



1
00:00:07,749 --> 00:00:05,150
good evening and welcome to tonight's

2
00:00:09,830 --> 00:00:07,759
sts-133 mission status briefing with us

3
00:00:11,430 --> 00:00:09,840
again tonight is royce renfrew the lead

4
00:00:13,589 --> 00:00:11,440
flight director for the international

5
00:00:15,190 --> 00:00:13,599
space station on this increment

6
00:00:16,310 --> 00:00:15,200
we'll go first to his statements and

7
00:00:17,990 --> 00:00:16,320
then we'll take questions here at

8
00:00:19,510 --> 00:00:18,000
johnson space center and on the phone

9
00:00:21,429 --> 00:00:19,520
bridge boyce

10
00:00:23,990 --> 00:00:21,439
okay thank you very much so we had

11
00:00:26,630 --> 00:00:24,000
another great day on orbit uh getting

12
00:00:28,790 --> 00:00:26,640
the pmm squared away ready uh

13
00:00:31,990 --> 00:00:28,800

ready for the crew undock later on

14
00:00:33,670 --> 00:00:32,000
monday morning at a crew news conference

15
00:00:36,069 --> 00:00:33,680
that went very well lots of good

16
00:00:38,709 --> 00:00:36,079
questions from all over the world people

17
00:00:40,869 --> 00:00:38,719
talking to the iss crew and the crew

18
00:00:43,670 --> 00:00:40,879
discovery at the same time

19
00:00:46,950 --> 00:00:43,680
we've been pounding through our mid-deck

20
00:00:48,950 --> 00:00:46,960
transfer we're about 90 complete when i

21
00:00:51,430 --> 00:00:48,960
last talked to aco transfer a couple

22
00:00:53,270 --> 00:00:51,440
hours before the end of my shift it's my

23
00:00:54,630 --> 00:00:53,280
expectation that the mid deck transfer

24
00:00:56,869 --> 00:00:54,640
is pretty much all done we don't

25
00:00:59,029 --> 00:00:56,879
actually have any scheduled for tomorrow

26

00:01:00,869 --> 00:00:59,039

we still have our late stow activities

27

00:01:02,549 --> 00:01:00,879

on the day we close the hatches to get

28

00:01:04,229 --> 00:01:02,559

the last couple payloads that need to

29

00:01:07,590 --> 00:01:04,239

get thrown across the hatch at the last

30

00:01:12,390 --> 00:01:10,469

today in the pmm we had a very

31

00:01:13,830 --> 00:01:12,400

successful day i told you yesterday we

32

00:01:15,910 --> 00:01:13,840

were going to go in and get a lot of the

33

00:01:17,749 --> 00:01:15,920

launch hardware squared away

34

00:01:19,510 --> 00:01:17,759

and try to get the pmm into a

35

00:01:21,830 --> 00:01:19,520

configuration for

36

00:01:23,270 --> 00:01:21,840

ease of use on orbit as opposed to all

37

00:01:24,149 --> 00:01:23,280

the the

38

00:01:32,069 --> 00:01:24,159

the

39

00:01:34,069 --> 00:01:32,079

so today we removed a bunch of that

40

00:01:36,149 --> 00:01:34,079

launch hardware and got express rack

41

00:01:37,670 --> 00:01:36,159

number eight relocated into the lab

42

00:01:39,510 --> 00:01:37,680

there was a couple questions in the crew

43

00:01:40,950 --> 00:01:39,520

news conference about that

44

00:01:43,429 --> 00:01:40,960

it was right there where the crew was

45

00:01:44,550 --> 00:01:43,439

doing the pao event

46

00:01:46,630 --> 00:01:44,560

we also

47

00:01:48,789 --> 00:01:46,640

spent some time playing with the

48

00:01:50,469 --> 00:01:48,799

zero-g stowage racks there are three of

49

00:01:52,069 --> 00:01:50,479

them that we focused on today in there

50

00:01:54,230 --> 00:01:52,079

one of those will eventually go into the

51
00:01:56,789 --> 00:01:54,240
columbus module and the other two will

52
00:01:58,389 --> 00:01:56,799
be deployed in the in the pmm they're

53
00:01:59,670 --> 00:01:58,399
actually kind of interesting

54
00:02:02,389 --> 00:01:59,680
pieces of hardware because they're

55
00:02:04,469 --> 00:02:02,399
really just fabric racks that come up

56
00:02:05,670 --> 00:02:04,479
folded up and then when they get on

57
00:02:07,670 --> 00:02:05,680
orbit we

58
00:02:09,910 --> 00:02:07,680
push them out so they take up the volume

59
00:02:12,309 --> 00:02:09,920
inside the rack and we can put

60
00:02:14,309 --> 00:02:12,319
soft stowage items in there as well

61
00:02:16,150 --> 00:02:14,319
did a little bit of stowage reconfig and

62
00:02:17,990 --> 00:02:16,160
that's just a fancy way of saying that

63
00:02:19,910 --> 00:02:18,000

we took some of the some of the

64

00:02:22,070 --> 00:02:19,920
components that came up in the pmm and

65

00:02:24,869 --> 00:02:22,080
started scattering those out around

66

00:02:29,589 --> 00:02:26,869
so all in all a great day in the pmm i

67

00:02:31,750 --> 00:02:29,599
know you guys were were watching the the

68

00:02:34,470 --> 00:02:31,760
the crew in there most of the day we

69

00:02:36,869 --> 00:02:34,480
