
Johnson

1
00:00:05,700 --> 00:00:03,449
well good afternoon everybody and

2
00:00:08,610 --> 00:00:05,710
welcome to NASA's Johnson Space Center

3
00:00:10,560 --> 00:00:08,620
we are here today for our combined

4
00:00:13,380 --> 00:00:10,570
mission status briefing in our post

5
00:00:15,390 --> 00:00:13,390
mission management team briefing joining

6
00:00:17,279 --> 00:00:15,400
us today is Bryan Lenny he is Space

7
00:00:20,519 --> 00:00:17,289
Shuttle Discovery's lead flight director

8
00:00:22,620 --> 00:00:20,529
throughout the mission of the orbiter to

9
00:00:25,229 --> 00:00:22,630
the International Space Station and also

10
00:00:27,359 --> 00:00:25,239
joining us is Leroy Cain he's the deputy

11
00:00:29,550 --> 00:00:27,369
manager of the space shuttle program and

12
00:00:31,800 --> 00:00:29,560
he's also the chair of the mission

13
00:00:32,970 --> 00:00:31,810

management team as well we'll hear from

14
00:00:35,069 --> 00:00:32,980
both gentlemen and then we'll take

15
00:00:37,439 --> 00:00:35,079
questions here at an end at other NASA

16
00:00:38,759 --> 00:00:37,449
centers and with that I'll turn it over

17
00:00:40,650 --> 00:00:38,769
to Bryan ok

18
00:00:42,419 --> 00:00:40,660
Thank You Carl I'll just start off with

19
00:00:43,950 --> 00:00:42,429
a quick summary of some of the things

20
00:00:46,200 --> 00:00:43,960
that went on today on orbit and how the

21
00:00:47,160 --> 00:00:46,210
crew is doing the crew woke up just

22
00:00:49,560 --> 00:00:47,170
before 6 o'clock

23
00:00:52,020 --> 00:00:49,570
Houston time and they were doing a great

24
00:00:52,979 --> 00:00:52,030
job up there listening to them they

25
00:00:54,959 --> 00:00:52,989
sound like they're having a really good

26
00:00:57,090 --> 00:00:54,969
time as well things are perked along

27
00:00:59,430 --> 00:00:57,100
just as we would all hope from an

28
00:01:01,739 --> 00:00:59,440
activity standpoint this morning we went

29
00:01:03,720 --> 00:01:01,749
performed our second phasing rendezvous

30
00:01:06,270 --> 00:01:03,730
phasing burned and that was about a 10

31
00:01:07,530 --> 00:01:06,280
foot per second right ohms burned that

32
00:01:09,450 --> 00:01:07,540
is just setting us up for a rendezvous

33
00:01:11,610 --> 00:01:09,460
tomorrow tonight we'll do one more of

34
00:01:12,990 --> 00:01:11,620
those rendezvous phasing burns that

35
00:01:16,050 --> 00:01:13,000
one's a little bit smaller at about 6

36
00:01:17,790 --> 00:01:16,060
feet per second currently we're phasing

37
00:01:20,040 --> 00:01:17,800
in on the International Space Station

38
00:01:22,350 --> 00:01:20,050

we're about 7600 nautical miles behind

39
00:01:25,950 --> 00:01:22,360
the ISS and of course we'll get there

40
00:01:27,810 --> 00:01:25,960
tomorrow for today Steve Lindsay eric

41
00:01:29,550 --> 00:01:27,820
boe and al jarreau they perform the

42
00:01:31,650 --> 00:01:29,560
flight day 2 inspection they've

43
00:01:33,270 --> 00:01:31,660
completed so far the starboard and the

44
00:01:34,830 --> 00:01:33,280
nose cap surveys and we're working on

45
00:01:37,470 --> 00:01:34,840
the port survey when I came over here

46
00:01:39,210 --> 00:01:37,480
all is going really well the systems are

47
00:01:40,920 --> 00:01:39,220
pretty Haven just well just fine with

48
00:01:42,690 --> 00:01:40,930
that and we expect to get that all

49
00:01:45,840 --> 00:01:42,700
wrapped up shortly and get the orbiter

50
00:01:48,080 --> 00:01:45,850
boom sensor system put away for tonight

51
00:01:50,970 --> 00:01:48,090
and all ready for docking tomorrow

52
00:01:52,350 --> 00:01:50,980
during this time period the other folks

53
00:01:55,530 --> 00:01:52,360
steve bowen mike barratt and nicole

54
00:01:57,570 --> 00:01:55,540
stott they continue you can to configure

55
00:01:59,970 --> 00:01:57,580
discovery for orbit ops by setting up

56
00:02:01,650 --> 00:01:59,980
the odometer little bicycle that they

57
00:02:04,410 --> 00:02:01,660
used for exercise they activated the

58
00:02:05,970 --> 00:02:04,420
National Laboratory program samples they

59
00:02:08,369 --> 00:02:05,980
were taking some orbit photos and some

60
00:02:11,010 --> 00:02:08,379
surveys for us with photos and they're

61
00:02:12,810 --> 00:02:11,020
checking out their spacesuits for their

62
00:02:13,900 --> 00:02:12,820
spacewalks on flight days five in flight

63
00:02:15,460 --> 00:02:13,910

day seven

64
00:02:17,260 --> 00:02:15,470
later today they'll continue with those

65
00:02:19,090 --> 00:02:17,270
preps by installing the centreline

66
00:02:21,760 --> 00:02:19,100
camera which is of course the camera we

67
00:02:23,800 --> 00:02:21,770
use to when we rendezvous to align the

68
00:02:25,600 --> 00:02:23,810
the discovery with the International

69
00:02:27,370 --> 00:02:25,610
Space Station and they're checking out

70
00:02:28,480 --> 00:02:27,380
the round of Atul's and docking systems

71
00:02:30,880 --> 00:02:28,490
and configuring the airlock for

72
00:02:32,230 --> 00:02:30,890
tomorrow's docking all in all those

73
00:02:34,180 --> 00:02:32,240
activities everything's going really

74
00:02:36,630 --> 00:02:34,190
well on board the plan is in good shape

75
00:02:39,010 --> 00:02:36,640
and the crews executing it quite well

76
00:02:40,750 --> 00:02:39,020
discovery it's from a system standpoint

77
00:02:43,390 --> 00:02:40,760
is doing fantastic the vehicles in great

78
00:02:45,460 --> 00:02:43,400
shape I don't even have any notable

79
00:02:47,710 --> 00:02:45,470
anomalies to talk to you about so

80
00:02:50,650 --> 00:02:47,720
everything's going well there and we're

81
00:02:54,940 --> 00:02:50,660
ready for our rendezvous tomorrow so

82
00:02:58,060 --> 00:02:54,950
that's all I got okay great thank you

83
00:03:01,000 --> 00:02:58,070
well good afternoon it is it's great to

84
00:03:03,700 --> 00:03:01,010
be here with you today it's it's always

85
00:03:07,950 --> 00:03:03,710
really good to be back on orbit I think

86
00:03:11,110 --> 00:03:07,960
in this case it's it's especially

87
00:03:12,400 --> 00:03:11,120
especially prideful for us I think a

88
00:03:14,740 --> 00:03:12,410

couple of reasons for that

89
00:03:16,660 --> 00:03:14,750
not the least of which is no doubt that

90
00:03:19,270 --> 00:03:16,670
this is a big milestone for discovery

91
00:03:21,490 --> 00:03:19,280
and and for the shuttle team as a whole

92
00:03:25,180 --> 00:03:21,500
and so it's great to see her back in

93
00:03:27,580 --> 00:03:25,190
orbit and performing the way she is also

94
00:03:30,790 --> 00:03:27,590
I think because and I know you've been

95
00:03:33,130 --> 00:03:30,800
briefed quite a bit before launch on on

96
00:03:37,020 --> 00:03:33,140
all the work that took place with the

97
00:03:39,610 --> 00:03:37,030
external tank and and the various

98
00:03:42,190 --> 00:03:39,620
challenge that challenges that we had as

99
00:03:46,750 --> 00:03:42,200
a program going back to late October and

100
00:03:48,340 --> 00:03:46,760
early November I I know some of those

101
00:03:50,820 --> 00:03:48,350
briefings went into some great detail on

102
00:03:53,590 --> 00:03:50,830
on the work that the team performed and

103
00:03:56,979 --> 00:03:53,600
and what was necessary to get us back to

104
00:03:59,170 --> 00:03:56,989
a flying condition again I don't think

105
00:04:03,190 --> 00:03:59,180
in those forums or in this one I can

106
00:04:04,690 --> 00:04:03,200
really do justice in terms of in terms

107
00:04:08,110 --> 00:04:04,700
of what I want to say about the team's

108
