,179
members work to release the final bolt

558
01:08:29,990 --> 01:08:27,179
holding it to the carrier eb1 installs a

559
01:08:32,870 --> 01:08:30,000
second scoop an ev2 lifts the eye Rosa

560
01:08:38,340 --> 01:08:32,880
off of the carrier

561
01:08:44,329 --> 01:08:40,809
[Music]

562
01:08:46,970 --> 01:08:44,339
Maneuvers on the robotic arm ev2 will

563
01:08:49,430 --> 01:08:46,980

arrive at the 1A mod kit work site

564

01:08:51,530 --> 01:08:49,440

during these Maneuvers ev1 will pick up

565

01:08:54,110 --> 01:08:51,540

the temporarily stowed bag from the port

566

01:08:57,590 --> 01:08:54,120

cart and reconfigure both Cruise safety

567

01:08:58,550 --> 01:08:57,600

tethers on his way to meet ev2 at the

568

01:09:04,849 --> 01:08:58,560

mod kit

569

01:09:16,030 --> 01:09:06,890

both crew will then work to install

570

01:09:21,110 --> 01:09:19,189

the crew will release the scoops and ev2

571

01:09:23,329 --> 01:09:21,120

will move into position to release the

572

01:09:24,829 --> 01:09:23,339

final bolt holding a rose in its folded

573

01:09:27,349 --> 01:09:24,839

position

574

01:09:29,510 --> 01:09:27,359

once released ev1 will hold our Rosa

575

01:09:32,570 --> 01:09:29,520

closed while ev2 egresses his foot

576

01:09:34,550 --> 01:09:32,580

restraint and gets into position

577

01:09:36,530 --> 01:09:34,560

both crew will then work together to

578

01:09:38,650 --> 01:09:36,540

unfold iroza and secure the right side

579

01:09:42,229 --> 01:09:38,660

onto the mounting bracket

580

01:09:44,090 --> 01:09:42,239

once secured ev2 will drive two hinge

581

01:09:45,650 --> 01:09:44,100

bolts that hold our Rosa in the unfolded

582

01:09:48,709 --> 01:09:45,660

position

583

01:09:50,990 --> 01:09:48,719

ev2 will then move away from my Rosa to

584

01:09:54,050 --> 01:09:51,000

reconfigure a safety tether on the arm

585

01:10:01,310 --> 01:09:54,060

ev1 Works to drive 8 volts to fully

586

01:10:05,810 --> 01:10:03,650

both crew will then work to electrically

587

01:10:06,950 --> 01:10:05,820

connect the new irosa to the ISS power

588

01:10:09,169 --> 01:10:06,960

system

589

01:10:11,689 --> 01:10:09,179

they'll first attach four connectors to

590

01:10:13,729 --> 01:10:11,699

a Rosa then both will move to either

591

01:10:17,150 --> 01:10:13,739

side of the Legacy array to disconnect

592

01:10:18,890 --> 01:10:17,160

the old array and connect a y cable this

593

01:10:21,410 --> 01:10:18,900

will allow power to flow from both the

594

01:10:30,850 --> 01:10:21,420

new irosa and the Legacy array to the

595

01:10:36,050 --> 01:10:33,649

at this point ev1 moves into a

596

01:10:38,090 --> 01:10:36,060

deployment viewing position and ev2 will

597

01:10:40,550 --> 01:10:38,100

release the final two bolts restraining

598

01:10:43,310 --> 01:10:40,560

iroza in the undeployed position

599

01:10:44,390 --> 01:10:43,320

ibrosa will deploy over next 6 to 10

600

01:10:47,510 --> 01:10:44,400

minutes

601
01:10:49,729 --> 01:10:47,520
during deployment ev1 translates back to

602
01:10:51,530 --> 01:10:49,739
diversa carrier to reconfigure the

603
01:10:53,990 --> 01:10:51,540
carrier beams that previously held the

604
01:10:56,270 --> 01:10:54,000
upper iroza

605
01:10:58,550 --> 01:10:56,280
these beams need to be rotated out of

606
01:11:02,930 --> 01:10:58,560
the way to allow access to the lower

607
01:11:07,550 --> 01:11:05,810
once deployment is complete ev2 will

608
01:11:10,070 --> 01:11:07,560
release two bolts that allow the arose

609
01:11:12,910 --> 01:11:10,080
of blankets to become tensioned

610
01:11:15,950 --> 01:11:12,920
ev2 then cleans up the mod kit work site

611
01:11:17,990 --> 01:11:15,960
retrieving his crew lock bag and head to

612
01:11:19,660 --> 01:11:18,000
the carrier to help ev1 with the carrier

613
01:11:22,130 --> 01:11:19,670

beams

614

01:11:23,870 --> 01:11:22,140

[Music]

615

01:11:25,610 --> 01:11:23,880

the crew members work together to

616

01:11:26,330 --> 01:11:25,620

release the bolts holding the beams in

617

01:11:28,370 --> 01:11:26,340

place

618

01:11:32,149 --> 01:11:28,380

then they will rotate the beams out of

619

01:11:37,180 --> 01:11:32,159

the way and secure them back down

620

01:11:37,190 --> 01:11:42,669

[Music]

621

01:11:47,990 --> 01:11:45,110

both crew will clean up the work site

622

01:11:50,689 --> 01:11:48,000

and translate back to the airlock they

623

01:11:53,450 --> 01:11:50,699

will clean up their tethers on the way

624

01:11:56,390 --> 01:11:53,460

they will then work to Ingress and begin

625

01:12:05,810 --> 01:11:56,400

repressing the airlock this will finish

626

01:12:10,250 --> 01:12:08,390

and that is a high level level overview

627

01:12:14,930 --> 01:12:10,260

of what we can expect from today's

628

01:12:20,330 --> 01:12:17,870

if you're just joining us to NASA

629

01:12:22,310 --> 01:12:20,340

astronauts are currently suited up and

630

01:12:24,410 --> 01:12:22,320

in the crew airlock and are working

631

01:12:26,149 --> 01:12:24,420

their way through depressurization

632

01:12:29,209 --> 01:12:26,159

procedures

633

01:12:31,490 --> 01:12:29,219

today's space walk space Walkers are

634

01:12:34,189 --> 01:12:31,500

NASA astronaut Steve Bowen and today

635

01:12:36,470 --> 01:12:34,199

will be his ninth spacewalk as well as

636

01:12:54,310 --> 01:12:36,480

NASA astronaut Woody hoberg who will be

637

01:13:01,189 --> 01:12:58,430

Bowen Ann hoberg will venture outside

638

01:13:02,930 --> 01:13:01,199

for a spacewalk expected to last about

639

01:13:05,030 --> 01:13:02,940

seven hours today the focus of which

640

01:13:07,490 --> 01:13:05,040

will be on the starboard truss of the

641

01:13:09,470 --> 01:13:07,500

International Space Station to install

642

01:13:13,370 --> 01:13:09,480

and monitor the deployment of one of the

643

01:13:15,590 --> 01:13:13,380

irosas or ISS rollout solar array

644

01:13:17,870 --> 01:13:15,600

both of which were delivered on a SpaceX

645

01:13:24,470 --> 01:13:17,880

cargo Dragon resupply vehicle on Monday

646

01:13:30,350 --> 01:13:28,490

and today's space walk is the 264th in

647

01:13:33,110 --> 01:13:30,360

support of space station assembly

648

01:13:36,470 --> 01:13:33,120

maintenance and upgrades

649

01:13:38,750 --> 01:13:36,480

this is the seventh spacewalk in 2023

650

01:13:41,209 --> 01:13:38,760

and the fifth spacewalk for expedition

651
01:13:43,550 --> 01:13:41,219
69.

652
01:13:46,250 --> 01:13:43,560
as we mentioned it's the ninth space

653
01:13:48,950 --> 01:13:46,260
work spacewalk for Bowen who has a

654
01:14:05,750 --> 01:13:48,960
cumulative space walking time of over 54

655
01:14:11,450 --> 01:14:08,090
the iro said that the crew will install

656
01:14:14,030 --> 01:14:11,460
today is 60 feet long and 20 feet wide

657
01:14:17,090 --> 01:14:14,040
it Shades a little more than half of the

658
01:14:22,910 --> 01:14:17,100
original or Legacy arrays which are 112

659
01:14:27,830 --> 01:14:25,430
each new irosa produces more than 20

660
01:14:30,590 --> 01:14:27,840
kilowatts of electricity and once all

661
01:14:33,290 --> 01:14:30,600
the iroses are installed it will enable

662
01:14:34,970 --> 01:14:33,300
a 30 increase in power production over

663
01:15:18,430 --> 01:14:34,980

the International Space Station's

664

01:15:25,189 --> 01:15:22,130

and we are in a loss of signal period as

665

01:15:27,530 --> 01:15:25,199

we have a Handover between satellites

666

01:15:30,590 --> 01:15:27,540

however we are expecting Communications

667

01:15:33,410 --> 01:15:30,600

and video to be back here in less than a

668

01:15:36,350 --> 01:15:35,209

during this loss of signal period the

669

01:15:38,930 --> 01:15:36,360

crew has been stepping through

670

01:15:41,930 --> 01:15:38,940

procedures in order to work through

671

01:15:43,729 --> 01:15:41,940

depressurization of the airlock

672

01:15:46,430 --> 01:15:43,739

this is done in a two-stage process

673

01:15:48,050 --> 01:15:46,440

first the crew lock goes down to five

674

01:15:50,149 --> 01:15:48,060

pounds per square inch of pressure at

675

01:15:52,189 --> 01:15:50,159

which point that depressurization will

676

01:15:54,550 --> 01:15:52,199

be paused to do a systems check

677

01:15:57,050 --> 01:15:54,560

and then following this depression

678

01:16:00,050 --> 01:15:57,060

depressurization will resume to bring it

679

01:16:01,790 --> 01:16:00,060

all the way down to the vacuum now once

680

01:16:03,350 --> 01:16:01,800

that vacuum is reached the two space

681

01:16:05,450 --> 01:16:03,360

Walkers will complete some additional

682

01:16:07,010 --> 01:16:05,460

suit and calm checks before placing

683

01:16:09,290 --> 01:16:07,020

their spacesuit on internal battery

684

01:16:54,290 --> 01:16:09,300

power officially marking the start of

685

01:17:00,350 --> 01:16:56,649

[Music]

686

01:17:03,350 --> 01:17:00,360

and pressure inside of the crew lock is

687

01:17:05,450 --> 01:17:03,360

about 7.27 pounds per square inch again

688

01:17:09,350 --> 01:17:05,460

we'll pause once that pressure reaches 5

689

01:17:09,360 --> 01:17:37,130

foreign

690

01:17:50,350 --> 01:17:38,990

station Houston on one we're back with

691

01:17:58,070 --> 01:17:52,669

next time we have your last favorite

692

01:17:58,080 --> 01:18:01,090

thank you

693

01:18:05,390 --> 01:18:03,290

Stephen what are you guys talking you

694

01:18:07,490 --> 01:18:05,400

have about 100 millimeters of mercury to

695

01:18:09,649 --> 01:18:07,500

go

696

01:18:12,410 --> 01:18:09,659

all right if you want coffee yep great

697

01:18:28,990 --> 01:18:12,420

guy copy I see airlock P6 decimal five

698

01:19:15,709 --> 01:18:31,630

pressure inside the crew lock now at

699

01:19:15,719 --> 01:19:19,330

ah

700

01:19:34,850 --> 01:19:22,370

now less than six pounds per square inch

701
01:19:39,830 --> 01:19:37,490
again once we do reach five pounds per

702
01:20:41,770 --> 01:19:39,840
square inch that depressurization will

703
01:20:45,910 --> 01:20:43,550
everything's still looking good for

704
01:20:48,229 --> 01:20:45,920
depressurization now at

705
01:20:50,750 --> 01:20:48,239
5.18 pounds per square inch of pressure

706
01:20:54,200 --> 01:20:50,760
inside the crew lock

707
01:21:06,470 --> 01:20:56,290
[Music]

708
01:21:10,790 --> 01:21:08,990
what do you keep us pump man Isle valve

709
01:21:16,010 --> 01:21:10,800
closed both of you can expect an alert

710
01:21:20,810 --> 01:21:18,530
and copy closed okay next thing we're

711
01:21:22,790 --> 01:21:20,820
going to do is a leak check so you'll

712
01:21:24,950 --> 01:21:22,800
both take your switch display status

713
01:21:27,470 --> 01:21:24,960

until recheck question mark is displayed

714

01:21:30,410 --> 01:21:27,480

hold that for two seconds and then

715

01:21:32,390 --> 01:21:30,420

follow the display instructions

716

01:21:35,450 --> 01:21:32,400

don't worry if he was

717

01:21:37,910 --> 01:21:35,460

uv2 and work

718

01:21:39,649 --> 01:21:37,920

and pressure inside the crew lock is now

719

01:21:41,630 --> 01:21:39,659

at five pounds per square inch of

720

01:21:43,790 --> 01:21:41,640

pressure so you did hear those words

721

01:21:47,149 --> 01:21:43,800

about the systems check that are

722

01:21:50,270 --> 01:21:48,530

following the system's check

723

01:21:53,930 --> 01:21:50,280

depressurization will resume and

724

01:21:58,310 --> 01:21:56,630

and once vacuum is reached the two space

725

01:22:00,290 --> 01:21:58,320

Walkers will complete some additional

726
01:22:02,510 --> 01:22:00,300
suit and communication checks before

727
01:22:04,550 --> 01:22:02,520
they Place their spacesuit on internal

728
01:22:08,050 --> 01:22:04,560
battery power officially marking the

729
01:22:10,729 --> 01:22:08,060
start of today's spacewalk

730
01:22:12,890 --> 01:22:10,739
and following this the crew will of

731
01:22:33,050 --> 01:22:12,900
course exit the airlock and begin

732
01:22:38,820 --> 01:22:36,470
is that complete everyone moving to Eva

733
01:22:41,649 --> 01:22:38,830
it'll be a minute

734
01:22:44,000 --> 01:22:41,659
[Applause]

735
01:22:46,010 --> 01:22:44,010
for both good news

736
01:22:56,510 --> 01:22:46,020
[Applause]

737
01:23:00,910 --> 01:22:59,390
Everyone's an Eva

738
01:23:02,830 --> 01:23:00,920

be able to

739

01:23:05,870 --> 01:23:02,840

accessories

740

01:23:07,430 --> 01:23:05,880

nice job

741

01:23:09,830 --> 01:23:07,440

what are you going to take a deepest

742

01:23:13,790 --> 01:23:09,840

month man ISO valve to open both of you

743

01:23:13,800 --> 01:23:22,030

man that's the valve is open

744

01:23:27,050 --> 01:23:23,689

foreign

745

01:23:28,490 --> 01:23:27,060

emergency empath is also open both of

746

01:23:30,649 --> 01:23:28,500

you continue to monitor your suit

747

01:23:33,169 --> 01:23:30,659

pressure gauge make sure that it remains

748

01:23:35,030 --> 01:23:33,179

less than five decimal five again if it

749

01:23:46,030 --> 01:23:35,040

ever goes above five decimal five let us

750

01:23:51,530 --> 01:23:49,729

our next fashion will be at 2 PSI copy I

751
01:23:53,450 --> 01:23:51,540
see it

752
01:23:55,669 --> 01:23:53,460
and those system checks looking good

753
01:24:25,130 --> 01:23:55,679
depressurization is continuing as

754
01:24:29,570 --> 01:24:27,890
pressure inside the crew lock now less

755
01:25:00,470 --> 01:24:29,580
than four pounds per square inch of

756
01:25:00,480 --> 01:25:33,910
foreign

757
01:25:33,920 --> 01:25:41,750
per square inch of pressure

758
01:25:41,760 --> 01:25:52,130
foreign

759
01:25:57,410 --> 01:25:54,950
and we are getting a view back inside of

760
01:25:59,390 --> 01:25:57,420
the equipment lock here where NASA

761
01:26:01,790 --> 01:25:59,400
astronaut Frank Rubio on the left and

762
01:26:03,830 --> 01:26:01,800
United Arab Emirates astronaut Sultan

763
01:26:06,229 --> 01:26:03,840

al-nayadi continue to step through

764

01:26:13,129 --> 01:26:06,239

depressurization procedures with hoberg

765

01:26:27,850 --> 01:26:15,910

pressure inside the crew lock now at

766

01:26:33,470 --> 01:26:30,890

once vacuum is reached inside the crew

767

01:26:35,510 --> 01:26:33,480

lock the two space Walkers will complete

768

01:26:37,850 --> 01:26:35,520

additional suit and communication checks

769

01:26:40,189 --> 01:26:37,860

before they do Place their spacesuit on

770

01:26:45,709 --> 01:26:40,199

internal battery power which will Mark

771

01:26:49,610 --> 01:26:47,930

a U.S spacewalk start and end time is

772

01:26:51,590 --> 01:26:49,620

measured from the time the crew places

773

01:26:52,990 --> 01:26:51,600

their space suit on internal battery

774

01:26:56,830 --> 01:26:53,000

power

775

01:27:29,870 --> 01:26:56,840

123 continuing to 103.

776
01:27:35,209 --> 01:27:33,290
now closing in on two pounds per square

777
01:27:52,250 --> 01:27:35,219
inch of pressure inside the

778
01:27:57,950 --> 01:27:54,430
okay

779
01:28:00,890 --> 01:27:57,960
valve closed closed

780
01:28:04,010 --> 01:28:00,900
copy close 40 on the UIA switch

781
01:28:06,590 --> 01:28:04,020
depressed pump power off of speed press

782
01:28:09,169 --> 01:28:06,600
both power is off

783
01:28:11,390 --> 01:28:09,179
okay guys I will turn you over to Jenny

784
01:28:14,090 --> 01:28:11,400
for your initial Thunder config and

785
01:28:18,709 --> 01:28:14,100
Jenny you are prime

786
01:28:22,729 --> 01:28:21,229
it's great Jenny I'm in a great con uh

787
01:28:25,550 --> 01:28:22,739
great position to read you the config

788
01:28:28,310 --> 01:28:25,560

setting at the erlock viewing extender

789

01:28:33,709 --> 01:28:30,830

all right good luck during extender I

790

01:28:37,189 --> 01:28:33,719

have my left waist tether gate closed

791

01:28:39,050 --> 01:28:37,199

locked lock unlocked

792

01:28:41,870 --> 01:28:39,060

the waste other small Hook is on my left

793

01:28:41,880 --> 01:28:46,370

a closed lock on block

794

01:28:46,380 --> 01:28:52,750

I left beer extender I have my Red Hook

795

01:28:59,450 --> 01:28:56,570

and green reels are both unlocked

796

01:29:04,250 --> 01:28:59,460

the red Wheels yellow Hook is gay closed

797

01:29:10,310 --> 01:29:07,189

my green reels small Greenhouse is gate

798

01:29:15,290 --> 01:29:10,320

close locked wheel

799

01:29:24,360 --> 01:29:15,300

and the green reels anchor hook goes to

800

01:29:28,400 --> 01:29:27,290

[Music]

801
01:30:04,209 --> 01:29:28,410
foreign

802
01:30:11,390 --> 01:30:07,370
rail both reels are unlocked

803
01:30:12,709 --> 01:30:11,400
I have the boy crook to my mini

804
01:30:32,270 --> 01:30:12,719
Workstation

805
01:30:32,280 --> 01:30:37,209
all right

806
01:30:40,750 --> 01:30:39,410
so I can actually eventually open the

807
01:30:48,470 --> 01:30:40,760
hash

808
01:30:53,689 --> 01:30:50,930
thanks so much James and good morning to

809
01:30:55,310 --> 01:30:53,699
you and the orbit 2 team

810
01:31:05,810 --> 01:30:55,320
good morning we are happy to be here

811
01:31:20,750 --> 01:31:08,570
and you are now hearing the voice of

812
01:31:46,610 --> 01:31:23,810
she'll be stepping through procedures

813
01:31:52,790 --> 01:31:49,669

and that pressure inside the crew lock

814

01:31:54,350 --> 01:31:52,800

now at vacuum with Woody and Steve were

815

01:31:56,270 --> 01:31:54,360

continuing the Deep press here it'll

816

01:31:59,750 --> 01:31:56,280

take a couple of more minutes

817

01:32:09,169 --> 01:31:59,760

uh when the crew lock the PDT is

818

01:32:14,149 --> 01:32:11,570

that pressure inside the crew lock is

819

01:32:19,850 --> 01:32:14,159

continuing to approach vacuum it's now

820

01:32:19,860 --> 01:32:23,050

if I don't know what you guys do this

821

01:32:26,930 --> 01:32:25,010

depending on you this is going to be

822

01:32:28,370 --> 01:32:26,940

good you guys are going to

823

01:32:29,810 --> 01:32:28,380

work in this is going to work out really

824

01:32:32,090 --> 01:32:29,820

well

825

01:32:34,129 --> 01:32:32,100

thanks so much you guys did a fantastic

826

01:32:36,770 --> 01:32:34,139

job lving this morning thanks so much

827

01:32:36,780 --> 01:33:09,129

my pleasure we'll see you in a few hours

828

01:33:12,890 --> 01:33:11,570

everything continuing to go smoothly

829

01:33:14,209 --> 01:33:12,900

this morning

830

01:33:17,090 --> 01:33:14,219

that's

831

01:33:18,830 --> 01:33:17,100

NASA astronaut Woody hoberg and Steve

832

01:33:28,189 --> 01:33:18,840

Bowen around

833

01:33:28,199 --> 01:33:33,770

it says watching it go very slowly

834

01:33:33,780 --> 01:33:43,189

good

835

01:33:48,169 --> 01:33:45,530

again everything going smoothly so far

836

01:33:50,030 --> 01:33:48,179

this morning as we anticipate the

837

01:33:51,950 --> 01:33:50,040

spacesuits to be switched over to

838

01:33:54,649 --> 01:33:51,960

battery power here shortly as soon as

839

01:33:57,890 --> 01:33:54,659

those calm checks and system checks are

840

01:34:03,470 --> 01:33:59,990

following this the crew will egress or

841

01:35:21,250 --> 01:34:03,480

exit the the hatch after they open the

842

01:35:25,430 --> 01:35:23,870

and we are continuing to get views

843

01:35:27,350 --> 01:35:25,440

inside the International Space Station

844

01:35:29,750 --> 01:35:27,360

you are seeing NASA astronaut Frank

845

01:35:34,610 --> 01:35:29,760

Rubio who helped get bone and hoberg

846

01:35:38,870 --> 01:35:36,770

all my audio now floating into screen as

847

01:35:41,270 --> 01:35:38,880

well

848

01:35:45,470 --> 01:35:41,280

Bowen and Holberg are inside the crew

849

01:35:48,229 --> 01:35:45,480

lock which continues to depress now at

850

01:36:05,689 --> 01:35:48,239

0.64 pounds per square inch rapidly

851

01:36:10,790 --> 01:36:08,510

the goal of today's spacewalk is to

852

01:36:12,590 --> 01:36:10,800

install an upgraded irosa or

853

01:36:15,410 --> 01:36:12,600

International Space Station rollout

854

01:36:22,490 --> 01:36:15,420

solar array on the 1A power channel on

855

01:36:44,870 --> 01:36:24,830

today's irosa installation will be the

856

01:36:44,880 --> 01:37:02,950

thank you

857

01:38:26,590 --> 01:37:05,689

pressure inside the crew lock now at

858

01:38:34,910 --> 01:38:31,370

Steven Woody we are at 0.5 PSI you are

859

01:38:41,890 --> 01:38:34,920

go to verify the EV hatch gauge is less

860

01:38:50,270 --> 01:38:45,830

at dural4

861

01:38:50,280 --> 01:39:16,930

all right get ready to go for the hatch

862

01:39:16,940 --> 01:39:21,890

is open

863

01:39:31,189 --> 01:39:24,110

is

864

01:39:38,970 --> 01:39:31,199

closed

865

01:39:44,090 --> 01:39:41,570

[Music]

866

01:39:45,410 --> 01:39:44,100

and we are hearing that the hatch is

867

01:39:47,090 --> 01:39:45,420

open

868

01:39:49,070 --> 01:39:47,100

pressure inside the crew lock now a

869

01:39:52,129 --> 01:39:49,080

vacuum

870

01:39:54,890 --> 01:39:52,139

both hoberg and Bowen are now going to

871

01:39:56,990 --> 01:39:54,900

work together to egress or exit the

872

01:40:00,709 --> 01:39:57,000

airlock

873

01:40:03,890 --> 01:40:00,719

copy Frank emergency mpev closed now we

874

01:40:07,370 --> 01:40:03,900

are in post depress Woody and Steve on

875

01:40:09,590 --> 01:40:07,380

your dcm's switch power to bat stagger

876
01:40:11,970 --> 01:40:09,600
your switch throws and expect a warning

877
01:40:11,980 --> 01:40:17,149
[Music]

878
01:40:21,290 --> 01:40:18,530
ducky

879
01:40:38,149 --> 01:40:21,300
dv2 going to Barry

880
01:40:43,129 --> 01:40:41,149
we verified you have a functional

881
01:40:48,050 --> 01:40:43,139
display

882
01:40:50,560 --> 01:40:48,060
switch power eb1 and 2 to off off on the

883
01:40:50,570 --> 01:41:00,290
[Music]

884
01:41:08,030 --> 01:41:04,250
copy check power ev1 and two LEDs all

885
01:41:14,330 --> 01:41:10,490
off

886
01:41:19,310 --> 01:41:14,340
switch display to Pro to verify

887
01:41:25,370 --> 01:41:23,090
functional eb2 display functional

888
01:41:27,950 --> 01:41:25,380

got these two functional displays you

889

01:41:30,350 --> 01:41:27,960

can disconnect your scus install your

890

01:41:42,520 --> 01:41:30,360

DCM covers and Stow the scus in their

891

01:41:42,530 --> 01:41:57,290

[Music]

892

01:42:02,689 --> 01:42:00,350

all right if you want to crush ab2 as

893

01:42:39,229 --> 01:42:02,699

you in the pouch

894

01:42:39,239 --> 01:42:49,850

Peppa

895

01:42:49,860 --> 01:42:53,750

Pig

896

01:42:53,760 --> 01:43:00,250

everyone

897

01:43:00,260 --> 01:43:05,090

switch water on

898

01:43:09,229 --> 01:43:07,129

if you want one room

899

01:43:12,830 --> 01:43:09,239

BB2 water on

900

01:43:16,370 --> 01:43:12,840

check DCM blank fight off and at 8 25

901
01:43:18,709 --> 01:43:16,380
a.m central time this morning the 264th

902
01:43:21,950 --> 01:43:18,719
spacewalk in support of station assembly

903
01:43:24,470 --> 01:43:21,960
maintenance and upgrades has begun ccvs

904
01:43:30,169 --> 01:43:24,480
as desired report all subsequent changes

905
01:43:30,179 --> 01:43:37,340
foreign

906
01:43:44,149 --> 01:43:40,490
[Music]

907
01:43:48,729 --> 01:43:44,159
copy both tcvs set to four reports suit

908
01:43:54,410 --> 01:43:51,950
everyone for decimal two EV two four

909
01:43:59,090 --> 01:43:54,420
decimal four

910
01:44:04,330 --> 01:43:59,100
set your visors as required we have

911
01:44:04,340 --> 01:44:11,030
two copies

912
01:44:15,290 --> 01:44:13,129
all right with that Steve you can open

913
01:44:16,729 --> 01:44:15,300

the thermal cover we'll have you Stow

914

01:44:18,830 --> 01:44:16,739

the hook on the stiffener tether Point

915

01:44:25,780 --> 01:44:18,840

cinch the strap and Report Sharpie line

916

01:44:48,970 --> 01:44:31,980

[Music]

917

01:44:57,890 --> 01:44:51,649

and we are expecting the thermal hatch

918

01:44:57,900 --> 01:45:01,790

Hook is released

919

01:45:01,800 --> 01:45:05,400

and

920

01:45:05,410 --> 01:45:15,830

[Music]

921

01:45:21,530 --> 01:45:18,350

we are seeing that thermal cover begin

922

01:45:23,870 --> 01:45:21,540

to open this is preparing to egress you

923

01:45:26,570 --> 01:45:23,880

can retrieve crew lock bag m

924

01:45:31,129 --> 01:45:26,580

you'll be doing this on your brt and

925

01:45:37,189 --> 01:45:35,450

all right daddy sounds great all right

926

01:45:46,910 --> 01:45:37,199

welcome to

927

01:45:54,109 --> 01:45:48,950

happy Steve that's a good config egress

928

01:45:54,119 --> 01:45:59,030

foreign

929

01:46:04,070 --> 01:46:01,669

and we are seeing NASA astronaut Steve

930

01:46:06,649 --> 01:46:04,080

Bowen egress the airlock

931

01:46:08,030 --> 01:46:06,659

he's designated ev1 today and he'll be

932

01:46:09,649 --> 01:46:08,040

wearing that spacesuit with the red

933

01:46:17,120 --> 01:46:09,659

stripe so he's the first out of the

934

01:46:17,130 --> 01:46:22,189

[Music]

935

01:46:33,890 --> 01:46:24,310

see no rush at all

936

01:46:37,910 --> 01:46:36,050

Bowen is still inside the airlock Hill

937

01:46:41,450 --> 01:46:37,920

egress here shortly but first he's going

938

01:46:54,590 --> 01:46:41,460

to hand a crew lock crew lock bag to

939

01:46:54,600 --> 01:46:58,570

everybody

940

01:47:05,420 --> 01:47:01,310

my brq ready

941

01:47:05,430 --> 01:47:11,750

[Music]

942

01:47:11,760 --> 01:47:16,650

foreign

943

01:48:16,390 --> 01:47:31,600

[Music]

944

01:48:16,400 --> 01:48:20,570

body checks

945

01:48:20,580 --> 01:48:27,410

hey Johnny thanks

946

01:48:31,609 --> 01:48:29,629

and next out of the airlock is going to

947

01:48:33,530 --> 01:48:31,619

be NASA astronaut Woody hoberg who is

948

01:48:35,750 --> 01:48:33,540

completing his very first spacewalk this

949

01:48:38,330 --> 01:48:35,760

morning he'll be wearing the spacesuit

950

01:48:45,600 --> 01:48:38,340

with no stripes on it the unmarked

951
01:48:45,610 --> 01:48:50,050

[Applause]

952
01:48:55,310 --> 01:48:52,310
once both crew members are out of the

953
01:48:57,830 --> 01:48:55,320
airlock they'll work to

954
01:48:59,330 --> 01:48:57,840
translate to their next location but

955
01:49:03,350 --> 01:48:59,340
first they're going to turn the lights

956
01:49:03,360 --> 01:49:14,330
thank you

957
01:49:14,340 --> 01:49:33,070
so it sounds like to see I can figure

958
01:49:33,080 --> 01:49:49,490
both crew members now out of the airlock

959
01:49:52,790 --> 01:49:51,050
I'm gonna get I'm going to plan to be

960
01:50:02,209 --> 01:49:52,800
asked Steve all right I'll come back

961
01:50:05,030 --> 01:50:03,830
but I'm in a great spot for fighting

962
01:50:17,530 --> 01:50:05,040
checks if you want to do them here yeah

963
01:50:24,290 --> 01:50:19,550

Houston's ready to coffee buddy check

964

01:50:24,300 --> 01:50:28,790

and I see what he's doing this way

965

01:50:45,609 --> 01:50:31,550

the

966

01:50:49,729 --> 01:50:47,930

handles down

967

01:50:52,100 --> 01:50:49,739

and

968

01:51:03,490 --> 01:50:52,110

what's up

969

01:51:03,500 --> 01:51:08,790

getting my crew lock bag on yeah

970

01:51:08,800 --> 01:51:24,350

[Music]

971

01:51:29,450 --> 01:51:26,390

all right excuse

972

01:51:31,430 --> 01:51:29,460

me when you are all right let me see

973

01:51:34,070 --> 01:51:31,440

one thing left to check

974

01:51:41,470 --> 01:51:34,080

are you like pretty great

975

01:51:45,649 --> 01:51:43,910

let's see

976
01:51:46,729 --> 01:51:45,659
the safer handles down if you keep

977
01:51:49,790 --> 01:51:46,739
calves up

978
01:51:51,530 --> 01:51:49,800
and at the two green lights and they

979
01:51:55,010 --> 01:51:51,540
keep your lights off

980
01:51:57,590 --> 01:51:55,020
all right Steve for you I see too many

981
01:51:58,910 --> 01:51:57,600
workstation tiles on a brq tab all three

982
01:52:02,810 --> 01:51:58,920
up

983
01:52:06,229 --> 01:52:02,820
I see a green wvs light and a green

984
01:52:11,149 --> 01:52:06,239
hacker light the lights are on

985
01:52:16,430 --> 01:52:14,030
put your bag on the brt

986
01:52:18,050 --> 01:52:16,440
and

987
01:52:19,609 --> 01:52:18,060
you're looking good Steve

988
01:52:22,790 --> 01:52:19,619

all right

989

01:52:29,570 --> 01:52:22,800

I am and I put these check your super

990

01:52:34,689 --> 01:52:31,370

starting off my gloves look good and I

991

01:52:40,550 --> 01:52:38,570

Houston copies good buddy checks good uh

992

01:52:42,169 --> 01:52:40,560

glove checks and dry hops for both of

993

01:52:44,090 --> 01:52:42,179

you you can tend the thermal cover

994

01:52:47,270 --> 01:52:44,100

closed and Steve you'll be translating

995

01:52:51,109 --> 01:52:47,280

to the Anchor hook location I have more

996

01:52:51,119 --> 01:52:54,729

all right give me one second

997

01:53:06,109 --> 01:52:57,050

I got the Cabbage piece

998

01:53:17,510 --> 01:53:10,430

just 10 to close for now thanks Woody

999

01:53:22,189 --> 01:53:20,149

and Bowen and hoberg completed some

1000

01:53:24,350 --> 01:53:22,199

initial checks to ensure everything is

1001
01:53:26,149 --> 01:53:24,360
looking good on their suits

1002
01:53:26,990 --> 01:53:26,159
they're now going to get that thermal

1003
01:53:37,450 --> 01:53:27,000
hatch

1004
01:53:48,890 --> 01:53:40,490
Steve I have a caution for you avoid

1005
01:53:58,970 --> 01:53:50,689
good read back for you both for around

1006
01:54:08,450 --> 01:54:01,669
you're looking for the shrc

1007
01:54:08,460 --> 01:54:12,590
okay

1008
01:54:17,209 --> 01:54:15,410
and hoberg is getting the thermal cover

1009
01:54:19,609 --> 01:54:17,219
closed

1010
01:54:21,770 --> 01:54:19,619
meanwhile Bowen is translating up the

1011
01:54:24,169 --> 01:54:21,780
forward face of the tress

1012
01:54:26,629 --> 01:54:24,179
Steve that mile marker is six three zero

1013
01:54:26,639 --> 01:54:46,629

six three zero zero thank you

1014

01:54:51,590 --> 01:54:49,370

once the thermal cover is closed hoberg

1015

01:54:53,149 --> 01:54:51,600

is going to follow a similar translation

1016

01:54:55,669 --> 01:54:53,159

path

1017

01:54:58,490 --> 01:54:55,679

but he's going to stop at the Port crew

1018

01:55:00,350 --> 01:54:58,500

equipment translation Aid cart

1019

01:55:04,010 --> 01:55:00,360

and he's going to pick up an

1020

01:55:06,050 --> 01:55:04,020

articulating portable foot restraint

1021

01:55:08,810 --> 01:55:06,060

this is going to be required for him

1022

01:55:12,169 --> 01:55:08,820

later in the spacewalk when he steps

1023

01:55:14,209 --> 01:55:12,179

into it on the Canada arm 2. this is

1024

01:55:16,790 --> 01:55:14,219

where you'll place your anchor hook it's

1025

01:55:29,060 --> 01:55:16,800

the Mater most handrail under the fhrc

1026
01:55:29,070 --> 01:55:32,590
[Music]

1027
01:55:39,410 --> 01:55:37,250
walking closer locked reveal

1028
01:55:43,070 --> 01:55:39,420
is unlocked

1029
01:55:45,310 --> 01:55:43,080
to my right steering extender

1030
01:55:46,910 --> 01:55:45,320
just get close like a walk

1031
01:55:50,270 --> 01:55:46,920
[Music]

1032
01:55:59,090 --> 01:55:50,280
and the greenhouse between the green and

1033
01:56:05,750 --> 01:56:02,629
anchor hook on handrail 3247 which is

1034
01:56:39,590 --> 01:56:05,760
the Zenith handrail just above yours

1035
01:56:46,010 --> 01:56:42,830
all right okay what do you talk

1036
01:56:47,040 --> 01:56:46,020
they close fireworks if he's turning

1037
01:56:50,770 --> 01:56:47,050
back to the airlock

1038
01:56:55,609 --> 01:56:53,750

happy that is a good load path for Woody

1039

01:56:58,970 --> 01:56:55,619

you can give Woody the go to release his

1040

01:57:07,189 --> 01:57:00,590

would you have a good release your waste

1041

01:57:12,649 --> 01:57:10,189

Steve you can now translate to the FSC

1042

01:57:14,930 --> 01:57:12,659

work site you'll be dropping your green

1043

01:57:17,810 --> 01:57:14,940

hook on S3

1044

01:57:20,930 --> 01:57:17,820

handrail 3011 which is Nader at the Port

1045

01:57:20,940 --> 01:57:27,250

33011

1046

01:57:31,729 --> 01:57:30,589

copy Steve or Woody excuse me once

1047

01:57:36,290 --> 01:57:31,739

that's complete you can close the

1048

01:57:40,609 --> 01:57:38,570

I broke up this Jam space uh closed

1049

01:57:44,209 --> 01:57:40,619

thermal cover

1050

01:57:47,570 --> 01:57:44,219

B Woody Woody once that's complete

1051
01:57:49,910 --> 01:57:47,580
complete you are headed to the crew lock

1052
01:57:53,209 --> 01:57:49,920
bag so much location on the Port City

1053
01:57:53,219 --> 01:57:58,430
all right Johnny thanks

1054
01:58:04,209 --> 01:58:00,770
Steve when ready I have cautions and a

1055
01:58:10,310 --> 01:58:07,310
okay goodbye

1056
01:58:12,470 --> 01:58:10,320
all right really awesome

1057
01:58:15,770 --> 01:58:12,480
warning grapple shafts and curvet

1058
01:58:17,750 --> 01:58:15,780
coupling are no touch and cautions no

1059
01:58:21,169 --> 01:58:17,760
aggressive movements or quick grabs on

1060
01:58:23,750 --> 01:58:21,179
the FSE translate slowly wait for motion

1061
01:58:35,689 --> 01:58:23,760
to dampen out before imparting loads and

1062
01:58:35,699 --> 01:58:40,870
and with the thermal cover closed

1063
01:58:46,010 --> 01:58:44,209

Holberg is now working to translate to

1064

01:58:47,930 --> 01:58:46,020

the Flight Support equipment work site

1065

01:58:52,850 --> 01:58:47,940

this is essentially a pallet that is

1066

01:59:08,270 --> 01:59:02,900

[Music]

1067

01:59:16,910 --> 01:59:10,250

I should say

1068

01:59:22,850 --> 01:59:19,430

zero one one

1069

01:59:22,860 --> 01:59:35,270

okay

1070

01:59:39,890 --> 01:59:37,010

following this Steve you'll be

1071

01:59:42,830 --> 01:59:39,900

translating onto the FSE

1072

01:59:44,390 --> 01:59:42,840

via the Pola and the crew is running

1073

01:59:47,750 --> 01:59:44,400

about 10 minutes ahead of today's

1074

01:59:52,430 --> 01:59:49,970

today's space walk is unique in that

1075

01:59:55,010 --> 01:59:52,440

once the International Space Station

1076

01:59:57,410 --> 01:59:55,020

roll out array or Arosa is installed

1077

01:59:59,870 --> 01:59:57,420

cables will need to be mated during an

1078

02:00:03,530 --> 01:59:59,880

eclipse portion so this spacewalk is

1079

02:00:06,050 --> 02:00:03,540

very carefully choreographed

1080

02:00:28,750 --> 02:00:06,060

to ensure that this timing takes place

1081

02:00:34,010 --> 02:00:31,669

and you are seeing this view from the

1082

02:00:35,629 --> 02:00:34,020

helmet cam of NASA astronaut Woody

1083

02:00:37,930 --> 02:00:35,639

hoberg who is completing his first

1084

02:00:40,850 --> 02:00:37,940

spacewalk today

1085

02:00:42,890 --> 02:00:40,860

he's continuing to translate or move

1086

02:00:46,370 --> 02:00:42,900

make his way over to the palette where

1087

02:00:54,669 --> 02:00:46,380

the iroses are installed

1088

02:00:59,750 --> 02:00:57,410

he's currently at the Port Cedar cart

1089

02:01:02,510 --> 02:00:59,760

where he's going to temporarily drop off

1090

02:01:05,270 --> 02:01:02,520

one of his crew lock bags

1091

02:01:07,250 --> 02:01:05,280

and he's also going to pick up an apfr

1092

02:01:10,850 --> 02:01:07,260

an articulating portable foot restraint

1093

02:01:14,390 --> 02:01:10,860

which will allow him to step into and

1094

02:01:17,450 --> 02:01:14,400

ride on the Canada arm 2

1095

02:01:19,970 --> 02:01:17,460

Holberg will be carrying the irosa while

1096

02:01:27,589 --> 02:01:19,980

he's on the Canada arm 2 in order to

1097

02:01:32,089 --> 02:01:30,229

today's solar array will be installed on

1098

02:01:38,390 --> 02:01:32,099

the 1A power channel on the starboard

1099

02:01:38,400 --> 02:01:45,890

thank you

1100

02:01:45,900 --> 02:02:01,990

foreign

1101
02:02:02,000 --> 02:02:26,150
to a short Handover

1102
02:02:26,160 --> 02:02:44,330
[Music]