also spent some time in the airlock

70

00:02:38,710 --> 00:02:36,879
with mr bowen and mr drew getting the

71

00:02:40,550 --> 00:02:38,720
airlock squared away and getting their

72

00:02:42,630 --> 00:02:40,560
emu's ready to transfer back to

73

00:02:44,309 --> 00:02:42,640
discovery when they come back home

74

00:02:46,470 --> 00:02:44,319
essentially putting all their tools back

75

00:02:50,070 --> 00:02:46,480
away and getting the airlock in a good

76

00:02:53,190 --> 00:02:50,080

config for nominal stay jobs

77

00:02:55,030 --> 00:02:53,200

the last tag up we had with the crew

78

00:02:57,030 --> 00:02:55,040

essentially reporting that the tool stow

79

00:02:59,350 --> 00:02:57,040

was complete in the airlock and they

80

00:03:01,830 --> 00:02:59,360

also did a little bit of work on a

81

00:03:04,149 --> 00:03:01,840

couple of conversations between the crew

82

00:03:05,350 --> 00:03:04,159

and the airlock and my eva officer

83

00:03:08,470 --> 00:03:05,360

troubleshooting

84

00:03:11,030 --> 00:03:08,480

al drew's wvs his helmet lights that

85

00:03:12,630 --> 00:03:11,040

came off in eva2 had some questions

86

00:03:14,470 --> 00:03:12,640

about the way

87

00:03:16,630 --> 00:03:14,480

we installed those previous to coming

88

00:03:18,630 --> 00:03:16,640

out the hatch so we're narrowing in on

89

00:03:20,149 --> 00:03:18,640

hopefully a solution as to why they came

90

00:03:22,790 --> 00:03:20,159

off and be able to prevent that from

91

00:03:25,990 --> 00:03:22,800

occurring in the future

92

00:03:28,149 --> 00:03:26,000

let's see tomorrow is a is a very busy

93

00:03:31,030 --> 00:03:28,159

day again on orbit we're going to do

94

00:03:33,110 --> 00:03:31,040

three major activities tomorrow the

95

00:03:34,550 --> 00:03:33,120

first major activity is a continuation

96

00:03:35,750 --> 00:03:34,560

of what we've been doing for the last

97

00:03:38,550 --> 00:03:35,760

couple of days

98

00:03:41,030 --> 00:03:38,560

in that we will continue in the pmm

99

00:03:43,350 --> 00:03:41,040

and get the last little bit of launch

100

00:03:45,990 --> 00:03:43,360

hardware taken off the racks and get

101
00:03:48,309 --> 00:03:46,000
those racks in a good configuration for

102
00:03:49,750 --> 00:03:48,319
on-orbit stay

103
00:03:52,630 --> 00:03:49,760
and we will also spend a little bit of

104
00:03:54,229 --> 00:03:52,640
time tomorrow in htv2

105
00:03:56,550 --> 00:03:54,239
getting some food out of there that

106
00:03:59,190 --> 00:03:56,560
stowed in htv and probably transfer that

107
00:04:01,589 --> 00:03:59,200
over to the pmm we'll also move some

108
00:04:03,110 --> 00:04:01,599
ballast around in htv and get it

109
00:04:05,030 --> 00:04:03,120
prepared to take some of the launch

110
00:04:07,750 --> 00:04:05,040
hardware that we've been disassembling

111
00:04:09,350 --> 00:04:07,760
in the pmm to get it transferred over to

112
00:04:11,350 --> 00:04:09,360
htv2

113
00:04:13,830 --> 00:04:11,360

it's important to maintain the center of

114

00:04:15,990 --> 00:04:13,840

gravity in the vehicle obviously and

115

00:04:17,509 --> 00:04:16,000

when we release it we want to make sure

116

00:04:18,949 --> 00:04:17,519

that the center of gravity is correct

117

00:04:21,189 --> 00:04:18,959

and that will require us to move some

118

00:04:23,110 --> 00:04:21,199

equipment around in hdv2 to get that

119

00:04:25,030 --> 00:04:23,120

ready to go

120

00:04:26,629 --> 00:04:25,040

second major major activity that we'll

121

00:04:29,749 --> 00:04:26,639

be doing tomorrow

122

00:04:32,390 --> 00:04:29,759

commander kelly will be in node three

123

00:04:35,430 --> 00:04:32,400

installing what's termed a remediation

124

00:04:37,749 --> 00:04:35,440

kit into the oxygen generation system as

125

00:04:40,870 --> 00:04:37,759

part of our regenerative ecosystem we

126
00:04:43,749 --> 00:04:40,880
take water that is produced onboard iss

127
00:04:45,670 --> 00:04:43,759
by taking condensation and

128
00:04:47,510 --> 00:04:45,680
crude urine and we clean that up and

129
00:04:49,430 --> 00:04:47,520
some of that water gets transferred over

130
00:04:50,469 --> 00:04:49,440
to the potable water system for the crew

131
00:04:52,310 --> 00:04:50,479
to drink

132
00:04:54,710 --> 00:04:52,320
some of that water also gets transferred

133
00:04:57,270 --> 00:04:54,720
to the oxygen generation rack and we

134
00:04:59,990 --> 00:04:57,280
split that down into its component parts

135
00:05:01,110 --> 00:05:00,000
and pump the o2 into the iss and dump

136
00:05:06,950 --> 00:05:01,120
the

137
00:05:08,950 --> 00:05:06,960