00:04:10,030 --> 00:04:08,120
effort in that regard as a as a shuttle

109
00:04:12,610 --> 00:04:10,040
program management team I can tell you

110
00:04:16,710 --> 00:04:12,620
that we couldn't be more proud of what

111
00:04:19,539 --> 00:04:16,720
the team was was able to accomplish the

112
00:04:21,849 --> 00:04:19,549
dedication that the team showed to it to

113
00:04:25,090 --> 00:04:21,859

a person across the country across the

114
00:04:27,190 --> 00:04:25,100
various centers the the sheer

115
00:04:31,000 --> 00:04:27,200
perseverance of

116
00:04:33,820 --> 00:04:31,010
of the team members and in their

117
00:04:35,710 --> 00:04:33,830
commitment to excellence we've seen this

118
00:04:38,760 --> 00:04:35,720
kind of thing as we've tackled other

119
00:04:42,550 --> 00:04:38,770
problems going through the program and

120
00:04:45,550 --> 00:04:42,560
in this case I think it was was it was

121
00:04:46,960 --> 00:04:45,560
extra special because we had some other

122
00:04:51,100 --> 00:04:46,970
challenges that we haven't faced before

123
00:04:55,810 --> 00:04:51,110
in the program and to include a smaller

124
00:04:57,760 --> 00:04:55,820
workforce and and some pressures on

125
00:04:59,500 --> 00:04:57,770
folks both in their personal and

126
00:05:03,160 --> 00:04:59,510
professional life that we probably

127
00:05:06,690 --> 00:05:03,170
didn't face before but these folks

128
00:05:10,990 --> 00:05:06,700
it was amazing to watch them work and

129
00:05:13,000 --> 00:05:11,000
it's a no doubt another reason as I said

130
00:05:14,710 --> 00:05:13,010
why it's extra special for us to be in

131
00:05:16,390 --> 00:05:14,720
orbit again with discovery so I can't

132
00:05:22,230 --> 00:05:16,400
say enough about the team performance it

133
00:05:25,240 --> 00:05:22,240
was just exemplary overall and it really

134
00:05:27,580 --> 00:05:25,250
it's hard to describe and really hard as

135
00:05:29,680 --> 00:05:27,590
I said in a forum like this to really

136
00:05:32,680 --> 00:05:29,690
give you a full appreciation of what it

137
00:05:34,540 --> 00:05:32,690
means to us and what it really took to

138
00:05:37,330 --> 00:05:34,550

get to the point where we could light

139
00:05:38,590 --> 00:05:37,340
the solids and and have their liftoff in

140
00:05:41,620 --> 00:05:38,600
the launch of discovery that we had

141
00:05:44,320 --> 00:05:41,630
yesterday so just a great day to be part

142
00:05:46,060 --> 00:05:44,330
of the space program a great day to be

143
00:05:49,660 --> 00:05:46,070
part of this team so I'm extremely proud

144
00:05:51,880 --> 00:05:49,670
of the team the the launch and the

145
00:05:55,780 --> 00:05:51,890
ascent went extremely well it was

146
00:05:59,170 --> 00:05:55,790
beautiful launch and et 137 the external

147
00:06:01,900 --> 00:05:59,180
tank had excellent performance again a

148
00:06:05,050 --> 00:06:01,910
testament to the team's work the past

149
00:06:06,700 --> 00:06:05,060
several months in particular as Brian

150
00:06:08,740 --> 00:06:06,710
mentioned Discovery's performance on

151
00:06:13,150 --> 00:06:08,750
orbit has been outstanding we had very

152
00:06:16,540 --> 00:06:13,160
very few minor kinds of systems items to

153
00:06:19,660 --> 00:06:16,550
even talk about and nothing of

154
00:06:21,160 --> 00:06:19,670
significance we're looking forward to

155
00:06:25,690 --> 00:06:21,170
the rendezvous and the and the docking

156
00:06:28,870 --> 00:06:25,700
tomorrow we have a very full and an

157
00:06:31,840 --> 00:06:28,880
exciting mission with the with the space

158
00:06:33,700 --> 00:06:31,850
station and the team is ready to go at

159
00:06:36,790 --> 00:06:33,710
the MMT today we really didn't have a

160
00:06:40,220 --> 00:06:36,800
whole lot to talk about we did review

161
00:06:43,190 --> 00:06:40,230
some very preliminary

162
00:06:45,350 --> 00:06:43,200
images from a cent we have and I think

163
00:06:48,530 --> 00:06:45,360

we have a couple of images with us today

164
00:06:51,530 --> 00:06:48,540
Kyle and we can show one that you don't

165
00:06:56,090 --> 00:06:51,540
doubt have heard about this is I believe

166
00:06:59,810 --> 00:06:56,100
it was a 231 second event we had a piece

167
00:07:04,610 --> 00:06:59,820
of foam that liberated from the external

168
00:07:07,460 --> 00:07:04,620
tank this area here is is on the lower

169
00:07:10,700 --> 00:07:07,470
part of the inner tank area it's it's

170
00:07:15,110 --> 00:07:10,710
actually the majority of this debris

171
00:07:17,600 --> 00:07:15,120
liberation is just a little bit above

172
00:07:19,550 --> 00:07:17,610
the lh2 flange area that you heard us

173
00:07:23,090 --> 00:07:19,560
talk quite a bit about in the last

174
00:07:25,430 --> 00:07:23,100
several months the the foam liberated at

175
00:07:27,770 --> 00:07:25,440
a time when it's it's relatively late

176
00:07:31,490 --> 00:07:27,780
and the profile it's certainly well past

177
00:07:33,950 --> 00:07:31,500
our time of concern for foam liberation

178
00:07:35,090 --> 00:07:33,960
nevertheless this piece liberated and

179
00:07:37,520 --> 00:07:35,100
then I think we have another slide that

180
00:07:39,230 --> 00:07:37,530
shows sort of the trajectory of the

181
00:07:42,560 --> 00:07:39,240
piece if you if you get your bearings in

182
00:07:44,270 --> 00:07:42,570
this in this photo here the lower left

183
00:07:47,660 --> 00:07:44,280
corner of the picture is the is the

184
00:07:50,420 --> 00:07:47,670
actual feed line on the tank and and

185
00:07:53,960 --> 00:07:50,430
then the yellow line and the red lines

186
00:07:58,360 --> 00:07:53,970
are intended to indicate the trajectory

187
00:08:03,080 --> 00:07:58,370
of the foam piece it took sort of a

188
00:08:06,830 --> 00:08:03,090

random path where it initially floated

189
00:08:09,500 --> 00:08:06,840
up looks like it may have touched the

190
00:08:10,970 --> 00:08:09,510
underside of the orbiter there in the in

191
00:08:13,340 --> 00:08:10,980
the bipod attached region maybe

192
00:08:17,020 --> 00:08:13,350
somewhere around the arrowhead region

193
00:08:20,380 --> 00:08:17,030
and then it from there it went and and

194
00:08:22,880 --> 00:08:20,390
traveled back along the stack and

195
00:08:24,920 --> 00:08:22,890
doesn't appear to have impacted any

196
00:08:26,570 --> 00:08:24,930
other part of the orbiter or the or the

197
00:08:30,620 --> 00:08:26,580
shuttle system as it made its way into

198
00:08:34,339 --> 00:08:30,630
the plume so that was that was an item

199
00:08:38,630 --> 00:08:34,349
of interest during a sent this I'll

200
00:08:40,820 --> 00:08:38,640
remind you this is in an area where we

201
00:08:44,630 --> 00:08:40,830
know we have susceptibility to what we

202
00:08:46,220 --> 00:08:44,640
call crop pumping where that part of it

203
00:08:48,980 --> 00:08:46,230
that's at the very top of the liquid

204
00:08:51,290 --> 00:08:48,990
hydrogen tank and so when we get to this

205
00:08:52,639 --> 00:08:51,300
three or four minute time period an

206
00:08:55,460 --> 00:08:52,649
asset that part of the tank is

207
00:08:58,939 --> 00:08:55,470
getting relatively warm compared to what

208
00:09:01,699 --> 00:08:58,949
it had been and so we get this cryo

209
00:09:04,340 --> 00:09:01,709
pumping and from a physics standpoint

210
00:09:06,199 --> 00:09:04,350
and in a post-flight historical and a

211
00:09:08,449 --> 00:09:06,209
test standpoint going back to return to

212
00:09:10,549 --> 00:09:08,459
flight we know we can lose foam as a

213
00:09:13,669 --> 00:09:10,559

