
Johnson

1
00:00:03,649 --> 00:00:01,550
well good morning everybody and welcome

2
00:00:05,630 --> 00:00:03,659
to NASA's Johnson Space Center for

3
00:00:08,690 --> 00:00:05,640
today's post mission management team

4
00:00:10,040 --> 00:00:08,700
briefing the last mmt of the mission of

5
00:00:12,680 --> 00:00:10,050
discovery to the International Space

6
00:00:14,749 --> 00:00:12,690
Station joining us today is Leroy Cain

7
00:00:16,820 --> 00:00:14,759
he's the deputy manager of the space

8
00:00:20,000 --> 00:00:16,830
shuttle program and of course he also

9
00:00:22,220 --> 00:00:20,010
chairs the MMT throughout the on-orbit

10
00:00:23,810 --> 00:00:22,230
phase of the mission I'll turn it over

11
00:00:26,240 --> 00:00:23,820
to Leroy for some comments and then

12
00:00:27,410 --> 00:00:26,250
we'll take questions from here and the

13
00:00:31,040 --> 00:00:27,420

Kennedy Space Center and out on the

14
00:00:32,209 --> 00:00:31,050
phone bridge ok Thank You Kyle well good

15
00:00:34,479 --> 00:00:32,219
morning to all of you

16
00:00:38,299 --> 00:00:34,489
it's great to be here as we wind up the

17
00:00:41,540 --> 00:00:38,309
mission of discovery the the crew on

18
00:00:43,369 --> 00:00:41,550
orbit is doing very well the discovery

19
00:00:47,299 --> 00:00:43,379
continues to perform outstanding for us

20
00:00:49,160 --> 00:00:47,309
as she has the entire mission in the

21
00:00:52,569 --> 00:00:49,170
mission management team today we we

22
00:00:55,279 --> 00:00:52,579
reviewed a few items we we reviewed the

23
00:00:57,590 --> 00:00:55,289
completion of the thermal protection

24
00:00:59,360 --> 00:00:57,600
system inspection and there were no

25
00:01:00,920 --> 00:00:59,370
issues there so that the team did not

26
00:01:04,729 --> 00:01:00,930
standing job getting all that wrapped up

27
00:01:06,080 --> 00:01:04,739
the the timeline had had been such that

28
00:01:09,950 --> 00:01:06,090
that would be wrapped up till later

29
00:01:12,109 --> 00:01:09,960
today but they put I think they kind of

30
00:01:13,550 --> 00:01:12,119
pulled an all-nighter and they were able

31
00:01:16,760 --> 00:01:13,560
to get through all the data reviews and

32
00:01:17,570 --> 00:01:16,770
be able to report to the MMT today so no

33
00:01:21,560 --> 00:01:17,580
issues there

34
00:01:22,850 --> 00:01:21,570
the team were reported on one item from

35
00:01:25,310 --> 00:01:22,860
the flight control system check out

36
00:01:28,219 --> 00:01:25,320
there was a transient on one of the

37
00:01:30,200 --> 00:01:28,229
flight control system avionics boxes had

38
00:01:33,260 --> 00:01:30,210

they had a power transient it has

39
00:01:35,539 --> 00:01:33,270
recovered and so that would be no issue

40
00:01:38,539 --> 00:01:35,549
for us and essentially if it if it were

41
00:01:40,310 --> 00:01:38,549
to recur and not recover it would be it

42
00:01:42,109 --> 00:01:40,320
would be a loss or redundancy and so

43
00:01:43,609 --> 00:01:42,119
that system it's a quad redundant system

44
00:01:47,170 --> 00:01:43,619
so there are no issues or concerns with

45
00:01:49,249 --> 00:01:47,180
that and it's back to ops nominal the

46
00:01:50,749 --> 00:01:49,259
the entry flight director will be over

47
00:01:52,520 --> 00:01:50,759
later today to talk about the entry plan

48
00:01:55,280 --> 00:01:52,530
we did review that at the mission

49
00:01:57,480 --> 00:01:55,290
management team yesterday and we

50
00:01:59,160 --> 00:01:57,490
reviewed the weather again today

51
00:02:03,990 --> 00:01:59,170
that all looks very very good for

52
00:02:05,580 --> 00:02:04,000
tomorrow I was in talking with the the

53