while waiting for a kit that we were

138
00:05:10,790 --> 00:05:08,960

bringing up on 133 called the

139

00:05:12,550 --> 00:05:10,800
remediation kit

140

00:05:14,390 --> 00:05:12,560
when we launched originally we were

141

00:05:16,390 --> 00:05:14,400
going to install the remediation kit in

142

00:05:17,830 --> 00:05:16,400
the in the stage but now that we've

143

00:05:19,270 --> 00:05:17,840
added a couple days to the docked

144

00:05:21,590 --> 00:05:19,280
mission we're going to take advantage of

145

00:05:23,909 --> 00:05:21,600
those couple days to offload the stage

146

00:05:26,150 --> 00:05:23,919
activity install that remediation kit

147

00:05:27,430 --> 00:05:26,160
tomorrow and really it's a

148

00:05:29,189 --> 00:05:27,440
it's a filter that we're going to

149

00:05:31,189 --> 00:05:29,199
install in there much like you might

150

00:05:32,629 --> 00:05:31,199
have a filter on your faucet in your in

151

00:05:34,790 --> 00:05:32,639

your home at home

152

00:05:37,110 --> 00:05:34,800

that clean out impurities in that water

153

00:05:38,790 --> 00:05:37,120

and it also has some chemicals in there

154

00:05:40,870 --> 00:05:38,800

that we want to flow through the rack to

155

00:05:42,790 --> 00:05:40,880

reduce the ph balance in there and get

156

00:05:46,150 --> 00:05:42,800

it back down to where we want it to be

157

00:05:47,830 --> 00:05:46,160

so we can start using that oga again

158

00:05:49,749 --> 00:05:47,840

and then the third major activity that

159

00:05:52,390 --> 00:05:49,759

we'll do tomorrow

160

00:05:55,110 --> 00:05:52,400

we'll have apollo and

161

00:05:58,390 --> 00:05:55,120

mike barrett working on the lab carbon

162

00:06:00,710 --> 00:05:58,400

dioxide removal assembly or sidra

163

00:06:03,510 --> 00:06:00,720

during eva one we actually had a failure

164

00:06:05,510 --> 00:06:03,520

in the lab cedra and we've narrowed that

165

00:06:07,110 --> 00:06:05,520

down to what's essentially a short in

166

00:06:09,590 --> 00:06:07,120

the heater beds

167

00:06:11,350 --> 00:06:09,600

of that cdr the carbon dioxide removal

168

00:06:12,550 --> 00:06:11,360

essentially essentially

169

00:06:15,670 --> 00:06:12,560

sucks

170

00:06:18,870 --> 00:06:15,680

air atmospheric air into the into the

171

00:06:21,189 --> 00:06:18,880

sedra and then uses a heating process to

172

00:06:23,670 --> 00:06:21,199

bake out the carbon dioxide so we can

173

00:06:25,749 --> 00:06:23,680

clean the carbon dioxide from the air so

174

00:06:27,670 --> 00:06:25,759

there are really just heater pads in

175

00:06:29,749 --> 00:06:27,680

there one of those heater pads

176

00:06:31,270 --> 00:06:29,759

apparently has a short in it and we're

177

00:06:33,590 --> 00:06:31,280

going to go in and operate on that

178

00:06:35,830 --> 00:06:33,600

particular heater pad tomorrow in that

179

00:06:38,070 --> 00:06:35,840

front seizure bed

180

00:06:40,629 --> 00:06:38,080

this is actually a good thing for mike

181

00:06:43,189 --> 00:06:40,639

barrett to do because he did exactly the

182

00:06:45,430 --> 00:06:43,199

same activity when during his increment

183

00:06:47,029 --> 00:06:45,440

we had a very similar signature we took

184

00:06:49,270 --> 00:06:47,039

a heater heater

185

00:06:50,469 --> 00:06:49,280

a cedar bed out

186

00:06:53,029 --> 00:06:50,479

cut into it

187

00:06:54,550 --> 00:06:53,039

mike barrett the doctor to use some

188

00:06:57,189 --> 00:06:54,560

scalpels and what not to cut the

189

00:06:58,469 --> 00:06:57,199

insulation foam off that cedar bed and

190

00:07:00,629 --> 00:06:58,479

then we're going to spend a little bit

191

00:07:02,469 --> 00:07:00,639

of time figuring out which wire to cut

192

00:07:04,309 --> 00:07:02,479

by using a multimeter and testing all

193

00:07:05,990 --> 00:07:04,319

those wires we'll eventually find the

194

00:07:07,029 --> 00:07:06,000

right one that's shorted we'll go in and

195

00:07:09,029 --> 00:07:07,039

snip that

196

00:07:11,749 --> 00:07:09,039

and put that back into the lab procedure

197

00:07:15,350 --> 00:07:11,759

and get that back up and running

198

00:07:17,189 --> 00:07:15,360

incidentally the the my equals officer

199

00:07:19,189 --> 00:07:17,199

was the same e-class officer that did

200

00:07:21,350 --> 00:07:19,199

this with mike previously so we've got

201
00:07:23,029 --> 00:07:21,360
the got the band back together here and

202
00:07:25,110 --> 00:07:23,039
i was the flight director on council

203
00:07:26,950 --> 00:07:25,120
when mike did that in his increment so

204
00:07:29,350 --> 00:07:26,960