result of this crowd pumping phenomenon

214
00:09:16,639 --> 00:09:13,679
so that was we believe preliminarily

215
00:09:21,230 --> 00:09:16,649
that was the cause of this foam loss and

216
00:09:23,569 --> 00:09:21,240
so not not totally unexpected this is

217
00:09:27,549 --> 00:09:23,579
this is a portion an area of the tank

218
00:09:29,780 --> 00:09:27,559
that we're very attuned to in terms of

219
00:09:31,280 --> 00:09:29,790
the potential for this kind of debris

220
00:09:33,819 --> 00:09:31,290
loss so we don't have any concerns about

221
00:09:36,259 --> 00:09:33,829
this event obviously we'll do our normal

222
00:09:39,769 --> 00:09:36,269
vehicle inspections and in fact they are

223
00:09:41,090 --> 00:09:39,779
ongoing today and tomorrow as we

224
00:09:43,280 --> 00:09:41,100
approach the space station and we'll do

225
00:09:44,720 --> 00:09:43,290
all of our normal inspection work to

226
00:09:47,030 --> 00:09:44,730
make sure that the vehicle is okay but

227
00:09:49,489 --> 00:09:47,040
that was one foam event that I thought

228
00:09:52,309 --> 00:09:49,499
we would show you today there were a

229
00:09:55,100 --> 00:09:52,319
couple of other events during s and they

230
00:09:59,509 --> 00:09:55,110
were as well outside of the area of

231
00:10:02,840 --> 00:09:59,519
aerodynamic sensitive transport time and

232
00:10:05,150 --> 00:10:02,850
so we didn't we didn't see anything of

233
00:10:07,790 --> 00:10:05,160
concern in terms of debris loss from the

234
00:10:09,439 --> 00:10:07,800
tank and as I mentioned earlier overall

235
00:10:12,290 --> 00:10:09,449
the the performance of this tank

236
00:10:15,519 --> 00:10:12,300
external tank number 137 was was really

237
00:10:18,079 --> 00:10:15,529
exceptional so from a preliminary

238
00:10:19,730 --> 00:10:18,089

standpoint things look really good for

239
00:10:21,669 --> 00:10:19,740
for all of the Space Shuttle elements

240
00:10:24,319 --> 00:10:21,679
and certainly discovery is performing

241
00:10:28,429 --> 00:10:24,329
very very well on orbit and and the crew

242
00:10:30,079 --> 00:10:28,439
as well on their way to to getting into

243
00:10:31,309 --> 00:10:30,089
the mission in earnest and and so we

244
00:10:35,480 --> 00:10:31,319
look forward to running and docking

245
00:10:36,889 --> 00:10:35,490
tomorrow and in the the crew and the

246
00:10:40,369 --> 00:10:36,899
ground and the teams on the ground are

247
00:10:42,829 --> 00:10:40,379
ready to go so that's all I have them be

248
00:10:44,569 --> 00:10:42,839
happy to take your questions okay thanks

249
00:10:46,369 --> 00:10:44,579
gentlemen we'll start here of course and

250
00:10:48,859 --> 00:10:46,379
then check with the other NASA centers

251
00:10:50,239 --> 00:10:48,869
and out on the phone bridge please give

252
00:10:52,220 --> 00:10:50,249
your name and affiliation for those

253
00:10:54,499 --> 00:10:52,230
following along with the briefing

254
00:10:57,199 --> 00:10:54,509
Jeremiah we'll start with mark hey

255
00:11:00,710 --> 00:10:57,209
thanks mark for Aviation Week and I

256
00:11:04,489 --> 00:11:00,720
think this is for Leroy but on the lh2

257
00:11:06,919 --> 00:11:04,499
flange foam loss and debris trajectory

258
00:11:10,929 --> 00:11:06,929
you talked about is that something you

259
00:11:13,309 --> 00:11:10,939
would see in the photography during the

260
00:11:15,559 --> 00:11:13,319
backflip tomorrow

261
00:11:18,439 --> 00:11:15,569
or is that something you have to catch

262
00:11:23,179 --> 00:11:18,449
another another way in terms of whether

263
00:11:24,979 --> 00:11:23,189

there was impact damage certainly we we

264
00:11:26,869 --> 00:11:24,989
would fully expect to see any kind of

265
00:11:28,489 --> 00:11:26,879
damage in that in that area that I

266
00:11:33,289 --> 00:11:28,499
showed you in the photo there that one

267
00:11:34,849 --> 00:11:33,299
still shot the closest the area of what

268
00:11:36,889 --> 00:11:34,859
I would call closest approach if it did

269
00:11:37,939 --> 00:11:36,899
in fact touch the the bottom of the

270
00:11:39,619 --> 00:11:37,949
orbiter would have been in that

271
00:11:42,189 --> 00:11:39,629
Arrowhead region where the bipod

272
00:11:45,079 --> 00:11:42,199
attaches to the underside of the orbiter

273
00:11:49,339 --> 00:11:45,089
up in the landing gear the forward

274
00:11:52,609 --> 00:11:49,349
landing gear door area so we we expect

275
00:11:56,209 --> 00:11:52,619
as we have in the past we would get very

276
00:11:58,909 --> 00:11:56,219
good imagery of that entire area during

277
00:12:07,639 --> 00:11:58,919
the the RPM and over tomorrow during the

278
00:12:12,220 --> 00:12:10,040
Philips lost with NASA space flight calm

279
00:12:17,660 --> 00:12:12,230
for Leroy could you just provide a

280
00:12:20,210 --> 00:12:17,670
status on the SRB recovery SRB recovery

281
00:12:21,590 --> 00:12:20,220
is on track as the same schedule as it

282
00:12:23,179 --> 00:12:21,600
was before we launched so I think

283
00:12:26,030 --> 00:12:23,189
tomorrow we'll get a preliminary

284
00:12:27,499 --> 00:12:26,040
briefing and they'll give us a good

285
00:12:30,949 --> 00:12:27,509
indication and when we expect to have

286
00:12:33,319 --> 00:12:30,959
the the boosters in tow and in in in the

287
00:12:35,980 --> 00:12:33,329
port in fact so I'm looking to the

288
00:12:40,730 --> 00:12:35,990

Sunday Monday timeframe thank you

289
00:12:42,699 --> 00:12:40,740
anything else Gina oh grab Eric while

290
00:12:45,799 --> 00:12:42,709
you're there

291
00:12:49,549 --> 00:12:45,809
Eric burger with Houston Chronicle

292
00:12:53,239 --> 00:12:49,559
Leroy if you could kind of go over the

293
00:12:56,660 --> 00:12:53,249
status the last two tanks for 134 and

294
00:12:58,730 --> 00:12:56,670
135 talk about their disposition are

295
00:13:02,780 --> 00:12:58,740
they going to be fixed the same way

296
00:13:04,009 --> 00:13:02,790
et 137 was and does that give you a sort

297
00:13:05,509 --> 00:13:04,019
of more confidence in these last two

298
00:13:09,619 --> 00:13:05,519
tanks considering their performance of

299
00:13:12,530 --> 00:13:09,629
this tank yeah we've essentially settled

300
00:13:14,960 --> 00:13:12,540
on a path that puts all of the tank and

301
00:13:20,169 --> 00:13:14,970
essentially in the same configuration as

302
00:13:22,999 --> 00:13:20,179
as what we flew here on et 137 so ET 122

303
00:13:25,189 --> 00:13:23,009
the tank that we have hanging in the in

304
00:13:27,590 --> 00:13:25,199
the in the integration cell right now

305
00:13:30,019 --> 00:13:27,600
getting ready to mate and ever is the

306
00:13:35,059 --> 00:13:30,029
tank that will fly on STS 134 the April

307
00:13:39,350 --> 00:13:35,069
mission and and we made a decision a few

308
00:13:41,329 --> 00:13:39,360
weeks ago that the the best approach for

309
00:13:43,730 --> 00:13:41,339
us would be to go with a configuration

310
00:13:48,160 --> 00:13:43,740
that we know which is to put the radius

311
00:13:51,829 --> 00:13:48,170
blocks on the LT flange area on 80 122

312
00:13:55,850 --> 00:13:51,839
and we anticipate we'll do the same

313
00:13:57,679 --> 00:13:55,860

thing for et 138 so we will essentially

314
00:13:59,449 --> 00:13:57,689
plan to fly the last three tanks to

315
00:14:02,720 --> 00:13:59,459
include the one we just launched in flew

316
00:14:07,309 --> 00:14:02,730
yesterday 80 137 in the same

317
00:14:11,480 --> 00:14:07,319
configuration it's one that that prior

318
00:14:15,559 --> 00:14:11,490