00:02:10,889 --> 00:02:05,590
integrated shuttle and Space Station

54
00:02:13,229 --> 00:02:10,899
team a couple days ago I was commenting

55
00:02:15,900 --> 00:02:13,239
about what a superb docked mission this

56
00:02:18,330 --> 00:02:15,910
has been for us we couldn't be more

57
00:02:20,040 --> 00:02:18,340
pleased in terms of being able to

58
00:02:22,309 --> 00:02:20,050
accomplish all of the mission objectives

59
00:02:26,900 --> 00:02:22,319
the team just an outstanding job in

60
00:02:29,009 --> 00:02:26,910
execution and of course we had the

61
00:02:32,759 --> 00:02:29,019
pleasure of staying for a couple extra

62
00:02:35,520 --> 00:02:32,769
days it's nice to have that flexibility

63
00:02:39,300 --> 00:02:35,530

and in this case it really paid off I

64
00:02:41,960 --> 00:02:39,310
think having the ability to do that

65
00:02:44,970 --> 00:02:41,970
really as a tribute to the broader team

66
00:02:46,979 --> 00:02:44,980
it it takes a lot to be able to do that

67
00:02:48,539 --> 00:02:46,989
because it takes a lot to be able to do

68
00:02:51,720 --> 00:02:48,549
that before you ever launch the vehicle

69
00:02:54,330 --> 00:02:51,730
so the vehicle performance has to be

70
00:02:56,880 --> 00:02:54,340
outstanding to allow us to be able to

71
00:02:59,670 --> 00:02:56,890
work through additional days on orbit

72
00:03:02,490 --> 00:02:59,680
without having to deal with systems or

73
00:03:04,490 --> 00:03:02,500
other spacecraft issues and obviously we

74
00:03:06,750 --> 00:03:04,500
we didn't have to deal with any of that

75
00:03:08,520 --> 00:03:06,760
in order for that to happen the

76
00:03:12,289 --> 00:03:08,530
processing on the ground has to be done

77
00:03:15,060 --> 00:03:12,299
in such a way as to provide a vehicle

78
00:03:18,319 --> 00:03:15,070
that is that pristine once you get on

79
00:03:20,430 --> 00:03:18,329
orbit so the entire space shuttle system

80
00:03:23,190 --> 00:03:20,440
just performed outstanding on this

81
00:03:26,309 --> 00:03:23,200
entire mission and then of course in

82
00:03:28,170 --> 00:03:26,319
order to be able to to to have the

83
00:03:31,770 --> 00:03:28,180
flexibility to add a couple days you

84
00:03:33,630 --> 00:03:31,780
also have to have perfect and flawless

85
00:03:36,960 --> 00:03:33,640
execution once you get into the mission

86
00:03:40,500 --> 00:03:36,970
and so I think as I said a couple days

87
00:03:44,129 --> 00:03:40,510
ago when I was here we we planned well

88
00:03:46,530 --> 00:03:44,139

we train well and we execute well and

89
00:03:48,300 --> 00:03:46,540
when we're able to do all of that then

90
00:03:50,039 --> 00:03:48,310
then we get to stay for a couple more

91
00:03:52,890 --> 00:03:50,049
days and help the space station program

92
00:03:54,390 --> 00:03:52,900
out some more and that all came to

93
00:03:55,890 --> 00:03:54,400
fruition on this mission I think in a

94
00:03:58,050 --> 00:03:55,900
way that that I couldn't have possibly

95
00:04:00,900 --> 00:03:58,060
written a script that would have had to

96
00:04:02,610 --> 00:04:00,910
come out better so we're just very very

97
00:04:06,469 --> 00:04:02,620
pleased with with all the missions going

98
00:04:09,060 --> 00:04:06,479
now that Discovery's a lone free flyer

99
00:04:10,150 --> 00:04:09,070
we have one major milestone remaining

100
00:04:12,670 --> 00:04:10,160
obviously and that is to get

101
00:04:14,830 --> 00:04:12,680
to get the crew of the of discovery and

102
00:04:18,310 --> 00:04:14,840
get discovery back safely so we look

103
00:04:19,630 --> 00:04:18,320
forward to that tomorrow with our

104
00:04:23,910 --> 00:04:19,640
landing opportunities at Kennedy Space