apparently having mike on the vehicle

205
00:07:31,110 --> 00:07:29,360
with john gar and myself on console is a

206
00:07:32,629 --> 00:07:31,120
bad thing to do but

207
00:07:34,629 --> 00:07:32,639
we'll get all that squared away again

208
00:07:38,070 --> 00:07:34,639
tomorrow

209
00:07:40,390 --> 00:07:38,080
let's see the the hdv just to forecast

210
00:07:43,270 --> 00:07:40,400
out there a little bit for folks the htv

211
00:07:45,029 --> 00:07:43,280
release on march 28th after discovery

212
00:07:47,510 --> 00:07:45,039
departs on monday

213
00:07:50,629 --> 00:07:47,520

we'll get htv relocated back down to the

214

00:07:52,469 --> 00:07:50,639

node 2 nader port on thursday march 10th

215

00:07:54,390 --> 00:07:52,479

and we move that out a couple days with

216

00:07:56,550 --> 00:07:54,400

the extension of the mission so we'll

217

00:07:59,510 --> 00:07:56,560

get that relocated

218

00:08:01,589 --> 00:07:59,520

and then uh and then we'll uh uh

219

00:08:04,150 --> 00:08:01,599

on the 28th we'll release it from the

220

00:08:05,670 --> 00:08:04,160

nader port uh the question i had

221

00:08:08,309 --> 00:08:05,680

yesterday about when we were going to

222

00:08:10,070 --> 00:08:08,319

get robonaut out so after discovery

223

00:08:13,430 --> 00:08:10,080

undocks on monday and then we're going

224

00:08:14,550 --> 00:08:13,440

to relocate htv on thursday of that week

225

00:08:16,150 --> 00:08:14,560

we're going to give the crew a couple

226

00:08:18,070 --> 00:08:16,160

days off in between there because we've

227

00:08:20,150 --> 00:08:18,080

been working them really hard so we

228

00:08:23,350 --> 00:08:20,160

won't get robonaut out until after we

229

00:08:25,110 --> 00:08:23,360

relocate htv down to the nadir port

230

00:08:27,189 --> 00:08:25,120

on the 10th and we'll get that done

231

00:08:29,350 --> 00:08:27,199

between the 10th and the 28th when we're

232

00:08:31,510 --> 00:08:29,360

going to release htv

233

00:08:32,630 --> 00:08:31,520

that's really all i have

234

00:08:33,909 --> 00:08:32,640

okay

235

00:08:35,670 --> 00:08:33,919

thanks royce we'll start here at the

236

00:08:38,949 --> 00:08:35,680

johnson space center with any questions

237

00:08:40,949 --> 00:08:38,959

that you might have mark

238

00:08:43,509 --> 00:08:40,959

mark crowe for aviation week i just

239

00:08:44,790 --> 00:08:43,519

wanted to follow up on the uh the oga

240

00:08:46,870 --> 00:08:44,800

work so

241

00:08:49,670 --> 00:08:46,880

has it been sporadically

242

00:08:52,150 --> 00:08:49,680

operational and this uh

243

00:08:53,509 --> 00:08:52,160

puts it back in the fold or how long has

244

00:08:55,990 --> 00:08:53,519

it been

245

00:08:58,230 --> 00:08:56,000

disabled or whatever the state is now

246

00:09:00,230 --> 00:08:58,240

okay um we've been looking at a lot of

247

00:09:02,870 --> 00:09:00,240

the the data off of that and we actually

248

00:09:04,470 --> 00:09:02,880

haven't had oga up and running for uh i

249

00:09:07,829 --> 00:09:04,480

don't remember when we turned it off we

250

00:09:09,910 --> 00:09:07,839

we partially use it and operate it in a

251
00:09:11,430 --> 00:09:09,920
not full capacity whenever we needed

252
00:09:13,990 --> 00:09:11,440
some o2

253
00:09:16,150 --> 00:09:14,000
on iss but we've been we've been waiting

254
00:09:18,710 --> 00:09:16,160
literally for this remediation kit to

255
00:09:20,630 --> 00:09:18,720
arrive on 133 so we want to get those

256
00:09:22,949 --> 00:09:20,640
chemicals into the system get the ph

257
00:09:25,030 --> 00:09:22,959
balance squared away and get that filter

258
00:09:27,269 --> 00:09:25,040
in the system before we power it back up

259
00:09:29,990 --> 00:09:27,279
so we haven't really been using it we

260
00:09:32,550 --> 00:09:30,000
really don't need it atv the brought up

261
00:09:34,550 --> 00:09:32,560
a bunch of o2 for us in its tanks and

262
00:09:37,030 --> 00:09:34,560
we've transferred a bunch of o2

263
00:09:39,990 --> 00:09:37,040

over from discovery to the iss tank so

264

00:09:41,590 --> 00:09:40,000

we really haven't needed to use the oga

265

00:09:44,230 --> 00:09:41,600

up to this point but we want to get that

266

00:09:45,350 --> 00:09:44,240

squared away so we can make our own o2

267

00:09:46,790 --> 00:09:45,360

rather than having to use those

268

00:09:48,310 --> 00:09:46,800

consumables that have come up in the

269

00:09:51,990 --> 00:09:48,320

visiting vehicles so hopefully we'll get

270

00:09:56,389 --> 00:09:53,910

and just to follow up on the uh the

271

00:09:58,150 --> 00:09:56,399