to this flight we you know is the best

319
00:14:17,509 --> 00:14:15,569
data that we have relative to the the

320
00:14:19,460 --> 00:14:17,519
lion's share of the test and analysis

321
00:14:20,430 --> 00:14:19,470
that we've done and we have a high

322
00:14:22,470 --> 00:14:20,440
degree of confidence

323
00:14:24,869 --> 00:14:22,480
in the modification that we've done and

324
00:14:27,210 --> 00:14:24,879
certainly it performed exceptionally on

325
00:14:30,379 --> 00:14:27,220
on the tank we just flew launched and

326
00:14:33,689 --> 00:14:30,389
flew yesterday so that's our plan

327
00:14:36,960 --> 00:14:33,699
Junius in Serie ABC News for Brian what

328
00:14:38,759 --> 00:14:36,970
is the fly around the Soyuz fly around a

329
00:14:43,800 --> 00:14:38,769
done deal yet if so when would that

330
00:14:46,079 --> 00:14:43,810
happen sure the discussion for the Soyuz

331
00:14:47,670 --> 00:14:46,089
fly around is something we looked at

332
00:14:50,030 --> 00:14:47,680
real closely for the last few weeks

333
00:14:52,889 --> 00:14:50,040
prior to flight it's not a done deal yet

334
00:14:55,170 --> 00:14:52,899
we're going to have my friends and the

335
00:14:57,150 --> 00:14:55,180
MMT and the IMT discuss it further and

336
00:14:59,220 --> 00:14:57,160
I've asked them to give us ops guys the

337
00:15:02,400 --> 00:14:59,230
decision no later than flight day six if

338
00:15:03,869 --> 00:15:02,410

they agree and asked us to go include

339
00:15:05,999 --> 00:15:03,879
that in the flight then we're going to

340
00:15:08,249 --> 00:15:06,009
insert a day and B between flight day

341
00:15:10,379 --> 00:15:08,259
nine and ten so it we would do the

342
00:15:13,290 --> 00:15:10,389
flight the fly around fly about about

343
00:15:14,069 --> 00:15:13,300
flight day on flight day ten and the

344
00:15:17,249 --> 00:15:14,079
current schedule

345
00:15:19,499 --> 00:15:17,259
if after him to review and IMM T review

346
00:15:25,499 --> 00:15:19,509
they conclude that we ought to go do

347
00:15:28,590 --> 00:15:25,509
that right right behind her Denise chat

348
00:15:30,120 --> 00:15:28,600
space comm question for Leroy I know you

349
00:15:32,179 --> 00:15:30,130
said that the preliminary results show

350
00:15:35,249 --> 00:15:32,189
that the phone loss is not an issue but

351
00:15:36,600 --> 00:15:35,259
because you saw that with et 137 is that

352
00:15:37,949 --> 00:15:36,610
going to change at all the modifications

353
00:15:42,600 --> 00:15:37,959
that you're doing for endeavour and

354
00:15:45,809 --> 00:15:42,610
Atlantis is tanks no in all likelihood

355
00:15:47,579 --> 00:15:45,819
it won't I will as we always do reserved

356
00:15:50,189 --> 00:15:47,589
final judgment until until we have

357
00:15:52,400 --> 00:15:50,199
thoroughly reviewed all of the data what

358
00:15:54,600 --> 00:15:52,410
I've shown you today is preliminary my

359
00:15:56,759 --> 00:15:54,610
assessment of it is also preliminary

360
00:15:59,550 --> 00:15:56,769
what I would tell you that I have pretty

361
00:16:01,829 --> 00:15:59,560
high degree of confidence that we're

362
00:16:06,120 --> 00:16:01,839
going to in the end determine that this

363
00:16:08,220 --> 00:16:06,130

was a crowd pumping event one that that

364
00:16:09,840 --> 00:16:08,230
we know that we're susceptible to why

365
00:16:13,139 --> 00:16:09,850
don't we know that we have some level of

366
00:16:16,439 --> 00:16:13,149
accepted risk for and one that we know

367
00:16:18,569 --> 00:16:16,449
that in this area of the lh2 flange

368
00:16:21,509 --> 00:16:18,579
we've done an awful lot of work to

369
00:16:24,360 --> 00:16:21,519
ensure that we can minimize these kind

370
00:16:25,590 --> 00:16:24,370
of cryo and crowd pumping events if you

371
00:16:27,569 --> 00:16:25,600
recall when we were having the

372
00:16:28,930 --> 00:16:27,579
discussions about eighteen 137 the tank

373
00:16:33,010 --> 00:16:28,940
we just flew a model

374
00:16:37,120 --> 00:16:33,020
and in flu one of the areas that we that

375
00:16:39,580 --> 00:16:37,130
we emphasized was we were we were quite

376
00:16:43,360 --> 00:16:39,590
satisfied that we were able to develop

377
00:16:46,180 --> 00:16:43,370
flight rationale for the LH to the

378
00:16:48,640 --> 00:16:46,190
stringer ends on the LH to flange end of

379
00:16:51,010 --> 00:16:48,650
the inner tank because we really didn't

380
00:16:53,290 --> 00:16:51,020
want to have to remove foam and modify

381
00:16:56,880 --> 00:16:53,300
those areas of the stringer ends and

382
00:17:01,420 --> 00:16:56,890
part of the reason for that is because

383
00:17:03,190 --> 00:17:01,430
we have some very special processes that

384
00:17:06,250 --> 00:17:03,200
are done at the manufacturing plant

385
00:17:08,320 --> 00:17:06,260
where the LH to flange closeout is

386
00:17:10,900 --> 00:17:08,330
concerned what the way we put the foam

387
00:17:13,810 --> 00:17:10,910
on the methods and the techniques that

388
00:17:16,540 --> 00:17:13,820

we use for putting that foam on you'll

389
00:17:18,160 --> 00:17:16,550
recall that we did a lot of analytical

390
00:17:22,120 --> 00:17:18,170
work and a lot of testing in the return

391
00:17:24,940 --> 00:17:22,130
to flight timeframe to to wind up with

392
00:17:27,730 --> 00:17:24,950
the design and the implementation of the

393
00:17:29,830 --> 00:17:27,740
of that LH to flange area that we fly

394
00:17:31,690 --> 00:17:29,840
today and we really didn't want to

395
00:17:35,410 --> 00:17:31,700
disturb that because we know that we

396
00:17:37,660 --> 00:17:35,420
have some susceptibility with with crowd

397
00:17:40,420 --> 00:17:37,670
pumping in that area so I do not

398
00:17:42,160 --> 00:17:40,430
anticipate that that what we've seen in

399
00:17:43,420 --> 00:17:42,170
terms of performance on this tank would

400
00:17:46,360 --> 00:17:43,430
cause us to want to do anything

401
00:17:48,220 --> 00:17:46,370
different in the area of the LH to

402
00:17:52,570 --> 00:17:48,230
flange on the upcoming two tanks that's

403
00:17:55,690 --> 00:17:52,580
preliminary in fact I would say contrary

404
00:17:58,000 --> 00:17:55,700
to that I think we'll look at the

405
00:18:00,610 --> 00:17:58,010
performance of this tank once all the

406
00:18:03,580 --> 00:18:00,620
data is in and it will confirm what we

407
00:18:06,400 --> 00:18:03,590
think today which is it it was performed

408
00:18:08,830 --> 00:18:06,410
exceptionally and it reinforces the the

409
00:18:13,510 --> 00:18:08,840
modifications that we did on the on the

410
00:18:15,640 --> 00:18:13,520
locks the elbow tooth flange area and so

411
00:18:17,710 --> 00:18:15,650
I think it'll it'll reinforce the flight

412
00:18:20,970 --> 00:18:17,720
rationale that we established to go fly

413
00:18:26,010 --> 00:18:23,430

hi Robert Pearlman with collects paste

414
00:18:29,760 --> 00:18:26,020
copper Brian can you just give a preview

415
00:18:33,510 --> 00:18:29,770
tomorrow's docking activities and talk a

416
00:18:35,340 --> 00:18:33,520
little bit about the dragon IDT oh that

417
00:18:37,289 --> 00:18:35,350
will be performed during that as well as

418
00:18:38,669 --> 00:18:37,299
on the subject of visiting vehicles if

419
00:18:40,560 --> 00:18:38,679
there's anything different about the

420
00:18:43,590 --> 00:18:40,570
stocking given that you do have HTV and

421
00:18:46,140 --> 00:18:43,600
an ATV already there okay

422
00:18:48,150 --> 00:18:46,150
for tomorrow the cruel wakeup like any

423
00:18:49,980 --> 00:18:48,160
other day and we're gonna pick up with

