
John

1
00:00:10,070 --> 00:00:07,190
good morning and welcome to today's

2
00:00:12,070 --> 00:00:10,080
mission status briefing joining us today

3
00:00:13,430 --> 00:00:12,080
are derek hossman the international

4
00:00:15,829 --> 00:00:13,440
space station

5
00:00:18,710 --> 00:00:15,839
lead flight director and allison

6
00:00:20,630 --> 00:00:18,720
bollinger the mission's lead spacewalk

7
00:00:22,470 --> 00:00:20,640
officer derek

8
00:00:24,710 --> 00:00:22,480
okay thank you and good morning everyone

9
00:00:27,269 --> 00:00:24,720
it's a pleasure to be here after a

10
00:00:29,109 --> 00:00:27,279
very very successful eba number four of

11
00:00:31,509 --> 00:00:29,119
course the the last planned spacewalk

12
00:00:33,830 --> 00:00:31,519
for for the dock mission

13
00:00:36,229 --> 00:00:33,840

and also the the last spacewalk

14
00:00:38,069 --> 00:00:36,239
conducted by a space shuttle crew on the

15
00:00:39,670 --> 00:00:38,079
station

16
00:00:41,910 --> 00:00:39,680
just a again

17
00:00:43,430 --> 00:00:41,920
very very successful eva and just a

18
00:00:45,670 --> 00:00:43,440
tribute to all the work and preparation

19
00:00:48,310 --> 00:00:45,680
that goes into these spacewalks both by

20
00:00:51,110 --> 00:00:48,320
the team on the ground and as well as by

21
00:00:52,549 --> 00:00:51,120
this the crew on orbit

22
00:00:54,470 --> 00:00:52,559
this was

23
00:00:56,229 --> 00:00:54,480
another particularly challenging eva in

24
00:00:57,350 --> 00:00:56,239
that it had had the choreography

25
00:00:59,750 --> 00:00:57,360
involved

26
00:01:02,389 --> 00:00:59,760
with handing the obss off to the the

27
00:01:04,630 --> 00:01:02,399
space walking crew so we had

28
00:01:06,469 --> 00:01:04,640
box johnson inside the space station

29
00:01:08,390 --> 00:01:06,479
piloting the the space station robotic

30
00:01:09,190 --> 00:01:08,400
arm maneuvering the boom to a place

31
00:01:11,109 --> 00:01:09,200
where

32
00:01:13,270 --> 00:01:11,119
mike fink and greg shandolf could grab

33
00:01:15,190 --> 00:01:13,280
it and install it on s1

34
00:01:17,270 --> 00:01:15,200
all that went when it again went

35
00:01:19,910 --> 00:01:17,280
extremely well

36
00:01:22,870 --> 00:01:19,920
another difference from the pre-flight

37
00:01:24,870 --> 00:01:22,880
plan in terms of the ssrms choreography

38
00:01:27,990 --> 00:01:24,880

today is that initially we had planned

39
00:01:29,749 --> 00:01:28,000
to use um katie coleman as the m2 or the

40
00:01:32,550 --> 00:01:29,759
or the second set of eyes on the robotic

41
00:01:34,310 --> 00:01:32,560
workstation uh inside the space station

42
00:01:36,469 --> 00:01:34,320
of course when the mission slipped and

43
00:01:38,550 --> 00:01:36,479
and with katie having returned to earth

44
00:01:40,710 --> 00:01:38,560
we depended on our robotics officer in

45
00:01:42,469 --> 00:01:40,720
mission control to be the m2 or the

46
00:01:44,710 --> 00:01:42,479
second set eyes so you might have

47
00:01:46,789 --> 00:01:44,720
noticed some additional uh discussions

48
00:01:49,190 --> 00:01:46,799
on the space to ground tulu between box

49
00:01:51,590 --> 00:01:49,200
on the station and capcom and mission

50
00:01:54,630 --> 00:01:51,600
control and that's because uh our

51
00:01:56,870 --> 00:01:54,640
robotics officer in in mission control

52
00:01:59,350 --> 00:01:56,880
was serving as that as that second set

53
00:02:01,270 --> 00:01:59,360
of eyes it's something we've done before

54
00:02:02,709 --> 00:02:01,280
but it's a little bit unique for a doc

55
00:02:04,069 --> 00:02:02,719
mission and that that went extremely

56
00:02:05,270 --> 00:02:04,079
well

57
00:02:06,709 --> 00:02:05,280
we did

58
00:02:07,510 --> 00:02:06,719
some of the early tasks in the space

59
00:02:09,029 --> 00:02:07,520
walk

60
00:02:11,110 --> 00:02:09,039
lasted a little little longer than

61
00:02:12,550 --> 00:02:11,120
expected and what we did was we made

62
00:02:13,990 --> 00:02:12,560
some adjustments in the middle of the

63
00:02:15,910 --> 00:02:14,000

timeline which allison's going to talk

64
00:02:18,470 --> 00:02:15,920
to you about in order to get

65
00:02:19,270 --> 00:02:18,480
some critical objectives toward the end

66
00:02:20,869 --> 00:02:19,280
but

67
00:02:22,550 --> 00:02:20,879
at the end you saw that

68
00:02:25,030 --> 00:02:22,560
we were able to had a great opportunity

69
00:02:26,229 --> 00:02:25,040
with my uh with greg shamatoff on elc3

70
00:02:28,630 --> 00:02:26,239
looking back on the station in the

71
00:02:30,229 --> 00:02:28,640
daylight pass and just i i thought a

72
00:02:32,630 --> 00:02:30,239
wonderful way to end

73
00:02:34,869 --> 00:02:32,640
what was a series of very very

74
00:02:36,630 --> 00:02:34,879