cedra bed and the lab so does this bring

272

00:09:59,670 --> 00:09:58,160

up i'm trying to

273

00:10:01,190 --> 00:09:59,680

i'm not very uh

274

00:10:03,430 --> 00:10:01,200

we're trying to remember whether there's

275

00:10:05,509 --> 00:10:03,440

two beds in that one too or

276

00:10:07,350 --> 00:10:05,519

and one bed's been working so this makes

277

00:10:09,670 --> 00:10:07,360

it fully functional or can you just

278

00:10:13,030 --> 00:10:09,680

clarify that please thanks sure all of

279

00:10:15,990 --> 00:10:13,040

the seizures have two beds and the the

280

00:10:18,550 --> 00:10:16,000

one in the lab we just turned off the

281

00:10:21,829 --> 00:10:18,560

it has two power switches upstream of

282

00:10:24,150 --> 00:10:21,839

the two strings of heaters in both beds

283

00:10:26,230 --> 00:10:24,160

so that we saw a short on one side and

284

00:10:28,630 --> 00:10:26,240

we went ahead and unpowered that side so

285

00:10:30,310 --> 00:10:28,640

the lab cedar is still running but it's

286

00:10:32,949 --> 00:10:30,320

only running with one side of its

287

00:10:34,949 --> 00:10:32,959

heaters active right now and after we

288

00:10:36,470 --> 00:10:34,959

take the bed out and find that short

289

00:10:38,870 --> 00:10:36,480

clip that wire we'll be able to put it

290

00:10:40,710 --> 00:10:38,880

back in and activate both strings of the

291

00:10:46,069 --> 00:10:40,720

heater power so we'll get a little more

292

00:10:51,150 --> 00:10:49,910

philip and then comfort rob

293

00:10:53,110 --> 00:10:51,160

phillips loss with

294

00:10:56,069 --> 00:10:53,120

nasaspaceflight.com um

295

00:10:57,509 --> 00:10:56,079

i i may have misheard this but um i

296

00:11:00,310 --> 00:10:57,519

thought i heard over the commentary that

297

00:11:02,389 --> 00:11:00,320

there that the vozduk went down um could

298

00:11:04,069 --> 00:11:02,399

you just provide a quick status and you

299

00:11:05,509 --> 00:11:04,079

know what what's the go forward plan

300

00:11:08,310 --> 00:11:05,519

from here on that

301

00:11:10,150 --> 00:11:08,320

uh yes right at the end of my shift mr

302

00:11:13,030 --> 00:11:10,160

edelman had come in with his orbit three

303

00:11:14,949 --> 00:11:13,040

team and we were handing over my

304

00:11:16,630 --> 00:11:14,959

uh rio officer reported to me that

305

00:11:17,509 --> 00:11:16,640

vozduk went down

306

00:11:22,870 --> 00:11:17,519

uh

307

00:11:24,630 --> 00:11:22,880

they decided not to do anything with it

308

00:11:26,710 --> 00:11:24,640

this evening and then they'll talk to

309

00:11:27,990 --> 00:11:26,720

the crew in the morning and take a look

310

00:11:30,710 --> 00:11:28,000

at that and see if they can get that

311

00:11:31,590 --> 00:11:30,720

back up and running

312

00:11:34,150 --> 00:11:31,600

thanks

313

00:11:36,790 --> 00:11:34,160

and a question on the o2 transfer from

314

00:11:40,470 --> 00:11:36,800

the orbiter to the station um

315

00:11:43,269 --> 00:11:40,480

how how close to full will you get

316

00:11:45,990 --> 00:11:43,279

with the o2 transfer on this mission

317

00:11:46,949 --> 00:11:46,000

um the iss tanks will essentially be

318

00:11:49,670 --> 00:11:46,959

full

319

00:11:52,389 --> 00:11:49,680

uh it's a little bit uh

320

00:11:55,030 --> 00:11:52,399

it's a little bit difficult to describe

321

00:11:57,030 --> 00:11:55,040

because if you think about the the the

322

00:11:58,870 --> 00:11:57,040

heat that's applied to the outside of

323

00:12:01,430 --> 00:11:58,880

the stack that has the effect of

324

00:12:02,710 --> 00:12:01,440

expanding the gas in those tanks so if

325

00:12:04,550 --> 00:12:02,720

we're at a

326

00:12:06,470 --> 00:12:04,560

solar beta where we're getting a lot of

327

00:12:08,470 --> 00:12:06,480

heat on that side of the airlock it

328

00:12:10,629 --> 00:12:08,480

shows that there's more in those tanks

329

00:12:12,389 --> 00:12:10,639

because the pressure goes up if we're at

330

00:12:14,310 --> 00:12:12,399

a solar beta where the sun is not

331

00:12:16,629 --> 00:12:14,320

shining on those tanks on that side on

332

00:12:18,870 --> 00:12:16,639

the airlock the pressure goes down so we

333

00:12:21,190 --> 00:12:18,880

average all that out so

334

00:12:23,590 --> 00:12:21,200

i can't give you an exact number how

335

00:12:26,470 --> 00:12:23,600

many pounds of o2 we have on iss because

336

00:12:29,509 --> 00:12:26,480

it literally changes day by day but in

337

00:12:31,910 --> 00:12:29,519

the in in the math that my ecos officers

338

00:12:35,350 --> 00:12:31,920

calculate there will essentially leave