1103
02:02:48,770 --> 02:02:46,850
and we are in a brief expected Handover

1104
02:02:51,709 --> 02:02:48,780
between satellites but we'll regain

1105
02:03:09,169 --> 02:02:51,719
Communications and video with the crew

1106
02:03:17,930 --> 02:03:11,270
Steve Woody I'm back with you after the

1107
02:03:25,790 --> 02:03:21,229
coffee that small bushings on the uh

1108
02:03:40,070 --> 02:03:27,589
copy you have eyes on the phone thanks

1109
02:03:44,270 --> 02:03:43,010
Woody you will be picking up the apfr in

1110
02:03:48,589 --> 02:03:44,280
with three looks like you're already

1111
02:03:48,599 --> 02:04:08,290
and it does

1112
02:04:13,310 --> 02:04:11,089
and this view from NASA astronaut Woody

1113
02:04:15,050 --> 02:04:13,320

hoberg's helmet cameras he works to pick

1114

02:04:18,410 --> 02:04:15,060

up the articulating portable foot

1115

02:04:30,230 --> 02:04:18,420

restraint from the port Ceda cart

1116

02:04:47,990 --> 02:04:44,050

[Music]

1117

02:04:52,550 --> 02:04:48,000

Woody this is in line with what we

1118

02:04:58,020 --> 02:04:53,990

okay

1119

02:04:58,030 --> 02:05:01,310

[Applause]

1120

02:05:06,290 --> 02:05:04,390

copy a tcv of two for Woody

1121

02:05:08,030 --> 02:05:06,300

[Music]

1122

02:05:13,030 --> 02:05:08,040

negative seven

1123

02:05:22,850 --> 02:05:18,400

[Music]

1124

02:05:25,070 --> 02:05:22,860

adjust the alarm small goes to zero zero

1125

02:05:29,270 --> 02:05:25,080

zero eight

1126

02:05:31,310 --> 02:05:29,280

and the integral goes to the upper

1127

02:05:34,129 --> 02:05:31,320

paragraph

1128

02:05:37,010 --> 02:05:34,139

okay firm that's right uh Steve that

1129

02:05:40,550 --> 02:05:37,020

handrail should be 13. once that's done

1130

02:05:40,560 --> 02:05:59,890

uh

1131

02:06:05,089 --> 02:06:03,410

and while hoberg Works to secure that

1132

02:06:06,950 --> 02:06:05,099

articulating portable foot restraint

1133

02:06:09,770 --> 02:06:06,960

after grabbing it from the port Ceda

1134

02:06:13,620 --> 02:06:09,780

cart we are going to hear Bowen complete

1135

02:06:13,630 --> 02:06:16,729

[Music]

1136

02:06:23,450 --> 02:06:20,649

the hap is the helmet absorption pad

1137

02:06:25,129 --> 02:06:23,460

and this is checked regularly throughout

1138

02:06:27,229 --> 02:06:25,139

the spacewalk along with the gloves just

1139

02:06:37,470 --> 02:06:27,239

to assure that everything is performing

1140

02:06:41,050 --> 02:06:38,050

[Music]

1141

02:06:43,430 --> 02:06:41,060

[Applause]

1142

02:06:45,589 --> 02:06:43,440

with the articulating portable foot

1143

02:06:47,750 --> 02:06:45,599

restraint now and hand hoberg is going

1144

02:06:53,209 --> 02:06:47,760

to work to install it on the Canada arm

1145

02:06:53,219 --> 02:06:57,700

on

1146

02:06:57,710 --> 02:07:01,070

[Music]

1147

02:07:01,080 --> 02:07:05,030

zero zero eight

1148

02:07:05,040 --> 02:07:33,890

puppy

1149

02:07:39,410 --> 02:07:36,649

Woody I have your next step working with

1150

02:07:42,649 --> 02:07:39,420

Frank to GCA to the published apfr

1151
02:07:47,390 --> 02:07:45,350
all right James I agree uh Steve do you

1152
02:07:49,490 --> 02:07:47,400
need to call him just for one second I'm

1153
02:07:52,430 --> 02:07:49,500
gonna head over to

1154
02:07:55,330 --> 02:07:52,440
R5

1155
02:07:57,430 --> 02:07:55,340
from the upper

1156
02:08:00,290 --> 02:07:57,440
settings

1157
02:08:03,350 --> 02:08:00,300
and Steve can you confirm that you've

1158
02:08:04,970 --> 02:08:03,360
picked up the PGT I left the ret on the

1159
02:08:08,629 --> 02:08:04,980
bag so that's now in your swing arm and

1160
02:08:13,550 --> 02:08:11,270
okay you did record inspection headset

1161
02:08:13,560 --> 02:08:16,689
and you

1162
02:08:21,770 --> 02:08:19,490
we were getting a view there briefly of

1163
02:08:23,330 --> 02:08:21,780

the iroses and there we see it again

1164

02:08:26,149 --> 02:08:23,340

here the International Space Station

1165

02:08:28,370 --> 02:08:26,159

roll out race there's two on that pallet

1166

02:08:30,169 --> 02:08:28,380

on the very left of your screen one of

1167

02:08:36,290 --> 02:08:30,179

them is going to be installed today and

1168

02:08:40,850 --> 02:08:38,030

we're also getting a view of the Kanda

1169

02:08:44,390 --> 02:08:40,860

arm 2 which hoberg will be utilizing

1170

02:08:46,129 --> 02:08:44,400

today when he moves the irosa to the 1A

1171

02:08:49,120 --> 02:08:46,139

power Channel

1172

02:08:49,130 --> 02:08:54,370

[Applause]

1173

02:08:59,990 --> 02:08:58,010

all right Jenny I have the PTT and let

1174

02:09:02,209 --> 02:09:00,000

me leave this

1175

02:09:04,729 --> 02:09:02,219

rat on here correct

1176

02:09:06,890 --> 02:09:04,739

a firm leave the red on your swing or

1177

02:09:12,050 --> 02:09:06,900

leave the rat on the bag and Reps off to

1178

02:09:15,110 --> 02:09:13,370

all right that's gonna work if you're

1179

02:09:19,270 --> 02:09:15,120

doing PGT settings

1180

02:09:25,070 --> 02:09:22,990

[Music]

1181

02:09:27,169 --> 02:09:25,080

all right I'll let you know if we get

1182

02:09:27,830 --> 02:09:27,179

come back before if I haven't done it

1183

02:09:30,640 --> 02:09:27,840

yet

1184

02:09:46,010 --> 02:09:30,650

copy and that was a good read back

1185

02:09:54,169 --> 02:09:50,290

it's idiot I am Jared what is your name

1186

02:09:56,390 --> 02:09:54,179

and also in your frame there you can see

1187

02:09:59,510 --> 02:09:56,400

a dragon vehicle that actually brought

1188

02:10:01,070 --> 02:09:59,520

up the ISS rollout solar arrays

1189

02:10:04,310 --> 02:10:01,080

that Dragon docked to the International

1190

02:10:06,830 --> 02:10:04,320

Space Station on Monday

1191

02:10:09,649 --> 02:10:06,840

we bring in the arm towards you that is

1192

02:10:11,390 --> 02:10:09,659

station following the docking the ISS

1193

02:10:13,910 --> 02:10:11,400

rollout solar arrays were removed from

1194

02:10:16,790 --> 02:10:13,920

Dragon's trunk and placed on that pallet

1195

02:10:18,770 --> 02:10:16,800

that you just saw there and next our

1196

02:10:22,970 --> 02:10:18,780

space Walkers are going to work to

1197

02:10:25,010 --> 02:10:22,980

remove that first irosa solar array by

1198

02:10:27,649 --> 02:10:25,020

removing some bolts and working through

1199

02:10:30,950 --> 02:10:27,659

some procedures to loosen it up before

1200

02:10:41,089 --> 02:10:30,960

it can be hand carried by hoberg on the

1201
02:10:50,330 --> 02:10:43,129
continue

1202
02:10:54,589 --> 02:10:51,950
to go

1203
02:10:58,729 --> 02:10:54,599
continue to published

1204
02:10:58,739 --> 02:11:05,089
and ramping out

1205
02:11:09,109 --> 02:11:07,250
okay that is our published position

1206
02:11:11,689 --> 02:11:09,119
how's it how's that looking all right

1207
02:11:17,570 --> 02:11:11,699
can you please give me five zero

1208
02:11:31,629 --> 02:11:20,629
IAL the half a meter station later in

1209
02:11:41,330 --> 02:11:34,129
I see good Russian

1210
02:11:52,129 --> 02:11:44,149
okay 30 centimeters ago continue

1211
02:12:05,450 --> 02:11:54,890
they're running out

1212
02:12:08,810 --> 02:12:07,970
that is uh GCA complete that's a perfect

1213
02:12:10,970 --> 02:12:08,820

position

1214

02:12:13,870 --> 02:12:10,980

all right coffee just here complete and

1215

02:12:17,149 --> 02:12:13,880

bricks are coming on copy breakthrough

1216

02:12:18,770 --> 02:12:17,159

and I'll be installing the atsr Woody

1217

02:12:21,229 --> 02:12:18,780

we're looking for you are going to

1218

02:12:27,050 --> 02:12:21,239

install the area for Woody we're looking

1219

02:12:27,060 --> 02:12:30,470

confirmed proper

1220

02:12:37,570 --> 02:12:31,850

good settings

1221

02:12:41,089 --> 02:12:39,830

counterclockwise too

1222

02:12:44,930 --> 02:12:41,099

and

1223

02:12:46,729 --> 02:12:44,940

hope you got a completely horrify

1224

02:12:48,109 --> 02:12:46,739

copy the boat Will Spring out when fully

1225

02:12:52,970 --> 02:12:48,119

released and you'll see a white line

1226

02:12:56,569 --> 02:12:54,830
over continuing to step through

1227

02:12:58,970 --> 02:12:56,579
procedures to get that articulating

1228

02:13:03,129 --> 02:12:58,980
portable foot restraint installed on the

1229

02:13:08,089 --> 02:13:05,330
this articulating portable foot

1230

02:13:09,950 --> 02:13:08,099
restraint or apfr allows him to click

1231

02:13:14,930 --> 02:13:09,960
his space walking boots into it so that

1232

02:13:40,010 --> 02:13:17,629
he'll be carrying the irosa while he

1233

02:13:45,410 --> 02:13:42,470
any apfr's installed in the arm

1234

02:13:47,450 --> 02:13:45,420
at 12 talk about the fox six

1235

02:13:50,569 --> 02:13:47,460
always block on black good pull twist

1236

02:13:52,790 --> 02:13:50,579
test and the pitch off can be depressed

1237

02:13:55,010 --> 02:13:52,800
puppy Woody good checks now we'll need

1238

02:13:56,930 --> 02:13:55,020

you to perform a safety tether swap to

1239

02:13:59,990 --> 02:13:56,940

the arm let me know when your yellow

1240

02:14:03,290 --> 02:14:00,000

Hook is on the ssrms tether point and

1241

02:14:06,330 --> 02:14:05,390

all right sounds good Jimmy

1242

02:14:07,490 --> 02:14:06,340

all right

1243

02:14:09,109 --> 02:14:07,500

[Music]

1244

02:14:09,890 --> 02:14:09,119

we'll just returned they let it do a

1245

02:14:11,510 --> 02:14:09,900

couple of bumps

1246

02:14:13,370 --> 02:14:11,520

[Music]

1247

02:14:15,129 --> 02:14:13,380

so that we've verified it was it was

1248

02:14:17,930 --> 02:14:15,139

clear

1249

02:14:19,189 --> 02:14:17,940

cubby 27 turns and the bolt is fully

1250

02:14:25,490 --> 02:14:19,199

released can you see a white line

1251

02:14:30,229 --> 02:14:28,250

happy you can store your PGT and we are

1252

02:14:32,589 --> 02:14:30,239

currently in an expected Handover

1253

02:14:35,089 --> 02:14:32,599

between our satellites

1254

02:14:36,530 --> 02:14:35,099

we do have communications with the crew

1255

02:14:39,410 --> 02:14:36,540

however we do not have video at this

1256

02:14:43,669 --> 02:14:39,420

moment but we'll regain it

1257

02:14:46,790 --> 02:14:43,679

copy translate to stanchion Bravo

1258

02:14:49,530 --> 02:14:46,800

Berg has completed installing the apfr

1259

02:14:59,030 --> 02:14:49,540

on the robotic arm

1260

02:15:03,950 --> 02:15:01,910

s any my yellow hooks his gate closed

1261

02:15:07,550 --> 02:15:03,960

locked block unblocked to the ssrms

1262

02:15:10,970 --> 02:15:07,560

other point green Hook is stowed on mile

1263

02:15:15,890 --> 02:15:10,980

marker 6360 and that casino reel is

1264

02:15:20,870 --> 02:15:17,470

all right

1265

02:15:26,990 --> 02:15:23,450

coffee Woody that is a good config

1266

02:15:28,850 --> 02:15:27,000

insert ensure that uh Steve's tether is

1267

02:15:30,470 --> 02:15:28,860

clear of your green hook and then you

1268

02:15:33,830 --> 02:15:30,480

can work with Frank to get to the

1269

02:15:36,770 --> 02:15:35,390

all right let me get eyes on Steve's

1270

02:15:41,629 --> 02:15:36,780

tether

1271

02:15:46,910 --> 02:15:43,370

and I am in a

1272

02:15:48,290 --> 02:15:46,920

great config for apfr Ingress oh GCI

1273

02:15:51,350 --> 02:15:48,300

needed

1274

02:15:54,229 --> 02:15:51,360

okay with you we are coffee and uh pics

1275

02:15:56,270 --> 02:15:54,239

are still on you are go for apfr Ingress

1276

02:15:58,250 --> 02:15:56,280

drop the break time go for immigrants

1277

02:16:02,930 --> 02:15:58,260

thank you so much Woody you need to

1278

02:16:02,940 --> 02:16:06,290

yep you're in work jams thanks

1279

02:16:14,709 --> 02:16:08,569

and Steve they say again if I missed a

1280

02:16:19,430 --> 02:16:17,629

and hoberg has successfully gotten the

1281

02:16:21,770 --> 02:16:19,440

articulating portable foot restraint

1282

02:16:24,350 --> 02:16:21,780

installed on the Canada arm 2 he's now

1283

02:16:26,330 --> 02:16:24,360

going to work to click his boots into

1284

02:16:28,250 --> 02:16:26,340

the articulating portable foot restraint

1285

02:16:31,069 --> 02:16:28,260

and Ingress it

1286

02:16:34,420 --> 02:16:31,079

this will allow him to fly on the Canada

1287

02:16:38,450 --> 02:16:36,349

[Music]

1288

02:16:52,429 --> 02:16:38,460

and you are seeing him work to Ingress

1289

02:17:04,390 --> 02:16:54,410

thank you

1290

02:17:12,430 --> 02:17:11,110

[Music]

1291

02:17:24,140 --> 02:17:12,440

[Applause]

1292

02:17:33,230 --> 02:17:30,349

[Music]

1293

02:17:36,250 --> 02:17:33,240

10 o'clock was two

1294

02:17:39,290 --> 02:17:36,260

go to R5

1295

02:17:41,750 --> 02:17:39,300

and looking for a full release and a

1296

02:17:44,389 --> 02:17:41,760

white indicator

1297

02:17:49,549 --> 02:17:44,399

good word Steve expect

1298

02:17:49,559 --> 02:17:54,169

at 18 to 23rds okay

1299

02:17:57,650 --> 02:17:56,330

and Steve I'm gonna look look on again

1300

02:18:00,410 --> 02:17:57,660

when you have a chance

1301
02:18:03,530 --> 02:18:00,420
thanks

1302
02:18:07,250 --> 02:18:03,540
pixels on I'm ready for trust back off

1303
02:18:09,049 --> 02:18:07,260
surprise copies uh with your ready and

1304
02:18:11,030 --> 02:18:09,059
breaks are coming off coffee breaks off

1305
02:18:12,410 --> 02:18:11,040
would he ensure your check your tools

1306
02:18:18,290 --> 02:18:12,420
and tethers are clear we need you to

1307
02:18:18,300 --> 02:18:23,280
copy I agree you are a go to proceed

1308
02:18:27,169 --> 02:18:24,650
[Applause]

1309
02:18:29,690 --> 02:18:27,179
also are hearing that you're left safer

1310
02:18:32,750 --> 02:18:29,700
handle might be up we need you to check

1311
02:18:40,969 --> 02:18:36,770
got it you your team was correct

1312
02:18:42,770 --> 02:18:40,979
and both safer handles are down

1313
02:19:00,129 --> 02:18:42,780

Kentucky both safer handles down on

1314

02:19:05,570 --> 02:19:02,089

when you are we're going to bring you

1315

02:19:09,889 --> 02:19:05,580

frustration forward about 80 centimeters

1316

02:19:11,690 --> 02:19:09,899

and then station later uh three meters

1317

02:19:14,450 --> 02:19:11,700

um 60 centimeters

1318

02:19:20,690 --> 02:19:14,460

I'm ready for all of that here we go

1319

02:19:25,389 --> 02:19:22,969

good motion Photon probably a good

1320

02:19:30,830 --> 02:19:28,009

and as you can see on your screen now

1321

02:19:33,169 --> 02:19:30,840

hoberg now being moved while in that

1322

02:19:35,330 --> 02:19:33,179

articulating portable foot restraint on

1323

02:19:37,790 --> 02:19:35,340

the Canada arm

1324

02:19:40,310 --> 02:19:37,800

that Canada arm is being operated by

1325

02:19:42,589 --> 02:19:40,320

United Arab Emirates astronaut Sultan

1326

02:19:57,710 --> 02:19:42,599

al-niadi who is inside the International

1327

02:20:03,530 --> 02:20:00,710

hoberg is going to be translated to a

1328

02:20:06,310 --> 02:20:03,540

better position to help NASA astronaut

1329

02:20:09,469 --> 02:20:06,320

Steve Bowen remove some bolts

1330

02:20:12,530 --> 02:20:09,479

and an anti-rotation device which will

1331

02:20:14,630 --> 02:20:12,540

enable the irosa to be released from the

1332

02:20:17,050 --> 02:20:14,640

palette

1333

02:20:21,349 --> 02:20:17,060

following this hoberg will hand carry it

1334

02:20:52,490 --> 02:20:21,359

while on the Canada arm 2 over to the 1A

1335

02:20:58,070 --> 02:20:55,429

they want me to go

1336

02:21:00,889 --> 02:20:58,080

and this view from NASA astronaut Woody

1337

02:21:02,450 --> 02:21:00,899

hoberg's helmet cam as he is on the

1338

02:21:04,969 --> 02:21:02,460

Canon arm too looks like he's taking

1339

02:21:12,530 --> 02:21:04,979

this opportunity to get some truly out

1340

02:21:21,410 --> 02:21:15,530

and rapping out

1341

02:21:25,429 --> 02:21:23,570

will be just a heads up next uh we're

1342

02:21:26,570 --> 02:21:25,439

gonna take you to the volt axis

1343

02:21:28,210 --> 02:21:26,580

joynercast

1344

02:21:37,690 --> 02:21:28,220

um that'll be two minutes and a half

1345

02:21:43,849 --> 02:21:39,469

set up

1346

02:21:46,429 --> 02:21:43,859

uh jewelry 20 terms

1347

02:21:48,590 --> 02:21:46,439

the lower Arosa uh with a good White

1348

02:21:52,130 --> 02:21:48,600

Band

1349

02:21:54,490 --> 02:21:52,140

copy I release I understand R5 on the

1350

02:21:58,010 --> 02:21:54,500

lower eye roses released with 20 turns

1351
02:22:00,889 --> 02:21:58,020
you should be pretty much at the bolts

1352
02:22:03,770 --> 02:22:00,899
for C2 we are going to work on releasing

1353
02:22:06,050 --> 02:22:03,780
these anti-rotation devices so you can

1354
02:22:08,990 --> 02:22:06,060
attach an adjustable equipment tether

1355
02:22:12,050 --> 02:22:09,000
and from your small trash bag to the Ard

1356
02:22:12,060 --> 02:22:20,809
okay

1357
02:22:20,819 --> 02:22:44,530
oh

1358
02:22:53,750 --> 02:22:47,030
here we are ready when you are for the

1359
02:22:53,760 --> 02:22:59,750
copy

1360
02:22:59,760 --> 02:23:18,429
foreign

1361
02:23:23,030 --> 02:23:21,410
continuing to be moved on the Canada arm

1362
02:23:25,730 --> 02:23:23,040
too

1363
02:23:31,690 --> 02:23:25,740

meanwhile Bowen is working with the

1364

02:23:37,849 --> 02:23:35,330

this is a restraint Bolt

1365

02:23:43,010 --> 02:23:37,859

next up he's going to work on releasing

1366

02:23:51,889 --> 02:23:47,270

all of this is

1367

02:23:54,469 --> 02:23:51,899

ultimately removing the International

1368

02:23:56,570 --> 02:23:54,479

Space Station rollout solar array from

1369

02:24:14,810 --> 02:23:56,580

this carrier this palette that is

1370

02:24:14,820 --> 02:24:37,150

[Music]

1371

02:24:42,889 --> 02:24:40,429

and as hoberg continues to make his way

1372

02:24:44,570 --> 02:24:42,899

over to his first work site the

1373

02:24:45,730 --> 02:24:44,580

International Space Station is currently

1374

02:24:48,590 --> 02:24:45,740

flying

1375

02:24:58,510 --> 02:24:48,600

258 statute miles off the coast of Nova

1376

02:24:58,520 --> 02:25:05,460

Woody we need you to repower your hekka

1377

02:25:09,710 --> 02:25:08,450

[Music]

1378

02:25:12,950 --> 02:25:09,720

thank you

1379

02:25:16,790 --> 02:25:14,929

oh actually Jenny I just pressed the

1380

02:25:18,710 --> 02:25:16,800

power button and I see a green light so

1381

02:25:20,570 --> 02:25:18,720

it should be on now yes we just needed

1382

02:25:22,929 --> 02:25:20,580

you to power it on that's correct it was

1383

02:25:28,309 --> 02:25:22,939

knocked off earlier

1384

02:25:32,929 --> 02:25:31,190

getting a really great view here of

1385

02:25:35,150 --> 02:25:32,939

Woody hoberg in the articulating

1386

02:25:38,809 --> 02:25:35,160

portable foot restraint

1387

02:25:43,610 --> 02:25:40,389

good read back

1388

02:25:45,530 --> 02:25:43,620

yes 10 turns only a reminder these are

1389

02:25:48,170 --> 02:25:45,540

not captive so we only want to release

1390

02:26:02,690 --> 02:25:48,180

10 turns

1391

02:26:07,190 --> 02:26:05,330

and in hoberg's hand you can see the PGT

1392

02:26:08,809 --> 02:26:07,200

or pistol grip tool this is essentially

1393

02:26:10,610 --> 02:26:08,819

the space drill it's going to be

1394

02:26:13,429 --> 02:26:10,620

utilized a lot throughout today's space

1395

02:26:15,290 --> 02:26:13,439

walk first to remove the irosa from the

1396

02:26:18,230 --> 02:26:15,300

palette and then to reinstall it on the

1397

02:26:25,849 --> 02:26:20,450

Papi Thanks James good reminder I have

1398

02:26:27,290 --> 02:26:25,859

Alpha 4 outer two set for R1 and R2

1399

02:26:28,910 --> 02:26:27,300

there's a good thing good settings Woody

1400

02:26:30,770 --> 02:26:28,920

it doesn't matter to us which of these

1401

02:26:32,510 --> 02:26:30,780

bolts you do first but the bolts Will

1402

02:26:37,309 --> 02:26:32,520

Spring out when it's fully released you

1403

02:26:43,330 --> 02:26:40,130

obviously

1404

02:26:47,450 --> 02:26:43,340

all right they get 8.8 turns

1405

02:26:49,550 --> 02:26:47,460

happy that was eight turns

1406

02:26:58,190 --> 02:26:49,560

these and you can remove the Ard and

1407

02:26:58,200 --> 02:27:02,690

so far I'm ready for a monster

1408

02:27:06,830 --> 02:27:05,150

okay Woody uh we're uh needed a few

1409

02:27:11,150 --> 02:27:06,840

minutes a few seconds to set up our

1410

02:27:11,160 --> 02:27:16,550

roof

1411

02:27:23,030 --> 02:27:19,610

removed your settings are brothel one

1412

02:27:28,670 --> 02:27:23,040

clockwise two and you'll be driving this

1413

02:27:34,370 --> 02:27:31,610

Bravo won clockwise

1414

02:27:42,469 --> 02:27:34,380

that's it good settings

1415

02:27:56,410 --> 02:27:44,030

one

1416

02:28:02,290 --> 02:27:59,150

what are you ready for the next motion

1417

02:28:05,090 --> 02:28:02,300

so it's going to be body n meter and 60

1418

02:28:13,309 --> 02:28:05,100

centimeters wow that sounds great you'll

1419

02:28:18,710 --> 02:28:16,070

we are 48 minutes into today's space

1420

02:28:20,330 --> 02:28:18,720

walk and NASA astronaut Steve Bowen and

1421

02:28:22,309 --> 02:28:20,340

Woody hoberg are continuing to work

1422

02:28:23,990 --> 02:28:22,319

together to remove Bolts from the

1423

02:28:26,450 --> 02:28:24,000

International Space Station rollout

1424

02:28:28,309 --> 02:28:26,460

solar array in order to release it so

1425

02:28:29,330 --> 02:28:28,319

that it can be carried on the Canada arm

1426

02:28:31,250 --> 02:28:29,340

too

1427

02:28:37,190 --> 02:28:31,260

step through the next set of procedures

1428

02:28:41,210 --> 02:28:39,290

I'm going to hand it over to my

1429

02:28:42,950 --> 02:28:41,220

colleague Anna Schneider who's going to

1430

02:28:44,510 --> 02:28:42,960

step through the next set of procedures

1431

02:28:46,849 --> 02:28:44,520

with you

1432

02:28:50,630 --> 02:28:46,859

before

1433

02:28:55,550 --> 02:28:53,570

okay one meter fidelity

1434

02:28:58,130 --> 02:28:55,560

[Music]

1435

02:28:59,450 --> 02:28:58,140

all right Steve I copy 11 foot-pounds

1436

02:29:04,470 --> 02:28:59,460

and a green light could you say turn

1437

02:29:04,480 --> 02:29:24,950

[Music]

1438

02:29:24,960 --> 02:29:29,870

we're just checking on those turns Steve

1439

02:29:35,929 --> 02:29:33,710

if the bumper rolled on top of the uh

1440

02:29:38,030 --> 02:29:35,939

Mount you may not get a great turns as

1441

02:29:39,950 --> 02:29:38,040

you might have expected on stop motion

1442

02:29:43,630 --> 02:29:39,960

but you can look at it it's it's on the

1443

02:29:48,290 --> 02:29:46,010

we are in the public position and you

1444

02:29:49,969 --> 02:29:48,300

are go for a bowl thing

1445

02:29:51,309 --> 02:29:49,979

we were

1446

02:29:54,230 --> 02:29:51,319

on there

1447

02:30:01,130 --> 02:29:54,240

it's on the boat it's on the amount it

1448

02:30:11,990 --> 02:30:06,469

now you can see it NASA astronaut Woody

1449

02:30:15,590 --> 02:30:13,849

all right Steve I'm sorry one more time

1450

02:30:18,170 --> 02:30:15,600

we're going to have to have you say what

1451
02:30:20,030 --> 02:30:18,180
you saw on those turns and whether you

1452
02:30:21,290 --> 02:30:20,040
counted the turns or you're reading them

1453
02:30:23,510 --> 02:30:21,300
off

1454
02:30:26,330 --> 02:30:23,520
well I counted the terms correctly

1455
02:30:29,870 --> 02:30:26,340
bumper be lost

1456
02:30:31,550 --> 02:30:29,880
but it turns it went on to the mount for

1457
02:30:34,790 --> 02:30:31,560
the Bulls dancing

1458
02:30:37,370 --> 02:30:34,800
therefore it is locked in place

1459
02:30:40,070 --> 02:30:37,380
to still feed Fred's below

1460
02:30:44,510 --> 02:30:40,080
bumper

1461
02:30:48,889 --> 02:30:46,190
all right thanks for the clarification

1462
02:30:50,450 --> 02:30:48,899
again speeds this is a good bolt you can

1463
02:30:52,670 --> 02:30:50,460

store your PGT and we'll have you

1464

02:30:55,210 --> 02:30:52,680

translate to stanchion Charlie for the

1465

02:31:03,469 --> 02:30:55,220

Charlie 1ard

1466

02:31:08,809 --> 02:31:07,070

the bolts that hoberg is working on

1467

02:31:10,670 --> 02:31:08,819

um are on the boom end of the upper

1468

02:31:13,610 --> 02:31:10,680

irosa or International Space Station

1469

02:31:15,530 --> 02:31:13,620

roll out solar array the first two bolts

1470

02:31:17,450 --> 02:31:15,540

will allow the boom deployment system

1471

02:31:19,370 --> 02:31:17,460

rollers to be moved into place to help

1472

02:31:21,110 --> 02:31:19,380

with the array deployment later in the

1473

02:31:26,330 --> 02:31:21,120

spacewalk

1474

02:31:33,670 --> 02:31:28,910

all strung out and it was 9 decimal five

1475

02:31:38,990 --> 02:31:36,290

79 decimal five that is a good bolt

1476
02:31:42,590 --> 02:31:39,000
release Woody uh we need you to access

1477
02:31:45,290 --> 02:31:42,600
R3 and R4 next you can TCA if you need

1478
02:31:47,510 --> 02:31:45,300
to I have new settings for you and as a

1479
02:31:48,889 --> 02:31:47,520
reminder these will be the 245 turn

1480
02:31:50,510 --> 02:31:48,899
bolts so we need you in a good body

1481
02:31:53,150 --> 02:31:50,520
position

1482
02:31:55,670 --> 02:31:53,160
you just heard confirmation that Woody

1483
02:31:57,050 --> 02:31:55,680
hoberg successfully released two of the

1484
02:32:01,730 --> 02:31:57,060
bolts and he's moving on to the second

1485
02:32:05,990 --> 02:32:03,290
Woody we are ready

1486
02:32:12,650 --> 02:32:06,000
okay so it's on half a meter station uh

1487
02:32:17,030 --> 02:32:14,450
and we've caught the half a meter body

1488
02:32:17,040 --> 02:32:21,410

okay stopping motion copy

1489

02:32:21,420 --> 02:32:27,349

good motion

1490

02:32:33,290 --> 02:32:29,690

you're hearing some conversation between

1491

02:32:35,570 --> 02:32:33,300

NASA ashra Audi hoberg and UAE astronaut

1492

02:32:38,630 --> 02:32:35,580

Sultan alniadi who is inside the space

1493

02:32:41,030 --> 02:32:38,640

station operating the robotic arm as he

1494

02:32:44,170 --> 02:32:41,040

moves Woody hoberg down a little bit to

1495

02:32:47,710 --> 02:32:44,180

access the next set of bolts

1496

02:32:47,720 --> 02:32:54,050

GTA complete

1497

02:32:59,030 --> 02:32:56,870

Steve once in position you can tether to

1498

02:33:02,570 --> 02:32:59,040

the Ard tether points and then I have

1499

02:33:14,590 --> 02:33:05,210

and I'm ready for settings

1500

02:33:21,170 --> 02:33:18,710

and Jenny I have Alpha three clockwise

1501

02:33:23,690 --> 02:33:21,180

three for R3

1502

02:33:26,330 --> 02:33:23,700

happy Alpha three for clockwise three

1503

02:33:34,550 --> 02:33:26,340

verify verify your PGT turn count to

1504

02:33:39,230 --> 02:33:36,770

paper

1505

02:33:44,870 --> 02:33:39,240

copy PGT turn count is zero you can

1506

02:33:52,429 --> 02:33:46,429

stop it

1507

02:33:52,439 --> 02:33:56,750

copy Woody

1508

02:34:00,290 --> 02:33:58,730

the second set of bolts that Woody

1509

02:34:02,630 --> 02:34:00,300

hoberg is currently working on will

1510

02:34:04,849 --> 02:34:02,640

release two of four mechanisms that hold

1511

02:34:14,870 --> 02:34:04,859

the ISS rollout solar array and it's

1512

02:34:19,910 --> 02:34:17,210

when folded the irosa measures

1513

02:34:21,710 --> 02:34:19,920

approximately 10 feet by two feet by

1514

02:34:23,210 --> 02:34:21,720

four feet

1515

02:34:25,670 --> 02:34:23,220

all right

1516

02:34:27,469 --> 02:34:25,680

got eight terms

1517

02:34:29,210 --> 02:34:27,479

and

1518

02:34:31,550 --> 02:34:29,220

it's loose

1519

02:34:34,429 --> 02:34:31,560

[Music]

1520

02:34:38,330 --> 02:34:34,439

copy eight turns on the Ard you pour it

1521

02:34:43,969 --> 02:34:41,330

now remove the air he's removed here for

1522

02:34:50,870 --> 02:34:43,979

settings to drive back in Bravo One

1523

02:34:50,880 --> 02:34:57,410

30 seconds from short Handover

1524

02:35:03,889 --> 02:34:59,210

while NASA astronaut Woody hoberg

1525

02:35:39,790 --> 02:35:06,530

NASA astronaut Steve Bowen continues to

1526
02:35:46,130 --> 02:35:42,530
copy Steve you've driven the stop block

1527
02:35:48,290 --> 02:35:46,140
bolt 12.1 torque seven turns and a green

1528
02:36:02,950 --> 02:35:48,300
light

1529
02:36:08,990 --> 02:36:06,130
back with you after the Handover 12.1

1530
02:36:14,630 --> 02:36:09,000
Torx seven turns in a green light you

1531
02:37:20,270 --> 02:36:37,969
s

1532
02:37:20,280 --> 02:37:34,290
foreign

1533
02:37:34,300 --> 02:37:55,910
[Music]

1534
02:38:03,530 --> 02:37:59,990
we need the 5 8 12 inch wobble on your

1535
02:38:07,190 --> 02:38:03,540
TGT and you can Stow the 7 16 on the

1536
02:38:14,510 --> 02:38:10,270
you're not so bad at work

1537
02:38:14,520 --> 02:38:19,130
copy

1538
02:38:23,809 --> 02:38:22,969

Jenny 245 turns R3 turkey counter popped

1539

02:38:27,290 --> 02:38:23,819

out

1540

02:38:30,910 --> 02:38:27,300

copy 245 turns on R3 with the turkey

1541

02:38:33,050 --> 02:38:30,920

timer pops out your settings are alpha 3

1542

02:38:43,849 --> 02:38:33,060

counter three

1543

02:39:19,990 --> 02:38:43,859

currency PTC here we go

1544

02:39:27,410 --> 02:39:22,670

NASA astronaut Woody hoberg is currently

1545

02:39:29,929 --> 02:39:27,420

working on the last of the four bolts

1546

02:39:32,510 --> 02:39:29,939

these last two bolts release two of four

1547

02:39:34,550 --> 02:39:32,520

mechanisms that hold the irosa or ISS

1548

02:40:15,530 --> 02:39:34,560

roll out solar array and its rolled up

1549

02:40:21,889 --> 02:40:18,349

the 12 inch wobble

1550

02:40:21,899 --> 02:40:26,630

going for the 5 8 to 12 inch

1551
02:40:39,349 --> 02:40:29,510
Steve I copy a good pull test on the 7

1552
02:40:49,130 --> 02:40:42,469
all right good full pass on the

1553
02:40:57,110 --> 02:40:51,290
we'll pass on the 5 8 inch 12 inch on

1554
02:41:03,230 --> 02:40:59,809
Steve now we will be breaking torque on

1555
02:41:06,469 --> 02:41:03,240
the Arosa ffe bolt you can translate to

1556
02:41:23,809 --> 02:41:06,479
oh Charlie one which is Stanton Charlie

1557
02:41:23,819 --> 02:41:29,990
all right

1558
02:41:36,110 --> 02:41:32,570
we'll be breaking torque on this bolt

1559
02:41:41,630 --> 02:41:36,120
less than half a carry

1560
02:41:58,849 --> 02:41:44,030
Brothers here

1561
02:41:58,859 --> 02:42:12,750
foreign

1562
02:42:12,760 --> 02:42:26,590
[Music]

1563
02:42:31,250 --> 02:42:29,809

we are about a minute and a half

1564

02:42:35,090 --> 02:42:31,260

from

1565

02:42:38,690 --> 02:42:35,100

an loss we have voicecom for the first

1566

02:42:42,410 --> 02:42:38,700

five minutes and for the last five

1567

02:42:56,170 --> 02:42:42,420

minutes I'm still Prime IV I will hand

1568

02:42:56,180 --> 02:43:10,060

[Applause]

1569

02:43:17,590 --> 02:43:13,610

[Music]