successful space walks and of course

75
00:02:39,270 --> 00:02:36,640
inside the space station things didn't

76
00:02:40,949 --> 00:02:39,280
slow down um roberto vittori and box

77
00:02:43,670 --> 00:02:40,959
johnson when he wasn't operating the

78
00:02:46,309 --> 00:02:43,680
robotic arm continued to do transfer and

79
00:02:48,790 --> 00:02:46,319
um we also were working on atv stewart

80
00:02:51,190 --> 00:02:48,800
so we kept the the other crew members

81
00:02:52,869 --> 00:02:51,200
not involved in spacewalk busy inside

82
00:02:54,630 --> 00:02:52,879
and and looking ahead before i hand over

83
00:02:55,830 --> 00:02:54,640
to allison tomorrow we're not slowing

84
00:02:57,190 --> 00:02:55,840
down we've got

85
00:02:59,509 --> 00:02:57,200
we finish up the work on the carbon

86
00:03:01,509 --> 00:02:59,519
dioxide removal assembly

87
00:03:02,390 --> 00:03:01,519
and additional transfer and stowage and

88
00:03:05,270 --> 00:03:02,400

then

89
00:03:07,350 --> 00:03:05,280
finally the day after that on um

90
00:03:08,949 --> 00:03:07,360
flight day 14

91
00:03:10,550 --> 00:03:08,959
i lose track on these long missions but

92
00:03:12,790 --> 00:03:10,560
on flight day 14 now finally we'll

93
00:03:13,830 --> 00:03:12,800
conclude that day with hatch clothes but

94
00:03:15,750 --> 00:03:13,840
you know it's a little bit of a

95
00:03:18,070 --> 00:03:15,760
bittersweet moment for the team that

96
00:03:19,910 --> 00:03:18,080
that kind of pours their lives and all

97
00:03:20,630 --> 00:03:19,920
their focus over a number of years into

98
00:03:22,790 --> 00:03:20,640
this

99
00:03:25,350 --> 00:03:22,800
series of evas and before we came over

100
00:03:27,589 --> 00:03:25,360
here we had a great tag up with the crew

101
00:03:29,110 --> 00:03:27,599
um and it was just nice to talk to them

102
00:03:31,589 --> 00:03:29,120
about everything we've accomplished and

103
00:03:33,110 --> 00:03:31,599
and just how well everything is gone so

104
00:03:36,390 --> 00:03:33,120
uh with that i'll hand over to allison

105
00:03:38,229 --> 00:03:36,400
for the details of the today's spacewalk

106
00:03:39,670 --> 00:03:38,239
all right thanks a lot derek and and

107
00:03:42,229 --> 00:03:39,680
like derek mentioned i couldn't be more

108
00:03:44,070 --> 00:03:42,239
proud of how this mission has has run

109
00:03:46,949 --> 00:03:44,080
its course through our four evas and how

110
00:03:48,229 --> 00:03:46,959
ev4 today went so we had a 7 hour and 24

111
00:03:49,910 --> 00:03:48,239
minute eva

112
00:03:51,670 --> 00:03:49,920
to conclude the mission

113
00:03:54,229 --> 00:03:51,680

as derek mentioned as well we started

114
00:03:56,309 --> 00:03:54,239
out the eva with working with box who

115
00:03:58,149 --> 00:03:56,319
was flying the arm to stow the boom on

116
00:04:00,869 --> 00:03:58,159
the s1 truss

117
00:04:02,630 --> 00:04:00,879
we started out with spanky had a tool

118
00:04:04,869 --> 00:04:02,640
bag that contained an adapter assembly

119
00:04:07,429 --> 00:04:04,879
that we would use later in the eva and

120
00:04:08,789 --> 00:04:07,439
greg worked on retrieving an apfr or

121
00:04:10,229 --> 00:04:08,799
foot restraint articulating portable

122
00:04:12,630 --> 00:04:10,239
foot restraint that he installed up on

123
00:04:14,390 --> 00:04:12,640
the s1 truss as we got out to the work

124
00:04:15,990 --> 00:04:14,400
site the arm was a little bit behind us

125
00:04:17,349 --> 00:04:16,000
so we thought we would we required the

126
00:04:18,789 --> 00:04:17,359
crew members to wait for the arm but it

127
00:04:20,710 --> 00:04:18,799
turns out that it actually took taz a

128
00:04:22,710 --> 00:04:20,720
little bit longer to ingress the foot

129
00:04:23,990 --> 00:04:22,720
restraint than it nominally took in the

130
00:04:26,790 --> 00:04:24,000
in the neutral buoyancy lab and we were

131
00:04:28,870 --> 00:04:26,800
training this and post eva he mentioned

132
00:04:31,189 --> 00:04:28,880
when we when the crew nominally reports

133
00:04:32,950 --> 00:04:31,199
the suit fit issues that he thinks his

134
00:04:34,870 --> 00:04:32,960
legs might have been about a half inch

135
00:04:37,030 --> 00:04:34,880
too long in his suit and that was what

136
00:04:38,469 --> 00:04:37,040
was uh what was causing difficulty with

137
00:04:39,830 --> 00:04:38,479
ingressing the foot restraint because he

138
00:04:41,909 --> 00:04:39,840

wasn't able to get his heel all the way

139
00:04:43,990 --> 00:04:41,919
down in the boot and this is common

140
00:04:45,909 --> 00:04:44,000
we've seen this before we typically

141
00:04:47,590 --> 00:04:45,919
a com

142
00:04:49,749 --> 00:04:47,600
we typically protect for a certain

143
00:04:52,469 --> 00:04:49,759