339

00:12:37,350 --> 00:12:35,360

the iss tanks full uh before discovery

340

00:12:41,590 --> 00:12:37,360

departs

341

00:12:45,430 --> 00:12:43,829

hi robert perlman with collectspace.com

342

00:12:47,509 --> 00:12:45,440

just a quick question just to follow

343

00:12:49,910 --> 00:12:47,519

what you said about robonaut so barring

344

00:12:51,670 --> 00:12:49,920

any unforeseen problems

345

00:12:55,269 --> 00:12:51,680

robonaut will be out and about by the

346

00:12:58,790 --> 00:12:55,279

time endeavors crew arrives in mid-april

347

00:13:01,430 --> 00:12:58,800

and will it be active or will it just be

348

00:13:03,590 --> 00:13:01,440

just be set up out of its packaging

349

00:13:05,829 --> 00:13:03,600

um okay so

350

00:13:08,949 --> 00:13:05,839

we'll uh we'll have it set up and then

351

00:13:11,110 --> 00:13:08,959

there's a relatively extensive uh

352

00:13:14,069 --> 00:13:11,120

checkout period that we have to do on

353

00:13:16,310 --> 00:13:14,079

robonaut and will incrementally increase

354

00:13:17,750 --> 00:13:16,320

the number of the the tasks that they do

355

00:13:19,509 --> 00:13:17,760

so obviously

356

00:13:22,550 --> 00:13:19,519

uh the very first thing that we're going

357

00:13:25,750 --> 00:13:22,560

to do sometime after we've relocated the

358

00:13:27,590 --> 00:13:25,760

htv and get in unpack him is obviously

359

00:13:29,430 --> 00:13:27,600

just set him up and then we'll turn

360

00:13:31,590 --> 00:13:29,440

around and power it on and

361

00:13:32,949 --> 00:13:31,600

some folks over in marshall will be

362

00:13:34,790 --> 00:13:32,959

looking at the

363

00:13:37,190 --> 00:13:34,800

telemetry on it and i

364

00:13:39,430 --> 00:13:37,200

can't forecast how long that'll go on

365

00:13:41,829 --> 00:13:39,440

before you ever actually see robonaut

366

00:13:43,430 --> 00:13:41,839

move but obviously we'll spend a lot of

367

00:13:45,350 --> 00:13:43,440

time just checking out the system and

368

00:13:48,389 --> 00:13:45,360

see how it behaved

369

00:13:49,910 --> 00:13:48,399

after the the forces that we put on the

370

00:13:51,990 --> 00:13:49,920

on the robonaut when we launch the

371

00:13:54,470 --> 00:13:52,000

vehicle so spend a lot of time checking

372

00:13:57,030 --> 00:13:54,480

it out and then sometime in the future

373

00:13:59,110 --> 00:13:57,040

we'll start incrementally increasing the

374

00:14:00,949 --> 00:13:59,120

activities that robonaut does he

375

00:14:03,110 --> 00:14:00,959

actually has a breadboard that he plays

376

00:14:04,870 --> 00:14:03,120

with where we command it from the ground

377

00:14:06,550 --> 00:14:04,880

for him to do things like take something

378

00:14:08,870 --> 00:14:06,560

out of a a

379

00:14:11,430 --> 00:14:08,880

specific socket and then move and then

380

00:14:13,750 --> 00:14:11,440

put it back in and then as we increase

381

00:14:15,910 --> 00:14:13,760

those uh technical difficulty of stuff

382

00:14:18,389 --> 00:14:15,920

that he'll do he'll start being behaving

383

00:14:20,150 --> 00:14:18,399

more like you would expect a human to

384

00:14:22,629 --> 00:14:20,160

move but that'll be a long way down the

385

00:14:27,910 --> 00:14:23,750

just

386

00:14:28,870 --> 00:14:27,920

his commands going to be ground driven

387

00:14:31,750 --> 00:14:28,880

or

388

00:14:35,670 --> 00:14:31,760

to

389

00:14:37,829 --> 00:14:35,680

on orbit

390

00:14:40,790 --> 00:14:37,839

the the crew actually has capability of

391

00:14:42,389 --> 00:14:40,800

operating robonaut from onboard uh the

392

00:14:44,310 --> 00:14:42,399

the first stuff that we're going to do

393

00:14:47,750 --> 00:14:44,320

there obviously one of the resources

394

00:14:49,750 --> 00:14:47,760

that we always track is crew time so we

395

00:14:52,150 --> 00:14:49,760

we want to do all of our initial check

396

00:14:54,710 --> 00:14:52,160

out just to make sure that robonaut is

397

00:14:56,310 --> 00:14:54,720

ready to go we'll do it we'll do the

398

00:14:57,990 --> 00:14:56,320

majority of that from the ground and

399

00:15:00,629 --> 00:14:58,000

then we'll if we need the crew to help

400

00:15:02,470 --> 00:15:00,639

us do one or two things turn a bolt here

401

00:15:04,550 --> 00:15:02,480

or check a circuit there that will get

402

00:15:06,150 --> 00:15:04,560

them involved in that but the majority

403

00:15:08,550 --> 00:15:06,160

of the work that we'll do to begin with

404

00:15:09,829 --> 00:15:08,560

will be commanded from the ground

405

00:15:12,710 --> 00:15:09,839