105
00:04:27,430 --> 00:04:23,920
Center we've we've had an awesome

106
00:04:31,060 --> 00:04:27,440
display here of the capabilities of the

107
00:04:34,720 --> 00:04:31,070
team you know the hardware and we're

108
00:04:37,450 --> 00:04:34,730
very happy to be bringing sts-133 to a

109
00:04:39,010 --> 00:04:37,460
close in the fashion that we are and we

110
00:04:41,740 --> 00:04:39,020
look forward to landing tomorrow so I'll

111
00:04:43,540 --> 00:04:41,750
be happy to answer any questions okay

112
00:04:45,880 --> 00:04:43,550
we'll start here of course as usual and

113
00:04:47,350 --> 00:04:45,890

then check with KSC and on the phone

114
00:04:49,960 --> 00:04:47,360
bridge we'll start on the front row

115
00:04:51,430 --> 00:04:49,970
right here with gina gina Sunseri ABC

116
00:04:53,890 --> 00:04:51,440
News I'm sort of collecting this

117
00:04:57,850 --> 00:04:53,900
question from everyone what do you think

118
00:05:02,290 --> 00:04:57,860
the legacy of discovery will be well I

119
00:05:04,240 --> 00:05:02,300
think the legacy of discovery is as a

120
00:05:08,380 --> 00:05:04,250
specific orbiter within the shuttle

121
00:05:10,660 --> 00:05:08,390
fleet in some ways will be the way that

122
00:05:13,300 --> 00:05:10,670
we were able to fly return to fly

123
00:05:16,330 --> 00:05:13,310
missions with with discovery discovery

124
00:05:19,930 --> 00:05:16,340
was important to us of course as we

125
00:05:23,350 --> 00:05:19,940
returned from to flight after challenger

126
00:05:25,540 --> 00:05:23,360
as well as after Columbia so that'll be

127
00:05:28,210 --> 00:05:25,550
a special tribute to the discovery

128
00:05:30,670 --> 00:05:28,220
vehicle there will be others I think in

129
00:05:33,730 --> 00:05:30,680
a broader sense though discovery as part

130
00:05:35,220 --> 00:05:33,740
of the shuttle fleet the legacy for the

131
00:05:38,409 --> 00:05:35,230
Shell fleet in the shuttle program

132
00:05:42,960 --> 00:05:38,419
undoubtedly in my mind will be in space

133
00:05:46,440 --> 00:05:42,970
station we could not have assembled this

134
00:05:48,610 --> 00:05:46,450
marvelous facility in orbit without the

135
00:05:50,620 --> 00:05:48,620
capability of the space shuttle system

136
00:05:53,560 --> 00:05:50,630
and in the team that makes it happen so

137
00:05:55,000 --> 00:05:53,570
that in my opinion is is the biggest

138
00:06:01,510 --> 00:05:55,010

legacy for the shuttle program not to

139
00:06:03,670 --> 00:06:01,520
mention just discovery no okay let's see

140
00:06:05,290 --> 00:06:03,680
we'll go to the Kennedy Space Center I

141
00:06:09,700 --> 00:06:05,300
understand there's a couple of folks

142
00:06:12,460 --> 00:06:09,710
there with some questions hello this is

143
00:06:14,470 --> 00:06:12,470
Marcia Dunn of The Associated Press I'm

144
00:06:16,810 --> 00:06:14,480
wondering do you see Discovery's

145
00:06:18,850 --> 00:06:16,820
flawless flight that it's that it's

146
00:06:22,000 --> 00:06:18,860
completing is it a way it could either

147
00:06:23,790 --> 00:06:22,010
be a way to go out on such a high note

148
00:06:26,369 --> 00:06:23,800
or it could

149
00:06:27,809 --> 00:06:26,379
possibly be a strong demonstration a

150
00:06:31,320 --> 00:06:27,819
striking demonstration of all the

151
00:06:36,779 --> 00:06:31,330
lifetime left that could be flown how do

152
00:06:39,629 --> 00:06:36,789
you see this falling out Leroy that's

153
00:06:42,029 --> 00:06:39,639
interesting question Marsha you know a

154
00:06:46,460 --> 00:06:42,039
few years ago when we started working in

155
00:06:49,200 --> 00:06:46,470
earnest on the on the plan to phase down

156