amount of spinal growth on crew members

144
00:04:54,070 --> 00:04:52,479
in microgravity so we had adjusted taz's

145
00:04:56,150 --> 00:04:54,080
suit to what we thought would be his

146
00:04:57,830 --> 00:04:56,160
spinal growth on orbit and it turns out

147
00:04:59,430 --> 00:04:57,840
i guess we had he didn't grow as much as

148
00:05:00,790 --> 00:04:59,440
we thought he would so his his legs were

149
00:05:02,310 --> 00:05:00,800
a little bit long but he was able to

150
00:05:03,990 --> 00:05:02,320
eventually with that with the help of

151
00:05:05,590 --> 00:05:04,000
spanky ingress that foot restraint at

152
00:05:07,590 --> 00:05:05,600
just the right time that box was ready

153
00:05:09,430 --> 00:05:07,600
to present the boom so the two eva crew

154
00:05:10,870 --> 00:05:09,440
members worked with box to to move the

155
00:05:13,029 --> 00:05:10,880
boom back in and then the two crew

156
00:05:15,430 --> 00:05:13,039
members took control of the boom stowed

157
00:05:17,110 --> 00:05:15,440
it using the on orbit stowage equipment

158
00:05:18,710 --> 00:05:17,120
osc's or the gun rack you might have

159
00:05:20,870 --> 00:05:18,720
heard box refer to it as they stored it

160
00:05:22,550 --> 00:05:20,880
on the gun rack locked it into place

161
00:05:24,950 --> 00:05:22,560
released some constraints that would

162
00:05:27,189 --> 00:05:24,960
allow for thermal expansion

163
00:05:28,950 --> 00:05:27,199

of those of those joints if required and

164
00:05:30,950 --> 00:05:28,960
then greg worked on transferring the

165
00:05:32,310 --> 00:05:30,960
foot restraint from the truss over to

166
00:05:34,070 --> 00:05:32,320
the arm which he would use later and

167
00:05:35,749 --> 00:05:34,080
spanky worked on releasing some

168
00:05:37,270 --> 00:05:35,759
connectors on the sensor end of the boom

169
00:05:38,629 --> 00:05:37,280
since those will no longer be used we

170
00:05:39,830 --> 00:05:38,639
installed some grounding connectors in

171
00:05:41,350 --> 00:05:39,840
that place

172
00:05:42,790 --> 00:05:41,360
once we're complete at the boomstow

173
00:05:45,270 --> 00:05:42,800
worksite both crew members headed

174
00:05:47,110 --> 00:05:45,280
outboard to p6 to retrieve the power and

175
00:05:48,710 --> 00:05:47,120
data grapple fixture pdgf that we

176
00:05:50,790 --> 00:05:48,720
eventually installed installed on the

177
00:05:52,870 --> 00:05:50,800
boom while we were out there working on

178
00:05:54,310 --> 00:05:52,880
releasing the pdgf as derek mentioned we

179
00:05:55,830 --> 00:05:54,320
started calculating looking at the

180
00:05:57,830 --> 00:05:55,840
numbers here on the ground and realizing

181
00:05:59,909 --> 00:05:57,840
that the first few tasks took a little

182
00:06:02,070 --> 00:05:59,919
bit longer than than we had planned

183
00:06:04,070 --> 00:06:02,080
pre-flight so we made a real-time call

184
00:06:06,070 --> 00:06:04,080
there the plan was for spanky to take

185
00:06:07,590 --> 00:06:06,080
the pdgf back and test to take the foot

186
00:06:09,590 --> 00:06:07,600
restraint back to a more central

187
00:06:10,870 --> 00:06:09,600
location on station we made a real-time

188
00:06:13,590 --> 00:06:10,880

call to just go ahead and leave that

189
00:06:15,350 --> 00:06:13,600
foot restraint out on p6 for a future

190
00:06:16,870 --> 00:06:15,360
crew to retrieve so that did save us

191
00:06:18,950 --> 00:06:16,880
some time to help us catch back up on

192
00:06:22,790 --> 00:06:18,960
the timeline once we were back on the

193
00:06:24,309 --> 00:06:22,800
zero truss uh gr taz worked with box to

194
00:06:26,230 --> 00:06:24,319
ingress the foot restraint that he had

195
00:06:28,309 --> 00:06:26,240
previously installed on the arm and then

196
00:06:30,230 --> 00:06:28,319
he flew over to where spanky was waiting

197
00:06:32,070 --> 00:06:30,240
with the pdgf and they performed that

198
00:06:34,309 --> 00:06:32,080
transfer and then the two crew members

199
00:06:35,749 --> 00:06:34,319
worked together to release the efgf or

200
00:06:37,590 --> 00:06:35,759
the current grapple fixture that was on

201
00:06:39,749 --> 00:06:37,600
the boom they worked on releasing that

202
00:06:41,510 --> 00:06:39,759
efgf and that included cutting the wires

203
00:06:44,469 --> 00:06:41,520
that actually provided the power to the

204
00:06:46,550 --> 00:06:44,479
sensors once the efgf was removed spanky

205
00:06:49,350 --> 00:06:46,560
stowed that inside a tool bag and then

206
00:06:51,430 --> 00:06:49,360
he retrieved the pdgf adapter assembly

207
00:06:53,830 --> 00:06:51,440
which was a presented a mounting ring

208
00:06:55,830 --> 00:06:53,840
for the pdgf so they installed the six

209
00:06:58,390 --> 00:06:55,840