okay i think we have a question over

406

00:15:14,310 --> 00:15:12,720

here

407

00:15:15,829 --> 00:15:14,320

thanks pete spots with the christian

408

00:15:19,189 --> 00:15:15,839

science monitors a couple of quick ones

409

00:15:19,990 --> 00:15:19,199

one uh could you just sort of recap a

410

00:15:21,990 --> 00:15:20,000

bit

411

00:15:25,350 --> 00:15:22,000

the problems with the oxygen generator

412

00:15:26,870 --> 00:15:25,360

that these repairs uh are aimed to solve

413

00:15:29,269 --> 00:15:26,880

and i get the second one is just quick

414

00:15:31,189 --> 00:15:29,279

as if there's a if this um

415

00:15:32,870 --> 00:15:31,199

uh uh

416

00:15:34,550 --> 00:15:32,880

repositioning of robonaut or unpacking

417

00:15:36,949 --> 00:15:34,560

robonaut after uh

418

00:15:38,470 --> 00:15:36,959

after the uh you move the htv does that

419

00:15:40,069 --> 00:15:38,480

represent any sort of acceleration of

420

00:15:42,629 --> 00:15:40,079

the timetable or is that basically how

421

00:15:45,350 --> 00:15:42,639

you scripted it all along

422

00:15:47,350 --> 00:15:45,360

uh let's see question one the the one of

423

00:15:51,189 --> 00:15:47,360

the things that we're bringing home on

424

00:15:53,509 --> 00:15:51,199

133 is what's called a hydrogen dome

425

00:15:55,749 --> 00:15:53,519

that's part of the oga system that

426
00:15:59,110 --> 00:15:55,759
failed previously

427
00:16:02,150 --> 00:15:59,120
we in the pmm we flew up the packing for

428
00:16:04,870 --> 00:16:02,160
the hydrogen dome and the crew relocated

429
00:16:07,350 --> 00:16:04,880
that pack excuse me

430
00:16:09,670 --> 00:16:07,360
relocated that packing out of the pmm to

431
00:16:11,509 --> 00:16:09,680
discover his mid-deck and took the

432
00:16:13,749 --> 00:16:11,519
failed hydrogen dome and put that in

433
00:16:15,430 --> 00:16:13,759
discovery's mid-deck as well so that's

434
00:16:17,829 --> 00:16:15,440
the piece of hardware that failed

435
00:16:19,990 --> 00:16:17,839
originally and that was due to what we

436
00:16:22,470 --> 00:16:20,000
think is the chemical imbalance in the

437
00:16:25,189 --> 00:16:22,480
water that's going through that hydrogen

438
00:16:27,269 --> 00:16:25,199

dome so the remediation kit that and we

439

00:16:29,030 --> 00:16:27,279

had a spare one on board we installed

440

00:16:31,990 --> 00:16:29,040

that but we've been

441

00:16:35,189 --> 00:16:32,000

not operating it the oga at maximum

442

00:16:37,670 --> 00:16:35,199

capacity because we think the chemicals

443

00:16:39,430 --> 00:16:37,680

in the in the oga itself need to be

444

00:16:41,269 --> 00:16:39,440

adjusted which is what the remediation

445

00:16:43,189 --> 00:16:41,279

kit is going to do so what we didn't

446

00:16:45,110 --> 00:16:43,199

want to do is fail our other hydrogen

447

00:16:46,470 --> 00:16:45,120

dome that's currently installed so we

448

00:16:48,310 --> 00:16:46,480

we're bringing one home and we'll look

449

00:16:50,310 --> 00:16:48,320

at it when we get it on the ground we'll

450

00:16:51,990 --> 00:16:50,320

install the remediation kit tomorrow and

451
00:16:53,590 --> 00:16:52,000
that should square away the chemical

452
00:16:55,670 --> 00:16:53,600
imbalance and as i said it's kind of a

453
00:16:57,509 --> 00:16:55,680
little filter itself to make sure there

454
00:17:00,230 --> 00:16:57,519
are no impurities in that water going in

455
00:17:01,749 --> 00:17:00,240
there and uh we'll fire it up

456
00:17:04,230 --> 00:17:01,759
hopefully tomorrow evening we'll start

457
00:17:06,069 --> 00:17:04,240
it back up and see how it's behaving and

458
00:17:08,949 --> 00:17:06,079
then your second question

459
00:17:10,710 --> 00:17:08,959
about the the the period of time between

460
00:17:13,110 --> 00:17:10,720
unpacking robonaut is whether or not

461
00:17:14,710 --> 00:17:13,120
that's accelerated it's actually not

462
00:17:15,990 --> 00:17:14,720
it's uh it's pretty much where we

463
00:17:17,110 --> 00:17:16,000

thought it was going to be we want to

464

00:17:20,549 --> 00:17:17,120

get it done

465

00:17:23,029 --> 00:17:20,559

in the stage after it arrived obviously

466

00:17:24,949 --> 00:17:23,039

so we can start checking it out and and

467

00:17:26,789 --> 00:17:24,959

make sure we can start operating it if

468

00:17:29,430 --> 00:17:26,799

you think of the robonaut it's another

469

00:17:31,430 --> 00:17:29,440

science payload so we have a we have

470

00:17:33,510 --> 00:17:31,440

what's really a science payload on the

471

00:17:35,510 --> 00:17:33,520

vehicle that we want to get active as

472