424
00:18:51,960 --> 00:18:49,990
our what we call group P power up will

425
00:18:53,430 --> 00:18:51,970
power up all the a couple extra

426
00:18:55,470 --> 00:18:53,440
computers and some other components on

427
00:18:57,810 --> 00:18:55,480
the vehicle to get ready to go execute

428
00:18:59,880 --> 00:18:57,820
the docking and then we'll also we have

429
00:19:01,320 --> 00:18:59,890
two big Burns planned and altitude

430
00:19:04,260 --> 00:19:01,330
raising burning then another phasing

431
00:19:06,330 --> 00:19:04,270
burn and then followed about a Rev later

432
00:19:08,280 --> 00:19:06,340
by the ti burn the terminal initiation

433
00:19:09,330 --> 00:19:08,290
burn for the rendezvous as far as the

434
00:19:10,740 --> 00:19:09,340
rendezvous itself it's a pretty

435
00:19:13,110 --> 00:19:10,750
straightforward round a bit like many we

436
00:19:15,360 --> 00:19:13,120
have accomplished in the past no special

437
00:19:16,919 --> 00:19:15,370
tasks or things going on for that the

438
00:19:20,460 --> 00:19:16,929

vehicles in great shaped crews in great

439
00:19:23,130 --> 00:19:20,470
shape so nothing extra special there the

440
00:19:25,440 --> 00:19:23,140
as far as drag and I it's a DTO we have

441
00:19:27,870 --> 00:19:25,450
on board it's a box that sits by the

442
00:19:30,539 --> 00:19:27,880
orbiter docking system out in the

443
00:19:32,039 --> 00:19:30,549
payload Bay and the only interface we

444
00:19:32,970 --> 00:19:32,049
have with is a power switch pretty much

445
00:19:35,789 --> 00:19:32,980
we turned it on

446
00:19:37,350 --> 00:19:35,799
prior to the we begin the rendezvous and

447
00:19:40,230 --> 00:19:37,360
we turn it off once we get docked and

448
00:19:42,150 --> 00:19:40,240
our insight interface with it is limited

449
00:19:45,240 --> 00:19:42,160
so hopefully we'll get to see the data

450
00:19:47,549 --> 00:19:45,250
how it performs later as a agency as a

451
00:19:48,960 --> 00:19:47,559
spaceflight community but as far as

452
00:19:51,600 --> 00:19:48,970
during this flight it's not going to do

453
00:19:54,720 --> 00:19:51,610
anything for us we'll just our power it

454
00:19:56,159 --> 00:19:54,730
on and power it off when we get done so

455
00:19:57,930 --> 00:19:56,169
as far as arounded with everything's

456
00:19:59,760 --> 00:19:57,940
nominal and we expect everything to go

457
00:20:02,030 --> 00:19:59,770
just fine and as far as anything

458
00:20:03,570 --> 00:20:02,040
different because HTV and ATV are there

459
00:20:05,610 --> 00:20:03,580
no not really

460
00:20:07,710 --> 00:20:05,620
that we we have them in our visuals we

461
00:20:09,870 --> 00:20:07,720
see that they're there and we're gonna

462
00:20:11,820 --> 00:20:09,880
fly in we did talk about powering on one

463
00:20:14,610 --> 00:20:11,830

of the cameras on the exposed facility

464
00:20:16,320 --> 00:20:14,620
on the Japanese side and they may choose

465
00:20:19,440 --> 00:20:16,330
to do that and get some good video of

466
00:20:21,090 --> 00:20:19,450
the orbiter as its approaching we have

467
00:20:22,710 --> 00:20:21,100
said that they can do that if they like

468
00:20:24,600 --> 00:20:22,720
and I think they were still

469
00:20:27,840 --> 00:20:24,610
contemplating that when I left earlier

470
00:20:32,370 --> 00:20:29,790
Peter spots with the Christian Science

471
00:20:34,050 --> 00:20:32,380
Monitor for mr. Cain I wonder for for

472
00:20:36,150 --> 00:20:34,060
the rookie in the group if you could

473
00:20:38,280 --> 00:20:36,160
describe a little bit this does cryo

474
00:20:39,840 --> 00:20:38,290
pumping what what causes it what effect

475
00:20:43,590 --> 00:20:39,850
it has on the tank that would then lead

476
00:20:45,930 --> 00:20:43,600
to a shedding of foam okay yeah on the

477
00:20:49,160 --> 00:20:45,940
the probably the the most basic level

478
00:20:53,340 --> 00:20:49,170
from a physics level understanding the

479
00:20:57,260 --> 00:20:53,350
air pockets in the system that area of

480
00:21:00,750 --> 00:20:57,270
the tank is very cold before we launch

481
00:21:03,120 --> 00:21:00,760
the tank is is filled essentially up to

482
00:21:05,280 --> 00:21:03,130
nearly the the top where that flange

483
00:21:08,610 --> 00:21:05,290
area is so that whole surrounding area

484
00:21:11,340 --> 00:21:08,620
is very cold to include the back face of

485
00:21:13,890 --> 00:21:11,350
the tank structure and the flange and

486
00:21:17,760 --> 00:21:13,900
therefore the necessity of the

487
00:21:20,010 --> 00:21:17,770
insulation and the foam as we proceed

488
00:21:21,930 --> 00:21:20,020

through launch and a scent we use up

489
00:21:25,460 --> 00:21:21,940
that fuel at a pretty rapid pace so the

490
00:21:29,460 --> 00:21:25,470
fuel level goes down in the tank and so

491
00:21:31,410 --> 00:21:29,470
therefore that whole area that's vacated

492
00:21:33,420 --> 00:21:31,420
by that fuel tends to warm up and

493
00:21:36,480 --> 00:21:33,430
therefore the structure around it warms

494
00:21:38,820 --> 00:21:36,490
up the air warms up and any air pockets

495
00:21:40,710 --> 00:21:38,830
that you have in the system tend to want

496
00:21:42,900 --> 00:21:40,720
to escape because now they're they're

497
00:21:45,150 --> 00:21:42,910
warmer when they do that they sometimes

498
00:21:46,890 --> 00:21:45,160
push foam in the direction to include

499
00:21:50,040 --> 00:21:46,900
away from the surface of the tank and

500
00:21:52,230 --> 00:21:50,050
cause foam at whatever its weakest point

501
00:21:55,440 --> 00:21:52,240
is to pop off that's fundamentally

502
00:21:57,420 --> 00:21:55,450
what's happening okay let's go and take

503
00:22:02,640 --> 00:21:57,430
some questions down at the Kennedy Space

504
00:22:04,110 --> 00:22:02,650
Center the launch site in Florida hello

505
00:22:06,900 --> 00:22:04,120
this is Marsha Donna The Associated

506
00:22:09,480 --> 00:22:06,910
Press Leroy I have a couple foam

507
00:22:12,150 --> 00:22:09,490
questions please the chart that you

508
00:22:14,340 --> 00:22:12,160
showed had impact one two and three and

509
00:22:16,800 --> 00:22:14,350
I didn't know if those were three

510
00:22:19,590 --> 00:22:16,810
different pieces of foam potentially

511
00:22:21,300 --> 00:22:19,600
hitting at three different locations or

512
00:22:23,780 --> 00:22:21,310
whether that was just you just mentioned

513
00:22:26,730 --> 00:22:23,790

the one impact so that's why I'm unclear

514
00:22:29,010 --> 00:22:26,740
okay maybe I'll ask would put the slide

515
00:22:34,620 --> 00:22:29,020
back up and and we can talk to it a

516
00:22:36,270 --> 00:22:34,630
little bit it's really it's to answer

517
00:22:38,250 --> 00:22:36,280
your question best Marsha it's really

518
00:22:39,620 --> 00:22:38,260
it's really best to see this in motion

519
00:22:41,210 --> 00:22:39,630
unfortunately and I

520
00:22:43,940 --> 00:22:41,220
don't know if we have the ability to

521
00:22:47,110 --> 00:22:43,950
pull that up during this during this

522
00:22:51,380 --> 00:22:47,120
conference we probably don't we only saw

523
00:22:52,730 --> 00:22:51,390
one one area that we think that the foam

524
00:22:54,500 --> 00:22:52,740
may have touched the underside of the

525
00:22:56,240 --> 00:22:54,510
orbiter and that's in this area just in

526
00:23:00,850 --> 00:22:56,250
front of a bipod in the what I call the

527
00:23:03,800 --> 00:23:00,860
arrowhead region the others are our

528
00:23:06,140 --> 00:23:03,810
potential you know it says the impact

529
00:23:09,050 --> 00:23:06,150