bolts that held that paa in place then

210
00:07:00,150 --> 00:06:58,400
they worked together to install the pdgf

211
00:07:01,909 --> 00:07:00,160
and it's for expandable diameter

212
00:07:03,029 --> 00:07:01,919
fasteners or edfs that held that in

213
00:07:04,790 --> 00:07:03,039

place

214
00:07:06,790 --> 00:07:04,800
once we were complete with installing

215
00:07:08,390 --> 00:07:06,800
the pdgf on the boom

216
00:07:10,629 --> 00:07:08,400
um it was at a point in time when we

217
00:07:13,909 --> 00:07:10,639
started having more discussions about

218
00:07:16,230 --> 00:07:13,919
the best way to to ensure that we

219
00:07:18,150 --> 00:07:16,240
accomplished the high priority release

220
00:07:21,350 --> 00:07:18,160
of the fasteners on dexter's spare arm

221
00:07:22,710 --> 00:07:21,360
out on elc3 at the end of the eva so we

222
00:07:25,029 --> 00:07:22,720
had some discussions and realized

223
00:07:26,550 --> 00:07:25,039
spanky's next step was to transfer the

224
00:07:28,710 --> 00:07:26,560
grapple fixture we had removed from the

225
00:07:30,150 --> 00:07:28,720
bag to the tool stowage assembly or the

226
00:07:32,150 --> 00:07:30,160
toolbox that's in the shuttle payload

227
00:07:33,670 --> 00:07:32,160
bay and we realized it's better to just

228
00:07:35,270 --> 00:07:33,680
save that 35 minutes and plan on

229
00:07:37,510 --> 00:07:35,280
bringing that grapple fixture inside and

230
00:07:39,830 --> 00:07:37,520
it can either return internally on one

231
00:07:42,390 --> 00:07:39,840
on sts-134 possibly in the mplm on

232
00:07:44,309 --> 00:07:42,400
sts-135 so we gave the crew a heads up

233
00:07:45,670 --> 00:07:44,319
that we were just going to defer spanky

234
00:07:47,350 --> 00:07:45,680
from heading down to the payload bay and

235
00:07:50,150 --> 00:07:47,360
have him just translate straight out to

236
00:07:52,230 --> 00:07:50,160
elc 3 to to start the preparations for

237
00:07:54,550 --> 00:07:52,240
releasing those fasteners on dexter's

238
00:07:56,309 --> 00:07:54,560

arm so meanwhile greg worked on cleaning

239
00:07:58,390 --> 00:07:56,319
up the arm which include included

240
00:08:00,230 --> 00:07:58,400
removing the the foot restraint from the

241
00:08:02,390 --> 00:08:00,240
arm stowing it on a seda cart and also

242
00:08:05,029 --> 00:08:02,400
removing the the adapter that allows the

243
00:08:06,950 --> 00:08:05,039
the apfr to install on the ssrms

244
00:08:08,710 --> 00:08:06,960
so while he was working on that we also

245
00:08:10,869 --> 00:08:08,720
gave taza heads up that we'd like him to

246
00:08:13,909 --> 00:08:10,879
perform an oxygen recharge of his tanks

247
00:08:15,909 --> 00:08:13,919
just to make sure that he had the most

248
00:08:17,029 --> 00:08:15,919
capacity left to perform a full-length

249
00:08:18,150 --> 00:08:17,039
eva

250
00:08:20,309 --> 00:08:18,160
because we knew it would be a little bit

251
00:08:22,790 --> 00:08:20,319
longer than 6 30 on today so we went

252
00:08:25,270 --> 00:08:22,800
ahead and had him do that o2 recharge

253
00:08:27,189 --> 00:08:25,280
so spanky made his way out to elc 3 got

254
00:08:29,270 --> 00:08:27,199
set up to release these three fasteners

255
00:08:31,029 --> 00:08:29,280
we expected the first of three fasteners

256
00:08:33,190 --> 00:08:31,039
to release with with no issues and then

257
00:08:35,430 --> 00:08:33,200
we were planning on using the pry this

258
00:08:37,589 --> 00:08:35,440
specially designed pry rod to release

259
00:08:39,269 --> 00:08:37,599
the two remaining fasteners and these

260
00:08:40,550 --> 00:08:39,279
were based on thermal issues that we had

261
00:08:43,430 --> 00:08:40,560
seen when we were first assembling

262
00:08:45,430 --> 00:08:43,440
dexter on sts-123 spanking got out there

263
00:08:47,350 --> 00:08:45,440

released the first fastener no issue

264
00:08:49,030 --> 00:08:47,360
went over to we thought just untorque

265
00:08:50,389 --> 00:08:49,040
the second fastener and then wait for

266
00:08:52,310 --> 00:08:50,399
taz to come out and help him with the

267
00:08:53,910 --> 00:08:52,320
pry rod then spanky reported that that

268
00:08:55,350 --> 00:08:53,920
fastener released with no issues then we

269
00:08:57,110 --> 00:08:55,360
gave him the go to go ahead and release

270
00:08:59,990 --> 00:08:57,120
the third fastener the third and final

271
00:09:01,509 --> 00:09:00,000
fastener on dexter's spare arm spanky

272
00:09:03,590 --> 00:09:01,519
was able to release the fastener and got

273
00:09:05,590 --> 00:09:03,600
it pulled about halfway out of its out

274
00:09:07,110 --> 00:09:05,600
of its install location and then he

275
00:09:08,870 --> 00:09:07,120
encountered some resistance so he ended

276