1570

02:43:17,600 --> 02:43:24,469

uh RS4 release 245 turns turkey timer

1571

02:43:29,809 --> 02:43:27,469

puppy Woody great job R4 release 245

1572

02:43:31,370 --> 02:43:29,819

turns and you see the turkey timer you

1573

02:43:35,389 --> 02:43:31,380

can work with Frank to move to the

1574

02:43:39,110 --> 02:43:37,610

you just heard confirmation that NASA

1575

02:43:43,130 --> 02:43:39,120

astronaut Woody hoberg finished

1576

02:43:46,610 --> 02:43:43,140

releasing the fourth Bolt

1577

02:43:49,130 --> 02:43:46,620

that bolt was holding the irosa in its

1578

02:43:52,010 --> 02:43:49,140

rolled up configuration

1579

02:43:56,270 --> 02:43:52,020

security and this is basically a big new

1580

02:43:58,910 --> 02:43:56,280

body out one meter 60 centimeters and

1581

02:44:00,410 --> 02:43:58,920

that is stationed forward you also heard

1582

02:44:02,929 --> 02:44:00,420

them reference something called a turkey

1583

02:44:04,849 --> 02:44:02,939

timer that is basically just a status

1584

02:44:12,290 --> 02:44:04,859

indicator to ensure that the bolts are

1585

02:45:18,730 --> 02:44:15,349

we are now in a an expected Handover

1586

02:45:25,490 --> 02:45:21,830

we are currently about one hour and five

1587

02:45:28,370 --> 02:45:25,500

minutes into today's space walk

1588

02:45:32,030 --> 02:45:28,380

it began at 8 25 central time this

1589

02:45:36,170 --> 02:45:32,040

morning 9 25 a.m eastern time when the

1590

02:45:41,389 --> 02:45:38,809

Steve Bowen who is ev1 with the red

1591

02:45:44,330 --> 02:45:41,399

stripes egressed the crew lock and

1592

02:45:46,670 --> 02:45:44,340

received a crew lock bag and then ev2

1593

02:45:54,130 --> 02:45:46,680

who is Woody hoberg followed him shortly

1594

02:45:58,270 --> 02:45:56,270

Bowen then translated up the forward

1595

02:46:01,309 --> 02:45:58,280

face of the trust and went starboard

1596

02:46:03,590 --> 02:46:01,319

config configuring his safety tethers on

1597

02:46:05,690 --> 02:46:03,600

the way and then hoberg followed a

1598

02:46:07,969 --> 02:46:05,700

similar path but went to the port crew

1599

02:46:10,730 --> 02:46:07,979

equipment translation Aid or Cedar cart

1600

02:46:17,770 --> 02:46:10,740

to temporarily Stow his bag and retrieve

1601
02:46:22,309 --> 02:46:20,690
Bowen then translated to the irosa or

1602
02:46:24,410 --> 02:46:22,319
International Space Station roll out

1603
02:46:28,250 --> 02:46:24,420
solar array carrier stowed his bag and

1604
02:46:30,889 --> 02:46:28,260
retrieved the pistol grip tool

1605
02:46:32,750 --> 02:46:30,899
Bowen began preparing the irosa for

1606
02:46:36,469 --> 02:46:32,760
removal from the carrier first releasing

1607
02:46:39,469 --> 02:46:36,479
a restraint bolt on the upper irisa

1608
02:46:40,910 --> 02:46:39,479
meanwhile Woody hoberg relocated the

1609
02:46:46,010 --> 02:46:40,920
foot restraint and installed it on the

1610
02:46:51,230 --> 02:46:48,830
from there Woody hoberg Ingress the foot

1611
02:46:52,790 --> 02:46:51,240
restraint and then that the arm moved

1612
02:47:03,370 --> 02:46:52,800
him away from the trust and towards the

1613
02:47:08,330 --> 02:47:06,110

Bowen translated to the lower irosa and

1614

02:47:10,309 --> 02:47:08,340

released its first restraint Bull and

1615

02:47:12,889 --> 02:47:10,319

then released both anti-rotation devices

1616

02:47:14,510 --> 02:47:12,899

on the upper irosa and stowed them in

1617

02:47:17,270 --> 02:47:14,520

the crew lock bag

1618

02:47:19,130 --> 02:47:17,280

while on the robotic arm Woody hoberg

1619

02:47:20,990 --> 02:47:19,140

was flown over to access two different

1620

02:47:23,630 --> 02:47:21,000

sets of bolts on the boom end of the

1621

02:47:25,550 --> 02:47:23,640

upper irosa the first two bolts allowed

1622

02:47:27,170 --> 02:47:25,560

the boom deployment system rollers to be

1623

02:47:29,270 --> 02:47:27,180

moved into place to help with the array

1624

02:47:31,130 --> 02:47:29,280

deployment later in the spacewalk and

1625

02:47:33,349 --> 02:47:31,140

then the second two bolts released two

1626
02:47:56,510 --> 02:47:33,359
of four mechanisms that hold dirosa in

1627
02:47:56,520 --> 02:48:42,110
States

1628
02:48:46,790 --> 02:48:44,630
the goal of today's space walk is to

1629
02:48:48,770 --> 02:48:46,800
install an irosa or International Space

1630
02:48:50,990 --> 02:48:48,780
Station rollout solar array to augment

1631
02:48:52,969 --> 02:48:51,000
power generation for the 1A power

1632
02:48:55,750 --> 02:48:52,979
channel on the Space Station's starboard

1633
02:49:01,070 --> 02:48:58,670
the new solar arrays measure 60 feet

1634
02:49:02,929 --> 02:49:01,080
long by 20 feet wide once they're

1635
02:49:05,030 --> 02:49:02,939
deployed and shade a little more than

1636
02:49:08,630 --> 02:49:05,040
half of the original solar arrays which

1637
02:49:11,150 --> 02:49:08,640
are 112 feet long by 39 feet wide each

1638
02:49:13,190 --> 02:49:11,160

new irosa produces more than 20

1639

02:49:15,590 --> 02:49:13,200

kilowatts of electricity and once

1640

02:49:17,270 --> 02:49:15,600

installed will enable a 30 increase in

1641

02:52:38,570 --> 02:49:17,280

power production over the station's

1642

02:52:43,309 --> 02:52:41,150

there's about six minutes left in this

1643

02:52:46,070 --> 02:52:43,319

15 minute loss of signal before we'll

1644

02:52:53,750 --> 02:52:46,080

return to scene Steve Bowen and Woody

1645

02:52:58,490 --> 02:52:56,750

once we're back we'll see uh Steve Bowen

1646

02:53:00,590 --> 02:52:58,500

working on releasing the upper Iris

1647

02:53:02,990 --> 02:53:00,600

restraint bolts and installing the first

1648

02:53:05,269 --> 02:53:03,000

two handling AIDS called scoops and

1649

02:53:06,950 --> 02:53:05,279

preparation for removing the irosa or

1650

02:53:20,990 --> 02:53:06,960

International Space Station roll out

1651
02:53:26,269 --> 02:53:23,269
currently aboard the International Space

1652
02:53:28,670 --> 02:53:26,279
Station we have the Expedition 69 crew

1653
02:53:30,950 --> 02:53:28,680
which includes NASA astronauts Frank

1654
02:53:33,650 --> 02:53:30,960
Rubio who is inside the space station

1655
02:53:35,450 --> 02:53:33,660
helping with today's space walk also

1656
02:53:38,210 --> 02:53:35,460
inside the space station is UAE

1657
02:53:40,610 --> 02:53:38,220
astronaut Sultan al-niadi and Ross

1658
02:53:42,230 --> 02:53:40,620
Cosmos cosmonauts Sergey prokopia and

1659
02:53:44,210 --> 02:53:42,240
Dimitri patelan

1660
02:53:46,250 --> 02:53:44,220
and then of course our spacewalkers

1661
02:53:55,130 --> 02:53:46,260
today are NASA astronaut Steve Bowen and

1662
02:54:00,290 --> 02:53:57,349
here in the room we have the flight

1663
02:54:06,230 --> 02:54:00,300

director Diane Daly at the helm and she

1664

02:57:47,690 --> 02:54:08,690

and then serving as the prime ground IV

1665

02:57:51,830 --> 02:57:50,090

there's about one minute left in this

1666

02:57:54,950 --> 02:57:51,840

loss of signal and then we'll quickly

1667

02:58:17,809 --> 02:57:54,960

return to scene what Woody hoberg and

1668

02:58:22,550 --> 02:58:20,870

today's space walk is the 264th

1669

02:58:24,889 --> 02:58:22,560

spacewalk in support of space station

1670

02:58:26,450 --> 02:58:24,899

assembly maintenance and upgrades and

1671

02:59:09,950 --> 02:58:26,460

the seventh spacewalk out of the space

1672

02:59:09,960 --> 02:59:38,050

foreign

1673

02:59:43,910 --> 02:59:41,150

that loss of signal

1674

02:59:46,309 --> 02:59:43,920

um Steve Bowen released the upper iOS

1675

02:59:48,290 --> 02:59:46,319

restraint bulbs and installed the first

1676

02:59:50,090 --> 02:59:48,300

two handling AIDS called Scoops in

1677

02:59:52,610 --> 02:59:50,100

preparation for removing the irosa from

1678

02:59:56,630 --> 02:59:54,349

clear continue

1679

02:59:58,849 --> 02:59:56,640

you can now hear some discussion between

1680

03:00:01,610 --> 02:59:58,859

NASA astronaut Woody hoberg who is on

1681

03:00:03,469 --> 03:00:01,620

the Canada arm robotic 2 and UAE

1682

03:00:08,510 --> 03:00:03,479

astronaut Sultan alniadi who is inside

1683

03:00:18,110 --> 03:00:11,690

how's that looking good any further GCA

1684

03:00:22,670 --> 03:00:21,469

Sean can I please go body down

1685

03:00:25,070 --> 03:00:22,680

about

1686

03:00:27,349 --> 03:00:25,080

20 centimeters

1687

03:00:30,349 --> 03:00:27,359

they are flying Woody hoberg to the

1688

03:00:32,510 --> 03:00:30,359

hinge end of the upper irosa once

1689

03:00:34,309 --> 03:00:32,520

they're both Woody hoberg and Steve

1690

03:00:37,010 --> 03:00:34,319

Bowen will work to remove the final

1691

03:00:38,990 --> 03:00:37,020

bolts holding it to the carrier and then

1692

03:00:40,969 --> 03:00:39,000

Steve Bowen will install a second scoop

1693

03:00:43,090 --> 03:00:40,979

and Woody hoberg will then lift it off

1694

03:00:45,590 --> 03:00:43,100

of the carrier

1695

03:00:48,710 --> 03:00:45,600

that's a great spot

1696

03:00:57,050 --> 03:00:48,720

yeah complete refuses that was 15

1697

03:01:02,630 --> 03:00:59,809

we copy GCA complete

1698

03:01:08,030 --> 03:01:02,640

would he attach a rut to the scoop which

1699

03:01:15,830 --> 03:01:11,510

okay James I have a rat on the scoop on

1700

03:01:15,840 --> 03:01:21,710

puppy uh morning for both of you

1701
03:01:26,090 --> 03:01:23,330
Steve goat

1702
03:01:28,190 --> 03:01:26,100
say I have the first group

1703
03:01:30,469 --> 03:01:28,200
I don't like anywhere station

1704
03:01:32,210 --> 03:01:30,479
the long duration High down feather uh

1705
03:01:35,030 --> 03:01:32,220
wanted to bring the rent with that or

1706
03:01:38,630 --> 03:01:35,040
did I leave the rest transfer to 40

1707
03:01:43,790 --> 03:01:41,330
to be adjustable as well you can leave

1708
03:01:46,969 --> 03:01:43,800
the rat you'll stow it on your mini

1709
03:01:49,910 --> 03:01:46,979
workstation and uh Woody will use a rut

1710
03:01:52,969 --> 03:01:49,920
from his mini workstation in order to

1711
03:01:52,979 --> 03:01:56,450
Okay so

1712
03:01:56,460 --> 03:02:02,990
understand

1713
03:02:08,090 --> 03:02:06,590

we can get ahead on our checks here uh

1714

03:02:10,790 --> 03:02:08,100

so a warning

1715

03:02:15,230 --> 03:02:10,800

for both of you do not release C1 until

1716

03:02:15,240 --> 03:02:30,190

Bobby

1717

03:02:40,550 --> 03:02:32,510

I'll take a glove inspection and have

1718

03:02:46,849 --> 03:02:43,070

I have no change to the gloves

1719

03:02:48,769 --> 03:02:46,859

not this dry I can also report uh visor

1720

03:02:50,870 --> 03:02:48,779

down glove heaters on

1721

03:02:52,190 --> 03:02:50,880

tcv step

1722

03:02:54,410 --> 03:02:52,200

reference

1723

03:02:56,630 --> 03:02:54,420

copy good glove inspection and hot check

1724

03:03:00,349 --> 03:02:56,640

cooling visor glove heaters are set

1725

03:03:00,359 --> 03:03:03,530

they're both down

1726

03:03:14,090 --> 03:03:05,630

check tools and tethers are clear and

1727

03:03:20,690 --> 03:03:16,250

immigration

1728

03:03:24,590 --> 03:03:22,790

yeah and Jim did you guys happen to get

1729

03:03:26,030 --> 03:03:24,600

eyes on my heels just for a positive

1730

03:03:29,210 --> 03:03:26,040

confirmation there

1731

03:03:29,220 --> 03:03:35,090

checking

1732

03:03:40,910 --> 03:03:38,030

Woody we do not have eyes on your feet

1733

03:03:42,790 --> 03:03:40,920

but Steve could potentially check if you

1734

03:03:45,290 --> 03:03:42,800

need

1735

03:03:48,710 --> 03:03:45,300

to take a picture

1736

03:03:51,370 --> 03:03:48,720

okay I'm feeling quite confident so I'm

1737

03:03:54,170 --> 03:03:51,380

I think it was pretty good

1738

03:03:55,910 --> 03:03:54,180

yeah I agree all right he oversecured

1739

03:03:57,710 --> 03:03:55,920

your own thanks

1740

03:04:04,910 --> 03:03:57,720

copy Woody those are good checks we will

1741

03:04:04,920 --> 03:04:08,150

when I tried for

1742

03:04:12,889 --> 03:04:09,950

they're not transferring the adjustable

1743

03:04:14,870 --> 03:04:12,899

to what is just the scoop and the blood

1744

03:04:16,550 --> 03:04:14,880

version title rather than I keep the

1745

03:04:22,010 --> 03:04:16,560

adjustable with me the pickup operator

1746

03:04:22,020 --> 03:04:32,889

checking Steve

1747

03:04:36,309 --> 03:04:35,210

I think it's just a scoop and a

1748

03:04:39,349 --> 03:04:36,319

lingeration

1749

03:04:41,030 --> 03:04:39,359

that's right Steve so there's no

1750

03:04:42,710 --> 03:04:41,040

requirement to take the adjustable with

1751
03:04:44,330 --> 03:04:42,720
you you can have it if you want but we

1752
03:04:46,250 --> 03:04:44,340
just need the scoop and the long

1753
03:04:48,110 --> 03:04:46,260
duration tie down tether bundled

1754
03:04:52,309 --> 03:04:48,120
together and the red swap to Woody's

1755
03:04:56,630 --> 03:04:53,450
okay

1756
03:05:00,889 --> 03:04:58,790
and what if you have a rat I don't

1757
03:05:03,349 --> 03:05:00,899
really I sure do here's a ride I don't

1758
03:05:06,110 --> 03:05:03,359
know if you can reach me oh yeah you can

1759
03:05:08,510 --> 03:05:06,120
send that over here

1760
03:05:10,309 --> 03:05:08,520
and go there right now so okay

1761
03:05:12,290 --> 03:05:10,319
see it

1762
03:05:15,889 --> 03:05:12,300
so goals to get this right on the scoop

1763
03:05:17,389 --> 03:05:15,899

yeah okay it is on so okay if you

1764

03:05:18,830 --> 03:05:17,399

release the plans out adjustable then

1765

03:05:20,750 --> 03:05:18,840

you got it

1766

03:05:23,030 --> 03:05:20,760

yeah

1767

03:05:25,010 --> 03:05:23,040

is coming back all right thank you very

1768

03:05:26,929 --> 03:05:25,020

much thank you all right let me get that

1769

03:05:29,870 --> 03:05:26,939

clip on here

1770

03:05:31,730 --> 03:05:29,880

that'll get set up

1771

03:05:33,710 --> 03:05:31,740

copy we have a couple of additional

1772

03:05:36,349 --> 03:05:33,720

checks here as well we need a glove

1773

03:05:38,330 --> 03:05:36,359

inspection and half check from Steve and

1774

03:05:44,570 --> 03:05:38,340

a buddy check of each other's helmets

1775

03:05:49,790 --> 03:05:46,929

yeah

1776

03:05:52,309 --> 03:05:49,800

actually stay right there Steve okay I

1777

03:05:54,769 --> 03:05:52,319

have a good view into Steve's helmet

1778

03:05:57,950 --> 03:05:54,779

I can see this happens

1779

03:06:01,130 --> 03:05:57,960

uh absorption band

1780

03:06:03,370 --> 03:06:01,140

and I see no signs of water

1781

03:06:05,630 --> 03:06:03,380

diagram

1782

03:06:07,550 --> 03:06:05,640

for you

1783

03:06:09,710 --> 03:06:07,560

and I see those types of water I see

1784

03:06:12,349 --> 03:06:09,720

your health absorption bad and a

1785

03:06:14,809 --> 03:06:12,359

medication one that's good great my

1786

03:06:20,150 --> 03:06:14,819

gloves are the same they're still good

1787

03:06:25,429 --> 03:06:22,969

copy we have good checks

1788

03:06:27,410 --> 03:06:25,439

and as a reminder Woody we track you

1789

03:06:29,150 --> 03:06:27,420

holding that scoop at this time it needs

1790

03:06:30,469 --> 03:06:29,160

to be Reddit to you but Steve needs to

1791

03:06:36,550 --> 03:06:30,479

be holding it he will be the one

1792

03:06:36,560 --> 03:06:41,230

[Music]

1793

03:06:47,630 --> 03:06:44,510

we are now about one hour and 27 minutes

1794

03:06:50,990 --> 03:06:47,640

into today's space walk

1795

03:06:53,690 --> 03:06:51,000

before Woody hoberg and Steve Bowen

1796

03:06:55,490 --> 03:06:53,700

removed the final bolt holding the irosa

1797

03:06:58,990 --> 03:06:55,500

to the carrier they're performing a

1798

03:07:02,269 --> 03:06:59,000

series of glove and hop checks

1799

03:07:08,929 --> 03:07:02,279

you are both doing great on time we are

1800

03:07:15,170 --> 03:07:10,610

all right coffee bad

1801

03:07:22,490 --> 03:07:18,530

all right next as written I have uh

1802

03:07:23,870 --> 03:07:22,500

Steve releasing Charlie one fully Woody

1803

03:07:26,210 --> 03:07:23,880

you're going to maintain control of

1804

03:07:31,610 --> 03:07:26,220

iroza as he releases that bolt and

1805

03:07:36,290 --> 03:07:33,969

okay Jan sounds good

1806

03:07:40,550 --> 03:07:36,300

hey I need settings

1807

03:07:44,730 --> 03:07:40,560

Bravo 3 counter three fully release C1

1808

03:07:46,690 --> 03:07:44,740

the bolt Will Spring out expect 26 turns

1809

03:07:49,849 --> 03:07:46,700

[Music]

1810

03:07:52,370 --> 03:07:49,859

counterclockwise three

1811

03:07:53,330 --> 03:07:52,380

about 26 turns and to Spring

1812

03:07:55,309 --> 03:07:53,340

out

1813

03:07:56,990 --> 03:07:55,319

all right that's starting right now good

1814

03:07:59,389 --> 03:07:57,000

wins

1815

03:08:01,490 --> 03:07:59,399

you just heard the ground IV here in the

1816

03:08:02,210 --> 03:08:01,500

room Jenny Gibbons

1817

03:08:04,130 --> 03:08:02,220

um

1818

03:08:05,929 --> 03:08:04,140

to speak with the NASA astronauts

1819

03:08:08,030 --> 03:08:05,939

outside the space station Woody hoberg

1820

03:08:09,769 --> 03:08:08,040

and Steve Bowen

1821

03:08:11,269 --> 03:08:09,779

they were given the go to release the

1822

03:08:13,429 --> 03:08:11,279

irosa

1823

03:08:15,590 --> 03:08:13,439

so both crew members are now working to

1824

03:08:17,870 --> 03:08:15,600

remove the final bolts holding the irosa

1825

03:08:20,450 --> 03:08:17,880

to the carrier

1826

03:08:23,809 --> 03:08:20,460

Bowen will then install a second scoop

1827

03:08:30,410 --> 03:08:23,819

while hoberg lifts the irosa off of its

1828

03:08:30,420 --> 03:08:34,550

all right

1829

03:08:34,560 --> 03:08:37,849

guys

1830

03:08:37,859 --> 03:08:42,469

27 turns

1831

03:08:46,550 --> 03:08:44,450

to come off I think I need to start a

1832

03:08:49,790 --> 03:08:46,560

few more

1833

03:09:02,690 --> 03:08:49,800

but not three of this bowl copy 27 turns

1834

03:09:06,710 --> 03:09:05,269

right now that seems very loose I got an

1835

03:09:09,730 --> 03:09:06,720

additional

1836

03:09:15,110 --> 03:09:13,190

yeah I think it's uh it feels yeah quite

1837

03:09:18,710 --> 03:09:15,120

loose okay

1838

03:09:25,790 --> 03:09:18,720

so my future team get those that's great

1839

03:09:25,800 --> 03:09:58,790

[Applause]

1840

03:09:58,800 --> 03:10:07,130

so

1841

03:10:12,290 --> 03:10:09,050

Crown copies we agree we're in a good

1842

03:10:14,570 --> 03:10:12,300

config Steve we need you at the grapple

1843

03:10:17,030 --> 03:10:14,580

Tower to assist with this GCA make sure

1844

03:10:19,130 --> 03:10:17,040

I Rosa clears the fixed scrapple fixture

1845

03:10:23,030 --> 03:10:19,140

and I have cautions and a warning for

1846

03:10:26,090 --> 03:10:24,469

all right I'm in a good position to

1847

03:10:30,230 --> 03:10:26,100

watch clarison from me

1848

03:10:34,730 --> 03:10:32,570

caution prior to removing our Rosa

1849

03:10:37,429 --> 03:10:34,740

ensure the FSE is not moving

1850

03:10:39,710 --> 03:10:37,439

Steve you stay still on the FSE during

1851
03:10:41,750 --> 03:10:39,720
the release and warning don't put your

1852
03:10:43,370 --> 03:10:41,760
fingers in or around any of the pin

1853
03:10:45,349 --> 03:10:43,380
slots mounted on the inside and outside

1854
03:10:47,210 --> 03:10:45,359
of the roof beam

1855
03:10:50,389 --> 03:10:47,220
with that I will let you work together

1856
03:10:52,849 --> 03:10:50,399
to release irosa to do that Woody you

1857
03:10:57,889 --> 03:10:52,859
will be sliding irosa away from you to

1858
03:11:04,190 --> 03:11:00,290
okay James I believe that has already

1859
03:11:06,050 --> 03:11:04,200
happened I think so true

1860
03:11:15,469 --> 03:11:06,060
yes I saw control of it we're looking

1861
03:11:15,479 --> 03:11:19,250
your go-to-workers

1862
03:11:24,230 --> 03:11:21,230
hi Frank if you're ready

1863
03:11:26,630 --> 03:11:24,240

I'm ready for the irosive back off

1864

03:11:27,710 --> 03:11:26,640

position I've got a good eye on the

1865

03:11:30,349 --> 03:11:27,720

tower

1866

03:11:33,349 --> 03:11:30,359

and I'm looking for this to go straight

1867

03:11:41,389 --> 03:11:33,359

and uh Woody uh it's drifting a little

1868

03:11:47,690 --> 03:11:44,150

all right Steve will you copy and for

1869

03:11:54,110 --> 03:11:47,700

this motion we expect about four meters

1870

03:11:54,120 --> 03:11:58,849

and we are self-emotion

1871

03:12:03,050 --> 03:12:01,070

you heard confirmation that NASA

1872

03:12:06,290 --> 03:12:03,060

astronaut Steve Bowen has installed the

1873

03:12:09,410 --> 03:12:06,300

second scoop onto the carrier and uh

1874

03:12:11,630 --> 03:12:09,420

Woody Bowen and Woody hoberg Has Lifted

1875

03:12:14,210 --> 03:12:11,640

it off of the carrier

1876

03:12:17,330 --> 03:12:14,220

there will now be several Maneuvers with

1877

03:12:19,790 --> 03:12:17,340

hoberg on the robotic arm

1878

03:12:21,710 --> 03:12:19,800

and then he will arrive at the 1A mod

1879

03:12:24,349 --> 03:12:21,720

kit work site

1880

03:12:26,210 --> 03:12:24,359

during these Maneuvers Steve Bowen will

1881

03:12:28,250 --> 03:12:26,220

pick up the temporarily stowed crew lock

1882

03:12:30,590 --> 03:12:28,260

bag from the port cart and reconfigure

1883

03:12:33,349 --> 03:12:30,600

both of his safety tethers on his way to

1884

03:12:35,769 --> 03:12:33,359

meet hobrook at the mod kit

1885

03:12:39,410 --> 03:12:35,779

we are clear continue

1886

03:12:41,510 --> 03:12:39,420

we have three meters to go

1887

03:12:45,530 --> 03:12:41,520

continue

1888

03:12:47,990 --> 03:12:45,540

Houston copies since we are clear of the

1889

03:12:49,610 --> 03:12:48,000

grapple Tower and this is a procedure to

1890

03:12:52,610 --> 03:12:49,620

publish position I'm going to pick up

1891

03:12:55,490 --> 03:12:52,620

comma Steve Steve perform a socket swap

1892

03:12:57,710 --> 03:12:55,500

I need the 5 8 12 inch wobble on the

1893

03:13:02,630 --> 03:12:57,720

socket caddy and the two inch from your

1894

03:13:02,640 --> 03:13:08,030

and the headaches going to the

1895

03:13:11,510 --> 03:13:09,650

pgp

1896

03:13:13,370 --> 03:13:11,520

good words I'll take full tests for

1897

03:13:15,410 --> 03:13:13,380

everything and then you will be cleaning

1898

03:13:20,690 --> 03:13:15,420

up the crew lock bag with everything

1899

03:13:20,700 --> 03:13:29,150

understand

1900

03:13:34,010 --> 03:13:31,370

from this view you can see NASA

1901
03:13:36,050 --> 03:13:34,020
astronaut Woody hoberg on attached to

1902
03:13:38,210 --> 03:13:36,060
the Space Station's robotic arm as he

1903
03:14:06,530 --> 03:13:38,220
moves away with the International Space

1904
03:14:06,540 --> 03:14:18,349
and ramping out copy

1905
03:14:22,790 --> 03:14:20,630
okay that is the public Position will be

1906
03:14:25,190 --> 03:14:22,800
and just heads up our next simulation is

1907
03:14:43,730 --> 03:14:25,200
going to be that Rosa pitch join of all

1908
03:14:48,110 --> 03:14:46,370
thank you

1909
03:14:52,969 --> 03:14:48,120
I copy Steve

1910
03:14:58,490 --> 03:14:55,130
that's correct at all for you to talk us

1911
03:15:00,469 --> 03:14:58,500
all the sockets and that's complete

1912
03:15:02,750 --> 03:15:00,479
puppy again you can still that socket

1913
03:15:04,490 --> 03:15:02,760

caddy we'll have the crew lock bag

1914

03:15:06,769 --> 03:15:04,500

buttoned up with the doors facing the

1915

03:15:55,630 --> 03:15:06,779

FSE and the adjustable equipment tether

1916

03:16:00,950 --> 03:15:58,429

NASA astronaut Woody hoberg continues to

1917

03:16:05,030 --> 03:16:00,960

make his way on the robotic arm with the

1918

03:16:06,889 --> 03:16:05,040

irosa to the 1A mod kit work site

1919

03:16:08,090 --> 03:16:06,899

okay so on the outside of the tree

1920

03:16:12,290 --> 03:16:08,100

walked back

1921

03:16:20,389 --> 03:16:16,610

the wire tie and an adjustable

1922

03:16:23,150 --> 03:16:20,399

and then I need a small large small

1923

03:16:25,250 --> 03:16:23,160

adjustable attached to the lower

1924

03:16:27,590 --> 03:16:25,260

handrail

1925

03:16:30,710 --> 03:16:27,600

and then this rat should come with me

1926

03:16:32,630 --> 03:16:30,720

from either currently

1927

03:16:33,950 --> 03:16:32,640

correct there should be no red on the

1928

03:16:50,990 --> 03:16:33,960

outside

1929

03:16:55,730 --> 03:16:53,210

on the left side of your screen you can

1930

03:16:58,910 --> 03:16:55,740

see the helmet camera of NASA astronaut

1931

03:17:00,889 --> 03:16:58,920

Steve Bowen he is currently working to

1932

03:17:02,690 --> 03:17:00,899

pick up the temporarily stowed crew lock

1933

03:17:05,150 --> 03:17:02,700

bag from the port cart and reconfigured

1934

03:17:09,410 --> 03:17:05,160

both of his safety tethers on his way to

1935

03:17:11,809 --> 03:17:09,420

meet Woody Hobart got the mod kit

1936

03:17:13,910 --> 03:17:11,819

once they both arrive at the mod kit

1937

03:17:34,490 --> 03:17:13,920

site both crew will then work to install

1938

03:17:39,710 --> 03:17:36,290

and all the we are ready for the Arizona

1939

03:17:41,510 --> 03:17:39,720

pitch uh join ocas and we will give you

1940

03:17:44,690 --> 03:17:41,520

a countdown before we start and just

1941

03:17:47,210 --> 03:17:44,700

remember uh the uh impeachment over

1942

03:17:49,490 --> 03:17:47,220

come on that's perfect I'm ready

1943

03:17:55,910 --> 03:17:49,500

right then starting join all cash in

1944

03:17:58,910 --> 03:17:57,370

okay okay

1945

03:18:04,250 --> 03:17:58,920

[Music]

1946

03:18:04,260 --> 03:18:07,670

dancing

1947

03:18:11,990 --> 03:18:10,010

copy Steve great work

1948

03:18:49,429 --> 03:18:12,000

once complete you can translate off of

1949

03:18:49,439 --> 03:19:06,309

foreign

1950

03:19:06,319 --> 03:19:11,330

on your PGT Steve

1951

03:19:21,769 --> 03:19:13,309

I get it when I saw okay that sounds

1952

03:19:26,450 --> 03:19:24,170

confirm your first step once you are off

1953

03:19:29,269 --> 03:19:26,460

of the FSE is to retrieve your green

1954

03:19:30,950 --> 03:19:29,279

hook from three zero one one

1955

03:20:17,650 --> 03:19:30,960

sure

1956

03:20:21,910 --> 03:20:19,969

the next motion is going to be an

1957

03:21:37,969 --> 03:20:21,920

outboard joint okay so three minutes

1958

03:21:37,979 --> 03:21:40,610

ah

1959

03:21:47,030 --> 03:21:42,950

seriously we are selecting motion for

1960

03:21:48,650 --> 03:21:47,040

the journal cash for the evl code

1961

03:22:10,210 --> 03:21:48,660

I'm ready another count that would be

1962

03:22:16,490 --> 03:22:12,590

currently on your screen you can see

1963

03:22:18,830 --> 03:22:16,500

NASA astronaut Woody hoberg as he is on

1964

03:22:20,870 --> 03:22:18,840

the Space Station's robotic arm moving

1965

03:22:25,610 --> 03:22:20,880

the International Space Station roll out

1966

03:22:29,040 --> 03:22:25,620

solar array to the 1A mod kit work site

1967

03:22:29,050 --> 03:22:42,889

[Applause]

1968

03:22:42,899 --> 03:23:00,430

foreign

1969

03:23:00,440 --> 03:23:39,490

[Music]

1970

03:23:45,050 --> 03:23:43,370

today's spacewalk is the 264th spacewalk

1971

03:23:46,910 --> 03:23:45,060

in support of space station assembly

1972

03:23:48,590 --> 03:23:46,920

maintenance and upgrades and the seventh

1973

03:23:52,790 --> 03:23:48,600

spacewalk out of the International Space

1974

03:23:58,910 --> 03:23:55,150

foreign

1975

03:24:01,550 --> 03:23:58,920

space Walkers are NASA astronauts Steve

1976

03:24:03,830 --> 03:24:01,560

Bowen and Woody hoberg they are working

1977

03:24:06,769 --> 03:24:03,840

to install an irosa or International

1978

03:24:08,690 --> 03:24:06,779

Space Station roll out solar array this

1979

03:24:10,849 --> 03:24:08,700

will augment the power generation for

1980

03:24:24,110 --> 03:24:10,859

the 1A powered channel on the station's

1981

03:24:30,170 --> 03:24:26,929

the new arrays once unfurled measure

1982

03:24:33,050 --> 03:24:30,180

approximately 60 feet in length by 20

1983

03:24:36,349 --> 03:24:33,060

feet wide and they shade a little more

1984

03:24:38,870 --> 03:24:36,359

than half of the original arrays

1985

03:24:40,670 --> 03:24:38,880

each new irosa will produce more than 20

1986

03:24:43,130 --> 03:24:40,680

kilowatts of electricity and once

1987

03:24:44,750 --> 03:24:43,140

installed will enable a 30 increase in

1988

03:24:49,010 --> 03:24:44,760

power production over the station's

1989

03:24:53,389 --> 03:24:51,229

this spacewalk is the ninth spacewalk

1990

03:24:55,849 --> 03:24:53,399

for NASA astronaut Steve Bowen and the

1991

03:24:58,670 --> 03:24:55,859

first spacewalk for NASA astronaut Woody

1992

03:25:04,790 --> 03:25:00,710

copy the two inches installed on your

1993

03:25:04,800 --> 03:25:29,469

foreign

1994

03:25:29,479 --> 03:25:36,790

sounds great I'm ready

1995

03:25:57,070 --> 03:25:38,510

[Music]

1996

03:25:57,080 --> 03:26:00,969

Greenup is retrieved

1997

03:26:07,010 --> 03:26:04,370

copy Steve you have your green hook

1998

03:26:11,150 --> 03:26:07,020

after this you will get the bag and

1999

03:26:11,160 --> 03:26:14,570

all right bringing up the bag

2000

03:26:14,580 --> 03:26:18,830

good words

2001

03:26:23,750 --> 03:26:21,410

okay with the rest ready to start the

2002

03:26:26,809 --> 03:26:23,760

motion and this will put you in lineup

2003

03:26:28,849 --> 03:26:26,819

uh position under the iea

2004

03:26:32,510 --> 03:26:28,859

all rightful John I'm ready

2005

03:26:40,790 --> 03:26:32,520

okay starting in three two one stop

2006

03:26:40,800 --> 03:27:05,889

promotion copy good one

2007

03:27:16,330 --> 03:27:09,170

Stephen Woody will be in insulation in

2008

03:27:16,340 --> 03:27:39,590

Thanks James

2009

03:27:39,600 --> 03:28:09,070

foreign

2010

03:28:14,389 --> 03:28:12,050

hour and 48 minutes into today's Space

2011

03:28:16,210 --> 03:28:14,399

Walk we're actually about an hour ahead

2012

03:28:19,130 --> 03:28:16,220

of the scheduled timeline

2013

03:28:21,229 --> 03:28:19,140

once they arrive at the mod kit site

2014

03:28:24,889 --> 03:28:21,239

they will begin the process to install

2015

03:28:28,610 --> 03:28:24,899

the irosa onto the 1A mounting rocket

2016

03:28:39,889 --> 03:28:31,670

and releasing it from uh

2017

03:28:39,899 --> 03:28:55,130

together

2018

03:28:55,140 --> 03:29:10,429

ah

2019

03:29:51,769 --> 03:29:20,630

a

2020

03:29:54,170 --> 03:29:51,779

into position both crew will then work

2021

03:29:56,690 --> 03:29:54,180

together to unfold irosa and secure the

2022

03:29:58,849 --> 03:29:56,700

right side onto the mounting bracket

2023

03:30:01,729 --> 03:29:58,859

once secured Woody Holberg will then

2024

03:30:06,170 --> 03:30:01,739

drive two hinge bolts that Ira that Iris

2025

03:30:06,180 --> 03:30:12,730

all right

2026
03:30:12,740 --> 03:30:17,330

[Music]

2027
03:30:17,340 --> 03:30:25,370
40s

2028
03:30:31,190 --> 03:30:26,809
copy Steve

2029
03:30:37,790 --> 03:30:35,269
at around mile marker six three zero

2030
03:30:37,800 --> 03:30:43,389
six three zero zero

2031
03:30:43,399 --> 03:30:51,650
hey firm it'll be on 6360 exactly

2032
03:30:51,660 --> 03:31:00,170
let's head back that way

2033
03:31:00,180 --> 03:31:04,610
if you just clean hook

2034
03:31:04,620 --> 03:31:07,250
what's up

2035
03:31:07,260 --> 03:31:24,950
copy

2036
03:31:31,130 --> 03:31:28,550
penalty we are ready for your goal for

2037
03:31:34,550 --> 03:31:31,140
the GCA to pop the Shadows install

2038
03:31:37,190 --> 03:31:34,560

Ed I'm ready I see body left

2039

03:31:39,530 --> 03:31:37,200

as affirmative we are expecting a first

2040

03:31:42,469 --> 03:31:39,540

motion of the front area and it's going

2041

03:31:45,110 --> 03:31:42,479

to be 2 meters 40 centimeters and Then

2042

03:31:48,110 --> 03:31:45,120

followed by a body up

2043

03:31:56,690 --> 03:31:48,120

and that is 70 centimeters

2044

03:32:00,170 --> 03:31:58,550

green rail

2045

03:32:05,030 --> 03:32:00,180

on my right

2046

03:32:10,910 --> 03:32:07,790

now I'm going to translate out

2047

03:32:10,920 --> 03:32:15,710

F4

2048

03:32:18,769 --> 03:32:17,450

copy Steve's and I might have missed it

2049

03:32:22,610 --> 03:32:18,779

but I need to check that reels are

2050

03:32:29,650 --> 03:32:25,389

all right view is unlocked

2051
03:32:36,530 --> 03:32:32,450
copy like you said you're headed to the

2052
03:32:44,450 --> 03:32:36,540
S4 iea I have words on where to attach

2053
03:32:52,010 --> 03:32:47,450
we are ready to start watching body left

2054
03:32:55,550 --> 03:32:52,020
in three two one on the big loop for All

2055
03:33:02,809 --> 03:32:55,560
crew do not start this next motion stand

2056
03:33:07,130 --> 03:33:05,090
drop around

2057
03:33:09,290 --> 03:33:07,140
being a heart standing by

2058
03:33:10,990 --> 03:33:09,300
that was good motion put on for a whole

2059
03:33:13,790 --> 03:33:11,000
position now

2060
03:33:16,670 --> 03:33:13,800
more information for all of you on that

2061
03:33:18,110 --> 03:33:16,680
call everything is looking like it's in

2062
03:33:20,750 --> 03:33:18,120
good shape you guys are doing great on

2063
03:33:23,150 --> 03:33:20,760

the timeline we just since we are ahead

2064

03:33:25,729 --> 03:33:23,160

we want to hold and get all crew in

2065

03:33:27,830 --> 03:33:25,739

position that means means we'll have

2066

03:33:30,170 --> 03:33:27,840

time for Steve to drop the green Hooks

2067

03:33:31,849 --> 03:33:30,180

and get in a good position by the

2068

03:33:33,889 --> 03:33:31,859

mounting bracket before we go to the

2069

03:33:37,849 --> 03:33:33,899

install position from there we will push

2070

03:33:37,859 --> 03:33:40,690

thank you

2071

03:33:44,929 --> 03:33:42,889

everybody help me

2072

03:33:46,550 --> 03:33:44,939

you're doing great Steve I guess you're

2073

03:33:49,849 --> 03:33:46,560

doing all the work while I just ride the

2074

03:33:49,859 --> 03:33:53,929

and Ivy group Ivy group

2075

03:33:53,939 --> 03:34:00,769

all right great job everybody

2076

03:34:05,030 --> 03:34:02,929

from this view you can see both uh

2077

03:34:07,610 --> 03:34:05,040

astronauts working on today's space walk

2078

03:34:09,349 --> 03:34:07,620

in the upper right hand side of your

2079

03:34:11,510 --> 03:34:09,359

screen you see NASA astronaut Steve

2080

03:34:14,210 --> 03:34:11,520

Bowen as he works to configure some

2081

03:34:16,490 --> 03:34:14,220

safety tethers and work his way over to

2082

03:34:19,309 --> 03:34:16,500

the mod kit site to meet Woody hoberg

2083

03:34:21,830 --> 03:34:19,319

and then a little bit further down is

2084

03:34:23,809 --> 03:34:21,840

NASA astronaut Woody hoberg aboard the

2085

03:34:26,210 --> 03:34:23,819

International Space Station's robotic

2086

03:34:28,490 --> 03:34:26,220

arm holding on to the International

2087

03:34:30,650 --> 03:34:28,500

Space Station roll out solar array or

2088

03:34:40,550 --> 03:34:30,660

irosa as he makes his way to the mod kit

2089

03:34:40,560 --> 03:34:46,309

copy Steve

2090

03:34:46,319 --> 03:34:57,969

you're looking for handles 2219

2091

03:35:02,809 --> 03:35:00,290

and you'll be fair leading Woody's

2092

03:35:05,809 --> 03:35:02,819

tether around the outside edge of the

2093

03:35:16,729 --> 03:35:08,150

the outside edge of the iea for his

2094

03:35:21,550 --> 03:35:18,950

let's see just for awareness I'm right

2095

03:35:33,349 --> 03:35:21,560

behind you and hello to the left

2096

03:35:39,710 --> 03:35:38,090

your green heart your grill on p219

2097

03:35:43,490 --> 03:35:39,720

and

2098

03:35:49,429 --> 03:35:46,010

Miss Keller

2099

03:35:52,729 --> 03:35:49,439

copy good where is it

2100

03:35:56,990 --> 03:35:52,739

and it looks clear of my tether good

2101
03:36:03,530 --> 03:36:00,410
and his reel is

2102
03:36:06,170 --> 03:36:03,540
do you think you unlocked

2103
03:36:08,570 --> 03:36:06,180
good config Steve you can continue on

2104
03:36:15,190 --> 03:36:08,580
your translation path your next step is

2105
03:36:15,200 --> 03:36:57,590
heading down

2106
03:37:01,190 --> 03:36:58,440
here

2107
03:37:23,450 --> 03:37:01,200
[Music]

2108
03:37:23,460 --> 03:37:55,800
foreign

2109
03:38:14,809 --> 03:38:05,690
[Music]

2110
03:38:14,819 --> 03:38:25,429
do you have much of a view

2111
03:38:25,439 --> 03:38:29,690
all right we might feather clear now

2112
03:38:29,700 --> 03:38:34,790
happy Steve I have a caution

2113
03:38:39,410 --> 03:38:37,370

go ahead James

2114

03:38:50,330 --> 03:38:39,420

your caution is a void translation on

2115

03:38:54,469 --> 03:38:52,130

Steve you'll continue your translation

2116

03:38:56,389 --> 03:38:54,479

to the left side of the mounting bracket

2117

03:38:59,150 --> 03:38:56,399

check your tether routing for snags and

2118

03:39:00,830 --> 03:38:59,160

crosses and place Fair leads such that

2119

03:39:04,010 --> 03:39:00,840

your tether is running around the

2120

03:39:04,020 --> 03:39:07,130

okay

2121

03:39:07,140 --> 03:39:15,790

let's continue

2122

03:39:20,690 --> 03:39:17,990

I guess

2123

03:39:23,150 --> 03:39:20,700

two three five

2124

03:39:26,210 --> 03:39:23,160

I have your fairlead handrail written as

2125

03:39:35,389 --> 03:39:28,309

one two three four two three five is

2126

03:39:43,309 --> 03:39:38,389

copy that sounds good we are 45 seconds

2127

03:39:43,319 --> 03:39:46,550

very transl

2128

03:39:46,560 --> 03:39:50,750

or Mountain

2129

03:39:54,190 --> 03:39:53,389

copy Steve and once you are in a good

2130

03:39:57,469 --> 03:39:54,200

spot

2131

03:40:01,910 --> 03:39:57,479

you can resume this motion for the irosa

2132

03:40:06,950 --> 03:40:03,650

all right let me drop my bag off real

2133

03:40:44,750 --> 03:40:08,510

oh there you are

2134

03:40:48,530 --> 03:40:46,729

Woody that sounds great over to

2135

03:40:50,630 --> 03:40:48,540

Franklinton

2136

03:40:55,429 --> 03:40:50,640

ready to continue

2137

03:40:58,190 --> 03:40:55,439

again this is going to be a continuation

2138

03:41:02,150 --> 03:40:58,200

of the body left and we'll give you a

2139

03:41:05,389 --> 03:41:02,160

countdown here in three two one starting

2140

03:41:05,399 --> 03:41:19,969

the motion

2141

03:41:19,979 --> 03:41:45,130

in order two meters to go continue

2142

03:41:45,140 --> 03:41:57,170

[Music]