there there there's potential impact

530
00:23:11,630 --> 00:23:09,060
areas I think there's less certainty in

531
00:23:15,290 --> 00:23:11,640
the other two and because it is very

532
00:23:16,790 --> 00:23:15,300
preliminary I'd probably be what

533
00:23:21,440 --> 00:23:16,800
wouldn't be wise to say a whole lot more

534
00:23:22,970 --> 00:23:21,450
about it than that at this point will in

535
00:23:25,760 --> 00:23:22,980
the coming days potentially have some

536
00:23:27,140 --> 00:23:25,770
more certainty on that but we have to

537
00:23:28,820 --> 00:23:27,150
put some more time and some more

538
00:23:33,280 --> 00:23:28,830

assessment between hours between now and

539
00:23:35,390 --> 00:23:33,290
then but I think the one that we feel

540
00:23:37,070 --> 00:23:35,400
not the least of which reasons is

541
00:23:38,990 --> 00:23:37,080
because it caused the piece of foam to

542
00:23:43,340 --> 00:23:39,000
change direction significantly is the

543
00:23:45,320 --> 00:23:43,350
first event I think I probably would

544
00:23:48,710 --> 00:23:45,330
have chosen to to change these labels

545
00:23:51,110 --> 00:23:48,720
and call it event one two and three but

546
00:23:53,780 --> 00:23:51,120
at any rate I don't know that we have

547
00:23:56,720 --> 00:23:53,790
possibly positively ascertained that all

548
00:23:57,890 --> 00:23:56,730
three of those areas that are marked

549
00:24:02,900 --> 00:23:57,900
there were quote-unquote

550
00:24:06,140 --> 00:24:02,910
impact events that helps clear it up

551
00:24:08,660 --> 00:24:06,150
thank you and in any event these three

552
00:24:10,460 --> 00:24:08,670
events would they be different pieces of

553
00:24:16,430 --> 00:24:10,470
foam where those same one just sort of

554
00:24:18,170 --> 00:24:16,440
ricocheting around piece I'm sorry can

555
00:24:20,000 --> 00:24:18,180
you repeat we didn't hear that it's the

556
00:24:23,660 --> 00:24:20,010
same piece as it's traveling down the

557
00:24:25,850 --> 00:24:23,670
length of the stack great thank you and

558
00:24:27,740 --> 00:24:25,860
do you have I know yesterday at the

559
00:24:30,530 --> 00:24:27,750
briefing it was said that there were at

560
00:24:34,070 --> 00:24:30,540
least four instances of foam loss is

561
00:24:35,270 --> 00:24:34,080
that still the best number to your to

562
00:24:37,370 --> 00:24:35,280
what you've seen so far

563
00:24:40,730 --> 00:24:37,380

that's correct four is a number that was

564
00:24:45,230 --> 00:24:40,740
mentioned in the MMT today all of them

565
00:24:47,990 --> 00:24:45,240
were outside of the of the ast T region

566
00:24:51,770 --> 00:24:48,000
that we of concern for so relatively

567
00:24:52,680 --> 00:24:51,780
late events and so as of today it's it's

568
00:24:57,000 --> 00:24:52,690
four to

569
00:25:00,260 --> 00:24:57,010
this one that I showed you and when you

570
00:25:02,790 --> 00:25:00,270
say for I'm taking that to me for

571
00:25:05,550 --> 00:25:02,800
detectable pieces of foam that came off

572
00:25:07,500 --> 00:25:05,560
or for events with multiple little

573
00:25:10,560 --> 00:25:07,510
pieces coming off could you clarify and

574
00:25:14,600 --> 00:25:10,570
and what was the biggest size that you

575
00:25:21,600 --> 00:25:18,590
okay so for the first part for events

576
00:25:26,250 --> 00:25:21,610
three of which I believe we think the

577
00:25:28,320 --> 00:25:26,260
source or the the debris item itself is

578
00:25:30,900 --> 00:25:28,330
is you know likelihood foam from the

579
00:25:32,640 --> 00:25:30,910
tank I think there's a fourth event that

580
00:25:34,620 --> 00:25:32,650
we haven't been able to ascertain the

581
00:25:37,920 --> 00:25:34,630
source of it and I'm not sure that it's

582
00:25:39,540 --> 00:25:37,930
tank foam and again all these items will

583
00:25:40,950 --> 00:25:39,550
have more on as we go throughout the

584
00:25:44,250 --> 00:25:40,960
course of the mission this is all very

585
00:25:46,500 --> 00:25:44,260
preliminary but and then so those are

586
00:25:48,390 --> 00:25:46,510
separate and and would be we believe

587
00:25:51,000 --> 00:25:48,400
I've based what we know today they would

588
00:25:54,720 --> 00:25:51,010

be separate events separate sources of

589
00:25:58,770 --> 00:25:54,730
foam if you will I don't have a size a

590
00:26:00,240 --> 00:25:58,780
dimension yet on the largest I think the

591
00:26:02,660 --> 00:26:00,250
largest would be this two hundred thirty

592
00:26:05,580 --> 00:26:02,670
one second event I just don't the guys

593
00:26:10,020 --> 00:26:05,590
just haven't given me dimensionally what

594
00:26:11,760 --> 00:26:10,030
what size it is yet okay that's all from

595
00:26:14,640 --> 00:26:11,770
Florida let's see I've got a couple of

596
00:26:18,600 --> 00:26:14,650
folks on the phone bridge first up James

597
00:26:21,330 --> 00:26:18,610
Dean with Florida today thank you very

598
00:26:23,520 --> 00:26:21,340
much we were just just very quickly

599
00:26:27,840 --> 00:26:23,530
following up on what you just said

600
00:26:30,230 --> 00:26:27,850
if debris wasn't foam would that be much

601
00:26:32,760 --> 00:26:30,240
more of a concern even if it wasn't

602
00:26:35,190 --> 00:26:32,770
something that would have struck the

603
00:26:38,550 --> 00:26:35,200
shuttle with great velocity I mean what

604
00:26:41,700 --> 00:26:38,560
what could it have been otherwise it

605
00:26:44,070 --> 00:26:41,710
could be any number of things it would

606
00:26:46,920 --> 00:26:44,080
be pure speculation for me to say at

607
00:26:52,590 --> 00:26:46,930
this point so no not not a concern

608
00:26:56,640 --> 00:26:52,600
necessarily at all okay and I just want

609
00:26:59,760 --> 00:26:56,650
to ask you that the section inspection

610
00:27:02,340 --> 00:26:59,770
techniques discovery pioneered after

611
00:27:05,120 --> 00:27:02,350
after Columbia and particularly

612
00:27:06,420 --> 00:27:05,130
particularly with the respect to the

613
00:27:09,150 --> 00:27:06,430

backflip that

614
00:27:11,820 --> 00:27:09,160
tomorrow I just wondered if you could

615
00:27:14,520 --> 00:27:11,830
talk a little bit about what you've

616
00:27:15,900 --> 00:27:14,530
learned from these maneuvers since they

617
00:27:18,590 --> 00:27:15,910
were implemented and how important

618
00:27:25,290 --> 00:27:18,600
they've been to program moving forward

619
00:27:28,760 --> 00:27:25,300
over these past six plus years okay sure

620
00:27:32,040 --> 00:27:28,770
the as you know the the suite of

621
00:27:36,420 --> 00:27:32,050
techniques and tools and inspection

622
00:27:38,250 --> 00:27:36,430
capability and analytical techniques all

623
00:27:39,810 --> 00:27:38,260
of the work that we've done really in

624
00:27:43,140 --> 00:27:39,820
the return to flight and since return to

625
00:27:45,120 --> 00:27:43,150
flight which we continue to evolve all

626
00:27:48,780 --> 00:27:45,130
the way up to including you know this

627
00:27:51,560 --> 00:27:48,790
mission have been very very important to

628
00:27:53,610 --> 00:27:51,570
us in terms of continuing to learn and

629
00:27:57,300 --> 00:27:53,620
understand the performance of this

630
00:28:01,320 --> 00:27:57,310
vehicle so obviously we the first few

631
00:28:02,790 --> 00:28:01,330
times we did some of those those new

632
00:28:04,470 --> 00:28:02,800
procedures the first few times we

633
00:28:08,310 --> 00:28:04,480
implemented some of those return to

634
00:28:11,040 --> 00:28:08,320
flight techniques to get inspection data

635