00:09:10,870 --> 00:09:08,880
up single-handedly doing a two-man job

277
00:09:13,110 --> 00:09:10,880
which for spanky that's that's expected

278
00:09:15,030 --> 00:09:13,120
that's how that's how he always is so he

279
00:09:16,630 --> 00:09:15,040
was able to simultaneously use the pry

280
00:09:18,070 --> 00:09:16,640
rod and also release

281
00:09:19,430 --> 00:09:18,080
that fastener while taz was still

282
00:09:21,269 --> 00:09:19,440
cleaning up the arm and performing his

283
00:09:23,269 --> 00:09:21,279
o2 recharge

284
00:09:25,350 --> 00:09:23,279
so while we are near nearing the end of

285
00:09:28,470 --> 00:09:25,360
the eva spanky still had some cleanup

286
00:09:30,310 --> 00:09:28,480
work to do um taz had with him a special

287
00:09:31,910 --> 00:09:30,320
camera with a fisheye lens that he was

288
00:09:33,829 --> 00:09:31,920

very excited to be able to take some

289
00:09:35,990 --> 00:09:33,839
some fabulous photos out to on the end

290
00:09:37,430 --> 00:09:36,000
of elc3 so since taz still had some time

291
00:09:39,110 --> 00:09:37,440
available while spanky was cleaning up

292
00:09:41,750 --> 00:09:39,120
the work site we had to get ahead on our

293
00:09:44,150 --> 00:09:41,760
list to take some photos of the stph3

294
00:09:46,310 --> 00:09:44,160
experiment which launched on elc3 so we

295
00:09:47,829 --> 00:09:46,320
sent taz out to go ahead and snap those

296
00:09:50,230 --> 00:09:47,839
photos of that experiment and then also

297
00:09:52,070 --> 00:09:50,240
to take what we sure are going to be

298
00:09:53,750 --> 00:09:52,080
some phenomenal photos of endeavor

299
00:09:55,750 --> 00:09:53,760
docked to the space station for the last

300
00:09:57,990 --> 00:09:55,760
time so once the two crew members were

301
00:09:59,750 --> 00:09:58,000
complete at elc 3 they they took just a

302
00:10:01,750 --> 00:09:59,760
few minutes to soak in the sights and

303
00:10:03,750 --> 00:10:01,760
and all in mcc we all appreciated that

304
00:10:05,829 --> 00:10:03,760
because we had wvs footage at the time

305
00:10:07,269 --> 00:10:05,839
so we were also able to take just a few

306
00:10:09,910 --> 00:10:07,279
seconds and realize

307
00:10:11,750 --> 00:10:09,920
how how major of a milestone this was

308
00:10:13,269 --> 00:10:11,760
we packed it up called it a day headed

309
00:10:16,150 --> 00:10:13,279
back to the airlock and completed like i

310
00:10:17,750 --> 00:10:16,160
said a 7 hour and 24 minute eva and we

311
00:10:20,230 --> 00:10:17,760
closed the hatch for the last time with

312
00:10:22,310 --> 00:10:20,240
uh shuttle astronauts

313
00:10:24,550 --> 00:10:22,320

that's all i have okay thank you allison

314
00:10:26,630 --> 00:10:24,560
thank you derek we'll take questions now

315
00:10:28,310 --> 00:10:26,640
starting um here in houston would you

316
00:10:29,910 --> 00:10:28,320
please step to the microphone when

317
00:10:32,470 --> 00:10:29,920
you're recognized and please remember to

318
00:10:34,630 --> 00:10:32,480
give your name and affiliation

319
00:10:37,110 --> 00:10:34,640
robin

320
00:10:39,110 --> 00:10:37,120
hi rob prominent with collectspace.com

321
00:10:40,470 --> 00:10:39,120
um there was a question i guess after

322
00:10:42,310 --> 00:10:40,480
they got into the airlock that something

323
00:10:45,269 --> 00:10:42,320
might have flowed away from

324
00:10:48,069 --> 00:10:45,279
uh from mike fink was was that verified

325
00:10:50,069 --> 00:10:48,079
or um do you know what it was yeah we

326
00:10:51,509 --> 00:10:50,079
were able to so we had some folks

327
00:10:52,949 --> 00:10:51,519
watching video in the back room who had

328
00:10:54,230 --> 00:10:52,959
said you know we noticed something flown

329
00:10:56,470 --> 00:10:54,240
away from the crew members so while we

330
00:10:58,069 --> 00:10:56,480
were still at eva we had spanky verified

331
00:10:59,670 --> 00:10:58,079
that he had all the appropriate tethers

332
00:11:02,230 --> 00:10:59,680
on his mini workstation on his body

333
00:11:03,829 --> 00:11:02,240
restraint tether he reported he did

334
00:11:05,030 --> 00:11:03,839
so as we started looking at the footage

335
00:11:07,750 --> 00:11:05,040
a little bit closer we believe it was a

336
00:11:09,190 --> 00:11:07,760
label there the labels on on the truss

337
00:11:11,990 --> 00:11:09,200
element so it was more than likely one

338
00:11:14,710 --> 00:11:12,000

of those labels that that came loose

339
00:11:16,310 --> 00:11:14,720
thanks and uh i know that um it was

340
00:11:19,110 --> 00:11:16,320
mentioned that it was it's a bittersweet

341
00:11:21,829 --> 00:11:19,120
milestone but uh is the eba team the

342
00:11:23,670 --> 00:11:21,839
shuttle eva team as a group marking this

343