2143

03:41:57,180 --> 03:42:12,550

to go continue

2144

03:42:27,790 --> 03:42:15,650

to go

2145

03:42:27,800 --> 03:42:33,290

out for the left motion

2146

03:42:37,670 --> 03:42:34,309

okay

2147

03:42:43,849 --> 03:42:41,330

but uh ready to start the body up motion

2148

03:42:49,969 --> 03:42:43,859

paper ready for body up it's starting in

2149

03:42:49,979 --> 03:43:00,469

promotion

2150

03:43:00,479 --> 03:43:03,830

how many minutes ago

2151
03:43:03,840 --> 03:43:20,870
to continue

2152
03:43:27,590 --> 03:43:24,349
let's hold position there hold position

2153
03:43:28,910 --> 03:43:27,600
feels a little high actually I think be

2154
03:43:30,650 --> 03:43:28,920
a little high and a little short you

2155
03:43:32,269 --> 03:43:30,660
need to come toward me

2156
03:43:34,849 --> 03:43:32,279
another uh

2157
03:43:37,190 --> 03:43:34,859
40 centimeters

2158
03:43:38,750 --> 03:43:37,200
gotta see that Steve uh and you are

2159
03:43:42,229 --> 03:43:38,760
still alive

2160
03:43:44,210 --> 03:43:42,239
yeah still time could I come

2161
03:43:46,490 --> 03:43:44,220
by checking you gotta take the scoop off

2162
03:43:48,349 --> 03:43:46,500
from you closer that's all

2163
03:43:52,130 --> 03:43:48,359

actually this feels pretty good full

2164

03:43:56,510 --> 03:43:52,140

time can we just go body in

2165

03:44:01,490 --> 03:43:59,269

utility will give you that body and 20

2166

03:44:03,469 --> 03:44:01,500

centimeters starting motion and three

2167

03:44:05,410 --> 03:44:03,479

take your hair across too here we go

2168

03:44:10,389 --> 03:44:05,420

continue

2169

03:44:10,399 --> 03:44:14,750

I agree

2170

03:44:19,969 --> 03:44:16,729

you are hearing conversation between

2171

03:44:22,610 --> 03:44:19,979

NASA astronaut Woody hoberg and Sultan

2172

03:44:24,349 --> 03:44:22,620

alniadi who is a UAE ashra inside the

2173

03:44:27,170 --> 03:44:24,359

space station operating the Space

2174

03:44:29,630 --> 03:44:27,180

Station's robotic arm

2175

03:44:32,510 --> 03:44:29,640

if I'm ready to take the scoop off right

2176
03:44:34,330 --> 03:44:32,520
the softbox are set they've not been

2177
03:44:37,250 --> 03:44:34,340
Cycles

2178
03:44:40,070 --> 03:44:37,260
a little bit ago Houston's back with you

2179
03:44:41,809 --> 03:44:40,080
we see that the soft captures are in a

2180
03:44:42,590 --> 03:44:41,819
good position we do not need to cycle

2181
03:44:45,469 --> 03:44:42,600
them

2182
03:44:48,170 --> 03:44:45,479
Steve hold I Rose a steady well Woody

2183
03:44:49,729 --> 03:44:48,180
removes the scoop and I have some

2184
03:44:51,710 --> 03:44:49,739
cautions and warnings I need to read

2185
03:44:53,630 --> 03:44:51,720
warning when you're on the outside of

2186
03:44:55,729 --> 03:44:53,640
the mod kits these avoid contacting the

2187
03:44:57,769 --> 03:44:55,739
Legacy blanket boxes and trunnions

2188
03:45:00,590 --> 03:44:57,779

caution while you're both on the mod kit

2189

03:45:02,330 --> 03:45:00,600

don't simultaneously impart loads

2190

03:45:04,849 --> 03:45:02,340

sudden stops and quick grabs are not

2191

03:45:08,210 --> 03:45:04,859

allowed on the mod kit 30 pound Max

2192

03:45:10,370 --> 03:45:08,220

lateral load on the mod kit and finally

2193

03:45:15,969 --> 03:45:10,380

confirm no BGA motion prior to

2194

03:45:20,870 --> 03:45:19,070

thank you and Stephen Woody just to

2195

03:45:24,849 --> 03:45:20,880

confirm that you don't need any for the

2196

03:45:27,490 --> 03:45:24,859

GCA and we'll call it complete

2197

03:45:31,610 --> 03:45:27,500

centimeters

2198

03:45:36,110 --> 03:45:33,769

all right you say complete and brakes

2199

03:45:38,750 --> 03:45:36,120

are coming on Happy breaks on

2200

03:45:45,070 --> 03:45:38,760

Houston coffee breaks are on you can

2201
03:45:49,670 --> 03:45:46,969
I agree

2202
03:45:51,410 --> 03:45:49,680
it's been real slow this way yep

2203
03:45:52,790 --> 03:45:51,420
moving my uh

2204
03:45:55,190 --> 03:45:52,800
works here

2205
03:46:00,290 --> 03:45:55,200
okay for the push

2206
03:46:05,990 --> 03:46:03,170
okay if you don't start to get in

2207
03:46:07,670 --> 03:46:06,000
fall this is when you can towards of

2208
03:46:10,670 --> 03:46:07,680
Afghanistan

2209
03:46:13,429 --> 03:46:10,680
I running up into something like

2210
03:46:15,710 --> 03:46:13,439
get eyes on it

2211
03:46:19,130 --> 03:46:15,720
both of our spacewalkers have made their

2212
03:46:21,349 --> 03:46:19,140
way to the 1A mod kit work site

2213
03:46:23,510 --> 03:46:21,359

front from here the crew will work

2214

03:46:25,370 --> 03:46:23,520

together to install the irosa or

2215

03:46:33,070 --> 03:46:25,380

International Space Station roll out

2216

03:46:37,610 --> 03:46:35,450

a little left

2217

03:46:39,710 --> 03:46:37,620

out of the soft rock look on your phone

2218

03:46:41,990 --> 03:46:39,720

they're still popped out do they just

2219

03:46:44,570 --> 03:46:42,000

need to be pushed down no they should be

2220

03:46:46,670 --> 03:46:44,580

fine come right through

2221

03:46:51,530 --> 03:46:46,680

all right if you can still come toward

2222

03:46:59,030 --> 03:46:53,750

uh and run it up against suffering when

2223

03:47:07,929 --> 03:47:01,429

did you push your side a whole month

2224

03:47:14,030 --> 03:47:11,570

Steve your hecka might be contacting I

2225

03:47:15,349 --> 03:47:14,040

Rose I'm preventing the soft stock you

2226

03:47:17,389 --> 03:47:15,359

might have to adjust your body position

2227

03:47:20,090 --> 03:47:17,399

oh I understand

2228

03:47:24,530 --> 03:47:20,100

okay working on that

2229

03:47:24,540 --> 03:47:30,010

pushing hard left

2230

03:47:33,290 --> 03:47:32,150

I think we need to pull up on the

2231

03:47:40,429 --> 03:47:33,300

softbox

2232

03:47:44,630 --> 03:47:42,050

oh yeah that's

2233

03:47:50,210 --> 03:47:44,640

that's the problem all right make a

2234

03:47:50,220 --> 03:47:55,370

and let's make it back

2235

03:48:04,870 --> 03:47:57,250

that's good Steve

2236

03:48:10,750 --> 03:48:07,729

really close

2237

03:48:12,830 --> 03:48:10,760

uh you might be in the defense so try

2238

03:48:20,330 --> 03:48:12,840

popping it out of the little defense

2239

03:49:01,450 --> 03:48:22,360

foreign

2240

03:49:01,460 --> 03:49:06,950

20 seconds to a short Handover

2241

03:49:06,960 --> 03:49:10,070

[Applause]

2242

03:49:32,530 --> 03:49:14,229

s

2243

03:49:37,490 --> 03:49:35,330

we are in a brief but expected Handover

2244

03:49:39,290 --> 03:49:37,500

period but we'll receive camera views

2245

03:50:03,410 --> 03:49:39,300

from the space station in about 10

2246

03:50:03,420 --> 03:50:07,190

Houston's back with you

2247

03:50:11,510 --> 03:50:09,170

okay so Jenny just to describe what

2248

03:50:12,830 --> 03:50:11,520

we're seeing We Believe iris is in a

2249

03:50:18,969 --> 03:50:12,840

good position

2250

03:50:24,290 --> 03:50:21,590

yeah we agree we have a really good view

2251
03:50:26,929 --> 03:50:24,300
from your hecka Woody so good job at

2252
03:50:29,809 --> 03:50:26,939
this point uh irosa is soft dog so you

2253
03:50:32,269 --> 03:50:29,819
can release your ret from the scoop and

2254
03:50:34,190 --> 03:50:32,279
maneuver to the R6 back

2255
03:50:36,290 --> 03:50:34,200
off Steve for you you're finalizing the

2256
03:50:38,630 --> 03:50:36,300
config for the crew lock bag and you

2257
03:50:42,190 --> 03:50:38,640
will eventually receive the scoop bundle

2258
03:50:49,690 --> 03:50:44,990
any chance you can uh

2259
03:50:53,030 --> 03:50:49,700
cost me a threat don't even get a chance

2260
03:50:59,750 --> 03:50:56,150
for both of you are we're we are just

2261
03:51:02,150 --> 03:50:59,760
over two hours into an Eva tracking for

2262
03:51:04,670 --> 03:51:02,160
seven hours and 30 minutes limiting

2263
03:51:06,349 --> 03:51:04,680

consumable is battery on Woody and you

2264

03:51:10,969 --> 03:51:06,359

guys are still about an hour ahead on

2265

03:51:10,979 --> 03:51:15,349

thanks girls

2266

03:51:19,790 --> 03:51:17,510

okay if now's not a good time we can

2267

03:51:21,410 --> 03:51:19,800

wait okay we'll bring the drop off the

2268

03:51:24,830 --> 03:51:21,420

bag a little uh

2269

03:51:24,840 --> 03:51:47,410

oh yeah that might work

2270

03:51:52,849 --> 03:51:50,929

is now working to release the scoops

2271

03:51:55,550 --> 03:51:52,859

haha

2272

03:51:57,229 --> 03:51:55,560

and then Woody hoberg will move into

2273

03:52:01,490 --> 03:51:57,239

position to release the final bolt

2274

03:52:01,500 --> 03:52:05,450

S no what you need

2275

03:52:05,460 --> 03:52:10,610

sounds great I'll be uh oh actually

2276

03:52:10,620 --> 03:52:15,530

I bet I can just do that

2277

03:52:21,349 --> 03:52:20,269

if you have the position settings yes

2278

03:52:25,910 --> 03:52:21,359

okay

2279

03:52:33,349 --> 03:52:29,990

got your folks head of this coupon uh

2280

03:52:37,010 --> 03:52:35,269

yeah you should have two scoops there

2281

03:52:38,330 --> 03:52:37,020

Steve okay you ready to get your red

2282

03:52:52,550 --> 03:52:38,340

pack I'll give it to you let me know

2283

03:52:52,560 --> 03:53:04,200

get it deeper yep I got it

2284

03:53:04,210 --> 03:53:09,050

[Applause]

2285

03:53:09,060 --> 03:53:15,910

foreign

2286

03:53:19,969 --> 03:53:18,349

scoops and the long duration they can

2287

03:53:22,190 --> 03:53:19,979

just be tempo for now but that's up to

2288

03:53:24,469 --> 03:53:22,200

you at the crew lock bag we'll need you

2289

03:53:28,309 --> 03:53:24,479

to position to hold our Rosa in a folded

2290

03:53:31,670 --> 03:53:28,319

config well Woody does this bolt and

2291

03:53:35,690 --> 03:53:34,130

let me get the bag employee from that

2292

03:53:39,110 --> 03:53:35,700

I'll be

2293

03:53:41,870 --> 03:53:39,120

pretty much said to do that Bravo Two

2294

03:53:44,750 --> 03:53:41,880

County accused fat cams copy those are

2295

03:53:46,370 --> 03:53:44,760

good settings you'll be releasing R6 the

2296

03:53:48,349 --> 03:53:46,380

bolt Will Spring out when fully released

2297

03:53:54,349 --> 03:53:48,359

you'll see a white line indicator expect

2298

03:54:04,250 --> 03:53:56,030

do you want me to wait yeah because I'm

2299

03:54:06,950 --> 03:54:05,929

I'm in a great place to control our

2300

03:54:08,570 --> 03:54:06,960

besties

2301
03:54:10,910 --> 03:54:08,580
all right well if you want to stay there

2302
03:54:14,630 --> 03:54:10,920
then that's fine I just gotta just drag

2303
03:54:48,860 --> 03:54:17,330
that's great

2304
03:54:48,870 --> 03:54:57,290
[Applause]

2305
03:54:57,300 --> 03:55:01,610
okay Johnny

2306
03:55:07,550 --> 03:55:04,010
team turns

2307
03:55:10,670 --> 03:55:07,560
and we got the white line visible

2308
03:55:13,790 --> 03:55:10,680
is released

2309
03:55:18,410 --> 03:55:15,410
s you see the way the white line you can

2310
03:55:18,420 --> 03:55:21,650
complete

2311
03:55:27,710 --> 03:55:24,590
ah and uh Frank and Sultan for your

2312
03:55:32,510 --> 03:55:27,720
awareness I suspect my plan will be to

2313
03:55:32,520 --> 03:55:38,090

in order to do a copy

2314

03:55:42,650 --> 03:55:40,010

all right at the back of the handrail

2315

03:55:44,870 --> 03:55:42,660

and the Scoops to the bag great job

2316

03:55:48,110 --> 03:55:44,880

speeds and

2317

03:55:49,729 --> 03:55:48,120

leave the bag off my VRT

2318

03:55:54,349 --> 03:55:49,739

okay

2319

03:55:58,309 --> 03:55:56,630

Dido Scoops go in the bag eventually

2320

03:56:00,889 --> 03:55:58,319

okay gotcha

2321

03:56:02,450 --> 03:56:00,899

they do eventually but in the procedure

2322

03:56:04,670 --> 03:56:02,460

that'll be around the time when you

2323

03:56:06,229 --> 03:56:04,680

retrieve the AMS knob it's just crew

2324

03:56:09,610 --> 03:56:06,239

preference you can temp sow them for now

2325

03:56:09,620 --> 03:56:29,469

thank you

2326
03:56:35,269 --> 03:56:33,410
for you and uh for Steve and Woody um we

2327
03:56:36,950 --> 03:56:35,279
copy Woody that you think you can egress

2328
03:56:39,349 --> 03:56:36,960
from here that's no problem with us and

2329
03:56:41,389 --> 03:56:39,359
we're coordinating with Robo And The Ivy

2330
03:56:44,450 --> 03:56:41,399
team Steve we see you getting in

2331
03:56:47,269 --> 03:56:44,460
position to hold I Rosa folded we'll

2332
03:56:50,330 --> 03:56:47,279
need you to we'll need you to do that

2333
03:56:53,990 --> 03:56:50,340
well Woody egress is using only the

2334
03:56:57,550 --> 03:56:55,490
all right let me get my hand on the

2335
03:56:59,630 --> 03:56:57,560
other hand rail okay

2336
03:57:02,090 --> 03:56:59,640
yeah I take your time Steve just watch

2337
03:57:03,469 --> 03:57:02,100
your helmet is uh close hitting the

2338
03:57:06,650 --> 03:57:03,479

other side of that roaster yeah let me

2339

03:57:12,710 --> 03:57:09,889

at friends of town NASA astronauts Woody

2340

03:57:15,410 --> 03:57:12,720

hoberg and Steve Bowen just worked to

2341

03:57:17,510 --> 03:57:15,420

release the final bolt holding irosa or

2342

03:57:18,769 --> 03:57:17,520

the ISS roll out solar array in its

2343

03:57:21,590 --> 03:57:18,779

folded position

2344

03:57:23,809 --> 03:57:21,600

from here Steve Bowen will continue to

2345

03:57:26,330 --> 03:57:23,819

hold irosa closed while Woody hoberg

2346

03:57:30,290 --> 03:57:26,340

egresses or exits his foot restraint and

2347

03:57:34,250 --> 03:57:31,969

after that the crew will work together

2348

03:57:45,309 --> 03:57:34,260

to unfold irosa and secure the right

2349

03:57:45,319 --> 03:57:53,150

look at my body around here

2350

03:57:57,769 --> 03:57:55,729

all right okay just so you know your

2351

03:57:58,790 --> 03:57:57,779

Hacker's like touching aerosa but as

2352

03:58:00,650 --> 03:57:58,800

long as you're not pressuring it it

2353

03:58:03,550 --> 03:58:00,660

should be yep looks like it's just light

2354

03:58:07,010 --> 03:58:03,560

so it should be a good config

2355

03:58:08,750 --> 03:58:07,020

I have it okay for your awareness we see

2356

03:58:10,189 --> 03:58:08,760

that contact it's on the root beam and

2357

03:58:12,830 --> 03:58:10,199

ground's fine with it so you two are

2358

03:58:16,910 --> 03:58:12,840

doing a great job Woody you can egress

2359

03:58:23,450 --> 03:58:19,550

that's your only interested

2360

03:58:36,830 --> 03:58:26,570

copy you can check the Ingress Aid is

2361

03:58:48,229 --> 03:58:39,110

actually that is going to be interesting

2362

03:58:53,870 --> 03:58:50,210

to get on the experience and you might

2363

03:59:00,050 --> 03:58:53,880

start utas I might need a GCA just to

2364

03:59:00,060 --> 03:59:06,250

take a look here real quick

2365

03:59:10,670 --> 03:59:08,570

ly we have to be copy and we're standing

2366

03:59:12,170 --> 03:59:10,680

by okay thanks a lot actually I got it

2367

03:59:17,750 --> 03:59:12,180

the purpose you did

2368

03:59:22,070 --> 03:59:19,790

from this view you can see that Woody

2369

03:59:25,370 --> 03:59:22,080

hoberg has egressed the foot restraint

2370

03:59:29,570 --> 03:59:27,229

all right

2371

03:59:31,130 --> 03:59:29,580

if I am in a

2372

03:59:35,210 --> 03:59:31,140

three

2373

03:59:39,410 --> 03:59:37,370

yeah I'm in a good position you want to

2374

03:59:42,050 --> 03:59:39,420

cycle it

2375

03:59:44,689 --> 03:59:42,060

make sure it's free I just gotta I want

2376

03:59:47,150 --> 03:59:44,699

to think about my safety Charter so

2377

03:59:51,830 --> 03:59:47,160

NASA astronaut Woody hoberg is now

2378

03:59:54,469 --> 03:59:51,840

moving into position uh to unfold irosa

2379

03:59:56,330 --> 03:59:54,479

to help secure it to the right side of

2380

04:00:00,650 --> 03:59:56,340

the mounting bracket alongside NASA

2381

04:00:00,660 --> 04:00:03,889

I need that

2382

04:00:07,130 --> 04:00:05,450

I agree with that

2383

04:00:30,050 --> 04:00:07,140

damn is that making sense to you guys

2384

04:00:34,189 --> 04:00:31,849

Woody and Steve we've been talking about

2385

04:00:35,870 --> 04:00:34,199

the arm position and your tether here on

2386

04:00:41,950 --> 04:00:35,880

the ground and we think it's best if we

2387

04:00:46,689 --> 04:00:44,450

we like it

2388

04:00:49,790 --> 04:00:46,699

all right you can initiate that way

2389

04:00:50,929 --> 04:00:49,800

you can initiate that with M1 once you

2390

04:00:52,429 --> 04:00:50,939

do that since that's a published

2391

04:00:54,050 --> 04:00:52,439

position I have some big picture words

2392

04:00:56,330 --> 04:00:54,060

for you because we need to pause anyway

2393

04:00:58,070 --> 04:00:56,340

before you put in a fair lead Woody but

2394

04:01:00,710 --> 04:00:58,080

you can go ahead and coordinate with M1

2395

04:01:03,590 --> 04:01:01,849

okay great

2396

04:01:05,389 --> 04:01:03,600

sorry we're ready for you to move to the

2397

04:01:08,889 --> 04:01:05,399

published

2398

04:01:14,090 --> 04:01:11,929

this will take us uh three Maneuvers to

2399

04:01:15,769 --> 04:01:14,100

get to that position and uh we'll let

2400

04:01:17,570 --> 04:01:15,779

you know when we're there all right

2401
04:01:19,550 --> 04:01:17,580
sounds great Photon I'll be watching

2402
04:01:22,429 --> 04:01:19,560
while the arms near us

2403
04:01:24,950 --> 04:01:22,439
also we'll be starting with uh the

2404
04:01:29,150 --> 04:01:24,960
backup position and we're expecting

2405
04:01:31,969 --> 04:01:29,160
about two meters uh like anybody with

2406
04:01:35,750 --> 04:01:31,979
body rides okay yeah body right looks

2407
04:01:35,760 --> 04:02:25,250
okay brakes are coming off

2408
04:02:28,790 --> 04:02:26,990
Woody and Steve were just getting those

2409
04:02:29,990 --> 04:02:28,800
big picture words together for you we

2410
04:02:32,570 --> 04:02:30,000
have another couple minutes and then

2411
04:02:32,580 --> 04:02:53,870
thanks Jeff

2412
04:02:59,150 --> 04:02:56,030
all right I have to restart the motion

2413
04:03:01,370 --> 04:02:59,160

now go

2414

04:03:04,490 --> 04:03:01,380

I have those big picture words for you

2415

04:03:14,689 --> 04:03:04,500

let's let M1 start the next motion and

2416

04:03:18,170 --> 04:03:16,309

I understand and one's already

2417

04:03:19,849 --> 04:03:18,180

maneuvering to the backup position so

2418

04:03:24,050 --> 04:03:19,859

you guys ready

2419

04:03:27,349 --> 04:03:26,150

all right big picture you are doing

2420

04:03:29,450 --> 04:03:27,359

great

2421

04:03:31,670 --> 04:03:29,460

um we have a really good timeline laid

2422

04:03:33,170 --> 04:03:31,680

out in front of us so good in fact that

2423

04:03:36,410 --> 04:03:33,180

there is a potential that the next

2424

04:03:38,630 --> 04:03:36,420

eclipse could be our working eclipse for

2425

04:03:41,389 --> 04:03:38,640

our cable mates that's in around 25

2426
04:03:43,010 --> 04:03:41,399
minutes so we might break out of bolts

2427
04:03:45,170 --> 04:03:43,020
and take that opportunity while we have

2428
04:03:47,570 --> 04:03:45,180
it and I'll keep you both up to date on

2429
04:03:49,370 --> 04:03:47,580
that there is no rush because again our

2430
04:03:50,809 --> 04:03:49,380
nominally planned the clip was the

2431
04:03:55,610 --> 04:03:50,819
following one

2432
04:03:59,030 --> 04:03:57,110
you need two copies that sounds great

2433
04:04:01,250 --> 04:03:59,040
yes it does

2434
04:04:03,229 --> 04:04:01,260
all right good next piece of information

2435
04:04:05,990 --> 04:04:03,239
I have for you is that we have noticed

2436
04:04:07,370 --> 04:04:06,000
that a grounding pin is out of place on

2437
04:04:10,550 --> 04:04:07,380
the mod kit

2438
04:04:12,530 --> 04:04:10,560

it's at the base of the mounting bracket

2439

04:04:14,630 --> 04:04:12,540

where the mounting bracket meets the

2440

04:04:16,910 --> 04:04:14,640

left lower struts

2441

04:04:19,550 --> 04:04:16,920

after the unfold we're going to have to

2442

04:04:21,410 --> 04:04:19,560

address that grounding pin it should be

2443

04:04:22,910 --> 04:04:21,420

no problem but I will let you know and

2444

04:04:29,050 --> 04:04:22,920

I'll give you those words again when the

2445

04:04:33,050 --> 04:04:31,550

and just to be clear that's on Steve's

2446

04:04:36,150 --> 04:04:33,060

side and we don't want him to check it

2447

04:04:45,110 --> 04:04:38,330

[Music]