00:17:38,789 --> 00:17:35,520

soon as we can so we can start using it

473

00:17:41,590 --> 00:17:38,799

so doing it after 133 undocks and the

474

00:17:44,390 --> 00:17:41,600

htv relocate

475

00:17:46,150 --> 00:17:44,400

we we originally had to relocate htv

476
00:17:49,190 --> 00:17:46,160
because we couldn't get the pmm and the

477
00:17:50,390 --> 00:17:49,200
elc out of the payload bay with with htv

478
00:17:53,190 --> 00:17:50,400
on note 2

479
00:17:55,669 --> 00:17:53,200
on the no 2 nader port so the relocation

480
00:17:58,789 --> 00:17:55,679
of htv is a little bit of a wrinkle in

481
00:18:00,549 --> 00:17:58,799
the activation of robonaut but that's

482
00:18:03,190 --> 00:18:00,559
okay we'll we'll take the extra couple

483
00:18:04,789 --> 00:18:03,200
days to relocate hdv and then get get on

484
00:18:07,029 --> 00:18:04,799
with the activation robonaut in the

485
00:18:07,909 --> 00:18:07,039
stage following

486
00:18:10,150 --> 00:18:07,919
okay

487
00:18:12,310 --> 00:18:10,160
more questions here

488
00:18:18,230 --> 00:18:12,320

uh marcia down on the phone bridge do

489

00:18:21,190 --> 00:18:19,909

hello can you hear me

490

00:18:22,950 --> 00:18:21,200

yes we can

491

00:18:25,430 --> 00:18:22,960

hopefully i answered your question there

492

00:18:26,870 --> 00:18:25,440

marcia yes you did i'm on a cell phone

493

00:18:28,870 --> 00:18:26,880

so i just wanted to make sure i heard

494

00:18:31,990 --> 00:18:28,880

properly that your best guess unless the

495

00:18:33,990 --> 00:18:32,000

crew gets to it sooner is to unblock uh

496

00:18:35,669 --> 00:18:34,000

robonaut between the 10th and 28th of

497

00:18:37,990 --> 00:18:35,679

march right here correctly that's

498

00:18:40,230 --> 00:18:38,000

correct wait wait wait thank you we want

499

00:18:42,789 --> 00:18:40,240

to get the we want to get the foam he's

500

00:18:44,150 --> 00:18:42,799

packed in in htv so we don't have to

501
00:18:46,870 --> 00:18:44,160
deal with it so we need to get him

502
00:18:48,630 --> 00:18:46,880
unpacked prior to hdv release on the

503
00:18:50,310 --> 00:18:48,640
28th

504
00:18:52,070 --> 00:18:50,320
you know katie coleman said earlier

505
00:18:54,070 --> 00:18:52,080
today that they might even try to hurry

506
00:18:55,350 --> 00:18:54,080
it up before that

507
00:18:57,990 --> 00:18:55,360
will they have time on their plate to

508
00:19:01,029 --> 00:18:58,000
even consider something like that

509
00:19:03,750 --> 00:19:01,039
uh you mean during the docked mission

510
00:19:05,990 --> 00:19:03,760
yeah or soon afterwards

511
00:19:08,310 --> 00:19:06,000
you know they they we were struggling

512
00:19:10,390 --> 00:19:08,320
today they were just doing so good today

513
00:19:11,990 --> 00:19:10,400

we were we were staying one step ahead

514

00:19:13,669 --> 00:19:12,000

of them and i usually like to be ten

515

00:19:16,390 --> 00:19:13,679

steps out of them so

516

00:19:18,950 --> 00:19:16,400

uh this crew is very fast so i would not

517

00:19:21,029 --> 00:19:18,960

put it fast them to be able to to knock

518

00:19:23,909 --> 00:19:21,039

out everything we've given them to do

519

00:19:25,510 --> 00:19:23,919

and to maybe get into that earlier but

520

00:19:28,230 --> 00:19:25,520

per the timeline we're going to do it

521

00:19:30,150 --> 00:19:28,240

after we relocate hdv before we release

522

00:19:31,430 --> 00:19:30,160

it so somewhere between the 10th and the

523

00:19:32,870 --> 00:19:31,440

28th

524

00:19:34,470 --> 00:19:32,880

thank you very much

525

00:19:36,789 --> 00:19:34,480

yes ma'am

526

00:19:38,549 --> 00:19:36,799

okay any further questions here in

527

00:19:40,870 --> 00:19:38,559

houston

528

00:19:42,549 --> 00:19:40,880

see none well thank you for being here

529

00:19:44,470 --> 00:19:42,559

this evening a couple of programming

530

00:19:45,750 --> 00:19:44,480

notes uh the crew sleep is going to

531

00:19:47,990 --> 00:19:45,760

start at

532

00:19:50,789 --> 00:19:48,000

just a few minutes at 5 53 and then the

533

00:19:52,789 --> 00:19:50,799

discovery cool go to sleep at 6 23

534

00:19:54,630 --> 00:19:52,799

and then tonight's flight day highlights

535

00:19:56,789 --> 00:19:54,640

are being pushed back by an hour to let

536

00:19:58,870 --> 00:19:56,799

us get the best uh video in there and

537

00:20:02,070 --> 00:19:58,880

they'll be beginning at 8 pm central

538

00:20:03,510 --> 00:20:02,080

time and then overnight at 12 45 a.m

539

00:20:06,149 --> 00:20:03,520

we'll have our international space

540

00:20:07,430 --> 00:20:06,159

station flight director update with that