00:11:25,509 --> 00:11:23,680
milestone in any way here on the ground

344
00:11:27,670 --> 00:11:25,519
um you getting together and

345
00:11:29,110 --> 00:11:27,680
toasting your success

346
00:11:31,590 --> 00:11:29,120
i don't we haven't thought about that

347
00:11:33,509 --> 00:11:31,600
yet but i'm sure we will be um like

348
00:11:35,509 --> 00:11:33,519
we've talked about before you know our

349
00:11:36,790 --> 00:11:35,519
eva team we do both shuttle and stations

350
00:11:38,310 --> 00:11:36,800
so while we're complete with

351
00:11:40,790 --> 00:11:38,320
shuttle-based evas there are gonna

352
00:11:42,550 --> 00:11:40,800
continue to be station evas over the

353
00:11:43,910 --> 00:11:42,560
next however many years that station is

354
00:11:45,670 --> 00:11:43,920
up there so we're going to continue to

355
00:11:46,710 --> 00:11:45,680
be a very busy group

356
00:11:48,389 --> 00:11:46,720
but i haven't heard anything about a

357
00:11:51,030 --> 00:11:48,399
party just yet we'll be sure to invite

358
00:11:52,310 --> 00:11:51,040
you if we have one

359
00:11:54,310 --> 00:11:52,320
yes

360
00:11:55,590 --> 00:11:54,320
denise ciao with space.com i was

361
00:11:56,949 --> 00:11:55,600
wondering if you could summarize some of

362
00:11:59,110 --> 00:11:56,959
the get ahead tasks that you didn't get

363
00:12:00,870 --> 00:11:59,120

a chance to um get to today and how

364
00:12:03,509 --> 00:12:00,880
those will fit in with the um whether

365
00:12:05,190 --> 00:12:03,519
they'll be moved to the eva plan during

366
00:12:06,550 --> 00:12:05,200
the 135 mission by the station

367
00:12:08,870 --> 00:12:06,560
astronauts

368
00:12:10,629 --> 00:12:08,880
okay and i guess the one thing i forgot

369
00:12:13,190 --> 00:12:10,639
to mention we did get another task done

370
00:12:15,269 --> 00:12:13,200
we got the inspection and re-cinch of a

371
00:12:17,430 --> 00:12:15,279
tether that was holding down the otp

372
00:12:19,190 --> 00:12:17,440
that we had released from

373
00:12:21,509 --> 00:12:19,200
dexter previously so that was another

374
00:12:22,870 --> 00:12:21,519
test that we got done the only planned

375
00:12:25,350 --> 00:12:22,880
test that we did not complete was the

376
00:12:28,310 --> 00:12:25,360
installation of that 1553 data cable for

377
00:12:29,910 --> 00:12:28,320
the fgb pdgf that's perfectly suited for

378
00:12:32,069 --> 00:12:29,920
an increment eva

379
00:12:33,990 --> 00:12:32,079
we have one next summer i'm not sure if

380
00:12:36,310 --> 00:12:34,000
they're looking at putting that task on

381
00:12:37,990 --> 00:12:36,320
there as far as the other get-aheads i

382
00:12:39,670 --> 00:12:38,000
can't really think of of any other

383
00:12:41,590 --> 00:12:39,680
get-aheads that need that are required

384
00:12:43,670 --> 00:12:41,600
they were more nice to have uh we had we

385
00:12:46,230 --> 00:12:43,680
did have a test scheduled to resto tools

386
00:12:47,190 --> 00:12:46,240
in a toolbox out external to the airlock

387
00:12:48,550 --> 00:12:47,200
and that was just to help with the

388
00:12:50,150 --> 00:12:48,560

internal stowage but we can just

389
00:12:50,829 --> 00:12:50,160
continue to keep those tools stowed in

390
00:12:53,670 --> 00:12:50,839
the

391
00:12:55,829 --> 00:12:53,680
i was wondering if you could

392
00:12:57,509 --> 00:12:55,839
characterize how the the four ebas went

393
00:12:58,870 --> 00:12:57,519
for you this mission um it seemed to be

394
00:13:01,910 --> 00:12:58,880
very smooth other than a few minor

395
00:13:06,310 --> 00:13:04,629
yeah i i like as i said on the first dva

396
00:13:07,990 --> 00:13:06,320
i was just you know grinning from ear to

397
00:13:09,430 --> 00:13:08,000
ear because it was you know executing my

398
00:13:12,069 --> 00:13:09,440
first dva in the front room and it was

399
00:13:14,230 --> 00:13:12,079
just extremely exciting and everything

400
00:13:15,509 --> 00:13:14,240
went so well and we were able to you

401
00:13:17,030 --> 00:13:15,519
know we had a few hiccups on on the

402
00:13:19,430 --> 00:13:17,040
first dva not being able to complete

403
00:13:22,230 --> 00:13:19,440
that lab ewc task but then we were able

404
00:13:23,990 --> 00:13:22,240
to pretty seamlessly fit that into eva3

405
00:13:26,870 --> 00:13:24,000
since it was a hyper higher priority

406
00:13:28,870 --> 00:13:26,880
test in the 1553 cable so overall i just

407
00:13:30,310 --> 00:13:28,880
i couldn't be more proud of the way that

408
00:13:31,430 --> 00:13:30,320
both the on orbit crew and the ground

409
00:13:33,990 --> 00:13:31,440
team

410
00:13:35,910 --> 00:13:34,000
handled these four evas it just shows

411
00:13:37,430 --> 00:13:35,920
how well that our training went and how

412