2448

04:04:45,120 --> 04:04:50,090

all right

2449

04:04:54,410 --> 04:04:52,010

those are all the big picture words that

2450

04:04:56,450 --> 04:04:54,420

I have for both of you we will pick up

2451

04:04:59,269 --> 04:04:56,460

after these Robo Maneuvers with a fair

2452

04:05:02,570 --> 04:04:59,279

lead for Woody and then

2453

04:05:05,330 --> 04:05:02,580

start to work toward unfolding our Rosa

2454

04:05:07,070 --> 04:05:05,340

your warning is that this is a pinch

2455

04:05:16,670 --> 04:05:07,080

point and you'll need to keep clear of

2456

04:05:19,790 --> 04:05:18,469

I was wondering

2457

04:05:20,929 --> 04:05:19,800

because you might be able to head that

2458

04:05:23,689 --> 04:05:20,939

way and then when you drift on the lower

2459

04:05:30,889 --> 04:05:25,610

your fairlead is going to be on the

2460

04:05:35,929 --> 04:05:33,050

right lower strut lower Handler I've got

2461

04:05:39,950 --> 04:05:38,090

that means what's really driving through

2462

04:05:42,670 --> 04:05:39,960

the sentence when this will be clear

2463

04:05:46,910 --> 04:05:45,410

and Woody you need to hold the reason

2464

04:05:48,410 --> 04:05:46,920

why we're waiting is because we cannot

2465

04:05:50,630 --> 04:05:48,420

put this fair lead in while the arm's

2466

04:05:52,550 --> 04:05:50,640

moving

2467

04:05:54,229 --> 04:05:52,560

I understand your entrance just checking

2468

04:06:00,889 --> 04:05:54,239

out the location thank you all right no

2469

04:06:04,189 --> 04:06:02,870

okay well yes dear we are starting our

2470

04:06:06,469 --> 04:06:04,199

next motion is going to be a journal

2471

04:06:08,530 --> 04:06:06,479

cast and it will be two and a half

2472

04:06:12,410 --> 04:06:08,540

minutes

2473

04:06:12,420 --> 04:06:47,030

let's start emotions

2474

04:06:50,090 --> 04:06:48,830

stable we need to take some pictures of

2475

04:07:25,729 --> 04:06:50,100

our dragon

2476
04:07:31,370 --> 04:07:28,309
we are about two hours and 27 minutes

2477
04:07:33,110 --> 04:07:31,380
into today's space walk as NASA

2478
04:07:35,210 --> 04:07:33,120
astronaut Steve Bowen and Woody hoberg

2479
04:07:37,790 --> 04:07:35,220
continue to install the International

2480
04:07:43,610 --> 04:07:37,800
Space Station rollout solar array onto

2481
04:07:47,269 --> 04:07:45,650
they are about an hour ahead on their

2482
04:07:49,729 --> 04:07:47,279
scheduled timeline

2483
04:07:52,250 --> 04:07:49,739
and now targeting a working Eclipse

2484
04:08:11,269 --> 04:07:52,260
about 21 minutes from now for the cable

2485
04:08:16,490 --> 04:08:13,070
well since you had your advisor down

2486
04:08:21,229 --> 04:08:16,500
take a selfie you'll get the whole

2487
04:08:25,070 --> 04:08:23,389
the cable meeting is when both of the

2488
04:08:27,349 --> 04:08:25,080

crew members will work to electrically

2489

04:08:28,849 --> 04:08:27,359

connect the new irosa to the

2490

04:08:30,469 --> 04:08:28,859

International Space Station's power

2491

04:08:32,570 --> 04:08:30,479

system

2492

04:08:34,490 --> 04:08:32,580

they'll first attach four connectors to

2493

04:08:36,469 --> 04:08:34,500

Arosa and then both will move to either

2494

04:08:38,750 --> 04:08:36,479

side of the Legacy solar array to

2495

04:08:41,450 --> 04:08:38,760

disconnect the old array and connect a y

2496

04:08:43,670 --> 04:08:41,460

cable this will allow power to flow from

2497

04:08:45,110 --> 04:08:43,680

both the new irosa and the old Legacy

2498

04:09:30,110 --> 04:08:45,120

array to the Space Station's power

2499

04:09:30,120 --> 04:10:04,729

uh

2500

04:10:14,410 --> 04:10:09,229

position in Woody when able power on

2501

04:10:17,990 --> 04:10:16,130

that's good

2502

04:10:25,429 --> 04:10:18,000

a free chance thanks

2503

04:10:30,650 --> 04:10:28,450

what is the Army removing the market

2504

04:10:45,410 --> 04:10:30,660

yeah I think so I think you're setting

2505

04:10:49,429 --> 04:10:47,809

and uh Woody uh we are starting our next

2506

04:10:52,309 --> 04:10:49,439

join our class he'll last three minutes

2507

04:10:55,309 --> 04:10:52,319

and then we'll stick up with you and uh

2508

04:13:12,050 --> 04:10:57,410

um step in here to meet with you and

2509

04:13:17,510 --> 04:13:14,510

from this view you can see NASA

2510

04:13:19,370 --> 04:13:17,520

astronaut Woody hoberg near the irosa or

2511

04:13:22,010 --> 04:13:19,380

International Space Station rollout

2512

04:13:31,910 --> 04:13:22,020

solar array and the robotic arm is

2513

04:13:36,110 --> 04:13:33,889

see Jenny if I happen to have a cat

2514

04:13:50,929 --> 04:13:36,120

Keeper in my hand would it be a good

2515

04:13:50,939 --> 04:13:54,290

you can do that Woody

2516

04:13:54,300 --> 04:13:58,010

okay coffee thanks

2517

04:14:08,110 --> 04:14:01,010

on the other side of the folded irosa is

2518

04:14:34,550 --> 04:14:11,090

Steve Bowen is continuing to hold the

2519

04:14:34,560 --> 04:14:41,510

oh yes

2520

04:14:54,469 --> 04:14:44,630

what's that the good hook a good release

2521

04:14:59,330 --> 04:14:56,809

you are you are seeing the helmet camera

2522

04:15:05,650 --> 04:14:59,340

of NASA astronaut Woody hoberg as he

2523

04:15:10,309 --> 04:15:08,330

once his safety tethers are reconfigured

2524

04:15:12,410 --> 04:15:10,319

the crew members will work together to

2525

04:15:14,809 --> 04:15:12,420

unfold irosa or the International Space

2526

04:15:17,450 --> 04:15:14,819

Station roll out solar array and secure

2527

04:15:44,349 --> 04:15:17,460

the right side onto the mounting bracket

2528

04:15:49,790 --> 04:15:45,889

ER

2529

04:15:55,729 --> 04:15:53,030

I just grab the AMS knob while I've got

2530

04:15:57,840 --> 04:15:55,739

it all right good idea

2531

04:16:01,130 --> 04:15:57,850

Houston copies

2532

04:16:01,140 --> 04:16:07,490

that's true

2533

04:16:07,500 --> 04:16:14,229

yeah let me look at that Pandora

2534

04:16:14,239 --> 04:16:19,309

to my medi-work station

2535

04:16:19,319 --> 04:16:24,650

again

2536

04:16:24,660 --> 04:16:49,670

we copy Woody

2537

04:16:49,680 --> 04:17:09,830

foreign

2538

04:17:09,840 --> 04:17:13,670

right

2539

04:17:21,769 --> 04:17:15,530

we have a super event available for that

2540

04:17:21,779 --> 04:17:43,490

was the one that you love yep

2541

04:17:43,500 --> 04:17:54,290

yep here it is

2542

04:17:59,269 --> 04:17:55,670

all right

2543

04:18:02,389 --> 04:17:59,279

about the adjustable external

2544

04:18:04,389 --> 04:18:02,399

I don't think we needed external okay

2545

04:18:07,670 --> 04:18:04,399

now let's put that in the Bay Area

2546

04:18:09,050 --> 04:18:07,680

external for the adjustable we're gonna

2547

04:18:10,189 --> 04:18:09,060

use that later on Don't drop anything

2548

04:18:12,050 --> 04:18:10,199

else

2549

04:18:13,849 --> 04:18:12,060

I'm crew lock back in thanks for watch

2550

04:18:16,849 --> 04:18:13,859

that again no we won't need that you can

2551

04:18:21,950 --> 04:18:16,859

Stow that inside the bag

2552

04:18:25,189 --> 04:18:23,450

for both of your awareness couple more

2553

04:18:27,410 --> 04:18:25,199

minutes here

2554

04:18:29,210 --> 04:18:27,420

um and then we'll be able to get moving

2555

04:18:40,130 --> 04:18:29,220

again do a good job getting a little bit

2556

04:18:40,140 --> 04:19:46,610

ah

2557

04:19:51,050 --> 04:19:48,530

body I'm not sure which you hear the

2558

04:19:53,330 --> 04:19:51,060

area call but uh we are set up and ready

2559

04:19:56,809 --> 04:19:53,340

for manova to Canada's opposition

2560

04:20:01,910 --> 04:19:56,819

okay sounds great photon

2561

04:20:01,920 --> 04:20:05,510

okay copy go

2562

04:20:10,309 --> 04:20:08,150

since this is a published position Woody

2563

04:20:13,309 --> 04:20:10,319

you also have an option of assisting

2564

04:20:15,590 --> 04:20:13,319

closing keeping irosa in a closed

2565

04:20:17,689 --> 04:20:15,600

configuration so stopping it from

2566

04:20:19,610 --> 04:20:17,699

unfolding while Woody or will Steve

2567

04:20:22,250 --> 04:20:19,620

excuse me addresses that loose grounding

2568

04:20:26,689 --> 04:20:24,349

that sounds like a great idea James let

2569

04:20:31,610 --> 04:20:26,699

me get in position and then you can do

2570

04:20:31,620 --> 04:20:38,090

I just need to push on that Friday so

2571

04:20:46,729 --> 04:20:40,550

we're starting mostly enough copies will

2572

04:20:46,739 --> 04:20:51,889

okay Thief

2573

04:20:56,990 --> 04:20:53,750

enjoy

2574

04:20:59,210 --> 04:20:57,000

I can burn my arms again

2575

04:21:01,309 --> 04:20:59,220

we're glad to hear it Steve you should

2576

04:21:05,090 --> 04:21:01,319

be able to see a little uh receiving

2577

04:21:07,130 --> 04:21:05,100

area for the pen it should be near where

2578

04:21:10,189 --> 04:21:07,140

the pin is loose you just need to

2579

04:21:14,929 --> 04:21:13,130

all right heading down to the base of

2580

04:21:22,910 --> 04:21:14,939

Fitbit trucks

2581

04:21:27,170 --> 04:21:25,309

you should not have to translate far

2582

04:21:31,189 --> 04:21:27,180

Steve you should be in a good spot to

2583

04:21:38,870 --> 04:21:33,290

is at the base of the mounting bracket

2584

04:21:44,210 --> 04:21:41,689

or at least the left stretch

2585

04:21:49,070 --> 04:21:44,220

yeah so I see

2586

04:21:56,050 --> 04:21:51,530

another one yep there is another one

2587

04:22:02,570 --> 04:21:58,490

yes the second one that you touched is

2588

04:22:44,150 --> 04:22:04,729

before here

2589

04:22:51,550 --> 04:22:45,530

wow

2590

04:22:56,389 --> 04:22:54,410

great job Steve we are good to continue

2591

04:23:01,130 --> 04:22:56,399

with the procedure we understand the arm

2592

04:23:04,370 --> 04:23:01,140

is in a uh its final position so Steve

2593

04:23:06,290 --> 04:23:04,380

we need you to hold irosa in a closed

2594

04:23:08,929 --> 04:23:06,300

configuration and Woody you can place

2595

04:23:08,939 --> 04:23:16,729

all right

2596

04:23:25,429 --> 04:23:19,389

thanks for the break Lydia got it now

2597

04:23:25,439 --> 04:23:33,490

thank you

2598

04:23:39,830 --> 04:23:37,189

big picture call for All crew we are

2599

04:23:43,370 --> 04:23:39,840

headed into a region of spottycom

2600

04:23:46,429 --> 04:23:43,380

followed by an loss that total time is

2601
04:23:48,469 --> 04:23:46,439
six minutes your go to continue with

2602
04:23:53,269 --> 04:23:48,479
irosa unfold

2603
04:24:12,889 --> 04:23:53,279
Frank we are in Block nine

2604
04:24:18,950 --> 04:24:15,469
a firm once you have completed with the

2605
04:24:30,050 --> 04:24:18,960
unfold we will have you move to the

2606
04:24:34,689 --> 04:24:32,389
with the Space Station's robotic arm

2607
04:24:37,910 --> 04:24:34,699
backed away and in a safe configuration

2608
04:24:41,450 --> 04:24:37,920
the crew will now proceed with unfolding

2609
04:24:41,460 --> 04:24:53,510
good words

2610
04:24:59,570 --> 04:24:56,389
we are in a brief but expected Handover

2611
04:25:18,050 --> 04:24:59,580
period and we'll get views of the space

2612
04:25:23,330 --> 04:25:21,290
the first working eclipse is about three

2613
04:25:25,429 --> 04:25:23,340

and a half minutes away from now and

2614

04:25:28,490 --> 04:25:25,439

that is the first targeted window to

2615

04:25:37,550 --> 04:25:31,550

so after they unfold the irosa they will

2616

04:25:41,389 --> 04:25:39,710

okay now it's starting to clear your pgp

2617

04:25:44,570 --> 04:25:41,399

you're almost there there you go you're

2618

04:25:48,710 --> 04:25:47,149

thanks

2619

04:25:50,809 --> 04:25:48,720

barely installed let me just take a

2620

04:26:20,990 --> 04:25:50,819

quick look at my feathers absolutely and

2621

04:26:25,189 --> 04:26:22,790

one more thing to fix and then I'll be

2622

04:26:27,769 --> 04:26:25,199

ready Steve

2623

04:26:30,590 --> 04:26:27,779

Frank this is ground we're coming up on

2624

04:26:33,170 --> 04:26:30,600

that Los when you get there we will need

2625

04:26:40,490 --> 04:26:33,180

you to confirm safing for the working

2626
04:26:44,330 --> 04:26:42,469
and Jenny we thought we will need to

2627
04:26:45,590 --> 04:26:44,340
confirm and safety and that'll be two

2628
04:27:16,130 --> 04:26:45,600
minutes

2629
04:27:20,330 --> 04:27:18,530
okay guys uh this is gonna be a warning

2630
04:27:23,630 --> 04:27:20,340
for you both there's a pinch point so

2631
04:27:26,809 --> 04:27:23,640
keep clear of the rotating on Rosa

2632
04:27:28,670 --> 04:27:26,819
has to be verified that uh or would you

2633
04:27:30,889 --> 04:27:28,680
verify that you recycled the right soft

2634
04:27:34,490 --> 04:27:30,899
capture feature

2635
04:27:37,490 --> 04:27:36,349
okay thanks buddy and then just uh make

2636
04:27:52,330 --> 04:27:37,500
sure that you leave it in the soft

2637
04:27:57,769 --> 04:27:54,710
Steve go ahead and slowly pivot I

2638
04:28:09,530 --> 04:27:57,779

roasted to unfolded 40 engage the right

2639

04:28:14,149 --> 04:28:12,349

you can hear a conversation between NASA

2640

04:28:16,189 --> 04:28:14,159

astronaut Frank Rubio who is on board

2641

04:28:19,130 --> 04:28:16,199

the space station and currently serving

2642

04:28:23,330 --> 04:28:19,140

as the prime IV or communication link

2643

04:28:26,389 --> 04:28:25,010

all right nice job guys and so we'll

2644

04:28:28,729 --> 04:28:26,399

even go ahead and verify the soft

2645

04:28:30,530 --> 04:28:28,739

capture feature is properly engaged uh

2646

04:28:33,110 --> 04:28:30,540

so I have control and we're still

2647

04:28:35,689 --> 04:28:33,120

rotating thanks Frank

2648

04:28:37,729 --> 04:28:35,699

today's space Walkers are NASA astronaut

2649

04:28:39,889 --> 04:28:37,739

Steve Bowen and Woody hoberg and they

2650

04:28:41,809 --> 04:28:39,899

are currently working to unfold the

2651
04:28:46,910 --> 04:28:41,819
irosa or International Space Station

2652
04:28:52,189 --> 04:28:49,309
once it is unfolded they will verify

2653
04:28:53,750 --> 04:28:52,199
soft capture is properly engaged and

2654
04:28:55,790 --> 04:28:53,760
then they will perform some glove

2655
04:29:01,010 --> 04:28:55,800
inspections and have checks before

2656
04:29:06,229 --> 04:29:03,410
okay great job guys I need you both to

2657
04:29:08,870 --> 04:29:06,239
perform a glove cap and Gauntlet check

2658
04:29:13,010 --> 04:29:08,880
and then it will start moving towards

2659
04:29:15,889 --> 04:29:13,020
our cable mating positions

2660
04:29:19,070 --> 04:29:15,899
okay Frank ub1 has no change to gloves

2661
04:29:27,910 --> 04:29:19,080
drying up and droplets down yep one

2662
04:29:32,450 --> 04:29:30,590
the first working Eclipse window has

2663
04:29:33,950 --> 04:29:32,460

started and there's about 30 minutes for

2664

04:29:35,710 --> 04:29:33,960

them to complete the cable meeting

2665

04:29:40,250 --> 04:29:35,720

process

2666

04:29:40,260 --> 04:29:42,710

okay

2667

04:29:47,090 --> 04:29:44,929

you know at this point the hardware

2668

04:29:48,110 --> 04:29:47,100

meets minimum structural config for main

2669

04:29:50,689 --> 04:29:48,120

cables

2670

04:29:59,269 --> 04:29:50,699

actually yeah so why don't we when we

2671

04:29:59,279 --> 04:30:05,510

all right so I think we have the caps

2672

04:30:10,969 --> 04:30:08,090

the nvtl Caps we're ready to demate

2673

04:30:32,269 --> 04:30:14,090

okay you can uh teammate the mgdl Caps

2674

04:30:37,910 --> 04:30:34,809

come on

2675

04:30:40,010 --> 04:30:37,920

Evie and Ivy crew Houston our last

2676

04:30:42,229 --> 04:30:40,020

little bit of calm here we can confirm

2677

04:30:45,290 --> 04:30:42,239

our spacing is in place and we are in

2678

04:30:50,950 --> 04:30:45,300

our Eclipse condition so you are go for

2679

04:30:59,030 --> 04:30:53,330

copy go thanks James and do you guys

2680

04:31:03,950 --> 04:31:01,729

you have 28 minutes

2681

04:31:05,450 --> 04:31:03,960

we'll be back with you by then and as an

2682

04:31:07,429 --> 04:31:05,460

additional reminder you'll need to

2683

04:31:09,769 --> 04:31:07,439

complete the nset deals before you move

2684

04:31:14,929 --> 04:31:09,779

to the eclipse required cables

2685

04:31:22,189 --> 04:31:17,929

t-capping the nvga Caps now

2686

04:31:30,889 --> 04:31:25,010

okay guys once you have the Caps off not

2687

04:31:30,899 --> 04:31:35,389

standby Frank I still wants to cast off

2688

04:31:40,130 --> 04:31:38,149

both Woody hoberg and Steve Bowen are

2689

04:31:43,010 --> 04:31:40,140

now working to electrically connect the

2690

04:31:44,950 --> 04:31:43,020

new irosa or ISS roll out solar array to

2691

04:31:48,710 --> 04:31:44,960

the Space Station's power system

2692

04:31:48,720 --> 04:32:17,469

foreign

2693

04:32:21,649 --> 04:32:19,910

as they work through the cable meeting

2694

04:32:24,170 --> 04:32:21,659

process they'll first attach four

2695

04:32:25,849 --> 04:32:24,180

connectors to the irosa and then both of

2696

04:32:28,010 --> 04:32:25,859

them will move to either side of the

2697

04:32:30,469 --> 04:32:28,020

Legacy array to disconnect the old array

2698

04:32:32,510 --> 04:32:30,479

and connect a y cable this will allow

2699

04:32:34,130 --> 04:32:32,520

power to flow from both the new irosa

2700

04:32:44,090 --> 04:32:34,140

and the old Legacy array to the Space

2701
04:32:50,630 --> 04:32:47,030
we are about 2 hours and 53 minutes into

2702
04:32:53,210 --> 04:32:50,640
today's space walk and we are about six

2703
04:33:09,769 --> 04:32:53,220
minutes away from getting signal back

2704
04:33:15,949 --> 04:33:12,109
today's spacewalk officially started at

2705
04:33:18,470 --> 04:33:15,959
8 25 a.m Central Time 9 25 a.m eastern

2706
04:33:23,929 --> 04:33:18,480
time when the spacewalkers switched

2707
04:33:29,570 --> 04:33:27,170
Steve Bowen who is ev1 with red stripes

2708
04:33:31,609 --> 04:33:29,580
egressed the crew lock first and

2709
04:33:33,769 --> 04:33:31,619
received a crew lock bag and put it on

2710
04:33:37,250 --> 04:33:33,779
his body or straight tether he was Then

2711
04:33:40,609 --> 04:33:37,260
followed shortly by ev2 or Woody hoberg

2712
04:33:43,010 --> 04:33:40,619
who is in the unmarked suit

2713
04:33:45,410 --> 04:33:43,020

they then translated up the forward face

2714

04:33:47,090 --> 04:33:45,420
of the trust and went starboard

2715

04:33:49,070 --> 04:33:47,100
Steve villain stopped to configure his

2716

04:33:51,051 --> 04:33:49,080
safety tethers and then Woody hoberg

2717

04:33:54,890 --> 04:33:51,061
followed a similar path going to the

2718

04:33:57,051 --> 04:33:54,900
port crew equipment translation Aid cart

2719

04:34:02,689 --> 04:33:57,061
and retrieved and articulating portable

2720

04:34:07,131 --> 04:34:04,910
Bowen then translated to the irosa

2721

04:34:10,010 --> 04:34:07,141
carrier and retrieved his pistol grip

2722

04:34:15,849 --> 04:34:10,020
tool and began preparing irosa for

2723

04:34:20,449 --> 04:34:18,170
hoberg installed the foot restraint on

2724

04:34:23,029 --> 04:34:20,459
the Space Station's robotic arm Ingress

2725

04:34:30,590 --> 04:34:23,039
the restraint and then the arm moved him

2726
04:34:35,810 --> 04:34:33,051
both Bowen and hoberg then worked to

2727
04:34:46,131 --> 04:34:35,820
release a series of bolts both restraint

2728
04:34:49,910 --> 04:34:47,929
once those bolts were released they

2729
04:34:51,470 --> 04:34:49,920
installed the first of two handling AIDS

2730
04:35:03,109 --> 04:34:51,480
called Scoops in preparation for

2731
04:35:07,910 --> 04:35:05,150
once they installed the second scoop

2732
04:35:09,890 --> 04:35:07,920
hoberg lifted the iris off of its

2733
04:35:12,830 --> 04:35:09,900
carrier and then after several Maneuvers

2734
04:35:15,830 --> 04:35:12,840
on the robotic arm he arrived at the 1A

2735
04:35:18,349 --> 04:35:15,840
mod kit work site during these robotic

2736
04:35:20,510 --> 04:35:18,359
arm Maneuvers Bowen worked to make his

2737
04:35:22,849 --> 04:35:20,520
way over to the mod kit site

2738
04:35:31,570 --> 04:35:22,859

where they met to install the arrows

2739

04:35:38,510 --> 04:35:34,670

more recently the crew unfolded the

2740

04:36:32,349 --> 04:35:38,520

irosa and are now working to mate the

2741

04:36:36,949 --> 04:36:34,910

once the crew members finish connect

2742

04:36:38,750 --> 04:36:36,959

electrically connecting the new iros of

2743

04:36:49,131 --> 04:36:38,760

the Space Station's power system they

2744

04:36:55,609 --> 04:36:50,390

these

2745

04:38:02,150 --> 04:36:55,619

irisa to the mounting bracket before

2746

04:38:07,369 --> 04:38:04,429

here in the room we have flight director

2747

04:38:09,410 --> 04:38:07,379

Diane Daly you can see in the middle of

2748

04:38:18,230 --> 04:38:09,420

your screen and next to her is the prime

2749

04:38:59,230 --> 04:38:20,570

also in the room we have our Eva Flight

2750

04:39:02,869 --> 04:39:01,310

and please you're going to be

2751

04:39:07,369 --> 04:39:02,879

disconnecting saw

2752

04:39:09,230 --> 04:39:07,379

507 the panel 507 and saw

2753

04:39:13,810 --> 04:39:09,240

about two one from panel pop it through

2754

04:39:20,990 --> 04:39:16,490

Houston's back with you with a

2755

04:39:27,470 --> 04:39:22,429

okay

2756

04:39:33,470 --> 04:39:30,890

a chance all right great job you guys we

2757

04:39:35,209 --> 04:39:33,480

had some spotty shot SS there so we

2758

04:39:37,010 --> 04:39:35,219

could hear you you did a great job we

2759

04:39:39,170 --> 04:39:37,020

just want to confirm you're doing each

2760

04:39:41,090 --> 04:39:39,180

cable one at a time I don't mind which

2761

04:39:42,470 --> 04:39:41,100

one you start with just tell me which

2762

04:39:44,630 --> 04:39:42,480

one you're going to start with but only

2763

04:39:48,890 --> 04:39:44,640

demate one cable from the panel at a

2764

04:39:54,050 --> 04:39:50,810

ready to go

2765

04:39:59,570 --> 04:39:54,060

Woody I'm ready

2766

04:39:59,580 --> 04:40:05,590

Frankie ready for me to take back over

2767

04:40:11,990 --> 04:40:08,270

copycams you are prime

2768

04:40:15,830 --> 04:40:12,000

got it I'm Prime IV great job all right

2769

04:40:22,010 --> 04:40:15,840

I copy you already disconnected

2770

04:40:22,020 --> 04:40:26,390

I agree that is true

2771

04:40:33,770 --> 04:40:31,130

all right mate p21 Alpha to panel p21 I

2772

04:40:37,490 --> 04:40:33,780

need fraud pins Emi check and the

2773

04:40:40,910 --> 04:40:38,810

okay

2774

04:40:45,170 --> 04:40:40,920

321

2775

04:41:01,910 --> 04:40:47,390

s

2776

04:41:08,390 --> 04:41:04,850

yeah I've got panel t9d mating

2777

04:41:11,990 --> 04:41:08,400

here you go estimated

2778

04:41:14,150 --> 04:41:12,000

mate P9 Alpha to panel P9 I need fod

2779

04:41:16,910 --> 04:41:14,160

pins Emi check and the connector to hard

2780

04:41:16,920 --> 04:41:24,410

copy jams

2781

04:41:28,670 --> 04:41:26,868

okay

2782

04:41:32,270 --> 04:41:28,680

P9 Alpha

2783

04:41:35,750 --> 04:41:32,280

Channel denied preventing no side good

2784

04:41:35,760 --> 04:41:39,890

that you could check circles

2785

04:41:39,900 --> 04:41:47,390

oh p21 Alpha is made the p21 panel

2786

04:41:52,128 --> 04:41:50,150

that was pretty in my brand no thoughts

2787

04:41:54,948 --> 04:41:52,138

get pins

2788

04:41:58,070 --> 04:41:54,958

copy good mate Steve confirm the

2789

04:42:00,890 --> 04:41:58,080

connectors to hard stop

2790

04:42:04,390 --> 04:42:00,900

and the connectors to help stop

2791

04:42:13,670 --> 04:42:04,400

great work you can move on to

2792

04:42:19,310 --> 04:42:15,830

James I have P9

2793

04:42:21,350 --> 04:42:19,320

the panel hardstop

2794

04:42:23,990 --> 04:42:21,360

coffee that's a good mate Woody you can

2795

04:42:27,490 --> 04:42:24,000

move on to j9 Alpha mated to saw cable

2796

04:42:32,350 --> 04:42:29,470

Alpha

2797

04:42:36,530 --> 04:42:32,360

star cable P9

2798

04:42:42,490 --> 04:42:36,540

I have no bent pins no fraud

2799

04:42:44,930 --> 04:42:42,500

I all right I have no woody 321

2800

04:42:47,990 --> 04:42:44,940

j21 Alpha

2801
04:42:52,250 --> 04:42:48,000
there's two pins no pod and good Emi

2802
04:42:57,770 --> 04:42:54,770
copy Steve that is a good mate you can

2803
04:43:01,788 --> 04:42:57,780
move on to disconnecting saw cable p7

2804
04:43:01,798 --> 04:43:11,030
all right star cable foreign

2805
04:43:16,310 --> 04:43:13,970
you can now see live views of NASA

2806
04:43:27,050 --> 04:43:16,320
astronaut Steve Bowen working to mate

2807
04:43:36,288 --> 04:43:31,128
okay Jim property nine to j9 Alpha

2808
04:43:39,530 --> 04:43:36,298
connector or uh connect your heart stop

2809
04:43:42,890 --> 04:43:39,540
ready for panel v23 good words Woody

2810
04:43:53,208 --> 04:43:42,900
move on to disconnecting saw cable p23

2811
04:43:57,288 --> 04:43:54,590
all right

2812
04:44:06,170 --> 04:43:57,298
you made it

2813
04:44:11,930 --> 04:44:09,230

installing j7 p7 Alpha

2814

04:44:17,330 --> 04:44:11,940

copy Steve and copy your checks a firm

2815

04:44:17,340 --> 04:44:51,410

foreign

2816

04:44:51,420 --> 04:45:29,390

connect j23 Alpha to saw cable p23

2817

04:45:36,650 --> 04:45:33,948

dog cable p23 to j23 Alpha noventus so

2818

04:45:39,050 --> 04:45:36,660

far the good Emi band incap connect

2819

04:45:41,448 --> 04:45:39,060

their hearts up

2820

04:45:43,010 --> 04:45:41,458

copy Woody that is a good mate and I

2821

04:45:45,890 --> 04:45:43,020

track that that is your last connection

2822

04:45:48,350 --> 04:45:45,900

for this side verify the connector

2823

04:45:52,490 --> 04:45:48,360

config is as expected and clean up the

2824

04:45:52,500 --> 04:45:59,208

okay that's gonna work thanks James

2825

04:45:59,218 --> 04:46:06,230

all right I'm getting this little line

2826
04:46:12,530 --> 04:46:09,050
copies these and Woody we were tracking

2827
04:46:14,868 --> 04:46:12,540
that your hand did touch a connector p24

2828
04:46:18,708 --> 04:46:14,878
we just want to make sure that that is

2829
04:46:23,750 --> 04:46:20,990
good catch and I

2830
04:46:25,788 --> 04:46:23,760
uh you are correctly moved if it is back

2831
04:46:29,570 --> 04:46:25,798
at heart stop and I'm going to check

2832
04:46:29,580 --> 04:46:37,070
I can confirm all four panel connector

2833
04:46:37,080 --> 04:47:08,570
happy Woody we agree

2834
04:47:08,580 --> 04:47:14,288
foreign

2835
04:47:19,310 --> 04:47:17,030
Steve you're both doing great we have

2836
04:47:53,208 --> 04:47:19,320
over 12 minutes left of this working

2837
04:47:53,218 --> 04:48:03,788
foreign

2838
04:48:08,810 --> 04:48:06,770

I think the cables on the right side are

2839

04:48:19,610 --> 04:48:08,820

looking to be in a good condition

2840

04:48:25,550 --> 04:48:21,230

great job

2841

04:48:27,830 --> 04:48:25,560

Steve you can move on to copy to hard

2842

04:48:32,208 --> 04:48:27,840

stop you can move on to connecting j7

2843

04:48:36,650 --> 04:48:34,430

and that didn't work

2844

04:48:39,350 --> 04:48:36,660

Woody we agree your work site is in a

2845

04:48:41,090 --> 04:48:39,360

good config we will have a glove

2846

04:48:45,910 --> 04:48:41,100

inspection half check and Gauntlet check

2847

04:48:53,030 --> 04:48:48,650

NASA astronaut Steve Bowen is currently

2848

04:48:57,230 --> 04:48:55,368

once it is connected he will verify that

2849

04:48:59,030 --> 04:48:57,240

all the connection connectors are

2850

04:49:01,368 --> 04:48:59,040

configured as expected and clean up any

2851

04:49:10,910 --> 04:49:01,378

remaining cable Slack

2852

04:49:20,990 --> 04:49:14,330

they've got an alpha made it to p7 so

2853

04:49:26,090 --> 04:49:23,628

happy excellent work Steve that is a

2854

04:49:28,250 --> 04:49:26,100

good mate you can verify that your

2855

04:49:32,930 --> 04:49:28,260

connector config is as expected and

2856

04:49:32,940 --> 04:49:38,270

all right I see oh look

2857

04:49:38,280 --> 04:49:43,310

and

2858

04:49:48,708 --> 04:49:45,650

I'm not sure how bad this is do you want

2859

04:49:48,718 --> 04:49:51,288

um

2860

04:49:51,298 --> 04:49:55,850

checking

2861

04:49:55,860 --> 04:50:04,368

I think it looks not too bad

2862

04:50:07,730 --> 04:50:06,230

we're taking a look and it looks like

2863

04:50:14,770 --> 04:50:07,740

you're in a good config Steve we're

2864

04:50:14,780 --> 04:50:23,390

jams no change to gloves I have

2865

04:50:30,650 --> 04:50:25,670

copy witty and you cut out there did you

2866

04:50:30,660 --> 04:50:42,230

copy good checks from Woody

2867

04:50:42,240 --> 04:50:47,510

all right I think yeah

2868

04:50:50,450 --> 04:50:50,030

Woody you can translate to the hinge

2869

04:51:01,970 --> 04:50:50,460

bolts

2870

04:51:06,890 --> 04:51:04,490

caution for you Woody

2871

04:51:08,868 --> 04:51:06,900

you should avoid contact with the cables

2872

04:51:11,090 --> 04:51:08,878

and NZ GL connectors which are now

2873

04:51:12,890 --> 04:51:11,100

attached to irosa I Know It's tricky at

2874

04:51:14,930 --> 04:51:12,900

this work bite you can hold on to the

2875

04:51:19,070 --> 04:51:14,940

bolt canisters that are on either side

2876
04:51:27,890 --> 04:51:21,948
okay great yet I see those you can copy

2877
04:51:32,750 --> 04:51:29,810
Steve again we're happy with your work

2878
04:51:35,270 --> 04:51:32,760
site this is the end of our Eclipse

2879
04:51:37,430 --> 04:51:35,280
requirements for this uh Eva so great

2880
04:51:39,110 --> 04:51:37,440
work to both of you I need a glove

2881
04:51:40,310 --> 04:51:39,120
inspection half check and Gauntlet check

2882
04:51:42,560 --> 04:51:40,320
from Steve

2883
04:51:42,570 --> 04:51:48,368
[Music]

2884
04:51:53,750 --> 04:51:51,350
all of the cables have been successfully

2885
04:51:56,208 --> 04:51:53,760
connected this will now allow power to

2886
04:51:57,830 --> 04:51:56,218
flow from both the new irosa and the old

2887
04:52:00,050 --> 04:51:57,840
Legacy array to the Space Station's

2888
04:52:01,910 --> 04:52:00,060

power system

2889

04:52:28,610 --> 04:52:01,920

s

2890

04:52:37,690 --> 04:52:28,620

he might not have much to hold on to

2891

04:52:37,700 --> 04:52:49,970

all right

2892

04:52:58,128 --> 04:52:54,410

Alpha One clockwise two is set

2893

04:53:04,250 --> 04:52:58,138

good settings Drive the hinge bolts 14

2894

04:53:04,260 --> 04:53:17,090

working

2895

04:53:20,990 --> 04:53:19,190

NASA astronaut Woody hoberg is now

2896

04:53:22,730 --> 04:53:21,000

working to drive two hinge bolts into

2897

04:53:24,948 --> 04:53:22,740

irosa while it's in the unfolded

2898

04:53:27,050 --> 04:53:24,958

position the crew will then work

2899

04:53:55,368 --> 04:53:27,060

together to drive eight bolts to fully

2900

04:53:59,090 --> 04:53:58,128

because I got 17 and a half turns green

2901
04:54:03,288 --> 04:53:59,100
light

2902
04:54:06,650 --> 04:54:03,298
two decimal four foot counts on R7

2903
04:54:11,390 --> 04:54:06,660
copy R7 17 and a half turns green light

2904
04:54:40,430 --> 04:54:12,530
okay

2905
04:54:45,110 --> 04:54:42,650
Woody hoberg is now driving the second

2906
04:54:46,910 --> 04:54:45,120
of the two hinge bolts and then Steve

2907
04:54:48,410 --> 04:54:46,920
Bowen will work to drive the eight bolts

2908
04:54:50,810 --> 04:54:48,420
to fully secure I roasted to the

2909
04:54:53,090 --> 04:54:50,820
mounting bracket did he just confirm

2910
04:54:54,770 --> 04:54:53,100
once that's complete Steve Bowen will

2911
04:54:57,708 --> 04:54:54,780
move to a deployment viewing position

2912
04:55:00,170 --> 04:54:57,718
and Woody hoberg will release the final

2913
04:55:02,270 --> 04:55:00,180

two bolts holding irosa in an undeployed

2914

04:55:10,448 --> 04:55:02,280

position and then irosa will deploy over

2915

04:55:15,410 --> 04:55:13,610

five turns

2916

04:55:17,948 --> 04:55:15,420

and two decimal three foot pounds green

2917

04:55:22,788 --> 04:55:21,350

17 decimal two five turns two decimals

2918

04:55:26,868 --> 04:55:22,798

three on the torque and a green light

2919

04:55:30,350 --> 04:55:26,878

that is a good R8 we have a go for you

2920

04:55:32,150 --> 04:55:30,360

to use the AMS knob as a Delta to the

2921

04:55:34,910 --> 04:55:32,160

procedure as requested so at this time

2922

04:55:38,750 --> 04:55:34,920

you can store your PGT and we will have

2923

04:55:42,410 --> 04:55:38,760

you loosen each hinge bolt one turn and

2924

04:55:46,368 --> 04:55:42,420

then finger tight less than one turn on

2925

04:55:46,378 --> 04:55:56,990

okay James I understand all work

2926
04:56:01,610 --> 04:55:59,690
Woody after this is complete or excuse

2927
04:56:03,890 --> 04:56:01,620
me Steve after this is complete you will

2928
04:56:07,970 --> 04:56:03,900
be stowing the AMS knob in the acrylic

2929
04:56:17,150 --> 04:56:10,430
got it right here Steve let's get a rep

2930
04:56:17,160 --> 04:56:20,868
I'll hand it to you there you go

2931
04:56:25,070 --> 04:56:22,730
ahead

2932
04:56:26,530 --> 04:56:25,080
thanks

2933
04:56:33,650 --> 04:56:26,540
all right James

2934
04:56:36,890 --> 04:56:35,628
Woody we are happy with that

2935
04:56:38,990 --> 04:56:36,900
but your next step

2936
04:56:40,850 --> 04:56:39,000
to complete your tether swap so we will

2937
04:56:43,310 --> 04:56:40,860
have you translate back inboard to the

2938
04:56:45,170 --> 04:56:43,320

arm you might have to GCA from the

2939

04:56:47,090 --> 04:56:45,180

tether swap position if it's required

2940

04:56:48,470 --> 04:56:47,100

I'll let you work with Frank and Sultan

2941

04:56:51,590 --> 04:56:48,480

for that

2942

04:56:56,030 --> 04:56:51,600

Steve you are going to drive m-bolts on

2943

04:56:59,810 --> 04:56:58,250

all right let me install the very best

2944

04:57:02,448 --> 04:56:59,820

knob the middle

2945

04:57:04,670 --> 04:57:02,458

ready to do that

2946

04:57:09,650 --> 04:57:04,680

exams I copy all I'll be picking up my

2947

04:57:09,660 --> 04:57:59,270

good words

2948

04:58:04,128 --> 04:58:00,980

version

2949

04:58:04,138 --> 04:58:11,810

copy Steve

2950

04:58:15,110 --> 04:58:13,970

for Steve and Woody the verifying

2951
04:58:16,788 --> 04:58:15,120
there's no preferred order on the end

2952
04:58:18,770 --> 04:58:16,798
Bowl trip

2953
04:58:20,810 --> 04:58:18,780
no preferred order you can start with

2954
04:58:45,610 --> 04:58:20,820
whichever one you want first let me know

2955
04:58:51,230 --> 04:58:47,990
and Steve for your awareness we are

2956
04:58:53,628 --> 04:58:51,240
tracking the m34 had one turn hand

2957
04:58:57,470 --> 04:58:53,638
started on it if you started any other

2958
04:59:01,910 --> 04:58:59,570
all right and so the first one

2959
04:59:03,650 --> 04:59:01,920
there's 721

2960
04:59:06,850 --> 04:59:03,660
that's correct

2961
04:59:11,090 --> 04:59:06,860
underneath the uh expansion

2962
04:59:13,448 --> 04:59:11,100
31. yeah so I started that here

2963
04:59:16,250 --> 04:59:13,458

as well with one turn

2964

04:59:18,650 --> 04:59:16,260

and James I started up to you as well so

2965

04:59:21,110 --> 04:59:18,660

Steve can call them now let's see which

2966

04:59:24,110 --> 04:59:21,120

ones they are yeah okay that works well

2967

04:59:26,208 --> 04:59:24,120

for us I copy the M31 already has one

2968

04:59:31,868 --> 04:59:26,218

turn on it see if your settings are

2969

04:59:48,708 --> 04:59:33,770

two

2970

04:59:48,718 --> 04:59:55,788

pass

2971

05:00:01,070 --> 04:59:57,830

advice

2972

05:00:03,890 --> 05:00:01,080

and 39.9 volts

2973

05:00:10,010 --> 05:00:03,900

and so you got the things again Jay

2974

05:00:10,020 --> 05:00:13,128

five

2975

05:00:19,128 --> 05:00:16,070

clockwise

2976
05:00:21,590 --> 05:00:19,138
you'll be driving these bolts such that

2977
05:00:26,510 --> 05:00:21,600
the black line is flush it'll be to

2978
05:00:26,520 --> 05:00:30,770
11 14 turns left

2979
05:00:30,780 --> 05:00:35,330
good words

2980
05:00:41,690 --> 05:00:38,930
for both of you we are three hours and

2981
05:00:44,390 --> 05:00:41,700
20 minutes into this Eva

2982
05:00:45,590 --> 05:00:44,400
track in a time of 7 hours and 30

2983
05:00:48,110 --> 05:00:45,600
minutes

2984
05:00:50,570 --> 05:00:48,120
limiting consumable is Woody's battery

2985
05:01:03,050 --> 05:00:50,580
and we are around 45 minutes ahead of

2986
05:01:03,060 --> 05:01:09,288
all right I'm 31.

2987
05:01:14,208 --> 05:01:12,288
NASA astronaut Steve Bowen who is eb1

2988
05:01:16,010 --> 05:01:14,218

today is currently working to drive the

2989

05:01:20,270 --> 05:01:16,020

eight bolts to fully secure eye roast

2990

05:01:28,368 --> 05:01:24,708

torque of 22 seven turns green light and

2991

05:01:38,390 --> 05:01:30,288

and there's a black line

2992

05:01:42,470 --> 05:01:41,330

and my green reel is locked to my red

2993

05:01:54,230 --> 05:01:42,480

reel

2994

05:01:59,570 --> 05:01:56,750

you are currently seeing views from NASA

2995

05:02:02,570 --> 05:01:59,580

astronaut woody woody hoberg's helmet

2996

05:02:06,470 --> 05:02:02,580

can he is working to swap some tethers

2997

05:02:10,550 --> 05:02:08,150

okay and I think my next thing is to

2998

05:02:14,330 --> 05:02:10,560

reposition apfr to clocking six

2999

05:02:18,470 --> 05:02:16,190

he's now about to start working on

3000

05:02:21,830 --> 05:02:18,480

repositioning the articulating portable

3001

05:02:23,448 --> 05:02:21,840

foot restraint on the robotic arm

3002

05:02:25,550 --> 05:02:23,458

y see it here but we're headed meanwhile

3003

05:02:54,350 --> 05:02:25,560

NASA astronaut Steve Bowen continues to

3004

05:03:00,350 --> 05:02:57,948

okay looks like M32 33 and 34 all hand

3005

05:03:11,570 --> 05:03:00,360

started

3006

05:03:18,170 --> 05:03:13,670

and verifying settings

3007

05:03:26,510 --> 05:03:18,180

Bravo 5 clockwise II

3008

05:03:38,628 --> 05:03:30,170

copy M32 drive until Blackline flash to

3009

05:03:38,638 --> 05:03:41,810

go

3010

05:03:41,820 --> 05:03:50,590

all right repositioned talking six

3011

05:03:55,310 --> 05:03:52,610

black on black

3012

05:03:58,788 --> 05:03:55,320

and it ingratulated low profile

3013

05:04:01,128 --> 05:03:58,798

copy good install Woody you can give M1

3014

05:04:02,570 --> 05:04:01,138

a go for the iea back off and we will

3015

05:04:05,570 --> 05:04:02,580

have you translate back to the mounting

3016

05:04:12,350 --> 05:04:08,050

all right

3017

05:04:15,170 --> 05:04:12,360

European lights 1.31 turns and torque of

3018

05:04:26,510 --> 05:04:15,180

21.1

3019

05:04:26,520 --> 05:04:29,270

three

3020

05:04:29,280 --> 05:04:38,930

that didn't work

3021

05:04:44,150 --> 05:04:41,990

you're seeing live views of Steve Bowen

3022

05:04:49,550 --> 05:04:44,160

working to drive the final eight bolts

3023

05:04:54,050 --> 05:04:51,948

y we copy that all that said there's

3024

05:04:56,628 --> 05:04:54,060

been removed from there and the ffr

3025

05:05:00,170 --> 05:04:56,638

reconfigured and ready to uh Military

3026

05:05:02,690 --> 05:05:00,180

Park uh position grips are coming off

3027

05:05:03,890 --> 05:05:02,700

coffee breaks off you're going behind

3028

05:05:06,470 --> 05:05:03,900

you right

3029

05:05:11,690 --> 05:05:06,480

all right I got a quick green lights

3030

05:05:15,890 --> 05:05:11,700

got the 11.4 turns 21 44 foot five arms

3031

05:05:23,390 --> 05:05:18,650

copy Steve's that's a good bolt for m33

3032

05:05:27,350 --> 05:05:24,410

all right

3033

05:05:49,368 --> 05:05:27,360

m34 is gonna work

3034

05:05:49,378 --> 05:05:56,570

all right a good green lights

3035

05:05:56,580 --> 05:06:00,650

Sports 1.5

3036

05:06:00,660 --> 05:06:08,448

um I mean 11.5 currents at 23.05

3037

05:06:12,948 --> 05:06:10,970

and Steve I copy green light and that

3038

05:06:15,410 --> 05:06:12,958

volt is driven but I need you to read

3039

05:06:18,610 --> 05:06:15,420

back the torque and the turns you cut

3040

05:06:18,620 --> 05:06:24,170

23.0 in terms of the 11.5

3041

05:06:28,670 --> 05:06:27,110

you know the arm is starting motion copy

3042

05:06:35,090 --> 05:06:28,680

filter

3043

05:06:35,100 --> 05:06:38,090

you can move on

3044

05:06:51,470 --> 05:06:40,970

okay copy M35 has not been hand started

3045

05:06:56,350 --> 05:06:53,510

NASA astronaut Steve Bowen is now

3046

05:06:59,330 --> 05:06:56,360

halfway through installing the eight

3047

05:07:01,970 --> 05:06:59,340

mounting bracket bolts he has four to go

3048

05:07:04,250 --> 05:07:01,980

and has completed four of them meanwhile

3049

05:07:17,628 --> 05:07:04,260

NASA astronaut Woody hoberg is currently

3050

05:07:29,990 --> 05:07:20,448

back of the green lights

3051
05:07:32,770 --> 05:07:31,610
we will feel

3052
05:07:35,208 --> 05:07:32,780
good

3053
05:07:36,770 --> 05:07:35,218
is it useful for me to stock and Swap

3054
05:07:40,030 --> 05:07:36,780
and help Drive these or unless you just

3055
05:07:44,930 --> 05:07:43,070
yeah absolutely I can do that we're okay

3056
05:07:54,128 --> 05:07:44,940
with you doing that but Steve say again

3057
05:07:59,208 --> 05:07:57,230
copy 12.2 that is a good bold then if

3058
05:08:00,650 --> 05:07:59,218
you transfer your PGT to Woody we can

3059
05:08:06,050 --> 05:08:00,660
drive the remaining bolts we're looking

3060
05:08:14,330 --> 05:08:09,170
that should be Bravo five let me pass it

3061
05:08:18,050 --> 05:08:15,830
I got it

3062
05:08:22,868 --> 05:08:18,060
okay

3063
05:08:22,878 --> 05:08:29,990

would be in motion

3064

05:08:34,610 --> 05:08:31,970

okay

3065

05:08:37,310 --> 05:08:34,620

NASA astronaut Steve Bowen just handed

3066

05:08:39,230 --> 05:08:37,320

off the Pistol Group grip tool to Woody

3067

05:08:46,070 --> 05:08:39,240

hoberg who's gonna help him drive the

3068

05:08:46,080 --> 05:09:20,868

foreign

3069

05:09:27,770 --> 05:09:24,230

26 decimal two nine turns green light 21

3070

05:09:29,330 --> 05:09:27,780

decimal 9 foot pounds

3071

05:09:31,010 --> 05:09:29,340

hey you must have gone back out that's

3072

05:09:44,628 --> 05:09:31,020

double

3073

05:09:44,638 --> 05:10:00,830

we're just checking on that Bolt

3074

05:10:05,628 --> 05:10:03,110

by my memory XL

3075

05:10:07,490 --> 05:10:05,638

14 turns and a great green light and

3076

05:10:10,010 --> 05:10:07,500

good torque it's a good Bowl we can move

3077

05:10:15,788 --> 05:10:10,020

on that was M36 we're ready to move on

3078

05:10:15,798 --> 05:10:19,730

437 now

3079

05:10:19,740 --> 05:10:27,050

been a good spot okay

3080

05:10:34,430 --> 05:10:29,090

okay

3081

05:11:17,270 --> 05:10:36,948

five o'clockwise two or seven good

3082

05:11:24,650 --> 05:11:19,510

all right

3083

05:11:32,810 --> 05:11:27,170

correction 12 decimal five turns green

3084

05:11:32,820 --> 05:11:45,288

good bolts you can move on 10 38.

3085

05:11:49,670 --> 05:11:47,628

NASA astronaut Woody hoberg is now

3086

05:11:51,530 --> 05:11:49,680

working to drive the final of the eight

3087

05:11:53,930 --> 05:11:51,540

bolts to fully secure the International

3088

05:11:57,230 --> 05:11:53,940

Space Station rollout solar array to the

3089

05:12:01,730 --> 05:12:00,230

after that's complete ev1 or Steve Bowen

3090

05:12:04,550 --> 05:12:01,740

will move to a deployment viewing

3091

05:12:06,708 --> 05:12:04,560

position while eb2 who is Woody hoberg

3092

05:12:11,150 --> 05:12:06,718

will release the final two bolts holding

3093

05:12:16,788 --> 05:12:13,128

trying to find a position where I'm not

3094

05:12:23,270 --> 05:12:18,288

we copy

3095

05:12:27,230 --> 05:12:25,368

this one's a little awkward okay I think

3096

05:12:28,010 --> 05:12:27,240

you end up fighting alone time to play a

3097

05:12:49,250 --> 05:12:28,020

little bit

3098

05:12:56,270 --> 05:12:52,788

okay I'm 38. we had 11 decimal nine

3099

05:12:57,530 --> 05:12:56,280

three turns green light 22 decimal two

3100

05:13:01,128 --> 05:12:57,540

foot pounds

3101

05:13:01,138 --> 05:13:06,530

my hands off here

3102

05:13:12,170 --> 05:13:10,730

we copy Woody uh that is a good bolt we

3103

05:13:13,850 --> 05:13:12,180

just needed the confirmation the black

3104

05:13:16,730 --> 05:13:13,860

line is flush because we cannot see it

3105

05:13:20,750 --> 05:13:18,890

s yep black line flush trying to point

3106

05:13:23,208 --> 05:13:20,760

out it

3107

05:13:26,810 --> 05:13:23,218

copy great work we are complete with our

3108

05:13:29,090 --> 05:13:26,820

M bolts uh Steve you can Stow your PGT

3109

05:13:30,948 --> 05:13:29,100

and we'll have you positioned to observe

3110

05:13:32,990 --> 05:13:30,958

the first five magnets snapped together

3111

05:13:36,110 --> 05:13:33,000

when we deploy

3112

05:13:38,930 --> 05:13:36,120

uh Woody you need to get in position on

3113

05:13:42,650 --> 05:13:38,940

the base of the mounting bracket for R9

3114

05:13:48,590 --> 05:13:46,070

okay getting in position for R9 r10

3115

05:13:51,170 --> 05:13:48,600

and I'm getting in position to watch

3116

05:13:53,448 --> 05:13:51,180

deeper good words Woody as a reminder

3117

05:13:54,890 --> 05:13:53,458

this is a Bravo 7 setting you can use

3118

05:13:59,050 --> 05:13:54,900

the scoop on the base of the mounting

3119

05:13:59,060 --> 05:14:39,230

thank you

3120

05:14:39,240 --> 05:14:59,150

ah

3121

05:14:59,160 --> 05:15:28,810

foreign

3122

05:15:35,690 --> 05:15:33,650

a good position Woody I see your PGT out

3123

05:15:37,070 --> 05:15:35,700

warning for both of you prior to

3124

05:15:39,110 --> 05:15:37,080

releasing the deployment launch

3125

05:15:40,730 --> 05:15:39,120

restraint folds positioned to stay clear

3126

05:15:42,890 --> 05:15:40,740

of deploying our rows of blankets you

3127

05:15:44,890 --> 05:15:42,900

will both be in a good position

3128

05:15:47,390 --> 05:15:44,900

thank you

3129

05:15:53,270 --> 05:15:47,400

all right that sounds great yeah uh

3130

05:15:57,948 --> 05:15:56,030

I need a reminder that clockwise or

3131

05:16:00,948 --> 05:15:57,958

counterclockwise

3132

05:16:04,010 --> 05:16:00,958

Bravo 7 counter two and I'll have you

3133

05:16:09,350 --> 05:16:06,770

okay copy that Bravo 7 trying to do is

3134

05:16:15,128 --> 05:16:09,360

set all right I'm in a good position

3135

05:16:19,610 --> 05:16:17,810

NASA astronaut Woody hoberg is standing

3136

05:16:21,830 --> 05:16:19,620

by to release the final two bolts

3137

05:16:23,750 --> 05:16:21,840

holding the ISS rollout solar array in

3138

05:16:27,170 --> 05:16:23,760

an undeployed position you are going to

3139

05:16:28,550 --> 05:16:27,180

release R9 and r10 the white line will

3140

05:16:32,868 --> 05:16:28,560

appear when they are fully released

3141

05:16:48,170 --> 05:16:32,878

expect 17 to 20 turns iroza will deploy

3142

05:16:48,180 --> 05:17:00,670

foreign

3143

05:17:14,090 --> 05:17:03,410

tube bolts are released the irisa will

3144

05:17:14,100 --> 05:17:17,830

falling off the at the station here

3145

05:17:17,840 --> 05:17:25,810

copy we understand that looks great

3146

05:17:32,090 --> 05:17:28,128

my personal

3147

05:17:36,010 --> 05:17:32,100

wait My Invisible I counted 17 turns on

3148

05:17:42,410 --> 05:17:40,070

copy 17 turns on R9 stand continue to

3149

05:17:44,810 --> 05:17:42,420

stand by Woody

3150

05:18:00,610 --> 05:17:44,820

the first of two restraint bolts has

3151
05:18:00,620 --> 05:18:09,910
I just couldn't stop it

3152
05:18:09,920 --> 05:18:34,128
a little bit

3153
05:18:34,138 --> 05:19:09,970
foreign

3154
05:19:09,980 --> 05:19:14,270
but your eyes are enough for us

3155
05:19:18,650 --> 05:19:15,970
all right

3156
05:19:30,288 --> 05:19:18,660
I'll try this on

3157
05:19:30,298 --> 05:19:38,480
I heard that

3158
05:19:38,490 --> 05:19:45,610
[Music]