00:28:13,140 --> 00:28:11,050
we our learning curve was was pretty

636
00:28:15,660 --> 00:28:13,150
steep and we learned a lot about the

637
00:28:17,850 --> 00:28:15,670
performance of the vehicle along the way

638
00:28:20,010 --> 00:28:17,860

as we continue to implement changes to

639
00:28:25,310 --> 00:28:20,020
the tank and we continue to to tweak the

640
00:28:29,310 --> 00:28:25,320
system with our with our goal of having

641
00:28:30,870 --> 00:28:29,320
minimising the amount of debris the

642
00:28:35,280 --> 00:28:30,880
amount of foam coming off the tank if

643
00:28:38,880 --> 00:28:35,290
you will the the procedures and the

644
00:28:41,520 --> 00:28:38,890
techniques have been as important all

645
00:28:44,750 --> 00:28:41,530
the way along because in some cases they

646
00:28:47,790 --> 00:28:44,760
were used to verify that we did in fact

647
00:28:52,020 --> 00:28:47,800
solve a problem or help mitigate a

648
00:28:55,220 --> 00:28:52,030
problem by some modification that we did

649
00:28:57,150 --> 00:28:55,230
to a foam application technique or

650
00:29:00,120 --> 00:28:57,160
something more significant than that

651
00:29:01,920 --> 00:29:00,130
that we did on the tank to remove some

652
00:29:04,350 --> 00:29:01,930
of the foam ramps and some of the larger

653
00:29:06,170 --> 00:29:04,360
modifications that we did so those

654
00:29:08,550 --> 00:29:06,180
things were not only important for

655
00:29:10,050 --> 00:29:08,560
determining the health of the vehicle

656
00:29:12,390 --> 00:29:10,060
once we got in orbit which was hugely

657
00:29:14,850 --> 00:29:12,400
important to us of course but they were

658
00:29:16,340 --> 00:29:14,860
also important as it relates to moving

659
00:29:18,260 --> 00:29:16,350
forward in being

660
00:29:22,700 --> 00:29:18,270
being in a continuous learning

661
00:29:24,350 --> 00:29:22,710
environment so they they substantiate

662
00:29:27,770 --> 00:29:24,360
some of the things we did along the way

663
00:29:30,860 --> 00:29:27,780

in addition to for that very mission

664
00:29:32,540 --> 00:29:30,870
where we did that inspection they they

665
00:29:35,090 --> 00:29:32,550
gave us the ability to move forward

666
00:29:37,700 --> 00:29:35,100
knowing that we had a vehicle that was

667
00:29:41,660 --> 00:29:37,710
safe to continue the mission and and to

668
00:29:44,000 --> 00:29:41,670
return for a deorbit and entry and so I

669
00:29:48,620 --> 00:29:44,010
would tell you it'd be very difficult to

670
00:29:50,720 --> 00:29:48,630
go back and more than a year or two and

671
00:29:51,920 --> 00:29:50,730
find missions in that succession going

672
00:29:54,880 --> 00:29:51,930
all the way back to return to flight

673
00:29:59,450 --> 00:29:54,890
where we haven't continued to learn

674
00:30:03,200 --> 00:29:59,460
because of the because of the return to

675
00:30:05,960 --> 00:30:03,210
flight inspection and analytical

676
00:30:08,980 --> 00:30:05,970
techniques that we put in place so it's

677
00:30:11,060 --> 00:30:08,990
been very very important to us and and

678
00:30:12,800 --> 00:30:11,070
allowed us really to move forward with

679
00:30:19,580 --> 00:30:12,810
our eyes open and to continue to evolve

680
00:30:23,900 --> 00:30:19,590
and improve the system just wonder if

681
00:30:26,300 --> 00:30:23,910
you you and or Brian you know remember

682
00:30:28,910 --> 00:30:26,310
the first backflip and could share any

683
00:30:31,520 --> 00:30:28,920
thoughts of seeing that unfold and and

684
00:30:38,240 --> 00:30:31,530
if that'll be on your mind as you're

685
00:30:39,890 --> 00:30:38,250
watching it tomorrow good from my

686
00:30:42,230 --> 00:30:39,900
perspective I'll be sitting on console

687
00:30:45,590 --> 00:30:42,240
of course watching the crew execute this

688
00:30:48,740 --> 00:30:45,600

activity I was on the space station side

689
00:30:52,280 --> 00:30:48,750
for sts-114 as a flight director when

690
00:30:53,750 --> 00:30:52,290
this was being executed and I can't say

691
00:30:56,030 --> 00:30:53,760
all think too much about that it was a

692
00:30:57,920 --> 00:30:56,040
it was an interesting time obviously but

693
00:30:59,810 --> 00:30:57,930
right now I'm pretty well focused on the

694
00:31:01,370 --> 00:30:59,820
activity at hand and ensuring that the

695
00:31:03,140 --> 00:31:01,380
crew gets through this one safely and we

696
00:31:06,200 --> 00:31:03,150
get rendezvous and dock safely and

697
00:31:08,540 --> 00:31:06,210
everything goes well like Leroy did said

698
00:31:11,270 --> 00:31:08,550
we do have learned a great deal in the

699
00:31:13,130 --> 00:31:11,280
past couple a few years on how to how to

700
00:31:14,900 --> 00:31:13,140
fly this vehicle and how this vehicle

701
00:31:16,460 --> 00:31:14,910
behaves and how to analyze the data on

702
00:31:18,170 --> 00:31:16,470
the ground all emphasize what he said

703
00:31:20,300 --> 00:31:18,180
I've gone to a bunch of the mission

704
00:31:22,970 --> 00:31:20,310
management team meetings where we have

705
00:31:24,530 --> 00:31:22,980
discussed these are the the inspection

706
00:31:26,930 --> 00:31:24,540
techniques we have in the analysis

707
00:31:28,850 --> 00:31:26,940
techniques we have and it's it's pretty

708
00:31:29,900 --> 00:31:28,860
astonishing actually what how far that

709
00:31:32,000 --> 00:31:29,910
team has come and how

710
00:31:34,970 --> 00:31:32,010
they are at doing what they do and I am

711
00:31:36,500 --> 00:31:34,980
impressed and amazed each time we get

712
00:31:38,000 --> 00:31:36,510
something for them to look at I'm glad

713
00:31:39,650 --> 00:31:38,010

when we don't have something for them to

714
00:31:41,960 --> 00:31:39,660
look at but when they do look at things

715
00:31:44,480 --> 00:31:41,970
they do something so in such a thorough

716
00:31:46,700 --> 00:31:44,490
and rigorous manner that it is a it is

717
00:31:48,320 --> 00:31:46,710
very impressive so we will do the

718
00:31:50,090 --> 00:31:48,330
rendezvous pitch maneuver tomorrow and

719
00:31:52,790 --> 00:31:50,100
everything is going to go well I expect

720
00:32:01,630 --> 00:31:52,800
and we got the teams backing us up and

721
00:32:08,590 --> 00:32:04,400
am thanks very much I just had a quick

722
00:32:12,410 --> 00:32:08,600
question about the Soyuz photo

723
00:32:14,860 --> 00:32:12,420
rendezvous if that's approved the flight

724
00:32:17,180 --> 00:32:14,870
d9 scheduled lost when I saw has the

725
00:32:19,880 --> 00:32:17,190
hatches being closed at the end of that

726
00:32:22,430 --> 00:32:19,890
day and I'm assuming that you'd postpone

727
00:32:24,890 --> 00:32:22,440
that is that right yeah that's a good

728
00:32:27,770 --> 00:32:24,900
assumption if if we insert this extra

729
00:32:29,830 --> 00:32:27,780
day to go do this activity plus we would

730
00:32:32,450 --> 00:32:29,840
use the additional time to do additional

731
00:32:35,150 --> 00:32:32,460
outfitting of the PMM and also some

732
00:32:36,860 --> 00:32:35,160
stowage in the HTV we had that idea in

733
00:32:39,440 --> 00:32:36,870
our minds going into this mission we may

734
00:32:41,060 --> 00:32:39,450
need extra time want to use extra time

735
00:32:43,280 --> 00:32:41,070
for those activities if everything else

736
00:32:45,380 --> 00:32:43,290
is going well in addition on that extra

737
00:32:47,090 --> 00:32:45,390
day on flight day 10 so on flight day

738
00:32:49,100 --> 00:32:47,100

nine right we would not close the hatch

739
00:32:51,320 --> 00:32:49,110
we would insert flight day 10 and that