00:13:39,430 --> 00:13:37,440
well the team was able to adapt to

413
00:13:40,949 --> 00:13:39,440

real-time changes and they're able to

414
00:13:42,790 --> 00:13:40,959
just you know like water off a duck's

415
00:13:44,550 --> 00:13:42,800
back we were swapping tasks around on

416
00:13:46,069 --> 00:13:44,560
today's eva and it was like no big deal

417
00:13:48,150 --> 00:13:46,079
you know the crew would had trained this

418
00:13:50,389 --> 00:13:48,160
all so i was extremely pleased with the

419
00:13:52,069 --> 00:13:50,399
way that the evas went today and overall

420
00:13:54,150 --> 00:13:52,079
in the mission

421
00:13:55,590 --> 00:13:54,160
any further questions here in houston i

422
00:13:57,670 --> 00:13:55,600
believe we have reporters on the phone

423
00:14:02,150 --> 00:13:57,680
bridge we'll take those now starting

424
00:14:04,629 --> 00:14:03,269
this is so fast with massive

425
00:14:07,110 --> 00:14:04,639
spaceflight.com you guys already covered

426
00:14:08,629 --> 00:14:07,120
everything for me thanks oh okay

427
00:14:10,790 --> 00:14:08,639
uh marcia

428
00:14:12,790 --> 00:14:10,800
yes hi i was just wish uh

429
00:14:15,590 --> 00:14:12,800
hoping that there could um talk a little

430
00:14:17,189 --> 00:14:15,600
bit about space station complete

431
00:14:18,470 --> 00:14:17,199
i know there was a lot of different

432
00:14:20,230 --> 00:14:18,480
historical

433
00:14:21,829 --> 00:14:20,240
history points today but it seems like

434
00:14:23,990 --> 00:14:21,839
the overriding

435
00:14:25,509 --> 00:14:24,000
comments involved the completion of the

436
00:14:27,590 --> 00:14:25,519
space station construction could you

437
00:14:29,750 --> 00:14:27,600
comment on that please

438
00:14:32,069 --> 00:14:29,760

yeah you might have heard commander mark

439
00:14:34,470 --> 00:14:32,079
kelly call down assembly complete uh

440
00:14:36,550 --> 00:14:34,480
when we finished the obsess install on

441
00:14:38,389 --> 00:14:36,560
the s1 trust which was was not a call i

442
00:14:40,230 --> 00:14:38,399
was expecting by the way but uh when you

443
00:14:42,629 --> 00:14:40,240
take a step back and look at it in terms

444
00:14:45,910 --> 00:14:42,639
of the u.s segment that that was and is

445
00:14:48,710 --> 00:14:45,920
the the the final piece um in terms of

446
00:14:49,829 --> 00:14:48,720
significant additions to the station so

447
00:14:51,110 --> 00:14:49,839
you know looking back i've talked a

448
00:14:53,269 --> 00:14:51,120
little bit about

449
00:14:55,430 --> 00:14:53,279
about my history with the program the

450
00:14:57,350 --> 00:14:55,440
fact that that i started back on prior

451
00:14:59,110 --> 00:14:57,360
to sts-88 so

452
00:15:00,550 --> 00:14:59,120
you know i never would have thought uh

453
00:15:02,150 --> 00:15:00,560
that i would still be here today

454
00:15:03,990 --> 00:15:02,160
necessarily but you know having

455
00:15:06,470 --> 00:15:04,000
participated in the first mission that

456
00:15:09,189 --> 00:15:06,480
that uh delivered the first u.s piece of

457
00:15:11,189 --> 00:15:09,199
the space station to participate in and

458
00:15:12,629 --> 00:15:11,199
uh in this next-to-last mission with the

459
00:15:14,710 --> 00:15:12,639
last significant piece of hardware it's

460
00:15:15,590 --> 00:15:14,720
just an honor and a privilege for me and

461
00:15:17,509 --> 00:15:15,600
and

462
00:15:19,509 --> 00:15:17,519
you know the best thing about these

463
00:15:21,750 --> 00:15:19,519

missions is the people and and the

464
00:15:22,550 --> 00:15:21,760
teamwork that goes into it and that's uh

465
00:15:24,389 --> 00:15:22,560
you know i mentioned that it's

466
00:15:27,350 --> 00:15:24,399
bittersweet and and it's we've got a lot

467
00:15:28,710 --> 00:15:27,360
of work ahead of us but uh but that's

468
00:15:30,150 --> 00:15:28,720
i mean in terms of this mission that's

469
00:15:31,829 --> 00:15:30,160
what i'll look back on

470
00:15:34,069 --> 00:15:31,839
uh the most just the the great people

471
00:15:36,790 --> 00:15:34,079
that i worked with and the the wonderful

472
00:15:39,189 --> 00:15:36,800
crew that we had to go execute

473
00:15:41,189 --> 00:15:39,199
and just refresh my memory um the

474
00:15:43,110 --> 00:15:41,199
russians have at least one more module

475
00:15:44,870 --> 00:15:43,120
to launch what are their plans going

476
00:15:47,030 --> 00:15:44,880
forward and when might they be launching

477
00:15:48,790 --> 00:15:47,040
their final pieces yeah i'm not familiar

478
00:15:51,269 --> 00:15:48,800
with the specific schedule but i know in

479
00:15:53,269 --> 00:15:51,279
the next couple of years they plan to

480
00:15:55,749 --> 00:15:53,279
replace their peers docking

481
00:15:57,670 --> 00:15:55,759