3159
05:19:45,620 --> 05:19:48,670
foreign

3160
05:19:53,150 --> 05:19:50,810
if you are in a stable position we're

3161
05:19:57,830 --> 05:19:53,160
happy with your view Woody you are going

3162
05:20:26,270 --> 05:20:00,240
s

3163
05:20:26,280 --> 05:20:35,170

all right

3164

05:20:35,180 --> 05:20:40,970

30 seconds to a short hand over

3165

05:20:40,980 --> 05:20:46,010

I count 20 turns so far

3166

05:20:52,730 --> 05:20:47,690

to continue

3167

05:20:52,740 --> 05:20:56,628

gotcha

3168

05:21:00,948 --> 05:20:58,610

foreign

3169

05:21:02,868 --> 05:21:00,958

the second of the two restraint bolts

3170

05:21:04,670 --> 05:21:02,878

has been fully released and irosa will

3171

05:21:05,810 --> 05:21:04,680

begin to point over the next six to ten

3172

05:21:14,208 --> 05:21:05,820

minutes

3173

05:21:18,170 --> 05:21:16,190

we are now in a brief but expected

3174

05:21:19,850 --> 05:21:18,180

Handover period and will regain signal

3175

05:21:45,110 --> 05:21:19,860

of those beautiful views of the space

3176

05:21:45,120 --> 05:21:49,310

all right Houston's back with you

3177

05:21:49,320 --> 05:21:52,670

welcome back

3178

05:21:56,570 --> 05:21:53,930

thank you

3179

05:21:58,490 --> 05:21:56,580

Woody you are staying exactly where you

3180

05:22:00,470 --> 05:21:58,500

are well done on the final bolt to

3181

05:22:05,050 --> 05:22:00,480

release irosa and Steve will take your

3182

05:22:09,230 --> 05:22:07,250

ing out nicely

3183

05:22:10,850 --> 05:22:09,240

and uh everything seems to be lining up

3184

05:22:13,368 --> 05:22:10,860

kind of look for you did you have a good

3185

05:22:18,050 --> 05:22:15,288

copy we don't have video back yet but we

3186

05:22:39,890 --> 05:22:18,060

will shortly we appreciate the words

3187

05:22:43,610 --> 05:22:41,868

we have our video back everything is

3188

05:22:45,770 --> 05:22:43,620

looking great I have two cautions for

3189

05:22:48,170 --> 05:22:45,780

you Woody

3190

05:22:49,670 --> 05:22:48,180

you can now see live views of the

3191

05:22:52,250 --> 05:22:49,680

International Space Station roll out

3192

05:22:54,530 --> 05:22:52,260

solar array as it begins to unfurl as

3193

05:22:57,530 --> 05:22:54,540

the space station flies over the coast

3194

05:22:59,510 --> 05:22:57,540

of us the Southwest United States

3195

05:23:02,390 --> 05:22:59,520

lateral load this is five less than

3196

05:23:31,610 --> 05:23:06,110

okay coffee thank you or be cautious

3197

05:23:36,230 --> 05:23:33,530

everything's looking really good to us

3198

05:23:38,270 --> 05:23:36,240

again well done you too Woody again you

3199

05:23:40,010 --> 05:23:38,280

have to stay put but Steve you can get

3200

05:23:42,650 --> 05:23:40,020

moving if you want to we're still well

3201

05:23:44,090 --> 05:23:42,660

ahead of schedule so uh you can stay and

3202

05:23:45,590 --> 05:23:44,100

look a little longer if you prefer it

3203

05:23:48,530 --> 05:23:45,600

but your next step is to pick up your

3204

05:23:56,208 --> 05:23:51,110

all right hook

3205

05:23:56,218 --> 05:24:07,850

copy

3206

05:24:11,930 --> 05:24:10,250

Woody if we can we'd love to adjust your

3207

05:24:13,850 --> 05:24:11,940

heck of you a little bit if you could

3208

05:24:16,490 --> 05:24:13,860

pitch back at all for us we'd appreciate

3209

05:24:16,500 --> 05:24:19,850

you got it

3210

05:24:19,860 --> 05:24:40,128

thank you

3211

05:24:46,850 --> 05:24:43,250

Woody hoberg is continuing to monitor

3212

05:24:49,368 --> 05:24:46,860

the irosa as it deploys meanwhile Steve

3213

05:24:51,470 --> 05:24:49,378

Bowen is translating back to the irosa

3214

05:24:54,050 --> 05:24:51,480

carrier to reconfigure the carrier beams

3215

05:24:56,390 --> 05:24:54,060

that previously held the upright irosa

3216

05:24:58,430 --> 05:24:56,400

these beams will need to be rotated out

3217

05:25:01,430 --> 05:24:58,440

of the way to allow access to the lower

3218

05:25:14,270 --> 05:25:01,440

iriso which will be installed on next

3219

05:25:14,280 --> 05:25:21,050

together

3220

05:25:21,060 --> 05:25:25,368

that's the week

3221

05:25:25,378 --> 05:25:31,010

copy Steve

3222

05:25:35,390 --> 05:25:33,590

I figured the pictures of what he's here

3223

05:25:38,090 --> 05:25:35,400

sounds great

3224

05:25:39,650 --> 05:25:38,100

once fully deployed the irosa or

3225

05:25:41,628 --> 05:25:39,660

International Space Station roll out

3226

05:25:43,850 --> 05:25:41,638

solar array we'll measure 60 feet long

3227

05:25:50,510 --> 05:25:43,860

by 20 feet wide and we'll shade a little

3228

05:25:54,770 --> 05:25:52,910

each new iroso will produce more than 20

3229

05:25:57,050 --> 05:25:54,780

kilowatts of electricity and once

3230

05:25:58,910 --> 05:25:57,060

installed will enable a 30 increase in

3231

05:26:02,448 --> 05:25:58,920

power production over the station over

3232

05:26:02,458 --> 05:26:32,510

foreign

3233

05:26:35,390 --> 05:26:34,070

copy

3234

05:26:42,288 --> 05:26:35,400

Steve whenever you're ready you're

3235

05:26:45,708 --> 05:26:44,090

on my way

3236

05:26:48,050 --> 05:26:45,718

copy

3237

05:26:52,030 --> 05:26:48,060

I have more questions and warnings for

3238

05:26:57,530 --> 05:26:54,288

to clear this

3239

05:26:57,540 --> 05:27:00,650

let me know

3240

05:27:00,660 --> 05:27:24,050

thank you

3241

05:27:24,060 --> 05:27:28,368

all right I'm ready for coffee Steve

3242

05:27:33,708 --> 05:27:31,070

warning and a reminder grapple shafts

3243

05:27:36,470 --> 05:27:33,718

and curvick coupling are no touch zones

3244

05:27:39,350 --> 05:27:36,480

no sudden movements quick grabs on the

3245

05:27:41,868 --> 05:27:39,360

FSE wait until motion dampens out before

3246

05:27:44,030 --> 05:27:41,878

importing loads on the FSC

3247

05:27:46,250 --> 05:27:44,040

don't simultaneously impart those into

3248

05:27:48,830 --> 05:27:46,260

the FSE this is for when Woody is also

3249

05:28:03,170 --> 05:27:48,840

ready to translate and do not contact

3250

05:28:03,180 --> 05:28:07,490

oh

3251

05:28:12,230 --> 05:28:09,948

the International Space Station roll out

3252

05:28:14,150 --> 05:28:12,240

solar array or irosa continues to pull

3253

05:28:16,368 --> 05:28:14,160

it to deploy on the starboard Fortress

3254

05:28:18,650 --> 05:28:16,378

connected to the 1A power Channel at the

3255

05:28:21,830 --> 05:28:18,660

space station as the space station flies

3256

05:28:26,570 --> 05:28:24,230

I do not have a fair lead listed for you

3257

05:28:33,650 --> 05:28:26,580

Steve and no green hook drop let me just

3258

05:28:38,330 --> 05:28:36,530

yeah I can confirm that now Steve there

3259

05:28:40,448 --> 05:28:38,340

is no action for a fairlead or green

3260

05:28:44,448 --> 05:28:40,458

hook drop you are just translating

3261

05:28:52,930 --> 05:28:44,458

directly onto the FSE from the Port City

3262

05:28:52,940 --> 05:29:44,690

than last time

3263

05:29:50,930 --> 05:29:48,470

I think we first spoke to C7 C8

3264

05:29:53,930 --> 05:29:50,940

hey firm that's right you're gonna be at

3265

05:29:56,628 --> 05:29:53,940

stanchion Alpha and this is a Bravo 7

3266

05:30:00,730 --> 05:29:56,638

setting so you might need to get in a

3267

05:30:04,128 --> 05:30:02,628

work

3268

05:30:41,708 --> 05:30:04,138

copy let me know when you're ready for

3269

05:30:48,830 --> 05:30:45,410

Woody we are nearly complete more words

3270

05:30:48,840 --> 05:31:09,350

okay thank you

3271

05:31:17,750 --> 05:31:12,470

apparently the settings are c738

3272

05:31:17,760 --> 05:31:23,230

level seven

3273

05:31:28,850 --> 05:31:26,628

good read back you'll be releasing C7

3274

05:31:35,208 --> 05:31:28,860

and C8

3275

05:32:04,368 --> 05:31:37,368

thanks for 11 times

3276

05:32:08,868 --> 05:32:07,190

it looks to me like motion respect

3277

05:32:10,788 --> 05:32:08,878

we're just double checking that we can

3278

05:32:12,830 --> 05:32:10,798

confirm a good deploy would eat what

3279

05:32:15,410 --> 05:32:12,840

would help us is if you could confirm

3280

05:32:16,730 --> 05:32:15,420

the bottom five magnets on both booms we

3281

05:32:18,410 --> 05:32:16,740

don't need a heck of you we just need

3282

05:32:25,610 --> 05:32:18,420

you to see that the magnets have snapped

3283

05:32:32,890 --> 05:32:27,110

be

3284

05:32:32,900 --> 05:32:41,090

copy C7 released your go for C8

3285

05:32:44,510 --> 05:32:43,010

Jones I think I might need to move to

3286

05:32:47,090 --> 05:32:44,520

see this do you agree with that or am I

3287

05:32:51,708 --> 05:32:49,730

magnets

3288

05:32:54,830 --> 05:32:51,718

hey from Woody you will have to move in

3289

05:32:57,170 --> 05:32:54,840

your go to translate right now

3290

05:32:59,150 --> 05:32:57,180

right now you're seeing views of NASA

3291

05:33:01,610 --> 05:32:59,160

astronaut Steve Bowen as he works to

3292

05:33:03,350 --> 05:33:01,620

release the beam restraint bolts he has

3293

05:33:08,750 --> 05:33:03,360

already released one of them and has a

3294

05:33:16,730 --> 05:33:12,410

copy C8 is released Steve Stow your PGT

3295

05:33:16,740 --> 05:33:31,128

family

3296

05:33:31,138 --> 05:33:40,750

ah

3297

05:33:46,670 --> 05:33:43,430

speed is a Delta to your plan will have

3298

05:33:48,650 --> 05:33:46,680

you continue translation past expansion

3299

05:33:53,270 --> 05:33:48,660

Bravo suspension Charlie because we have

3300

05:33:53,280 --> 05:34:19,910

okay

3301
05:34:26,570 --> 05:34:23,330
guys received our first five magnets on

3302
05:34:36,590 --> 05:34:26,580
the right side engaged

3303
05:34:36,600 --> 05:34:41,690
let's try to see it as well

3304
05:34:47,628 --> 05:34:44,868
copy thank you Woody with that we can

3305
05:34:51,230 --> 05:34:47,638
release the blanket tensioner bolts our

3306
05:34:53,810 --> 05:34:51,240
11 and R12 on the ISS inboard side of

3307
05:35:00,250 --> 05:34:53,820
irosa

3308
05:35:06,170 --> 05:35:04,368
Alpha One counter two a successful

3309
05:35:08,990 --> 05:35:06,180
deployment of the International Space

3310
05:35:10,670 --> 05:35:09,000
Station rollout solar array or irosa has

3311
05:35:22,010 --> 05:35:10,680
been confirmed as the space station

3312
05:35:26,390 --> 05:35:24,230
NASA astronaut Woody hoberg is now

3313
05:35:34,070 --> 05:35:26,400

working to release blanket tensioner

3314

05:35:38,868 --> 05:35:36,770

after he releases these two bolts it

3315

05:35:42,470 --> 05:35:38,878

will allow the irosa blankets to become

3316

05:35:42,480 --> 05:35:47,570

good settings

3317

05:35:52,930 --> 05:35:50,030

starting with R11

3318

05:35:55,550 --> 05:35:52,940

copy R11

3319

05:35:57,890 --> 05:35:55,560

meanwhile NASA astronaut Steve Bowen is

3320

05:36:10,090 --> 05:35:57,900

working on a get ahead task to release

3321

05:36:14,810 --> 05:36:12,830

in Bravo what would you like

3322

05:36:17,570 --> 05:36:14,820

retrieve the pit pin from the stowage

3323

05:36:25,490 --> 05:36:17,580

location push the C1 bolt into the can

3324

05:36:29,330 --> 05:36:27,110

a firm you should be at stanchion

3325

05:36:33,230 --> 05:36:29,340

Charlie Bravo

3326

05:36:38,270 --> 05:36:35,930

since I got five turns on R11 it pops

3327

05:36:41,690 --> 05:36:38,280

out with a white band

3328

05:36:44,868 --> 05:36:41,700

and I saw the tension on the array

3329

05:36:48,830 --> 05:36:44,878

puppy five turns are 11 released

3330

05:36:48,840 --> 05:36:56,868

. card insurance

3331

05:37:01,670 --> 05:37:00,170

about four turns on R12 I saw the

3332

05:37:03,948 --> 05:37:01,680

attention

3333

05:37:06,770 --> 05:37:03,958

got the good White Band at the bottom of

3334

05:37:12,170 --> 05:37:08,330

fully released

3335

05:37:14,208 --> 05:37:12,180

can still your PGT and verify

3336

05:37:16,788 --> 05:37:14,218

a fun place we want no metal struts or

3337

05:37:18,890 --> 05:37:16,798

collar bolts showing

3338

05:37:20,990 --> 05:37:18,900

NASA astronaut Woody hoberg just

3339

05:37:23,208 --> 05:37:21,000

released both of the tensioner bolts

3340

05:37:25,128 --> 05:37:23,218

that allowed the iris the blankets to

3341

05:37:27,470 --> 05:37:25,138

become tensioned he's not going to work

3342

05:37:30,170 --> 05:37:27,480

work on cleaning up the mod kit work

3343

05:37:35,448 --> 05:37:30,180

site would not describe the fault as

3344

05:37:45,170 --> 05:37:37,490

we're checking Woody thanks for the go

3345

05:37:51,350 --> 05:37:47,570

copy Steve your next step is to release

3346

05:37:54,708 --> 05:37:51,360

Charlie for and Charlie three so two

3347

05:37:56,990 --> 05:37:54,718

initial beam additional beam bolts this

3348

05:37:59,628 --> 05:37:57,000

is a Bravo 7 setting so I'll let you get

3349

05:37:59,638 --> 05:38:07,430

all right give me a second

3350

05:38:07,440 --> 05:38:19,730

thank you

3351

05:38:31,930 --> 05:38:22,070

all right Woody I can confirm that we

3352

05:38:38,330 --> 05:38:35,750

we are happy with both R11 and R12 so we

3353

05:38:41,750 --> 05:38:38,340

need you to verify all the mli on the

3354

05:38:48,230 --> 05:38:45,368

Coffee House dance and work right strut

3355

05:38:54,470 --> 05:38:48,240

I thought it was looking good

3356

05:39:00,948 --> 05:38:57,170

10 o'clockwise two

3357

05:39:04,368 --> 05:39:00,958

a firm Bravo 7 counter two you will be

3358

05:39:07,730 --> 05:39:04,378

releasing these bolts expect eight to

3359

05:39:11,690 --> 05:39:09,470

nice

3360

05:39:14,510 --> 05:39:11,700

early for

3361

05:39:48,948 --> 05:39:14,520

copy Charlie four

3362

05:39:54,590 --> 05:39:51,410

Charlie four is done

3363

05:39:54,600 --> 05:39:58,788

oh sorry

3364

05:40:06,350 --> 05:40:02,270

copy Charlie Charlie four is released I

3365

05:40:12,770 --> 05:40:08,330

it was 12. I let it run a little bit

3366

05:40:18,230 --> 05:40:15,350

puppy you can continue on to Charlie

3367

05:40:18,240 --> 05:40:23,170

reasons

3368

05:40:28,850 --> 05:40:26,390

looking good I need another couple spots

3369

05:40:30,670 --> 05:40:28,860

and I'm ready to retrieve the scoop

3370

05:40:44,570 --> 05:40:30,680

s

3371

05:40:50,288 --> 05:40:44,580

Steve you can Stow your PGT and we'll

3372

05:40:50,298 --> 05:41:12,830

Woody power your hecka on

3373

05:41:16,070 --> 05:41:13,850

thank you

3374

05:41:18,590 --> 05:41:16,080

all right and Woody we are happy with

3375

05:41:20,990 --> 05:41:18,600

the mli current config and we do not

3376

05:41:22,730 --> 05:41:21,000

need a hack a scan so you're exactly

3377

05:41:24,650 --> 05:41:22,740

right you can remove the square Scoop

3378

05:41:26,330 --> 05:41:24,660

from the mounting bracket along with the

3379

05:41:29,390 --> 05:41:26,340

adjustable tethers and sew it in the

3380

05:41:33,470 --> 05:41:29,400

crew lock bag you can close up this crew

3381

05:41:38,270 --> 05:41:36,350

I'll be all didn't work

3382

05:41:42,350 --> 05:41:38,280

and we do not need a crew lock bag

3383

05:41:42,360 --> 05:41:55,550

oh thank you so much

3384

05:41:55,560 --> 05:42:02,330

Bravo

3385

05:42:07,610 --> 05:42:05,448

copy Steve you will be retrieving the

3386

05:42:12,650 --> 05:42:07,620

pit pin from the stowage location and

3387

05:42:49,010 --> 05:42:15,350

all right step in Charlie too

3388

05:42:49,020 --> 05:42:53,708

a 1010 Channel 2 is installed

3389

05:43:01,368 --> 05:42:57,410

copy fitpin installed on charlie2

3390

05:43:03,230 --> 05:43:01,378

we need you to connect a rest

3391

05:43:05,628 --> 05:43:03,240

to the adjustable equipment tether

3392

05:43:07,190 --> 05:43:05,638

d-ring from

3393

05:43:12,470 --> 05:43:07,200

to the adjustable equipment to other

3394

05:43:12,480 --> 05:43:17,170

I understand get my adjustable ready to

3395

05:43:17,180 --> 05:43:33,708

okay copy

3396

05:43:33,718 --> 05:44:19,990

foreign

3397

05:44:25,850 --> 05:44:23,390

there should be a wret to an adjustable

3398

05:44:28,190 --> 05:44:25,860

equipment tethered d-ring and that

3399

05:44:30,048 --> 05:44:28,200

adjustable equipment tether hook should

3400

05:44:32,570 --> 05:44:30,058

be on the closest beam handrail

3401

05:44:34,730 --> 05:44:32,580

stanchion to you so you have an

3402

05:44:36,830 --> 05:44:34,740

adjustable attached to the beam and the

3403

05:44:40,810 --> 05:44:36,840

d-ring attached to a red and that red is

3404

05:44:49,128 --> 05:44:45,048

here Okay so we've got an adjustable

3405

05:44:49,138 --> 05:45:24,230

bathroom

3406

05:45:30,230 --> 05:45:26,868

make you configure

3407

05:45:35,150 --> 05:45:32,628

copy Steve we're gonna have you hold

3408

05:45:36,770 --> 05:45:35,160

here we're gonna get Steve's on the SSC

3409

05:45:42,190 --> 05:45:36,780

with you and then we will move forward

3410

05:45:42,200 --> 05:45:45,670

sounds good

3411

05:45:51,948 --> 05:45:49,128

yeah we will have you get yourself to

3412

05:45:56,270 --> 05:45:54,288

all right we'll have you get your PCT

3413

05:45:57,890 --> 05:45:56,280

out we're not releasing any bolts yet

3414

05:45:58,548 --> 05:45:57,900

again we're waiting

3415

05:46:01,430 --> 05:45:58,558

um

3416

05:46:03,530 --> 05:46:01,440

to do that but this will be a Bravo 7

3417

05:46:05,628 --> 05:46:03,540

setting to release Charlie 5 and Charlie

3418

05:46:38,170 --> 05:46:05,638

six so you can get ready for that you

3419

05:46:38,180 --> 05:46:42,190

Woody yeah

3420

05:46:47,150 --> 05:46:44,868

I was about to tell you your next step

3421

05:46:49,128 --> 05:46:47,160

is to press the starboard seated cart

3422

05:46:51,170 --> 05:46:49,138

break release

3423

05:46:54,708 --> 05:46:51,180

and then you will be

3424

05:46:58,070 --> 05:46:54,718

translating to the port cedocrite

3425

05:47:00,048 --> 05:46:58,080

all right you got it

3426
05:47:07,548 --> 05:47:00,058
while you're translating Woody I have

3427
05:47:12,820 --> 05:47:09,170
guys do I need both Breakers is one of

3428
05:47:12,830 --> 05:47:16,150
[Music]

3429
05:47:21,170 --> 05:47:19,010
I'll get them both

3430
05:47:23,750 --> 05:47:21,180
you can get both we I just confirmed you

3431
05:47:27,350 --> 05:47:23,760
need one of the two on both Zeta cards

3432
05:47:27,360 --> 05:47:30,948
okay thanks

3433
05:47:30,958 --> 05:47:34,070
from the starboard side

3434
05:47:34,080 --> 05:47:38,930
copy

3435
05:47:44,570 --> 05:47:41,270
Woody you are going to be dropping your

3436
05:47:46,128 --> 05:47:44,580
green hook on S3 handrails three zero

3437
05:47:50,090 --> 05:47:46,138
one one

3438
05:47:54,010 --> 05:47:50,100

stowing crew lock bag M on three two one

3439

05:47:59,030 --> 05:47:56,750

three two one seven okay thanks James

3440

05:48:07,910 --> 05:47:59,040

good read back let me know when you're

3441

05:48:14,628 --> 05:48:11,628

okay we are now four hours into this

3442

05:48:16,548 --> 05:48:14,638

seven hour thirty minute Eva limiting

3443

05:48:18,770 --> 05:48:16,558

consumable has not changed that is the

3444

05:48:20,930 --> 05:48:18,780

battery on Woody and we are still one

3445

05:48:22,788 --> 05:48:20,940

hour ahead of timeline obviously we've

3446

05:48:24,048 --> 05:48:22,798

deployed our Rosa so great job to you

3447

05:48:26,208 --> 05:48:24,058

both

3448

05:48:28,010 --> 05:48:26,218

we are getting

3449

05:48:32,810 --> 05:48:28,020

um to the point where we are going to

3450

05:48:34,610 --> 05:48:32,820

Stow the FSE beams and remove that sod

3451

05:48:37,010 --> 05:48:34,620

if we have time we're going to do some

3452

05:48:41,150 --> 05:48:37,020

get aheads and release the ards for the

3453

05:48:48,770 --> 05:48:43,368

thank you that sounds real good thanks

3454

05:48:55,670 --> 05:48:50,690

okay I found three zero one one that was

3455

05:48:55,680 --> 05:49:19,128

thank you

3456

05:50:08,448 --> 05:49:20,930

and then three two one seven for the bag

3457

05:50:08,458 --> 05:50:52,250

foreign

3458

05:51:01,190 --> 05:50:55,548

copy ensure you go via the POA path fair

3459

05:51:06,170 --> 05:51:03,350

8400

3460

05:51:39,590 --> 05:51:06,180

I'll be back a firm yeah I'm looking for

3461

05:51:44,510 --> 05:51:42,530

right now your scene views from NASA

3462

05:51:47,690 --> 05:51:44,520

astronaut Woody hoberg's helmet camera

3463

05:51:50,750 --> 05:51:47,700

he is working to translate over to the

3464

05:51:53,390 --> 05:51:50,760

carrier beam where NASA ashram Steve

3465

05:51:55,190 --> 05:51:53,400

Bowen is currently

3466

05:51:56,750 --> 05:51:55,200

once they're both over there the crew

3467

05:51:58,670 --> 05:51:56,760

members will work together to release

3468

05:52:00,230 --> 05:51:58,680

the bolts holding the beams in place and

3469

05:52:04,670 --> 05:52:00,240

then they will rotate them out of the

3470

05:52:17,570 --> 05:52:06,948

the spacewalkers continue to remain

3471

05:52:22,250 --> 05:52:20,448

after they release the beam there's a

3472

05:52:43,730 --> 05:52:22,260

couple of get ahead tasks that they can

3473

05:52:43,740 --> 05:52:47,868

all right am I heading to Alpha

3474

05:52:47,878 --> 05:52:58,010

hey friends

3475

05:53:04,310 --> 05:53:02,150

Steve and my Cutters will

3476

05:53:13,548 --> 05:53:04,320

that should be okay

3477

05:53:18,910 --> 05:53:15,708

all right on that Alpha

3478

05:53:23,570 --> 05:53:21,350

your next step is to perform a socket

3479

05:53:26,208 --> 05:53:23,580

swap Steve was able to already release

3480

05:53:29,208 --> 05:53:26,218

C3 and C4 so we'll just take the socket

3481

05:53:32,570 --> 05:53:29,218

Swap and then move on to rotating the

3482

05:53:37,070 --> 05:53:34,090

okay

3483

05:53:38,868 --> 05:53:37,080

now I will need a socket caddy to do

3484

05:53:41,530 --> 05:53:38,878

this correct

3485

05:53:44,150 --> 05:53:41,540

you only have oh no

3486

05:53:47,150 --> 05:53:44,160

hey firm you're going to use your pit

3487

05:53:50,510 --> 05:53:47,160

pen you'll remove the six inch wobble

3488

05:53:52,910 --> 05:53:50,520

from your PTT and sew it in your trash

3489

05:53:55,430 --> 05:53:52,920

bag with the pit pin and the two inch

3490

05:53:59,090 --> 05:53:55,440

that's currently I believe in your trash

3491

05:54:07,970 --> 05:54:01,510

love y'all

3492

05:54:19,330 --> 05:54:10,610

hey firm Steve you can release either

3493

05:54:19,340 --> 05:54:42,770

good grades

3494

05:54:42,780 --> 05:55:21,948

foreign

3495

05:55:21,958 --> 05:55:29,810

copy 11 turns and that was C6

3496

05:55:29,820 --> 05:55:33,288

copy will hold here

3497

05:55:33,298 --> 05:55:51,048

I agree

3498

05:56:06,048 --> 05:55:53,628

okay Jenny I've got the 5 8 2 inch rigid

3499

05:56:10,730 --> 05:56:08,030

okay

3500

05:56:13,250 --> 05:56:10,740

so when Steve releases this final bolt

3501
05:56:15,470 --> 05:56:13,260
C5 uh

3502
05:56:21,310 --> 05:56:15,480
Steve you will rotate the Zenith end of

3503
05:56:26,448 --> 05:56:24,530
and you'll be temp stowing the beam in

3504
05:56:28,070 --> 05:56:26,458
the stowage location which is parallel

3505
05:56:30,288 --> 05:56:28,080
to the blankets with the handrails

3506
05:56:34,788 --> 05:56:30,298
facing the POA you'll need two

3507
05:56:38,750 --> 05:56:36,350
and would we have an adjustable

3508
05:56:38,760 --> 05:56:43,010
we'll do it again

3509
05:56:43,020 --> 05:56:51,410
all right we are go when you are ready

3510
05:56:51,420 --> 05:57:10,788
C5

3511
05:57:10,798 --> 05:57:15,110
all right

3512
05:57:15,120 --> 05:57:36,830
boy boy

3513
05:57:45,110 --> 05:57:39,590

NASA astronaut Steve Bowen just released

3514

05:57:48,070 --> 05:57:46,970

Steve Bowen and Woody hoberg will now

3515

05:57:50,868 --> 05:57:48,080

work together

3516

05:57:56,208 --> 05:57:50,878

to rotate the beams out of the way and

3517

05:58:02,030 --> 05:57:59,150

disregard sorry these carrier beams were

3518

05:58:04,430 --> 05:58:02,040

being reconfigured they previously held

3519

05:58:06,830 --> 05:58:04,440

the upright erosa and they needed to be

3520

05:58:08,930 --> 05:58:06,840

rotated out of the way to allow access

3521

05:58:11,750 --> 05:58:08,940

to the lower irisa which will be

3522

05:58:14,628 --> 05:58:11,760

installed on next week's eBay Eva on

3523

05:58:17,030 --> 05:58:14,638

June 15th

3524

05:58:19,190 --> 05:58:17,040

okay

3525

05:58:20,810 --> 05:58:19,200

I'm sorry all right I've got an

3526

05:58:22,910 --> 05:58:20,820

adjustable on it I can cinch this side

3527

05:58:25,430 --> 05:58:22,920

we won't fix it down but when you get

3528

05:58:28,750 --> 05:58:25,440

yours on there we come back we'll finish

3529

05:58:28,760 --> 05:58:35,090

that's correct

3530

05:58:39,850 --> 05:58:37,368

and this is going to

3531

05:58:42,110 --> 05:58:39,860

zero zero one two

3532

05:58:44,270 --> 05:58:42,120

copy and Steve's exactly right we'll

3533

05:58:46,548 --> 05:58:44,280

cinch this down later on what we need to

3534

05:58:49,430 --> 05:58:46,558

make sure of right now is that the beam

3535

05:58:55,490 --> 05:58:49,440

is clear of the Nader upper support beam

3536

05:58:55,500 --> 05:59:00,410

okay

3537

05:59:07,670 --> 05:59:02,510

it's clear

3538

05:59:12,110 --> 05:59:09,110

copy

3539

05:59:14,090 --> 05:59:12,120

uh Steve you can release your ret l

3540

05:59:17,448 --> 05:59:14,100

understand this this is Tethered via two

3541

05:59:17,458 --> 05:59:21,288

all right

3542

05:59:26,690 --> 05:59:23,830

precaution for both of you

3543

05:59:29,628 --> 05:59:26,700

copy a caution for both of you now that

3544

05:59:32,570 --> 05:59:29,638

this beam is tied down do not exceed 30

3545

05:59:34,670 --> 05:59:32,580

foot pounds on the 10th Zone beam and

3546

05:59:36,708 --> 05:59:34,680

again a reminder for the FSE we don't

3547

05:59:39,230 --> 05:59:36,718

want to simultaneously impart loads into

3548

05:59:41,868 --> 05:59:39,240

it so we will alternate if we need to

3549

06:00:20,990 --> 05:59:41,878

translate around the same time

3550

06:00:25,368 --> 06:00:23,330

we are in another brief but expected

3551
06:00:38,990 --> 06:00:25,378
Handover period and we'll regain signal

3552
06:00:42,890 --> 06:00:41,270
Houston's back with you after a short

3553
06:00:46,430 --> 06:00:42,900
Handover

3554
06:00:49,430 --> 06:00:46,440
we will need Woody to translate to

3555
06:00:51,350 --> 06:00:49,440
stanchion Delta and Steve will need to

3556
06:00:53,750 --> 06:00:51,360
translate to stanchion Charlie but again

3557
06:01:06,288 --> 06:00:53,760
please alternate your translations

3558
06:01:10,548 --> 06:01:08,030
good words Woody once you're there

3559
06:01:53,090 --> 06:01:10,558
you'll attach a mini workstation Rhett

3560
06:01:57,530 --> 06:01:55,490
all right I'm at Delta putting that mini

3561
06:02:01,690 --> 06:01:57,540
workstation

3562
06:02:07,250 --> 06:02:01,700
threat in work I have set my translation

3563
06:02:07,260 --> 06:02:22,548

foreign

3564

06:02:31,788 --> 06:02:25,548

Woody once you have that rep down you'll

3565

06:02:31,798 --> 06:02:48,230

thanks girls

3566

06:02:48,240 --> 06:02:53,208

all right Woody

3567

06:02:58,910 --> 06:02:55,610

what will be my uh PCT setting one that

3568

06:03:04,788 --> 06:03:00,590

that was for Woody then you're setting

3569

06:03:09,850 --> 06:03:08,330

Auto seven counter two is set so when it

3570

06:03:14,510 --> 06:03:09,860

gets here what will it be

3571

06:03:21,170 --> 06:03:14,520

the 23rd it'll also be Bravo 7.

3572

06:03:21,180 --> 06:03:26,510

just finished there

3573

06:03:31,430 --> 06:03:28,788

all right I'm ready to drive C9

3574

06:03:35,270 --> 06:03:31,440

copy you're releasing C9

3575

06:03:35,280 --> 06:03:56,390

coffee and work

3576

06:03:59,390 --> 06:03:58,430

I mean I counted nine and a half and it

3577

06:04:04,670 --> 06:03:59,400

popped out

3578

06:04:09,650 --> 06:04:07,250

copy

3579

06:04:12,470 --> 06:04:09,660

ten about a minute until a short

3580

06:04:12,480 --> 06:04:34,750

are you starting during C10

3581

06:04:43,490 --> 06:04:37,970

you can popped out

3582

06:04:43,500 --> 06:04:49,730

you'll be rotating the beam toward Steve

3583

06:05:02,270 --> 06:04:50,750

okay

3584

06:05:24,770 --> 06:05:04,510

I got it probably you got it

3585

06:05:33,410 --> 06:05:28,788

32 not one turn two

3586

06:05:39,770 --> 06:05:37,070

over 20 right yes I recall Bravo 7

3587

06:05:42,910 --> 06:05:39,780

clockwise to

3588

06:05:45,708 --> 06:05:42,920

for no more than twenty no more than 20.

3589

06:05:49,368 --> 06:05:45,718

Houston's back with you

3590

06:05:54,048 --> 06:05:49,378

this is back with you I copy your hands

3591

06:05:59,570 --> 06:05:54,058

I concur Bravo 7 clockwise 2 and this

3592

06:06:04,368 --> 06:06:01,300

GPS but we are going to stop

3593

06:06:07,850 --> 06:06:04,378

[Music]

3594

06:06:14,390 --> 06:06:07,860

hey friend let's do that's 20 20 turns

3595

06:06:14,400 --> 06:06:20,930

starting C9

3596

06:06:20,940 --> 06:06:40,250

copy C9

3597

06:06:43,670 --> 06:06:42,410

and I'm stopping there it's pretty close

3598

06:06:48,850 --> 06:06:43,680

to the bottom

3599

06:06:54,230 --> 06:06:51,470

substitute Associated 19 turns is that

3600

06:06:54,240 --> 06:06:59,628

checking

3601
06:07:08,690 --> 06:07:01,670
59 I got

3602
06:07:08,700 --> 06:07:12,530
copy 18 turns on C

3603
06:07:12,540 --> 06:07:19,250
um safe we're checking

3604
06:07:26,170 --> 06:07:21,530
Steve we want more turns on your bolts

3605
06:07:26,180 --> 06:07:30,230
how many more do you want

3606
06:07:30,240 --> 06:07:35,330
only one turn

3607
06:07:35,340 --> 06:07:42,530
complete

3608
06:07:48,770 --> 06:07:45,830
our 43rd 21 there 43.

3609
06:07:50,628 --> 06:07:48,780
happy Steve's standby we're discussing

3610
06:07:51,830 --> 06:07:50,638
we're still discussing that config on

3611
06:07:56,448 --> 06:07:51,840
the ground we might have more action

3612
06:07:56,458 --> 06:08:08,030
okay I talk to you thanks James

3613
06:08:08,040 --> 06:08:14,690

what's different about gerbils

3614

06:08:19,070 --> 06:08:16,610

all right Steve because we choked out on

3615

06:08:23,990 --> 06:08:19,080

this bolts we need to back it out one

3616

06:08:30,350 --> 06:08:26,510

now let's work out on this bowl got a

3617

06:09:03,410 --> 06:08:30,360

low torque okay we misunderstood then I

3618

06:09:12,048 --> 06:09:06,048

you can see I have a red light for that

3619

06:09:17,330 --> 06:09:15,230

hey uh Steve wait one I'm trying to get

3620

06:09:18,890 --> 06:09:17,340

a word from Houston here they uh I think

3621

06:09:21,948 --> 06:09:18,900

we came up on a handle real quicker than

3622

06:09:24,830 --> 06:09:21,958

I expected this is Houston we hit a

3623

06:09:28,730 --> 06:09:24,840

patch of Ratty calm we are good on that

3624

06:09:32,390 --> 06:09:28,740

bolt Steve so at this time I'm handing

3625

06:09:34,430 --> 06:09:32,400

over to Frank Frank you are prime IV we

3626
06:09:36,288 --> 06:09:34,440
are one minute away from a five minute

3627
06:09:42,250 --> 06:09:36,298
loss

3628
06:09:51,048 --> 06:09:47,448
block 12. block 12 pick up in Step 32

3629
06:10:13,250 --> 06:09:51,058
for Woody and 37 for Steve and Nick

3630
06:10:21,770 --> 06:10:15,350
all right Steve I'm pretty sure I read

3631
06:10:27,530 --> 06:10:24,530
hi guys and I am with you on one so it

3632
06:10:29,990 --> 06:10:27,540
looks like you guys NASA astronaut Steve

3633
06:10:34,128 --> 06:10:30,000
Bowen and Woody hoberg have successfully

3634
06:10:35,690 --> 06:10:34,138
uh finished rotating the carrier beams

3635
06:10:37,670 --> 06:10:35,700
out of the way and secured them back

3636
06:10:40,310 --> 06:10:37,680
down

3637
06:10:41,990 --> 06:10:40,320
this was the last planned task in the

3638
06:10:44,570 --> 06:10:42,000

this Eva but they will now move into

3639

06:10:46,730 --> 06:10:44,580

some get ahead tasks for next week's Eva

3640

06:10:49,250 --> 06:10:46,740

that's right I've got a few uh

3641

06:10:52,128 --> 06:10:49,260

incidental blocks smudges on my glove

3642

06:10:57,230 --> 06:10:52,138

fingertips otherwise no change and dry

3643

06:11:02,030 --> 06:11:00,830

okay I copy for both of you and you'll

3644

06:11:03,350 --> 06:11:02,040

just have to be a little bit patient

3645

06:11:05,750 --> 06:11:03,360

with me here because we're working now

3646

06:11:07,430 --> 06:11:05,760

out of our Jedi message and so I'll just

3647

06:11:27,708 --> 06:11:07,440

have to be talking back and forth on the

3648

06:11:33,110 --> 06:11:30,288

we are now in approximately five minute

3649

06:11:37,610 --> 06:11:33,120

loss of signal we will regain signal

3650

06:11:41,628 --> 06:11:39,830

during this period NASA astronaut Frank

3651
06:11:44,150 --> 06:11:41,638
Rubio aboard the International Space

3652
06:11:56,990 --> 06:11:44,160
Station is the prime IV for the

3653
06:12:01,010 --> 06:11:59,208
a couple of the get ahead tasks that the

3654
06:12:04,070 --> 06:12:01,020
crew will be working on include

3655
06:12:07,070 --> 06:12:04,080
releasing the Ard or anti-rotation

3656
06:12:09,288 --> 06:12:07,080
device for next week's irosa as well as

3657
06:12:35,690 --> 06:12:09,298
releasing some of the lower our bolts or

3658
06:12:41,270 --> 06:12:38,930
while today's space walk has focused on

3659
06:12:43,368 --> 06:12:41,280
installing the irocer or International

3660
06:12:45,530 --> 06:12:43,378
Space Station roll out solar array on

3661
06:12:47,350 --> 06:12:45,540
the starboard Fortress connected to the

3662
06:12:50,390 --> 06:12:47,360
1A power channel on the space station

3663
06:12:52,910 --> 06:12:50,400

next week's Space Walk will focus on

3664

06:12:55,368 --> 06:12:52,920

installing the irosa to the starboard

3665

06:13:02,090 --> 06:12:55,378

six truss connected to the 1B power

3666

06:13:07,430 --> 06:13:04,490

coverage of next week's spacewalk which

3667

06:13:09,590 --> 06:13:07,440

is U.S spacewalk 88 is scheduled to

3668

06:13:36,410 --> 06:13:09,600

begin at approximately 8 20 a.m Central

3669

06:13:40,970 --> 06:13:38,628

the spacewalk next week is scheduled to

3670

06:13:43,850 --> 06:13:40,980

begin at approximately 8 20 a.m Central

3671

06:13:46,310 --> 06:13:43,860

Time 9 20 a.m eastern time with NASA TV

3672

06:14:48,770 --> 06:13:46,320

coverage beginning at 6 45 a.m Central

3673

06:14:54,230 --> 06:14:51,530

we are now about four hours and 35

3674

06:14:56,990 --> 06:14:54,240

minutes into today's space walk the

3675

06:15:00,590 --> 06:14:57,000

spacewalk officially began at 8 25 a.m

3676

06:15:02,570 --> 06:15:00,600

Central Time 9 25 a.m eastern time when

3677

06:15:05,990 --> 06:15:02,580

the spacesuits were switched to battery

3678

06:15:11,390 --> 06:15:09,048

NASA astronaut Steve Bowen is serving as

3679

06:15:13,670 --> 06:15:11,400

ev1 for today's space walk and has the

3680

06:15:16,730 --> 06:15:13,680

suit with the red stripes and then NASA

3681

06:15:19,250 --> 06:15:16,740

astronaut Woody hoberg is serving as ev2

3682

06:15:21,410 --> 06:15:19,260

with the unmarked suit

3683

06:15:23,390 --> 06:15:21,420

this is the ninth spacewalk in Steve

3684

06:15:27,048 --> 06:15:23,400

Bowen's career and the first spacewalk

3685

06:15:28,850 --> 06:15:27,058

for Woody hoberg it is the 264th

3686

06:15:31,310 --> 06:15:28,860

spacewalk in support of space station

3687

06:15:33,048 --> 06:15:31,320

assembly maintenance and upgrades and

3688

06:16:25,788 --> 06:15:33,058

the seventh spacewalk out of the space

3689

06:16:31,788 --> 06:16:28,850

in this view you can see uh today's

3690

06:16:34,610 --> 06:16:31,798

ground IV who is Jenny Gibbons in the

3691

06:16:37,610 --> 06:16:34,620

center of your strength screen but right

3692

06:16:39,230 --> 06:16:37,620

now during the loss of signal NASA

3693

06:16:40,850 --> 06:16:39,240

astronaut Frank Rubio aboard the

3694

06:16:44,390 --> 06:16:40,860

International Space Station is currently

3695

06:16:51,220 --> 06:16:45,890

Pride

3696

06:16:57,288 --> 06:16:52,970

[Applause]

3697

06:17:02,570 --> 06:16:59,330

not checking

3698

06:17:05,510 --> 06:17:02,580

all right so we want one of the filter

3699

06:17:10,070 --> 06:17:05,520

on one and one of them during two

3700

06:17:14,030 --> 06:17:12,350

all right correct uh Steve you're going

3701

06:17:16,430 --> 06:17:14,040

to install those end effectors on hero

3702

06:17:18,230 --> 06:17:16,440

one and two and you want to leave the

3703

06:17:20,930 --> 06:17:18,240

adjustable thermostat is connected to

3704

06:17:22,430 --> 06:17:20,940

both mud and effectors and then make

3705

06:17:23,690 --> 06:17:22,440

sure that the mod end effectors are

3706

06:17:25,310 --> 06:17:23,700

locked

3707

06:17:27,350 --> 06:17:25,320

all right

3708

06:17:28,730 --> 06:17:27,360

if you have extra adjustables over there

3709

06:17:32,570 --> 06:17:28,740

I have one

3710

06:17:35,930 --> 06:17:32,580

uh there's 31 oh no we used it I've got

3711

06:17:38,930 --> 06:17:35,940

one in a fairly that I could go get but

3712

06:17:40,548 --> 06:17:38,940

yeah this is supposed to have come from

3713

06:17:41,990 --> 06:17:40,558

your keyboard

3714

06:17:43,788 --> 06:17:42,000

obviously we must have used it somewhere

3715

06:17:44,690 --> 06:17:43,798

else all right the one in the bag that

3716

06:17:51,708 --> 06:17:44,700

you can use

3717

06:17:58,930 --> 06:17:53,570

turn the lock

3718

06:18:04,128 --> 06:18:01,850

yeah copy

3719

06:18:06,708 --> 06:18:04,138

correct yeah you'll just end up putting

3720

06:18:09,048 --> 06:18:06,718

that adjustable to a rut then you'll use

3721

06:18:12,770 --> 06:18:09,058

the either end of the adjustable pair

3722

06:18:14,330 --> 06:18:12,780

hold both ards all right I have the put

3723

06:18:19,548 --> 06:18:14,340

in defectors locked in place on here

3724

06:18:19,558 --> 06:18:23,690

Houston's back with you

3725

06:18:26,868 --> 06:18:25,430

thanks Jenny we're trying to figure out

3726

06:18:32,628 --> 06:18:26,878

where to get them adjustable for these

3727

06:18:39,590 --> 06:18:35,690

so we are currently for Steve in Block

3728

06:18:42,288 --> 06:18:39,600

one he just completed step five uh so he

3729

06:18:44,990 --> 06:18:42,298

would be going to step six next and then

3730

06:18:48,770 --> 06:18:45,000

for Woody for Block two and he's

3731

06:18:51,530 --> 06:18:48,780

completed step two and we were going to

3732

06:18:53,448 --> 06:18:51,540

the ards however since he was near

3733

06:18:58,368 --> 06:18:53,458

Charlie 11 he was going to do that one

3734

06:18:58,378 --> 06:19:09,350

I'll need a minute to catch up

3735

06:19:09,360 --> 06:19:15,310

ah

3736

06:19:19,910 --> 06:19:17,990

all right and we copied it Woody needs

3737

06:19:24,320 --> 06:19:19,920

an additional adjustable and Steve is

3738

06:19:28,310 --> 06:19:25,610

[Music]