740
00:32:54,380 --> 00:32:51,330
would essentially they do the fly about

741
00:32:56,240 --> 00:32:54,390
in the morning get read acht we'd go do

742
00:32:57,860 --> 00:32:56,250
all those other wrestler folks on board

743
00:32:59,690 --> 00:32:57,870
would be doing those other activities

744
00:33:01,370 --> 00:32:59,700
during this time period and then we'd

745
00:33:04,100 --> 00:33:01,380
close the hatch the night of flight day

746
00:33:05,840 --> 00:33:04,110
10 and then we done doctor morning a

747
00:33:08,770 --> 00:33:05,850
flight day 11 and continue with the rest

748
00:33:11,210 --> 00:33:08,780
of the mission okay thanks very much

749
00:33:12,800 --> 00:33:11,220
thanks Irene okay we're back here for

750
00:33:15,380 --> 00:33:12,810
any wrap-up Peter you have anything well

751
00:33:18,380 --> 00:33:15,390
Jeremias on your side okay anybody over

752
00:33:22,040 --> 00:33:18,390
here other than mark yes well let mark

753
00:33:27,970 --> 00:33:24,770
thanks mark Croatian weak and I believe

754
00:33:32,450 --> 00:33:27,980
is for Leroy one one would the MMT

755
00:33:35,860 --> 00:33:32,460
ideally kind of like to clear the TPS

756
00:33:38,060 --> 00:33:35,870
for the for the mission based on the

757
00:33:42,590 --> 00:33:38,070
imagery that you get from all the

758
00:33:44,390 --> 00:33:42,600
different sources it'll be in all

759
00:33:46,930 --> 00:33:44,400
likelihood in the Sunday timeframe I

760
00:33:50,570 --> 00:33:46,940
think the way the timeline lays out mark

761
00:33:53,810 --> 00:33:50,580
will get a great bit of our data

762
00:33:55,250 --> 00:33:53,820
tomorrow of course as the as discovery

763
00:33:57,740 --> 00:33:55,260

approaches the station we'll get a lot

764
00:34:01,520 --> 00:33:57,750
of photography we'll get all those

765
00:34:04,130 --> 00:34:01,530
images down linked the crew will will

766
00:34:05,330 --> 00:34:04,140
analyze all that data I believe you've

767
00:34:09,320 --> 00:34:05,340
heard us talk about our focused

768
00:34:11,840 --> 00:34:09,330
inspection meeting the the debris

769
00:34:15,440 --> 00:34:11,850
assessment team and and the orbiter

770
00:34:17,270 --> 00:34:15,450
experts they have that I think at least

771
00:34:21,350 --> 00:34:17,280
as of today they have that set for about

772
00:34:24,169 --> 00:34:21,360
nine o'clock tomorrow night Saturday

773
00:34:26,270 --> 00:34:24,179
evening so they'll they'll we expect to

774
00:34:29,840 --> 00:34:26,280
have the lion's share of the data in

775
00:34:32,930 --> 00:34:29,850
hand at least to to the point where they

776
00:34:34,760 --> 00:34:32,940
can make a recommendation as to whether

777
00:34:36,500 --> 00:34:34,770
or not there's an area that will require

778
00:34:39,440 --> 00:34:36,510
some more detail or some focused

779
00:34:41,629 --> 00:34:39,450
inspection as or and so that

780
00:34:45,290 --> 00:34:41,639
recommendation will come to the MMT as

781
00:34:49,129 --> 00:34:45,300
early as you know Sunday morning Sunday

782
00:34:53,090 --> 00:34:49,139
afternoon and subsequent to that things

783
00:34:54,800 --> 00:34:53,100
begin to happen pretty rapidly the the

784
00:34:57,680 --> 00:34:54,810
remainder of the data comes in pretty

785
00:35:00,950 --> 00:34:57,690
quickly and then the way it gets

786
00:35:04,370 --> 00:35:00,960
analyzed and it gets Qaid and it gets

787
00:35:06,830 --> 00:35:04,380
peer reviewed it'll be in that Sunday

788
00:35:10,640 --> 00:35:06,840

probably not later than Monday timeframe

789
00:35:13,820 --> 00:35:10,650
I think as it relates to the the Soyuz

790
00:35:15,170 --> 00:35:13,830
fly around that we're talking about I'm

791
00:35:16,280 --> 00:35:15,180
going to want to have a pretty good

792
00:35:19,910 --> 00:35:16,290
understanding of the health of the

793
00:35:22,510 --> 00:35:19,920
vehicle before we commit to doing that

794
00:35:26,960 --> 00:35:22,520
from a shuttle standpoint simply because

795
00:35:28,220 --> 00:35:26,970
selfishly that that plus one day we have

796
00:35:29,060 --> 00:35:28,230
a lot of different ways we could use

797
00:35:31,670 --> 00:35:29,070
that

798
00:35:33,290 --> 00:35:31,680
and obviously if there were some thing

799
00:35:34,940 --> 00:35:33,300
that we wanted to look more closely at

800
00:35:36,980 --> 00:35:34,950
we might need to use up part of that

801
00:35:40,760 --> 00:35:36,990
plus one for a focused inspection kind

802
00:35:42,890 --> 00:35:40,770
of opportunity so I don't anticipate

803
00:35:44,630 --> 00:35:42,900
that when I look at the performance

804
00:35:48,410 --> 00:35:44,640
going uphill when I look at

805
00:35:50,810 --> 00:35:48,420
preliminarily how discovery looks in

806
00:35:52,910 --> 00:35:50,820
orbit and and the performance of the

807
00:35:55,280 --> 00:35:52,920
external tank I absolutely don't expect

808
00:35:57,230 --> 00:35:55,290
that to be any issue but in any case

809
00:35:59,570 --> 00:35:57,240
we'll go through our normal process and

810
00:36:02,410 --> 00:35:59,580
I expect that to wrap up in the in the

811
00:36:07,490 --> 00:36:02,420
Sunday Monday timeframe and and then

812
00:36:11,090 --> 00:36:07,500
we'll we'll make a decision and on

813
00:36:14,180 --> 00:36:11,100

Monday you know likelihood with about

814
00:36:18,530 --> 00:36:14,190
the Soyuz fly around in the MMT

815
00:36:20,690 --> 00:36:18,540
and then as an mm TI mm t integrated

816
00:36:24,020 --> 00:36:20,700
team we'll make a final decision on on

817
00:36:25,580 --> 00:36:24,030
Tuesday morning is the way the timetable

818
00:36:26,960 --> 00:36:25,590
lays out now now that that assumes

819
00:36:29,900 --> 00:36:26,970
everything that we have planned in the

820
00:36:34,040 --> 00:36:29,910
next 48 hours goes just as brian has it

821
00:36:38,450 --> 00:36:34,050
laid out and and if it does then then

822
00:36:41,000 --> 00:36:38,460
that's kind of what you can expect okay

823
00:36:43,220 --> 00:36:41,010
well that'll wrap up the questions a

824
00:36:45,170 --> 00:36:43,230
couple of programming notes for you

825
00:36:47,990 --> 00:36:45,180
obviously the crew goes to bed a little

826
00:36:49,370 --> 00:36:48,000
before 10:00 tonight central time will

827
00:36:52,070 --> 00:36:49,380
begin showing the flight day two

828
00:36:54,050 --> 00:36:52,080
highlights at 10 o'clock and on the hour

829
00:36:56,570 --> 00:36:54,060
through the crew sleep period which ends

830
00:37:01,010 --> 00:36:56,580
with a wake-up call Saturday morning at

831
00:37:04,820 --> 00:37:01,020
5:50 3:00 a.m. central the are bar pitch

832
00:37:08,300 --> 00:37:04,830
maneuver that Brian described begins

833
00:37:10,580 --> 00:37:08,310
just after noon tomorrow and docking to

834
00:37:13,040 --> 00:37:10,590
the station is scheduled for about 1:15

835
00:37:15,020 --> 00:37:13,050
so look for that hatches are open just

836
00:37:17,000 --> 00:37:15,030
after 3:00 and then the mmm team meets

837
00:37:19,220 --> 00:37:17,010
beginning at 1:00 again tomorrow and

838
00:37:22,010 --> 00:37:19,230

we'll be back here for another status

839
00:37:23,870 --> 00:37:22,020
briefing with you at 3:30 central look

840
00:37:26,090 --> 00:37:23,880
for all of that on the NASA TV schedule

841
00:37:28,250 --> 00:37:26,100
we it's a living document we update it

842
00:37:30,410 --> 00:37:28,260
frequently so make sure you follow it

843
00:37:31,010 --> 00:37:30,420
out there on the web when you get a

844
00:37:33,080 --> 00:37:31,020
chance

845
00:37:34,820 --> 00:37:33,090
so with that well thank everybody for