module with a larger and more complex

482
00:16:00,230 --> 00:15:57,680
module

483
00:16:02,710 --> 00:16:00,240
thank you very much

484
00:16:04,389 --> 00:16:02,720
bill harwood

485
00:16:05,990 --> 00:16:04,399
yeah hi just a

486
00:16:07,189 --> 00:16:06,000
a quick nuts and bolts question for

487
00:16:08,550 --> 00:16:07,199
allison and this this probably got

488
00:16:10,629 --> 00:16:08,560

resolved earlier and i just simply

489
00:16:13,430 --> 00:16:10,639
missed it in the fog of staying up all

490
00:16:15,269 --> 00:16:13,440
night during this mission but uh could

491
00:16:17,030 --> 00:16:15,279
uh they mentioned on one of the flight

492
00:16:19,189 --> 00:16:17,040
director update some kind of fight issue

493
00:16:20,150 --> 00:16:19,199
with the pdgf you guys put on the fgp i

494
00:16:23,110 --> 00:16:20,160
just wanted to know how that got

495
00:16:25,269 --> 00:16:23,120
resolved thanks

496
00:16:27,590 --> 00:16:25,279
well drew took some very good photos up

497
00:16:29,509 --> 00:16:27,600
close and personal on that pdgf and we

498
00:16:32,150 --> 00:16:29,519
think we were able to identify

499
00:16:33,829 --> 00:16:32,160
it as a grounding wire i think that

500
00:16:35,590 --> 00:16:33,839
maybe holds the multi-layer insulation

501
00:16:38,150 --> 00:16:35,600
around the outside of the pdgf and that

502
00:16:39,910 --> 00:16:38,160
grounding wire was protruding from

503
00:16:42,389 --> 00:16:39,920
one of the flapper doors where when the

504
00:16:44,790 --> 00:16:42,399
ssrms grapples the electrical connectors

505
00:16:46,550 --> 00:16:44,800
go through those flapper doors so we're

506
00:16:49,189 --> 00:16:46,560
still we're still not sure how we're

507
00:16:51,189 --> 00:16:49,199
actually going to resolve that issue

508
00:16:53,590 --> 00:16:51,199
so there is still a future eva to at

509
00:16:55,910 --> 00:16:53,600
least install the 1553 data cable as

510
00:17:00,710 --> 00:16:55,920
well as address the fod issue in the

511
00:17:05,750 --> 00:17:04,150
okay bill is that all from you

512
00:17:07,510 --> 00:17:05,760
thank you very much

513
00:17:11,110 --> 00:17:07,520

and uh do we have additional questions

514
00:17:16,309 --> 00:17:12,949
just working off that question

515
00:17:18,309 --> 00:17:16,319
rob perlman with collectspace.com again

516
00:17:21,429 --> 00:17:18,319
i remember there was a lot of work done

517
00:17:23,270 --> 00:17:21,439
on qualifying the uh the obss

518
00:17:25,189 --> 00:17:23,280
for use with an astronaut in the end i

519
00:17:27,110 --> 00:17:25,199
think pure sellers got out on the end of

520
00:17:30,470 --> 00:17:27,120
it with the new pd

521
00:17:32,150 --> 00:17:30,480
pdgf at its new location is it already

522
00:17:34,070 --> 00:17:32,160
cleared to have an astronaut put at the

523
00:17:35,990 --> 00:17:34,080
end if you needed to or is more work

524
00:17:38,150 --> 00:17:36,000
needed

525
00:17:39,909 --> 00:17:38,160
i believe it's already cleared so it

526
00:17:41,510 --> 00:17:39,919
would grapple the ssrms would grapple at

527
00:17:43,190 --> 00:17:41,520
that end where we installed the power

528
00:17:44,950 --> 00:17:43,200
and data grapple fixture and then at the

529
00:17:47,270 --> 00:17:44,960
opposite end of the boom where the

530
00:17:49,350 --> 00:17:47,280
sensors are we have both a worksite

531
00:17:50,950 --> 00:17:49,360
interface or a whiff that we can install

532
00:17:53,350 --> 00:17:50,960
directly install a station foot

533
00:17:54,789 --> 00:17:53,360
restraint into and also on the underside

534
00:17:56,950 --> 00:17:54,799
we have a

535
00:17:59,350 --> 00:17:56,960
grapple bar that we could install that

536
00:18:02,390 --> 00:17:59,360
we could install a um

537
00:18:03,909 --> 00:18:02,400
pad or pfr attachment device to the

538
00:18:05,510 --> 00:18:03,919

bottom of so we have options and then

539
00:18:06,789 --> 00:18:05,520
from there we could also install an

540
00:18:08,630 --> 00:18:06,799
articulating portable foot restraint

541
00:18:10,470 --> 00:18:08,640
from there so we do have options on on

542
00:18:12,070 --> 00:18:10,480
either side at the end of the boom to

543
00:18:15,029 --> 00:18:12,080
install to to be able to have an

544
00:18:16,470 --> 00:18:15,039
astronaut on the end of the boom

545
00:18:17,830 --> 00:18:16,480
and do we have additional questions here

546
00:18:19,270 --> 00:18:17,840
in houston

547
00:18:21,430 --> 00:18:19,280
well seeing none we'll conclude our

548
00:18:22,510 --> 00:18:21,440
briefing now you can follow activities

549
00:18:24,789 --> 00:18:22,520
of the

550
00:18:26,710 --> 00:18:24,799
sts-134 mission of endeavor and

551
00:18:29,590 --> 00:18:26,720
international space station activities