3739

06:19:31,250 --> 06:19:28,320

alternative all right so again Woody

3740

06:19:32,690 --> 06:19:31,260

will be actually starting on step 12 I

3741

06:19:34,730 --> 06:19:32,700

don't need to complete that Ard you'll

3742

06:19:40,490 --> 06:19:34,740

have to go back to step three for the

3743

06:19:44,048 --> 06:19:42,230

all right Steve I'm at a bad angle here

3744

06:19:47,448 --> 06:19:44,058

yeah

3745

06:19:50,170 --> 06:19:47,458

thank you I could watch you do that all

3746

06:19:54,830 --> 06:19:53,150

so Jenny if you're ready then you can uh

3747

06:19:57,048 --> 06:19:54,840

have time

3748

06:20:00,170 --> 06:19:57,058

you have accessible about it

3749

06:20:02,570 --> 06:20:00,180

we'll just confirm with you Frank that

3750

06:20:05,810 --> 06:20:02,580

as the next step for Steve being

3751

06:20:11,030 --> 06:20:05,820

releasing R3 and R4

3752

06:20:14,750 --> 06:20:12,708

okay in that case I have all the

3753

06:20:18,410 --> 06:20:14,760

information I need great job I am proud

3754

06:20:18,420 --> 06:20:30,670

okay coffee thanks so much

3755

06:20:37,548 --> 06:20:32,868

I think

3756

06:20:39,170 --> 06:20:37,558

yeah was that Steve or would he

3757

06:20:41,570 --> 06:20:39,180

that's Steve I think I need to do a

3758

06:20:44,628 --> 06:20:41,580

soccer slots because

3759

06:20:49,310 --> 06:20:44,638

you need the uh actually you need the 7

3760

06:20:52,910 --> 06:20:49,320

16 6 inch wobble on your PGT yeah

3761

06:20:52,920 --> 06:21:17,868

hey firm you'll be at crew lock bag tea

3762

06:21:17,878 --> 06:21:35,570

all right

3763

06:21:39,650 --> 06:21:37,788

if you put the sausage patty in the

3764

06:21:41,690 --> 06:21:39,660

outside here what do you support oh no

3765

06:21:43,150 --> 06:21:41,700

it's on the inside

3766

06:22:09,590 --> 06:21:43,160

sorry

3767

06:22:16,730 --> 06:22:11,990

Woody was that a question for or excuse

3768

06:22:16,740 --> 06:22:19,150

yeah

3769

06:22:28,110 --> 06:22:21,770

back inside

3770

06:22:31,390 --> 06:22:29,330

[Music]

3771

06:22:34,250 --> 06:22:31,400

three

3772

06:22:37,490 --> 06:22:34,260

counterclockwise two set

3773

06:22:39,170 --> 06:22:37,500

of course Ard C11 release can you

3774

06:22:41,810 --> 06:22:39,180

confirm that you've attached the free

3775

06:22:44,448 --> 06:22:41,820

end of the adjustable to the Ard tether

3776

06:22:48,650 --> 06:22:47,448

yep I have an adjustable on the Ard

3777

06:22:50,690 --> 06:22:48,660

tether point

3778

06:22:54,230 --> 06:22:50,700

copy and that is connected to your mini

3779

06:23:00,368 --> 06:22:54,240

workstation via a ret on the D on the

3780

06:23:08,090 --> 06:23:03,770

I used my two one for a fair lead and

3781

06:23:09,650 --> 06:23:08,100

one for the uh boom tie down yep Houston

3782

06:23:10,970 --> 06:23:09,660

follows that I just want to make sure

3783

06:23:12,890 --> 06:23:10,980

that we're Reddit

3784

06:23:15,590 --> 06:23:12,900

um but we understand that uh the

3785

06:23:17,990 --> 06:23:15,600

adjustable config in that case we are go

3786

06:23:20,150 --> 06:23:18,000

to continue you have good settings Bravo

3787

06:23:24,350 --> 06:23:20,160

three counter two and you're releasing

3788

06:24:05,890 --> 06:23:24,360

the stop block bolts 10 turns only

3789

06:24:12,110 --> 06:24:09,410

NASA astronauts Steve Bowen and Woody

3790

06:24:14,990 --> 06:24:12,120

hoberg are continuing today's space walk

3791

06:24:15,948 --> 06:24:15,000

they are four hours and 44 minutes into

3792

06:24:18,230 --> 06:24:15,958

it

3793

06:24:21,590 --> 06:24:18,240

you're now working on some get ahead

3794

06:24:23,810 --> 06:24:21,600

tasks for next week's spacewalk

3795

06:24:28,128 --> 06:24:23,820

Rd and then your settings to drive these

3796

06:24:33,770 --> 06:24:31,190

Steve I can confirm you right now Woody

3797

06:24:36,708 --> 06:24:33,780

hoberg is working to remove the

3798

06:24:39,530 --> 06:24:36,718

anti-rotation device or Ard

3799

06:24:42,708 --> 06:24:39,540

while uh NASA astronaut Steve Bowen

3800

06:24:44,330 --> 06:24:42,718

Works to release some restraint bolts or

3801
06:24:46,910 --> 06:24:44,340
your trash bag it does not matter to us

3802
06:24:48,770 --> 06:24:46,920
well let me just go because I've got

3803
06:25:01,850 --> 06:24:48,780
that in mind I'll move it over

3804
06:25:01,860 --> 06:25:07,130
Kathy we got lots of time here

3805
06:25:07,140 --> 06:25:34,070
[Applause]

3806
06:25:34,080 --> 06:25:39,230
another one clockwise two sets

3807
06:25:43,850 --> 06:25:41,030
good words and confirm you've removed

3808
06:25:47,150 --> 06:25:45,170
oh yeah

3809
06:26:10,160 --> 06:25:47,160
okay your go to drive the stop block

3810
06:26:10,170 --> 06:26:24,410
[Applause]

3811
06:26:24,420 --> 06:26:27,470
wrench

3812
06:26:37,610 --> 06:26:30,048
the 16th wobble

3813
06:26:42,948 --> 06:26:40,128

Steve you broke up there I think you

3814

06:26:46,970 --> 06:26:42,958

said your 7 16 6 inch wobble is on your

3815

06:26:55,128 --> 06:26:50,650

that is what I said thank you

3816

06:26:58,548 --> 06:26:55,138

copy your next step is to release R3 or

3817

06:26:59,990 --> 06:26:58,558

R4 or let me know which position you're

3818

06:27:01,010 --> 06:27:00,000

going to be in and I'll give you

3819

06:27:03,230 --> 06:27:01,020

settings

3820

06:27:07,610 --> 06:27:03,240

all right let me get over there

3821

06:27:12,170 --> 06:27:10,010

against the stop block bolt torque out

3822

06:27:15,650 --> 06:27:12,180

at four and a half turns victory in life

3823

06:27:21,770 --> 06:27:15,660

12 decibel one foot pounds and I can see

3824

06:27:21,780 --> 06:27:29,288

the further recessed position

3825

06:27:34,850 --> 06:27:32,390

copy that is a good contiguity we are

3826
06:27:40,070 --> 06:27:34,860
ready for you to move to the other our

3827
06:28:00,470 --> 06:27:42,110
I'll be going over to Alpha a for

3828
06:28:05,570 --> 06:28:02,868
you are now seeing live views outside

3829
06:28:07,910 --> 06:28:05,580
the space station from NASA astronaut

3830
06:28:12,288 --> 06:28:07,920
Steve Bowen's Hallmark camera as he

3831
06:28:16,190 --> 06:28:14,208
the release of these restraint bolts is

3832
06:28:23,570 --> 06:28:16,200
part of a get ahead task for next week's

3833
06:28:29,330 --> 06:28:25,970
there are two sets of bolts on the boom

3834
06:28:31,250 --> 06:28:29,340
end of the lower irosa the first two

3835
06:28:33,590 --> 06:28:31,260
bolts will allow the boom deployment

3836
06:28:35,930 --> 06:28:33,600
system rollers to be moved into place to

3837
06:28:40,610 --> 06:28:35,940
help with the array deployment in next

3838
06:28:40,620 --> 06:28:44,448

three o'clockwise three

3839

06:28:44,458 --> 06:28:47,510

good read back

3840

06:28:47,520 --> 06:28:51,830

hold on

3841

06:29:12,590 --> 06:28:54,170

to calibrate again I just turned off my

3842

06:29:12,600 --> 06:29:26,570

okay

3843

06:29:33,530 --> 06:29:30,170

so Alpha three dot R3 is the clockwise

3844

06:29:37,368 --> 06:29:33,540

or counterclockwise for R3 it is

3845

06:29:37,378 --> 06:29:43,788

bar three clockwise three

3846

06:29:48,890 --> 06:29:47,390

I have R3 clockwise three

3847

06:29:49,970 --> 06:29:48,900

Alpha

3848

06:29:52,368 --> 06:29:49,980

one

3849

06:30:11,990 --> 06:29:53,810

Alpha three

3850

06:30:17,930 --> 06:30:14,208

puppy

3851
06:30:20,390 --> 06:30:17,940
we have our Auto three counter two sets

3852
06:30:21,890 --> 06:30:20,400
for ard3

3853
06:30:24,530 --> 06:30:21,900
release

3854
06:30:32,810 --> 06:30:24,540
and I've got my adjustable on it

3855
06:30:32,820 --> 06:30:38,510
I I definitely thank you Bravo

3856
06:30:43,910 --> 06:30:41,390
counter two I'm looking at it

3857
06:30:46,010 --> 06:30:43,920
copy good settings confirm that you have

3858
06:30:51,110 --> 06:30:46,020
Tethered to the Ard and then you can

3859
06:30:55,070 --> 06:30:53,448
okay 10 seconds and adjustable feather

3860
06:30:56,868 --> 06:30:55,080
is installed although I'm generated I

3861
06:30:59,670 --> 06:30:56,878
did a more comfortable position swinging

3862
06:31:03,230 --> 06:31:01,128
[Music]

3863
06:31:26,990 --> 06:31:03,240

we understand Steve again we're doing

3864

06:31:27,000 --> 06:31:31,010

turns on ardc

3865

06:31:43,070 --> 06:31:34,610

and turn oh nice stop black bolts here

3866

06:31:46,970 --> 06:31:45,110

and Steve understand you're finding a

3867

06:31:49,610 --> 06:31:46,980

better body position I wanted to let you

3868

06:31:53,150 --> 06:31:49,620

know your helmet is close to the irosa

3869

06:31:53,160 --> 06:31:57,170

we don't want to get in a better bike

3870

06:31:57,180 --> 06:32:01,448

happy

3871

06:32:10,190 --> 06:32:07,010

Prado one clockwise two set for

3872

06:32:13,070 --> 06:32:10,200

stopwatch install

3873

06:32:15,530 --> 06:32:13,080

copy you can drive that stop block bolt

3874

06:32:36,590 --> 06:32:15,540

to turn or to torque those are good

3875

06:32:40,548 --> 06:32:38,390

that should be a lot more comfortable

3876
06:32:41,990 --> 06:32:40,558
and hopefully I have a much better

3877
06:32:52,610 --> 06:32:42,000
position

3878
06:32:57,048 --> 06:32:54,650
Steve before you start this bolt since

3879
06:32:58,910 --> 06:32:57,058
it is 245 turns I'll let you know we're

3880
06:33:00,410 --> 06:32:58,920
about a minute and a half to Sunrise as

3881
06:33:04,548 --> 06:33:00,420
you can see

3882
06:33:13,250 --> 06:33:08,990
thanks Alpha three 12 lives three 245

3883
06:33:17,030 --> 06:33:13,260
turns for R3 correct

3884
06:33:23,390 --> 06:33:21,048
and I am starting off R3 clock live

3885
06:33:23,400 --> 06:33:27,470
here I go

3886
06:33:37,850 --> 06:33:30,170
Jam stock lock both 10 turns green light

3887
06:33:48,410 --> 06:33:41,628
cubby that is a good bolt Woody you can

3888
06:33:53,030 --> 06:33:50,868

Woody you will be translating to the

3889

06:33:59,510 --> 06:33:53,040

crew lock bag where you will be stowing

3890

06:34:04,250 --> 06:34:01,850

okay I copy they already is an

3891

06:34:55,850 --> 06:34:04,260

adjustable in Tango

3892

06:35:00,830 --> 06:34:58,490

NASA astronaut Steve Bowen is currently

3893

06:35:03,708 --> 06:35:00,840

working to release the first set of

3894

06:35:05,510 --> 06:35:03,718

bolts on the boom end of the lower irosa

3895

06:35:07,070 --> 06:35:05,520

or International Space Station roll out

3896

06:35:09,230 --> 06:35:07,080

solar array

3897

06:35:11,030 --> 06:35:09,240

these first two bolts will allow the

3898

06:35:13,070 --> 06:35:11,040

boom deployment system rollers to be

3899

06:36:03,170 --> 06:35:13,080

moved into place to help with the array

3900

06:36:07,868 --> 06:36:05,868

right now you are seeing views from NASA

3901
06:36:11,090 --> 06:36:07,878
astronaut Woody hoberg's helmet camera

3902
06:36:13,910 --> 06:36:11,100
he recently completed a get ahead task

3903
06:36:20,208 --> 06:36:13,920
to release the anti-rotation device on

3904
06:36:20,218 --> 06:36:23,530
checking for you Woody

3905
06:36:29,390 --> 06:36:27,170
is now working to Stow an equipment

3906
06:36:48,830 --> 06:36:29,400
tether with the anti-rotation devices

3907
06:36:51,890 --> 06:36:50,150
Woody

3908
06:36:54,110 --> 06:36:51,900
while you're at The Crew Love bag your

3909
06:36:57,650 --> 06:36:54,120
next step is a socket swap let me know

3910
06:37:02,030 --> 06:37:00,170
okay I'll get the 12 inch off what am I

3911
06:37:09,470 --> 06:37:02,040
going to

3912
06:37:13,910 --> 06:37:11,030
five six inch I'll get that out of my

3913
06:37:26,330 --> 06:37:13,920

trash bag okay for 12 inch on the socket

3914

06:37:26,340 --> 06:37:32,350

45 245 terms

3915

06:37:37,750 --> 06:37:35,150

of your turkey timer

3916

06:37:44,690 --> 06:37:37,760

copy 245 turns

3917

06:37:44,700 --> 06:37:49,970

happy Steve

3918

06:37:49,980 --> 06:38:04,490

sir

3919

06:38:09,830 --> 06:38:07,128

NASA astronaut Steve Bowen continues to

3920

06:38:11,990 --> 06:38:09,840

work on releasing a set of our bolts for

3921

06:38:13,368 --> 06:38:12,000

next week's spacewalk

3922

06:38:15,230 --> 06:38:13,378

um you heard them reference a turkey

3923

06:38:17,570 --> 06:38:15,240

timer which is basically a status

3924

06:38:19,490 --> 06:38:17,580

indicator to ensure bolts are fully

3925

06:38:24,010 --> 06:38:19,500

released

3926

06:38:29,230 --> 06:38:26,770

uh

3927

06:38:32,990 --> 06:38:29,240

yep it's popped up

3928

06:38:35,930 --> 06:38:33,000

we can't confirm the R3 is complete well

3929

06:38:37,670 --> 06:38:35,940

then we can move on to R4

3930

06:38:42,830 --> 06:38:37,680

let me know when you want your different

3931

06:38:42,840 --> 06:38:53,930

take your time

3932

06:39:17,868 --> 06:38:56,030

PDA with thanks for what do you want

3933

06:39:39,350 --> 06:39:20,510

can you please explain the concern with

3934

06:39:44,390 --> 06:39:41,390

from this view you can see both of

3935

06:39:47,930 --> 06:39:44,400

today's space walkers

3936

06:39:50,628 --> 06:39:47,940

NASA astronaut Steve Bowen is eb1 and

3937

06:39:52,910 --> 06:39:50,638

the red stripes and then NASA astronaut

3938

06:39:57,110 --> 06:39:52,920

Woody hoberg is ev2 with the unmarked

3939

06:39:57,120 --> 06:40:05,590

wow

3940

06:40:12,770 --> 06:40:08,330

damn socket saw complete here pull test

3941

06:40:18,190 --> 06:40:14,690

hey Woody

3942

06:40:28,070 --> 06:40:20,090

all right

3943

06:40:36,650 --> 06:40:30,890

or your settings are alpha three counter

3944

06:40:41,868 --> 06:40:38,708

for R4

3945

06:40:44,150 --> 06:40:41,878

245 terms again

3946

06:40:48,830 --> 06:40:44,160

you got it

3947

06:40:48,840 --> 06:41:24,410

copy

3948

06:41:29,270 --> 06:41:26,090

we can have him go ahead and start

3949

06:41:31,070 --> 06:41:29,280

working that FSC adjustable relocation

3950

06:41:32,750 --> 06:41:31,080

use that Delta right now he can

3951
06:41:35,270 --> 06:41:32,760
translate over to expansion Alpha and

3952
06:41:36,890 --> 06:41:35,280
start on that side and give us a call if

3953
06:41:38,868 --> 06:41:36,900
it has a

3954
06:41:55,030 --> 06:41:38,878
has anywhere

3955
06:41:59,628 --> 06:41:57,230
all right Woody thanks for your patience

3956
06:42:02,270 --> 06:41:59,638
we are ready translate to stanchion

3957
06:42:08,570 --> 06:42:05,930
we are going to have you readjust the

3958
06:42:11,150 --> 06:42:08,580
adjustable tether on the FSE beam that's

3959
06:42:15,590 --> 06:42:11,160
temptoad there this is because there is

3960
06:42:17,690 --> 06:42:15,600
a concern that that beam might move

3961
06:42:19,490 --> 06:42:17,700
toward the top of the eye Rosa blanket

3962
06:42:21,350 --> 06:42:19,500
over time with the adjustables in the

3963
06:42:22,548 --> 06:42:21,360

current position we want to stop that

3964

06:42:25,810 --> 06:42:22,558

from happening

3965

06:42:28,430 --> 06:42:25,820

so we are going to have you move the

3966

06:42:30,590 --> 06:42:28,440

adjustable from the

3967

06:42:32,570 --> 06:42:30,600

extension upper

3968

06:42:37,610 --> 06:42:32,580

the stanchion handrail upper extension

3969

06:42:44,930 --> 06:42:41,270

okay uh moving the adjustable from upper

3970

06:42:47,570 --> 06:42:44,940

to lower extension heading over

3971

06:42:49,070 --> 06:42:47,580

eventually we will also have to do this

3972

06:42:51,230 --> 06:42:49,080

attention Bravo which is on the other

3973

06:42:54,170 --> 06:42:51,240

side of the POA but let's just do alpha

3974

06:43:01,970 --> 06:42:54,180

for now we're also tracking the we need

3975

06:43:01,980 --> 06:43:06,890

okay you have coffee all

3976

06:43:11,030 --> 06:43:08,330

right all right so this is down this

3977

06:43:16,670 --> 06:43:11,040

would be handrail triple zero one that's

3978

06:43:20,270 --> 06:43:18,650

negative Woody it's staying on the same

3979

06:43:22,250 --> 06:43:20,280

handrail on the stanchion the one that

3980

06:43:23,810 --> 06:43:22,260

your left hand is on we just want to see

3981

06:43:27,350 --> 06:43:23,820

if you can move the hook to the lower

3982

06:43:31,610 --> 06:43:30,230

oh I got you yeah no problem and just to

3983

06:43:34,368 --> 06:43:31,620

be clear we have not

3984

06:43:36,470 --> 06:43:34,378

Item B is adjustables at all yet

3985

06:43:38,628 --> 06:43:36,480

yep we have not tightened those

3986

06:43:40,730 --> 06:43:38,638

adjustables at all we have that step for

3987

06:43:43,670 --> 06:43:40,740

whoever leaves the FSE last normally

3988

06:43:43,680 --> 06:43:51,530

okay gotcha

3989

06:43:55,190 --> 06:43:53,570

customer manager is it doesn't address

3990

06:43:57,070 --> 06:43:55,200

it doesn't reach we're going to go with

3991

06:44:13,070 --> 06:43:57,080

the other sanctions

3992

06:44:13,080 --> 06:44:26,810

ers

3993

06:44:26,820 --> 06:44:30,530

okay okay James got it on

3994

06:44:30,540 --> 06:44:39,350

copy great job Woody

3995

06:44:44,510 --> 06:44:41,270

and I can probably get over to Bravo and

3996

06:44:51,730 --> 06:44:46,970

let's do that Woody be mindful that

3997

06:44:55,610 --> 06:44:53,570

5

3998

06:44:58,250 --> 06:44:55,620

but I see the turkey timer has dropped

3999

06:45:04,010 --> 06:45:02,150

copy 245 turns on R4 and the tricky

4000

06:45:09,650 --> 06:45:04,020

timer has popped out great job you can

4001
06:45:14,270 --> 06:45:11,570
before it's actually correction Steve

4002
06:45:21,170 --> 06:45:14,280
you can probably leave your PGT out our

4003
06:45:21,180 --> 06:45:25,670
okay

4004
06:45:25,680 --> 06:45:29,208
copy you take your time

4005
06:45:34,850 --> 06:45:32,090
NASA astronaut Steve Bowen just finished

4006
06:45:37,730 --> 06:45:34,860
releasing the first set of bolts in his

4007
06:45:39,650 --> 06:45:37,740
get ahead task on the boom end of the

4008
06:45:42,288 --> 06:45:39,660
lower irosa

4009
06:45:44,570 --> 06:45:42,298
these bolts allow the boom deployment

4010
06:45:46,610 --> 06:45:44,580
system rollers to be moved into place to

4011
06:45:49,548 --> 06:45:46,620
help with array deployment for next

4012
06:45:52,368 --> 06:45:49,558
week's spacewalk now who he'll move on

4013
06:45:54,288 --> 06:45:52,378

to a second set of bolts which will

4014

06:45:56,510 --> 06:45:54,298

release two of four mechanisms that

4015

06:46:01,870 --> 06:45:56,520

holds the irosa and its rolled up

4016

06:46:01,880 --> 06:46:08,448

[Music]

4017

06:46:12,830 --> 06:46:10,788

Woody for your awareness if you have

4018

06:46:16,128 --> 06:46:12,840

trouble with this reach so be adjustable

4019

06:46:19,250 --> 06:46:16,138

is not long enough one leaving this on

4020

06:46:23,208 --> 06:46:19,260

the upper stanchion is acceptable since

4021

06:46:42,468 --> 06:46:25,788

okay that's great to know thanks James

4022

06:46:42,478 --> 06:46:45,948

six drops

4023

06:46:50,750 --> 06:46:48,530

great work Woody you can translate back

4024

06:47:00,230 --> 06:46:50,760

to the crew lock bag we'll be retrieving

4025

06:47:03,948 --> 06:47:02,208

actually Woody prior to your translation

4026
06:47:07,968 --> 06:47:03,958
we are going to have you cinch down the

4027
06:47:07,978 --> 06:47:24,548
okay

4028
06:47:29,570 --> 06:47:27,590
that feels pretty tight

4029
06:47:32,570 --> 06:47:29,580
and we agree we got a good view of it in

4030
06:47:32,580 --> 06:47:40,368
great

4031
06:47:44,628 --> 06:47:42,288
foreign

4032
06:47:46,670 --> 06:47:44,638
again you can translate back in the

4033
06:47:48,288 --> 06:47:46,680
direction of the crew lock bag on your

4034
06:47:50,208 --> 06:47:48,298
way we will have you cinch the other

4035
06:47:53,270 --> 06:47:50,218
adjustable tether that's temp sewing the

4036
06:47:56,690 --> 06:47:54,930
perfect

4037
06:47:59,868 --> 06:47:56,700
[Music]

4038
06:48:01,910 --> 06:47:59,878

here to get the R1 or R2

4039

06:48:04,910 --> 06:48:01,920
from here

4040

06:48:07,548 --> 06:48:04,920
uh might be by crawling on the

4041

06:48:09,170 --> 06:48:07,558
end of the arrays here

4042

06:48:15,948 --> 06:48:09,180
there's no good place to hold on to

4043

06:48:20,208 --> 06:48:18,530
copy Steve we think that the best

4044

06:48:22,128 --> 06:48:20,218
position for you here would be actually

4045

06:48:23,510 --> 06:48:22,138
holding on to the mutt end effector we

4046

06:48:26,330 --> 06:48:23,520
agree you will not be able to reach

4047

06:48:29,330 --> 06:48:26,340
unless you are actually on the boom end

4048

06:48:35,150 --> 06:48:29,340
of our Rosa and the FSE

4049

06:48:35,160 --> 06:48:38,448
happy

4050

06:48:42,410 --> 06:48:40,368
and Steve we know it's tight around here

4051
06:48:47,750 --> 06:48:42,420
we're getting words to remind you not to

4052
06:48:47,760 --> 06:48:52,310
experience

4053
06:48:58,368 --> 06:48:54,010
okay Jenny

4054
06:49:00,948 --> 06:48:58,378
Alpha adjustable is pinched

4055
06:49:03,288 --> 06:49:00,958
and I can confirm the beam up here as

4056
06:49:04,730 --> 06:49:03,298
well clear of irosa

4057
06:49:07,070 --> 06:49:04,740
great work we're really happy to hear

4058
06:49:11,570 --> 06:49:07,080
that you

4059
06:49:14,990 --> 06:49:12,708
you

4060
06:49:18,770 --> 06:49:15,000
okay question is uh what are my turns on

4061
06:49:24,230 --> 06:49:21,350
I won't load

4062
06:49:27,350 --> 06:49:24,240
your settings will be Alpha so you'll be

4063
06:49:30,110 --> 06:49:27,360

Alpha 4 counter two

4064

06:49:33,708 --> 06:49:30,120

for both of those bolts and it'll be 10

4065

06:49:33,718 --> 06:49:42,590

okay

4066

06:49:42,600 --> 06:50:00,530

copy

4067

06:50:06,410 --> 06:50:02,750

people that okay Jenny you got the

4068

06:50:06,420 --> 06:50:10,070

puppy Woody

4069

06:50:10,080 --> 06:50:31,110

time

4070

06:50:31,120 --> 06:50:45,770

[Applause]

4071

06:50:50,510 --> 06:50:47,930

Alpha three or Alpha fours and Alpha

4072

06:50:56,930 --> 06:50:52,910

and counterclockwise

4073

06:50:58,788 --> 06:50:56,940

it's Alpha Four counter two and just a

4074

06:51:00,288 --> 06:50:58,798

reminder caution here you'll have to

4075

06:51:02,330 --> 06:51:00,298

rotate these boom deployment system

4076
06:51:08,390 --> 06:51:02,340
rollers slowly once you release those

4077
06:51:13,788 --> 06:51:11,030
we understand it's very on top and I am

4078
06:51:13,798 --> 06:51:16,580
all right

4079
06:51:16,590 --> 06:51:20,690
[Music]

4080
06:51:20,700 --> 06:51:28,548
now

4081
06:51:32,690 --> 06:51:30,890
if it's helpful at this time Woody we

4082
06:51:34,368 --> 06:51:32,700
could have you translate to Steve to try

4083
06:51:39,288 --> 06:51:34,378
and provide some extra stability for

4084
06:51:39,298 --> 06:52:12,010
that would be helpful

4085
06:52:16,968 --> 06:52:14,750
why don't you take the uh

4086
06:52:18,350 --> 06:52:16,978
with the debris off right now and then

4087
06:52:22,868 --> 06:52:18,360
we'll deal with me

4088
06:52:27,170 --> 06:52:24,708

a little bit

4089

06:52:36,468 --> 06:52:27,180

and ground's fine with that option just

4090

06:52:40,310 --> 06:52:38,510

Woody while you're getting your brt down

4091

06:52:50,330 --> 06:52:40,320

I can give you both big picture words

4092

06:52:55,670 --> 06:52:52,430

all right we are around five hours and

4093

06:52:58,368 --> 06:52:55,680

15 minutes into this Eva tracking a time

4094

06:53:00,230 --> 06:52:58,378

of 7 hours and 30 minutes with the

4095

06:53:03,048 --> 06:53:00,240

limiting consumable still being Woody's

4096

06:53:06,410 --> 06:53:03,058

battery we have no more than one hour of

4097

06:53:08,690 --> 06:53:06,420

content left that includes our worksite

4098

06:53:10,548 --> 06:53:08,700

cleanup and translating back so that

4099

06:53:14,090 --> 06:53:10,558

means we're going to try and get our 1

4100

06:53:22,968 --> 06:53:14,100

and R2 complete and also like you guys

4101

06:53:28,788 --> 06:53:25,868

okay that sounds great

4102

06:53:32,330 --> 06:53:28,798

speeds awareness I think I'm in a l

4103

06:53:37,610 --> 06:53:32,340

think I should be able to hit the uh PDF

4104

06:53:44,540 --> 06:53:39,770

okay

4105

06:53:47,868 --> 06:53:45,948

[Music]

4106

06:53:50,208 --> 06:53:47,878

I'm just getting in a good spot here to

4107

06:53:52,810 --> 06:53:50,218

get the five I think I can get out too

4108

06:53:57,830 --> 06:53:52,820

but I get the player from here

4109

06:53:57,840 --> 06:54:08,590

hey firm you can start with R2

4110

06:54:12,530 --> 06:54:10,968

I'm in a good spot for the five should

4111

06:54:14,628 --> 06:54:12,540

we do that yeah let's do the pho at the

4112

06:54:21,110 --> 06:54:14,638

start okay

4113

06:54:25,730 --> 06:54:23,390

okay so Jenny just to talk through it

4114

06:54:28,070 --> 06:54:25,740

the plan is to grab this with the needle

4115

06:54:30,530 --> 06:54:28,080

nose then attempt to stick the needle

4116

06:54:38,030 --> 06:54:30,540

nose into the trash bag and release it

4117

06:54:43,610 --> 06:54:40,730

okay great thanks

4118

06:54:45,948 --> 06:54:43,620

NASA astronaut Woody hoberg

4119

06:54:49,368 --> 06:54:45,958

um is working on another get ahead task

4120

06:54:53,628 --> 06:54:49,378

to retrieve some fod or foreign object

4121

06:54:58,430 --> 06:54:56,090

he will be using those needle nose

4122

06:55:00,708 --> 06:54:58,440

pliers that you see in his hand in the

4123

06:55:03,590 --> 06:55:00,718

top left hand side of the screen

4124

06:55:05,170 --> 06:55:03,600

to remove the fod which is located near

4125

06:55:10,250 --> 06:55:05,180

a magnet

4126
06:55:15,048 --> 06:55:12,590
he will then stow it in a trash bag and

4127
06:55:17,448 --> 06:55:15,058
then NASA astronaut Steve Bowen will

4128
06:55:23,150 --> 06:55:17,458
continue to work on releasing the r

4129
06:55:25,788 --> 06:55:23,160
bolts on next week's irosa

4130
06:55:27,170 --> 06:55:25,798
what is a powerful magnet all right we

4131
06:55:29,030 --> 06:55:27,180
got it I'm holding it up in the hacker

4132
06:55:30,890 --> 06:55:29,040
just in case that's helpful

4133
06:55:34,070 --> 06:55:30,900
it's like a uh

4134
06:55:38,448 --> 06:55:34,080
cylinder with a smaller diameter Woody

4135
06:55:38,458 --> 06:55:43,968
oh yeah it's going there

4136
06:55:48,770 --> 06:55:46,788
it is I'm looking into the trash bag the

4137
06:55:51,948 --> 06:55:48,780
needle nose are in the trash bag

4138
06:55:53,448 --> 06:55:51,958

it is in the trash bag but it's stuck to

4139

06:55:56,030 --> 06:55:53,458

the needle news

4140

06:55:58,910 --> 06:55:56,040

so I don't wanna

4141

06:56:01,490 --> 06:55:58,920

sincerely pull them out

4142

06:56:03,708 --> 06:56:01,500

okay I think I got it right into the

4143

06:56:05,868 --> 06:56:03,718

trash bag all right it's in the trash

4144

06:56:17,750 --> 06:56:05,878

bag jams

4145

06:56:22,610 --> 06:56:20,330

let me just get kind of configured here

4146

06:56:23,868 --> 06:56:22,620

and then I can help yeah I just need a

4147

06:56:25,850 --> 06:56:23,878

little bit of stability in my legs I

4148

06:56:27,830 --> 06:56:25,860

should be okay

4149

06:56:30,410 --> 06:56:27,840

fine swing around the other way about

4150

06:56:37,670 --> 06:56:30,420

him in Houston right now

4151
06:56:41,930 --> 06:56:39,170
you need

4152
06:56:44,208 --> 06:56:41,940
to stop

4153
06:56:45,350 --> 06:56:44,218
stop up here real quick

4154
06:56:47,570 --> 06:56:45,360
um

4155
06:56:52,730 --> 06:56:47,580
oh I see yeah

4156
06:56:58,070 --> 06:56:55,310
how do you feel about me taking your PGT

4157
06:57:09,680 --> 06:56:58,080
and seeing if I can hit R1

4158
06:57:14,330 --> 06:57:12,590
[Music]

4159
06:57:23,048 --> 06:57:14,340
good settings

4160
06:57:23,058 --> 06:57:26,530
just in case

4161
06:57:31,368 --> 06:57:29,090
of this and the concern is liberated

4162
06:57:32,570 --> 06:57:31,378
Retreat appearance and if they do see

4163
06:57:35,330 --> 06:57:32,580

something coming out of the potassium

4164

06:57:39,170 --> 06:57:35,340

they put it back to them and for one

4165

06:57:43,730 --> 06:57:39,180

correction the yellow number is 12 17.

4166

06:57:48,230 --> 06:57:45,708

okay all right let's figure it out at 11

4167

06:57:55,810 --> 06:57:48,240

gems

4168

06:58:01,010 --> 06:58:00,048

you've got the pgg I can probably I

4169

06:58:02,570 --> 06:58:01,020

don't know if it helps for me to come

4170

06:58:04,128 --> 06:58:02,580

around to that side and try to do the

4171

06:58:05,628 --> 06:58:04,138

same thing if you want me to try to just

4172

06:58:08,208 --> 06:58:05,638

give you stability just give you some

4173

06:58:11,390 --> 06:58:08,218

stability that might be a California let

4174

06:58:13,610 --> 06:58:11,400

me see see what I can do here

4175

06:58:15,230 --> 06:58:13,620

probably they keep swinging under okay

4176
06:58:16,430 --> 06:58:15,240
let me grab your uh okay I've got your

4177
06:58:18,830 --> 06:58:16,440
brt

4178
06:58:21,410 --> 06:58:19,788
yeah

4179
06:58:23,030 --> 06:58:21,420
all right can I go a little bit higher

4180
06:58:33,128 --> 06:58:23,040
great try

4181
06:58:40,788 --> 06:58:35,868
every time I go up I come down

4182
06:58:46,548 --> 06:58:44,570
there you go gotcha Maybe

4183
06:59:12,610 --> 06:58:46,558
unfortunately when you push on it it's

4184
06:59:19,010 --> 06:59:15,530
NASA astronaut Steve Bowen is working to

4185
06:59:20,628 --> 06:59:19,020
release the second of two bolts

4186
06:59:23,090 --> 06:59:20,638
um this will release two of four

4187
06:59:25,070 --> 06:59:23,100
mechanisms that hold the irosa or

4188
06:59:26,570 --> 06:59:25,080

International Space Station roll up roll

4189

06:59:38,510 --> 06:59:26,580

out solar array and it's rolled up

4190

06:59:42,830 --> 06:59:41,208

Houston copies R2 is released and we

4191

06:59:49,850 --> 06:59:42,840

appreciate you being wary of those

4192

06:59:49,860 --> 07:00:04,868

foreign

4193

07:00:10,430 --> 07:00:07,610

work to rotate the boom deployment

4194

07:00:12,530 --> 07:00:10,440

system rollers

4195

07:00:16,730 --> 07:00:12,540

and then after that they will work on

4196

07:00:16,740 --> 07:00:26,700

Woody we follow you can do that

4197

07:00:26,710 --> 07:00:34,430

[Applause]

4198

07:00:39,590 --> 07:00:36,530

from this view you can see both of

4199

07:00:42,410 --> 07:00:39,600

today's space walkers in the unmarked

4200

07:00:45,530 --> 07:00:42,420

suit is NASA astronaut Woody hoberg who

4201
07:00:47,868 --> 07:00:45,540
is eb2 and with the red stripes on his

4202
07:00:56,750 --> 07:00:47,878
spacesuit is NASA astronaut Steve Bowen

4203
07:00:56,760 --> 07:01:00,590
thank you

4204
07:01:03,770 --> 07:01:02,448
it was

4205
07:01:06,590 --> 07:01:03,780
okay

4206
07:01:10,730 --> 07:01:06,600
outside BDS is

4207
07:01:10,740 --> 07:01:14,390
poppy Woody

4208
07:01:21,110 --> 07:01:16,610
I just pull it out slowly right

4209
07:01:24,650 --> 07:01:23,868
great to get to like 15 seconds for the

4210
07:01:34,070 --> 07:01:24,660
full

4211
07:01:41,330 --> 07:01:36,170
can you confirm whether that's deployed

4212
07:01:44,150 --> 07:01:42,770
copy

4213
07:01:46,310 --> 07:01:44,160

Woody

4214

07:01:49,430 --> 07:01:46,320

your next steps will be to translate off

4215

07:01:53,150 --> 07:01:49,440

of the FSE you can tuck the needle nose

4216

07:01:58,128 --> 07:01:55,788

you'll need to translate back down the

4217

07:02:02,350 --> 07:01:58,138

POA pick up your fair lead and then the

4218

07:02:11,628 --> 07:02:05,390

I think I've got more than 90. I need to

4219

07:02:17,930 --> 07:02:14,090

and Steve we need full rotation we don't

4220

07:02:17,940 --> 07:02:25,548

foreign

4221

07:02:31,788 --> 07:02:28,190

the rollers need to contact the blanket

4222

07:02:36,048 --> 07:02:34,010

okay they are now in contact I

4223

07:02:38,650 --> 07:02:36,058

understand thank you

4224

07:02:43,628 --> 07:02:38,660

not a problem

4225

07:02:43,638 --> 07:02:49,490

all right fishing

4226
07:02:49,500 --> 07:02:59,290
as well as your fair leads May firm

4227
07:03:05,150 --> 07:03:01,788
[Music]

4228
07:03:06,890 --> 07:03:05,160
and daddy uh what is um fantastic for me

4229
07:03:09,468 --> 07:03:06,900
next

4230
07:03:11,570 --> 07:03:09,478
Steve you are going to translate to crew

4231
07:03:13,670 --> 07:03:11,580
lock bag T where you're going to clean

4232
07:03:15,890 --> 07:03:13,680
up that crew lock bag we are still

4233
07:03:19,430 --> 07:03:15,900
tracking that the socket caddy is

4234
07:03:21,890 --> 07:03:19,440
outside so we need that tucked in and

4235
07:03:25,910 --> 07:03:21,900
then cleaned up such that the doors are

4236
07:03:29,448 --> 07:03:27,468
all right is there any reason to leave

4237
07:03:32,090 --> 07:03:29,458
that bag out here

4238
07:03:34,910 --> 07:03:32,100

a firm you are leaving crew lock bags

4239

07:03:38,868 --> 07:03:37,610

for directly DIY are we leaving it out

4240

07:03:40,490 --> 07:03:38,878

here is my question

4241

07:03:42,530 --> 07:03:40,500

we've uh spilled I think everything

4242

07:03:45,288 --> 07:03:42,540

we're going to start with two

4243

07:03:50,770 --> 07:03:45,298

Steve give us a second to check on that

4244

07:03:54,830 --> 07:03:53,330

it and then we can see if you want to

4245

07:03:57,048 --> 07:03:54,840

leave it out to bring it in that sounds

4246

07:04:03,110 --> 07:03:57,058

good I'll be back with you in uh 20

4247

07:04:08,030 --> 07:04:04,788

see if I'm right here so I'm just

4248

07:04:09,530 --> 07:04:08,040

dropping the stuff in the back yeah

4249

07:04:13,910 --> 07:04:09,540

can you think of a reason to leave it

4250

07:04:44,868 --> 07:04:17,288

Ard Loops are

4251
07:04:49,310 --> 07:04:46,670
that has a socket that we need for

4252
07:04:51,468 --> 07:04:49,320
phenomenal app and it makes it's pretty

4253
07:04:56,330 --> 07:04:51,478
close

4254
07:04:56,340 --> 07:05:01,070
Houston's back with you

4255
07:05:05,270 --> 07:05:03,650
all right Jenny what do you think

4256
07:05:12,410 --> 07:05:05,280
I just came back with you what's your

4257
07:05:18,830 --> 07:05:15,410
uh I'm gonna leave it out here

4258
07:05:24,230 --> 07:05:21,590
I'm trying to make sure it's facing the

4259
07:05:25,548 --> 07:05:24,240
see you that's kind of hard to do uh can

4260
07:05:34,310 --> 07:05:25,558
I use the wire tie to do that if we're

4261
07:05:38,628 --> 07:05:36,708
a firm Steve we've confirmed you will

4262
07:05:41,090 --> 07:05:38,638
need to leave it there because we need a

4263
07:05:45,250 --> 07:05:41,100

socket for the C bolt release on Eva 2

4264

07:05:47,990 --> 07:05:45,260

but you can use a wire tie to help you

4265

07:05:51,230 --> 07:05:48,000

stow it as long as these tethers are

4266

07:05:56,830 --> 07:05:54,230

oh yeah those trailers but these are

4267

07:07:03,410 --> 07:05:56,840

still things up tight enough to hold us

4268

07:07:03,420 --> 07:07:07,490

Woody next up for you

4269

07:07:11,390 --> 07:07:09,048

copy Steve

4270

07:07:15,048 --> 07:07:11,400

I've got a wire tie holder in place

4271

07:07:18,590 --> 07:07:16,850

that sounds good

4272

07:07:20,208 --> 07:07:18,600

Woody for you

4273

07:07:21,830 --> 07:07:20,218

you will be

4274

07:07:24,530 --> 07:07:21,840

following your tether back to your green

4275

07:07:29,930 --> 07:07:24,540

hook you'll be retrieving that as well

4276
07:07:29,940 --> 07:07:36,890
love you all

4277
07:07:36,900 --> 07:07:52,190
right

4278
07:07:54,360 --> 07:07:54,230
what's

4279
07:08:21,850 --> 07:07:54,370
up

4280
07:08:26,090 --> 07:08:24,530
Woody just to be conscious of that test

4281
07:08:29,030 --> 07:08:26,100
cable is hitting in a little bit of a

4282
07:08:40,310 --> 07:08:29,040
sandbag as these Turners

4283
07:08:44,270 --> 07:08:42,410
Woody an additional reminder of you to

4284
07:08:48,590 --> 07:08:44,280
stay clear of that test table just in

4285
07:08:53,390 --> 07:08:51,468
and thanks so much

4286
07:08:56,270 --> 07:08:53,400
we are just under five and a half hours

4287
07:08:59,270 --> 07:08:56,280
into today's space walk

4288
07:09:02,930 --> 07:08:59,280

which began at approximately 8 25 a.m

4289

07:09:06,110 --> 07:09:02,940

Central Time 9 25 a.m eastern time when

4290

07:09:08,090 --> 07:09:06,120

NASA astronauts Steve Bowen and Woody

4291

07:09:10,730 --> 07:09:08,100

hoberg turned their spacesuits to

4292

07:09:16,270 --> 07:09:12,948

is there something else we need to do

4293

07:09:18,590 --> 07:09:16,280

the duo then egressed the crew lock

4294

07:09:21,850 --> 07:09:18,600

where Steve Bowen received a crew lock

4295

07:09:24,650 --> 07:09:21,860

bag and Woody hoberg then

4296

07:09:35,330 --> 07:09:24,660

retrieved his articulating portable foot

4297

07:09:40,670 --> 07:09:37,548

from there they work to release some

4298

07:09:43,250 --> 07:09:40,680

anti-rotation devices on the upper irosa

4299

07:09:45,170 --> 07:09:43,260

or International rollout solar array as

4300

07:09:47,810 --> 07:09:45,180

well as a couple of sets of bolts on the

4301

07:09:49,850 --> 07:09:47,820

boom end of the upper irosa

4302

07:09:52,430 --> 07:09:49,860

confirm you are going to get off of the

4303

07:09:54,230 --> 07:09:52,440

FSC via the POA and we will have you

4304

07:09:56,690 --> 07:09:54,240

translate back to the airlock leading

4305

07:09:59,330 --> 07:09:56,700

they then work to remove the irisa from

4306

07:10:01,968 --> 07:09:59,340

its carrier and installed a scoop so

4307

07:10:04,128 --> 07:10:01,978

that NASA Astra Woody hoberg could lift

4308

07:10:06,468 --> 07:10:04,138

the irosa from the carrier and then

4309

07:10:09,590 --> 07:10:06,478

after several Maneuvers on the robotic

4310

07:10:12,468 --> 07:10:09,600

arm Woody hoberg arrived at the 1A mod

4311

07:10:15,770 --> 07:10:12,478

kit work site where NASA astronaut Steve

4312

07:10:18,948 --> 07:10:15,780

Bowen met him

4313

07:10:29,350 --> 07:10:18,958

they then work to install the irosa onto

4314

07:10:34,070 --> 07:10:32,208

and then they unfolded the irosa and

4315

07:10:36,048 --> 07:10:34,080

secured the right side onto the mounting

4316

07:10:38,208 --> 07:10:36,058

bracket

4317

07:10:41,030 --> 07:10:38,218

shortly after they electrically

4318

07:10:49,128 --> 07:10:41,040

connected the new irosa to the Space

4319

07:10:53,750 --> 07:10:51,468

after releasing the final two bolts

4320

07:10:56,270 --> 07:10:53,760

holding the irosa in an undeployed

4321

07:10:59,090 --> 07:10:56,280

position the International Space Station

4322

07:11:03,708 --> 07:10:59,100

roll out solar array deployed over the

4323

07:11:10,730 --> 07:11:08,448

I see him uh well the team then moved to

4324

07:11:13,430 --> 07:11:10,740

work on reconfiguring the carrier beams

4325

07:11:15,468 --> 07:11:13,440

that previously held the upright irosa

4326

07:11:17,270 --> 07:11:15,478

those beams needed to be rotated out of

4327

07:11:20,330 --> 07:11:17,280

the way to allow access to the lower

4328

07:11:25,730 --> 07:11:20,340

iossa which will be deployed on next

4329

07:11:30,770 --> 07:11:28,310

hoberg and Bowen remained about an hour

4330

07:11:37,190 --> 07:11:30,780

ahead on their tasks today so they were

4331

07:11:41,930 --> 07:11:39,468

the first of those tasks was to release

4332

07:11:45,770 --> 07:11:41,940

the anti-rotation device for next week's

4333

07:11:48,468 --> 07:11:45,780

irosa install along with some R bolts on

4334

07:11:50,448 --> 07:11:48,478

the boom end of the irosa for next week

4335

07:11:52,670 --> 07:11:50,458

and they also retrieved some fod or

4336

07:11:54,350 --> 07:11:52,680

foreign object debris

4337

07:11:57,110 --> 07:11:54,360

they're now working to clean up their

4338

07:12:00,230 --> 07:11:57,120

work site and then soon we will see them

4339

07:12:02,628 --> 07:12:00,240

Ingress the space station to complete

4340

07:12:04,490 --> 07:12:02,638

this week's spacewalk

4341

07:12:08,628 --> 07:12:04,500

fairly odd I'll let you know if it's a

4342

07:12:21,770 --> 07:12:10,430

the one at the very top you want to like

4343

07:12:21,780 --> 07:13:09,770

foreign

4344

07:13:14,930 --> 07:13:13,490

uh yeah but I might move it I think I'd

4345

07:13:31,570 --> 07:13:14,940

be a better spot for it if you don't

4346

07:13:31,580 --> 07:13:38,570

thank you

4347

07:13:44,930 --> 07:13:41,170

Jenny and my fair leading as well

4348

07:13:47,090 --> 07:13:44,940

yes Woody but stand by we are getting

4349

07:13:49,070 --> 07:13:47,100

word that we might have to go back to

4350

07:13:52,490 --> 07:13:49,080

get a double

4351

07:13:56,590 --> 07:13:52,500

tap on the for inboard most Port City

4352

07:14:03,530 --> 07:13:58,968

can you confirm with us whether you did

4353

07:14:09,530 --> 07:14:07,850

the guys honestly I can't recall I uh I

4354

07:14:12,230 --> 07:14:09,540

know it's just pressed fully but it is

4355

07:14:13,850 --> 07:14:12,240

possible that I only passed it once okay

4356

07:14:16,128 --> 07:14:13,860

we didn't see it we just want to be

4357

07:14:17,628 --> 07:14:16,138

super safe so uh let's go back and do

4358

07:14:24,430 --> 07:14:17,638

that since we got plenty of time here

4359

07:14:31,548 --> 07:14:26,810

okay do you want me on the outside of

4360

07:14:35,930 --> 07:14:33,948

happy Steve your next step is to open

4361

07:14:37,250 --> 07:14:35,940

the hatch thermal cover and then we're

4362

07:14:39,770 --> 07:14:37,260

going to be waiting for Woody to get

4363

07:14:39,780 --> 07:14:43,490

I understand

4364

07:14:47,330 --> 07:14:45,890

and Woody you just need to double tap

4365

07:14:51,170 --> 07:14:47,340

whichever break is going to be closest

4366

07:14:55,310 --> 07:14:52,850

great I see it

4367

07:14:57,708 --> 07:14:55,320

one two

4368

07:15:00,288 --> 07:14:57,718

four five see the card traps great work

4369

07:15:02,208 --> 07:15:00,298

we saw it you can translate back inboard

4370

07:15:05,930 --> 07:15:02,218

and you will now be placing a fair lead

4371

07:15:05,940 --> 07:15:10,010

copy Johnny thanks

4372

07:15:18,948 --> 07:15:11,868

Steve we would like you to cycle your

4373

07:15:23,628 --> 07:15:21,770

okay I got a quick question first

4374

07:15:25,128 --> 07:15:23,638

go wrong

4375

07:15:26,810 --> 07:15:25,138

get my

4376

07:15:30,350 --> 07:15:26,820

uh do you want me on the front side or

4377

07:15:34,788 --> 07:15:33,468

basement of the Airwalk I think I need

4378

07:15:37,730 --> 07:15:34,798

to be on the front side looking where my

4379

07:15:43,128 --> 07:15:37,740

tether's branding good morning goodbye

4380

07:15:47,570 --> 07:15:45,770

Steve we'll have you on the AFT side

4381

07:15:49,610 --> 07:15:47,580

that's what we have as a good position

4382

07:15:51,770 --> 07:15:49,620

what did you say you needed to

4383

07:15:55,430 --> 07:15:51,780

deconflict yourself with Woody

4384

07:16:03,350 --> 07:15:55,440

just looking at the way my tether is

4385

07:16:03,360 --> 07:16:07,070

between me you can go to the outside

4386

07:16:15,430 --> 07:16:09,170

it's just harder I can go there if you

4387

07:16:20,390 --> 07:16:17,930

I think it's a green light

4388

07:16:22,610 --> 07:16:20,400

if I hit it

4389

07:16:24,230 --> 07:16:22,620

happy about the Urka and we're still

4390

07:16:25,610 --> 07:16:24,240

talking the tethers thanks for letting

4391

07:16:35,030 --> 07:16:25,620

us know

4392

07:16:39,770 --> 07:16:38,270

hello what do you think

4393

07:16:41,810 --> 07:16:39,780

um Steve I just passed under your

4394

07:16:43,968 --> 07:16:41,820

Charter I'm over on the Cedars for a

4395

07:16:45,948 --> 07:16:43,978

while yeah

4396

07:16:51,010 --> 07:16:45,958

um I think you're clear to go ask

4397

07:16:55,090 --> 07:16:53,690

I thought it was on the left I've got

4398

07:17:03,110 --> 07:16:55,100

the eyes on it

4399

07:17:07,128 --> 07:17:05,510

so anywhere I want to do my spin move

4400

07:17:08,090 --> 07:17:07,138

I don't think it happened too much of a

4401

07:17:09,948 --> 07:17:08,100

string move

4402

07:17:12,468 --> 07:17:09,958

yeah okay

4403

07:17:14,868 --> 07:17:12,478

I agree just come on down and get on the

4404

07:17:25,310 --> 07:17:14,878

handrail the circular handrail and then

4405

07:17:25,320 --> 07:17:31,930

there you go

4406

07:17:31,940 --> 07:17:35,750

that'll work

4407

07:17:41,090 --> 07:17:38,810

all right in Houston copies you both

4408

07:17:42,948 --> 07:17:41,100

back at the airlock great work regarding

4409

07:17:44,690 --> 07:17:42,958

the tethers you guys have the best eyes

4410

07:17:47,690 --> 07:17:44,700

on what's going on we're just going to

4411

07:17:54,288 --> 07:17:47,700

need a report of the config once uh

4412

07:17:58,968 --> 07:17:56,270

all right sounds great James

4413

07:18:00,948 --> 07:17:58,978

NASA astronauts Steve Bowen and Woody

4414

07:18:03,350 --> 07:18:00,958

hoberg are translating back to the

4415

07:18:14,208 --> 07:18:03,360

airlock they were working on cleaning up

4416

07:18:19,010 --> 07:18:16,610

all right there's my right waste center

4417

07:18:23,330 --> 07:18:19,020

Escape closed walk on black to the

4418

07:18:26,690 --> 07:18:25,610

all right I copy that good load pass

4419

07:18:29,510 --> 07:18:26,700

Woody

4420

07:18:32,750 --> 07:18:29,520

I'll get you to turn off your heka and

4421

07:18:37,190 --> 07:18:35,448

you can see on the left side of your

4422

07:18:39,350 --> 07:18:37,200

screen that the thermal cover has been

4423

07:18:41,150 --> 07:18:39,360

opened and now NASA astronaut Woody

4424

07:19:08,090 --> 07:18:41,160

hoberg is working to Ingress or enter

4425

07:19:13,850 --> 07:19:11,330

Woody gives Steve a go when he's ready

4426
07:19:15,410 --> 07:19:13,860
for your tether actions Steve I have

4427
07:19:17,810 --> 07:19:15,420
steps for you if you want me to talk you

4428
07:19:21,468 --> 07:19:19,490
yeah I will I will need something too

4429
07:19:22,690 --> 07:19:21,478
let me get picture of Woody space inside

4430
07:19:25,490 --> 07:19:22,700
and yeah

4431
07:19:27,650 --> 07:19:25,500
all right the only connection I have is

4432
07:19:30,048 --> 07:19:27,660
my well other than my current safety

4433
07:19:33,350 --> 07:19:30,058
tether is my weight feather to the

4434
07:19:37,310 --> 07:19:33,360
dealer in extender understand

4435
07:19:47,090 --> 07:19:40,070
getting emergency coffee

4436
07:19:47,100 --> 07:20:02,048
okay

4437
07:20:07,910 --> 07:20:04,730
it's locked

4438
07:20:11,208 --> 07:20:07,920

Stow his green hook on the AFT air lock

4439

07:20:29,868 --> 07:20:14,570

all right Green Hope going to ask

4440

07:20:29,878 --> 07:20:35,590

thank you

4441

07:20:35,600 --> 07:20:43,010

all right it's on the Earth

4442

07:20:49,368 --> 07:20:46,368

deal is Deluxe sound like it

4443

07:20:52,128 --> 07:20:49,378

copy I copied the green hookers on the

4444

07:20:55,128 --> 07:20:52,138

AFT air lock d-ring the gate is closed

4445

07:20:58,788 --> 07:20:55,138

and the hook is locked you can Stow

4446

07:21:01,910 --> 07:20:58,798

Woody's yellow hook on your waist tether

4447

07:21:04,010 --> 07:21:01,920

that will be your new load pass you need

4448

07:21:06,770 --> 07:21:04,020

to make sure that hook is locked black

4449

07:21:15,070 --> 07:21:08,810

all right let me get that oh my race

4450

07:21:15,080 --> 07:21:22,200

thank you

4451
07:21:49,548 --> 07:21:34,100

[Music]

4452
07:21:49,558 --> 07:22:03,650
thank you

4453
07:22:03,660 --> 07:23:02,590
foreign

4454
07:23:07,730 --> 07:23:05,150
we agree that's a good config and your

4455
07:23:09,948 --> 07:23:07,740
new load pass lock your green reel and

4456
07:23:13,150 --> 07:23:09,958
Stow your green hook on the Forward Air

4457
07:23:41,990 --> 07:23:13,160
lock external d-ring

4458
07:23:42,000 --> 07:23:47,690
that that's locked

4459
07:23:47,700 --> 07:24:26,150
It's gotta be real locked

4460
07:24:31,010 --> 07:24:28,670
all right green hook

4461
07:24:34,968 --> 07:24:31,020
very close fight a lot

4462
07:24:34,978 --> 07:24:40,010
copy that's a good config for your hook

4463
07:24:46,250 --> 07:24:43,070

NASA astronaut Woody hoberg has fully

4464

07:24:49,128 --> 07:24:46,260

ingressed the crew lock and now we see

4465

07:24:50,930 --> 07:24:49,138

Steve Bowen finishing up some last steps

4466

07:24:53,810 --> 07:24:50,940

as he works to make his way inside

4467

07:24:58,368 --> 07:24:53,820

[Music]

4468

07:25:05,230 --> 07:25:00,410

Stow your yellow hook on your mini

4469

07:25:11,868 --> 07:25:08,230

that's complete

4470

07:25:15,350 --> 07:25:11,878

all right that is a good config Steve

4471

07:25:30,730 --> 07:25:16,300

all right

4472

07:25:30,740 --> 07:25:35,330

and Woody

4473

07:25:41,628 --> 07:25:39,110

what do we need we need you to power off

4474

07:25:44,510 --> 07:25:41,638

your heka when you powered it off you

4475

07:25:49,968 --> 07:25:48,048

all right that's fun I believe it is off

4476
07:25:54,230 --> 07:25:49,978
now I pressed the button once all right

4477
07:25:54,240 --> 07:26:01,368
wait till I get my legs inside

4478
07:26:06,288 --> 07:26:03,468
you can now see NASA astronaut Steve

4479
07:26:08,930 --> 07:26:06,298
Bowen making his way inside

4480
07:26:11,150 --> 07:26:08,940
once inside they'll close the hatch

4481
07:26:20,448 --> 07:26:11,160
thermal cover and the process to

4482
07:26:26,448 --> 07:26:22,850
that feels like maybe we got a

4483
07:26:26,458 --> 07:26:32,230
everything else

4484
07:26:37,070 --> 07:26:35,090
off now

4485
07:26:38,690 --> 07:26:37,080
I'm looking for I think there's

4486
07:26:41,090 --> 07:26:38,700
something around maybe the back of my

4487
07:26:44,510 --> 07:26:41,100
legs is that possible

4488
07:26:48,590 --> 07:26:44,520

it is possible no actually disregard

4489

07:26:48,600 --> 07:26:53,750

[Music]

4490

07:26:53,760 --> 07:26:58,548

try again

4491

07:26:58,558 --> 07:27:03,350

okay that's your clip on

4492

07:27:19,860 --> 07:27:04,990

on my legs

4493

07:27:34,190 --> 07:27:30,930

[Music]

4494

07:27:34,200 --> 07:28:00,110

thank you

4495

07:28:00,120 --> 07:28:10,610

my body yeah okay nice job

4496

07:28:10,620 --> 07:28:46,610

foreign

4497

07:28:46,620 --> 07:28:50,810

thank you

4498

07:29:00,128 --> 07:28:53,590

where are you you are

4499

07:29:09,830 --> 07:29:03,468

there we go that should help

4500

07:29:14,930 --> 07:29:12,708

and NASA astronaut Steve Bowen has now

4501
07:29:17,390 --> 07:29:14,940
ingressed the crew lock and close the

4502
07:29:19,128 --> 07:29:17,400
hatch thermal cover the copy that you

4503
07:29:21,350 --> 07:29:19,138
have the magnetic plate d-ring you'll

4504
07:29:23,330 --> 07:29:21,360
need to attach the hook to that cinch

4505
07:29:28,010 --> 07:29:23,340
the strap till snug and Report the

4506
07:29:28,020 --> 07:29:31,250
all right

4507
07:29:31,260 --> 07:30:02,048
she's written together

4508
07:30:02,058 --> 07:30:08,030
so I've got that you want six I think

4509
07:30:13,010 --> 07:30:11,510
one two three four five six

4510
07:30:15,048 --> 07:30:13,020
I got six

4511
07:30:17,868 --> 07:30:15,058
we did a little bit more coffee that's

4512
07:30:20,870 --> 07:30:17,878
what we were expecting verify the magnet

4513
07:30:33,468 --> 07:30:22,310

[Music]

4514

07:30:38,570 --> 07:30:36,230

all right that's engaged

4515

07:30:40,610 --> 07:30:38,580

coffee well done now for both of you you

4516

07:30:43,250 --> 07:30:40,620

can remove the svus from their stowage

4517

07:30:45,288 --> 07:30:43,260

pouches remove your DCM covers and

4518

07:30:48,850 --> 07:30:45,298

velcro them to your dcms and connect

4519

07:30:48,860 --> 07:31:02,570

all right that doesn't work

4520

07:31:02,580 --> 07:31:06,368

okay cold

4521

07:31:06,378 --> 07:31:12,590

set first before

4522

07:31:12,600 --> 07:31:27,288

copy

4523

07:31:27,298 --> 07:31:31,788

yes

4524

07:31:31,798 --> 07:31:47,448

that's so cool

4525

07:31:47,458 --> 07:32:03,770

foreign

4526
07:32:20,930 --> 07:32:06,770
copy SCU installed and locked for a

4527
07:32:25,850 --> 07:32:23,030
right now you are seeing live views

4528
07:32:28,670 --> 07:32:25,860
inside of the equipment log where NASA

4529
07:32:31,250 --> 07:32:28,680
astronaut Frank Rubio and UAE or United

4530
07:32:35,270 --> 07:32:31,260
Arab Emirates astronaut Sultan al-niadi

4531
07:32:37,730 --> 07:32:35,280
are awaiting the Press repressurization

4532
07:32:41,270 --> 07:32:37,740
of the crew lock before they can open

4533
07:32:44,510 --> 07:32:41,280
the Hodge and re-greet their fellow

4534
07:32:47,030 --> 07:32:44,520
astronauts after a successful spacewalk

4535
07:32:51,948 --> 07:32:47,040
if you want

4536
07:32:56,690 --> 07:32:51,958
copy ev1 SCU is attached and locked both

4537
07:33:01,030 --> 07:32:56,700
UB crew members switch water off of

4538
07:33:01,040 --> 07:33:05,510

51 Waters off

4539

07:33:11,150 --> 07:33:08,628

copy both Waters off caution do not

4540

07:33:19,910 --> 07:33:11,160

close the hatch until emu water is off

4541

07:33:25,070 --> 07:33:22,250

well I have you both here for two

4542

07:33:27,890 --> 07:33:25,080

minutes I want to say congratulations to

4543

07:33:30,650 --> 07:33:27,900

the team on an exceptional Eva you guys

4544

07:33:33,410 --> 07:33:30,660

were fantastic today congratulations to

4545

07:33:35,390 --> 07:33:33,420

Woody on your first spacewalk and to

4546

07:33:37,910 --> 07:33:35,400

Steve on your ninth

4547

07:33:40,670 --> 07:33:37,920

finally congratulations to all of crew

4548

07:33:45,468 --> 07:33:40,680

picks on your 100th day on orbit it's

4549

07:33:49,250 --> 07:33:47,030

thank you very much thank you really

4550

07:33:51,530 --> 07:33:49,260

appreciate that and uh

4551
07:33:53,390 --> 07:33:51,540
yeah I think it's been an amazing

4552
07:33:55,730 --> 07:33:53,400
Business Report from the ground

4553
07:33:59,030 --> 07:33:55,740
uh it's a great plan

4554
07:34:01,548 --> 07:33:59,040
um it was absolutely amazing uh quite

4555
07:34:03,948 --> 07:34:01,558
quite startling uh although that's what

4556
07:34:06,288 --> 07:34:03,958
it does every day and uh what is the

4557
07:34:08,570 --> 07:34:06,298
other thing you want to add

4558
07:34:11,090 --> 07:34:08,580
thanks Steve and thanks cams the team

4559
07:34:14,150 --> 07:34:11,100
did an amazing job of planning uh this

4560
07:34:15,708 --> 07:34:14,160
Eva and also executing it and uh

4561
07:34:18,830 --> 07:34:15,718
couldn't be happier to get to work with

4562
07:34:22,310 --> 07:34:18,840
this team and also to get to do my first

4563
07:34:26,090 --> 07:34:22,320

uh Eva with such a fantastic leader as

4564

07:34:27,948 --> 07:34:26,100

he is I just could not imagine a better

4565

07:34:31,368 --> 07:34:27,958

um experience to have for my first UVA

4566

07:34:35,448 --> 07:34:33,650

okay well we're happy for you both and

4567

07:34:37,610 --> 07:34:35,458

we have 30 seconds left on our timer

4568

07:34:42,850 --> 07:34:37,620

I'll let you know when you can close the

4569

07:34:42,860 --> 07:34:56,690

[Applause]

4570

07:35:00,770 --> 07:34:58,430

you just heard

4571

07:35:03,770 --> 07:35:00,780

um some kind words and congratulations

4572

07:35:07,190 --> 07:35:03,780

from the ground IV here in the room

4573

07:35:10,250 --> 07:35:07,200

Jenny Gibbons on a successful space walk

4574

07:35:13,010 --> 07:35:10,260

for NASA astronaut Steve Bowen and Woody

4575

07:35:15,890 --> 07:35:13,020

hoberg it was the first spacewalk for

4576
07:35:18,708 --> 07:35:15,900
Woody hoberg in the ninth spacewalk for

4577
07:35:23,868 --> 07:35:20,830
we're now standing by for

4578
07:35:25,610 --> 07:35:23,878
repressurization so with that you can

4579
07:35:29,090 --> 07:35:25,620
verify the outer hatch is clear of

4580
07:35:31,430 --> 07:35:29,100
hardware and the handle position is per

4581
07:35:33,770 --> 07:35:31,440
the hatch decal and close and lock the

4582
07:35:38,948 --> 07:35:35,628
uh that's complete there I'm going to

4583
07:35:42,650 --> 07:35:38,958
try and close this the first time

4584
07:35:44,570 --> 07:35:42,660
trying to stay out of the way Steve I

4585
07:35:47,810 --> 07:35:44,580
need to come a little bit off yeah I

4586
07:35:53,570 --> 07:35:47,820
agree I didn't pull me a little bit

4587
07:35:53,580 --> 07:36:06,128
she just did was trying to pull you yeah

4588
07:36:06,138 --> 07:36:12,048

watch each other yeah

4589

07:36:45,350 --> 07:36:14,270

all right it looks clear

4590

07:36:45,360 --> 07:37:07,368

foreign

4591

07:37:07,378 --> 07:37:39,180

copy the hatch is closed and locked

4592

07:37:39,190 --> 07:37:47,868

[Music]

4593

07:37:53,208 --> 07:37:50,090

Woody and Steve for your awareness we

4594

07:37:56,690 --> 07:37:53,218

are going to be headed into an Los where

4595

07:37:59,930 --> 07:37:56,700

we will have shot SS so I will say Prime

4596

07:38:04,368 --> 07:37:59,940

IV before handing off to Frank

4597

07:38:08,510 --> 07:38:04,378

on the UIA check oxygen emu one and two

4598

07:38:12,890 --> 07:38:10,490

if you're an emu one and two valves both

4599

07:38:12,900 --> 07:38:19,680

switch power easy one and two both on

4600

07:38:26,750 --> 07:38:21,948

[Applause]

4601
07:38:29,750 --> 07:38:26,760
to both on two LEDs bolts are 18 decimal

4602
07:38:33,770 --> 07:38:29,760
six times two

4603
07:38:38,090 --> 07:38:33,780
copy LEDs are on and 18 decimal six for

4604
07:38:49,990 --> 07:38:38,100
voltage ev1 and ev2 on your dcms switch

4605
07:38:50,000 --> 07:38:56,270
I see you

4606
07:38:56,280 --> 07:39:00,170
copy with that

4607
07:39:00,180 --> 07:39:12,048
I've used Frank the calm is yours

4608
07:39:17,270 --> 07:39:15,048
hey Jenny fantastic job as always by a

4609
07:39:18,170 --> 07:39:17,280
new nickname thanks so much we look

4610
07:39:19,368 --> 07:39:18,180
forward to hanging out with you guys

4611
07:39:37,208 --> 07:39:19,378
again next week

4612
07:39:37,218 --> 07:39:40,910
warning if

4613
07:39:45,430 --> 07:39:42,650

disregard

4614

07:39:50,270 --> 07:39:45,440

to you close your actuator to press

4615

07:39:52,310 --> 07:39:50,280

verify that you see go to actuator to

4616

07:40:09,410 --> 07:39:52,320

press display

4617

07:40:09,420 --> 07:40:16,190

thank you

4618

07:40:21,110 --> 07:40:18,468

TV choose impress

4619

07:40:30,948 --> 07:40:21,120

everyone is still working on it that's

4620

07:40:30,958 --> 07:40:35,090

I put my finger on there for some reason

4621

07:40:35,100 --> 07:41:01,560

foreign

4622

07:41:16,850 --> 07:41:09,520

[Music]

4623

07:41:35,890 --> 07:41:19,730

O2 actuator is interesting

4624

07:41:35,900 --> 07:41:46,128

I am now in

4625

07:41:52,128 --> 07:41:49,850

NASA astronaut Frank Rubio inside the

4626
07:41:54,948 --> 07:41:52,138
equipment lock is currently walking

4627
07:41:58,250 --> 07:41:54,958
through some repressurization procedures

4628
07:42:00,350 --> 07:41:58,260
with our space walkers from today who

4629
07:42:01,850 --> 07:42:00,360
are on the other side of that hatch in

4630
07:42:07,330 --> 07:42:01,860
the crew lock

4631
07:42:11,830 --> 07:42:09,948
check that the EV hatch after that is

4632
07:42:14,810 --> 07:42:11,840
closed

4633
07:42:17,810 --> 07:42:14,820
and I'll be throttling the IV has

4634
07:42:19,548 --> 07:42:17,820
Equalization valve from off the norm and

4635
07:42:42,770 --> 07:42:19,558
just let me know if it's a good rate for

4636
07:42:48,350 --> 07:42:45,468
the repressurization of the crew lock

4637
07:42:50,770 --> 07:42:48,360
has officially begun

4638
07:42:57,468 --> 07:42:50,780

we are currently at about

4639

07:42:57,478 --> 07:43:02,628

also expected

4640

07:43:02,638 --> 07:43:13,850

at a large problem

4641

07:43:13,860 --> 07:43:18,410

you guys both okay with that right

4642

07:43:26,430 --> 07:43:19,788

I'm good

4643

07:43:26,440 --> 07:43:45,360

[Applause]

4644

07:44:02,990 --> 07:43:45,500

[Music]

4645

07:44:08,570 --> 07:44:06,410

with the repressurization underway it

4646

07:44:13,250 --> 07:44:08,580

marks the official end of the spacewalk

4647

07:44:16,788 --> 07:44:13,260

at 2 28 PM central time to 20 I mean 3

4648

07:44:19,368 --> 07:44:16,798

28 PM eastern time for a total

4649

07:44:20,628 --> 07:44:19,378

spacewalking time of 6 hours and three

4650

07:44:24,048 --> 07:44:20,638

minutes

4651
07:44:36,690 --> 07:44:24,058
the spacewalk began at 6 25 a.m Central

4652
07:44:36,700 --> 07:44:44,350
[Music]

4653
07:44:44,360 --> 07:45:05,330
sounds good

4654
07:45:10,070 --> 07:45:07,788
the crew lock is now at a pressure of

4655
07:45:12,048 --> 07:45:10,080
approximately five pounds per square

4656
07:45:13,850 --> 07:45:12,058
inch they'll hold here for a couple of

4657
07:45:16,128 --> 07:45:13,860
minutes and then do some leak checks

4658
07:45:22,368 --> 07:45:16,138
before continuing to increase the

4659
07:45:22,378 --> 07:45:43,368
ah

4660
07:45:43,378 --> 07:45:49,350
foreign

4661
07:45:49,360 --> 07:47:25,910
[Applause]

4662
07:47:25,920 --> 07:48:43,510
sorry

4663
07:48:50,030 --> 07:48:46,730

with today's space walk coming to an end

4664

07:48:53,030 --> 07:48:50,040

and totaling six hours and three minutes

4665

07:48:55,670 --> 07:48:53,040

uh we have some statistics for you this

4666

07:48:56,930 --> 07:48:55,680

is the 264th spacewalk for the

4667

07:48:58,548 --> 07:48:56,940

International Space Station and

4668

07:49:01,310 --> 07:48:58,558

supportive assembly maintenance and

4669

07:49:02,930 --> 07:49:01,320

upgrades it's the seventh spacewalk out

4670

07:49:06,770 --> 07:49:02,940

of the space station this year in the

4671

07:49:09,410 --> 07:49:06,780

fifth spacewalk during Expedition 69.

4672

07:49:12,048 --> 07:49:09,420

this was the ninth spacewalk of NASA

4673

07:49:15,170 --> 07:49:12,058

astronaut Steve Bowen he has now

4674

07:49:17,510 --> 07:49:15,180

garnered 60 hours and 22 minutes of

4675

07:49:19,910 --> 07:49:17,520

space talk space walking time which puts

4676
07:49:22,548 --> 07:49:19,920
him fifth in the all-time list for the

4677
07:49:24,948 --> 07:49:22,558
most space walking time it was the first

4678
07:49:26,628 --> 07:49:24,958
spacewalk for Woody Bowen so he now has

4679
07:49:29,868 --> 07:49:26,638
six hours and three minutes of space

4680
07:49:36,708 --> 07:49:32,690
in today's spacewalk which began at 8 25

4681
07:49:40,850 --> 07:49:36,718
a.m Central Time 9 25 a.m eastern time

4682
07:49:44,150 --> 07:49:40,860
and ended at 2 28 p.m Central Time 3 28

4683
07:49:46,070 --> 07:49:44,160
p.m eastern time it lasted a total of 6

4684
07:49:49,310 --> 07:49:46,080
hours and three minutes as they

4685
07:49:53,208 --> 07:49:49,320
installed a new International Space

4686
07:49:55,430 --> 07:49:53,218
Station roll out solar array or irosa on

4687
07:49:57,948 --> 07:49:55,440
the 1A power channel on the starboard

4688
07:50:03,650 --> 07:49:57,958

truss of the space station

4689

07:50:06,590 --> 07:50:03,660

in total the space station has seen over

4690

07:50:09,410 --> 07:50:06,600

69 days of space walking time with 69

4691

07:50:12,530 --> 07:50:09,420

days 21 hours and 52 minutes of space

4692

07:50:26,708 --> 07:50:12,540

walking time across those 264 spacewalks

4693

07:50:32,448 --> 07:50:30,888

we are currently in a brief loss of

4694

07:50:34,310 --> 07:50:32,458

signal as we transition between

4695

07:50:36,530 --> 07:50:34,320

satellites there's about three minutes

4696

07:50:39,888 --> 07:50:36,540

left in that and then we will return to

4697

07:50:51,708 --> 07:50:39,898

views inside the equipment lock as the

4698

07:50:57,830 --> 07:50:55,310

once the repress process is complete we

4699

07:51:00,288 --> 07:50:57,840

will see NASA astronauts Steve Bowen and

4700

07:51:01,730 --> 07:51:00,298

Woody hoberg make their way into the

4701
07:51:04,490 --> 07:51:01,740
equipment lock

4702
07:51:06,468 --> 07:51:04,500
from there we will continue coverage

4703
07:51:08,510 --> 07:51:06,478
until we see that our helmets come off

4704
07:51:11,570 --> 07:51:08,520
and then we will wrap our coverage until

4705
07:53:42,590 --> 07:51:11,580
next week when we have another irosa

4706
07:53:42,600 --> 07:53:57,410
foreign

4707
07:53:57,420 --> 07:54:02,030
ah

4708
07:56:33,410 --> 07:54:53,448
a

4709
07:56:44,300 --> 07:56:35,190
foreign

4710
07:56:44,310 --> 07:56:59,410
[Music]

4711
07:56:59,420 --> 07:57:23,048
Houston on one crew is no longer hot mic

4712
07:57:32,030 --> 07:57:25,850
first into the equipment lock you can

4713
07:57:48,888 --> 07:57:35,030

he served as ev2 today so he had the

4714

07:57:54,530 --> 07:57:52,788

right now you can see UAE astronaut in

4715

07:57:56,810 --> 07:57:54,540

the bottom right hand corner of your

4716

07:58:58,570 --> 07:57:56,820

screen removing the safer or simplified

4717

07:59:04,368 --> 07:59:01,368

NASA astronaut Frank Rubio is Now

4718

07:59:07,310 --> 07:59:04,378

assistant Steve Bowen through the hatch

4719

07:59:09,468 --> 07:59:07,320

into the equipment lock and then he will

4720

07:59:13,250 --> 07:59:09,478

have his safer removed as well which is

4721

08:00:26,090 --> 07:59:13,260

the simplified aid for Eva rescue

4722

08:00:26,100 --> 08:00:34,070

okay

4723

08:01:30,708 --> 08:00:35,930

and then we saw that these on the flight

4724

08:01:30,718 --> 08:01:50,350

ESS

4725

08:01:50,360 --> 08:02:46,368

thank you

4726
08:02:46,378 --> 08:03:00,708
again

4727
08:03:06,530 --> 08:03:04,670
NASA astronaut Frank Rubio and UAE or

4728
08:03:09,288 --> 08:03:06,540
United Arab Emirates astronaut Sultan

4729
08:03:11,810 --> 08:03:09,298
al-niadi are beginning to assist with

4730
08:03:13,610 --> 08:03:11,820
Doffing the spacesuits right now they're

4731
08:03:15,288 --> 08:03:13,620
removing some of the tools that were

4732
08:04:24,128 --> 08:03:15,298
used on today's space walk and getting

4733
08:04:24,138 --> 08:04:43,730
I believe

4734
08:04:43,740 --> 08:05:03,888
so they're not they're notified

4735
08:05:03,898 --> 08:05:38,948
please remember

4736
08:05:38,958 --> 08:05:45,708
thank you

4737
08:05:52,430 --> 08:05:48,830
can see UAE astronaut Sultan al-niadi

4738
08:07:50,288 --> 08:05:52,440

removing the heka or HD emu camera

4739

08:07:56,330 --> 08:07:52,968

al-niadi and Rubio are now working to

4740

08:07:58,910 --> 08:07:56,340

remove the gloves from hoberg and Bowen

4741

08:08:01,730 --> 08:07:58,920

shortly after that they will then start

4742

08:08:03,468 --> 08:08:01,740

to remove the helmets once the helmets

4743

08:08:36,230 --> 08:08:03,478

are off we will then wrap our coverage

4744

08:08:36,240 --> 08:09:24,288

we will do

4745

08:09:28,670 --> 08:09:26,510

they are now working to remove the

4746

08:09:30,888 --> 08:09:28,680

helmets from today's space Walkers who

4747

08:09:58,128 --> 08:09:30,898

are NASA astronaut Steve Bowen and Woody

4748

08:09:58,138 --> 08:10:16,968

purple

4749

08:10:16,978 --> 08:10:38,270

okay

4750

08:10:42,948 --> 08:10:40,670

but the helmets often are spacewalkers

4751
08:10:44,448 --> 08:10:42,958
safely inside the International Space

4752
08:10:48,230 --> 08:10:44,458
Station we're gonna wrap today's

4753
08:10:49,788 --> 08:10:48,240
coverage as a recap on NASA astronaut

4754
08:10:52,310 --> 08:10:49,798
Steve Bowen and Woody hoberg

4755
08:10:54,230 --> 08:10:52,320
successfully installed an irosa or

4756
08:10:56,628 --> 08:10:54,240
International Space Station roll out

4757
08:10:58,610 --> 08:10:56,638
solar array to augment power generation

4758
08:11:02,388 --> 08:10:58,620
for the 1A power channel on the

4759
08:11:04,670 --> 08:11:02,398
station's starboard truss structure

4760
08:11:07,670 --> 08:11:04,680
they also were able to complete several

4761
08:11:10,310 --> 08:11:07,680
get ahead tasks to set them up for a

4762
08:11:12,548 --> 08:11:10,320
successful space walk next week

4763
08:11:16,430 --> 08:11:12,558

foreign

4764

08:11:18,888 --> 08:11:16,440

spacewalk 88 to install the next ISS

4765

08:11:21,010 --> 08:11:18,898

rollout solar array on the starboard

4766

08:11:24,048 --> 08:11:21,020

truss of the International Space Station

4767

08:11:27,048 --> 08:11:24,058

is scheduled to begin at approximately 8

4768

08:11:29,090 --> 08:11:27,058

20 a.m Central Time 9 20 a.m eastern

4769

08:11:33,770 --> 08:11:29,100

time with NASA TV coverage beginning

4770

08:11:36,048 --> 08:11:33,780

live at 6 45 a.m Central Time 7 45 a.m

4771

08:11:38,330 --> 08:11:36,058

eastern time and we will see the same

4772

08:11:40,250 --> 08:11:38,340

two spacewalkers venture out of the

4773

08:11:42,110 --> 08:11:40,260

space station again

4774

08:11:47,430 --> 08:11:42,120

with that this is Mission Control

4775

08:12:21,048 --> 08:12:07,060

[Music]