00:06:51,930 --> 00:06:49,210
the shuttle program within the context

157
00:06:53,369 --> 00:06:51,940
of the overall vision of the agency one

158
00:06:55,920 --> 00:06:53,379
of the things that we decided as a

159
00:07:01,020 --> 00:06:55,930
program and we felt very strongly about

160
00:07:03,420 --> 00:07:01,030
it then and we've continued to to to

161
00:07:06,890 --> 00:07:03,430
hold it as our as our mantra and that is

162
00:07:10,200 --> 00:07:06,900
that we wanted to finish strong and so

163
00:07:11,999 --> 00:07:10,210

for example if we had little problems or

164
00:07:14,430 --> 00:07:12,009
issues that we were working it would

165
00:07:17,339 --> 00:07:14,440
never be acceptable for us to say well

166
00:07:18,779 --> 00:07:17,349
we're only flying a few more flights oh

167
00:07:19,920 --> 00:07:18,789
we're only flying X number and more

168
00:07:21,779 --> 00:07:19,930
flights we don't really need to work

169
00:07:25,020 --> 00:07:21,789
that problem very hard

170
00:07:27,570 --> 00:07:25,030
our our mantra all the way along has

171
00:07:31,950 --> 00:07:27,580
been we want to finish strong we want

172
00:07:34,320 --> 00:07:31,960
the last flight to be the safest and so

173
00:07:37,680 --> 00:07:34,330
I think it has been our goal all along

174
00:07:40,040 --> 00:07:37,690
to do that and I think you're you're

175
00:07:42,600 --> 00:07:40,050
seeing that play out as I said earlier

176
00:07:44,430 --> 00:07:42,610
on this mission in particular with one

177
00:07:48,200 --> 00:07:44,440
major milestone remaining I couldn't be

178
00:07:55,559 --> 00:07:51,600
thank you and April 19 how is that

179
00:07:57,839 --> 00:07:55,569
looking for the next launch April 19

180
00:08:02,159 --> 00:07:57,849
looks very good for us for the launch of

181
00:08:07,260 --> 00:08:02,169
Endeavour on STS 134 the Ulf six mission

182
00:08:09,980 --> 00:08:07,270
with Space Station the as a programming

183
00:08:12,089 --> 00:08:09,990
note we do plan to to roll the stack

184
00:08:15,719 --> 00:08:12,099
endeavour in the in the stack to the

185
00:08:17,430 --> 00:08:15,729
launch pad tomorrow in the evening I

186
00:08:19,439 --> 00:08:17,440
think we have a tentative time for roll

187
00:08:22,170 --> 00:08:19,449
into the pad of 8:00 p.m. Eastern Time

188
00:08:27,209 --> 00:08:22,180

tomorrow evening so the team is on track

189
00:08:30,709 --> 00:08:27,219
and we have we have a pretty standard

190
00:08:33,540 --> 00:08:30,719
pad flow as I understand it and we're

191
00:08:36,480 --> 00:08:33,550
looking beyond this mission once we get

192
00:08:37,410 --> 00:08:36,490
discovery landed we are really looking

193
00:08:39,270 --> 00:08:37,420
forward to

194
00:08:40,590 --> 00:08:39,280
the endeavor mission and and we feel

195
00:08:45,090 --> 00:08:40,600
very good about the schedule and about

196
00:08:49,320 --> 00:08:45,100
the launch date of the 19th and end of

197
00:08:51,330 --> 00:08:49,330
June for Atlantis might that be pushed a

198
00:08:52,800 --> 00:08:51,340
little to just give a little bigger gap

199
00:08:56,790 --> 00:08:52,810
between the next to the last flight in

200
00:09:00,150 --> 00:08:56,800
the very last one well we have a target

201
00:09:02,600 --> 00:09:00,160
date Marsha right now June 28th I think

202
00:09:06,750 --> 00:09:02,610
you'll see us maintain that target date

203
00:09:11,610 --> 00:09:06,760
for the foreseeable future and we have

204
00:09:14,160 --> 00:09:11,620
the ability to fly in that timeframe and

205
00:09:15,840 --> 00:09:14,170
so unless something changes it's our

206
00:09:21,360 --> 00:09:15,850
plan that we would fly that mission at

207
00:09:23,340 --> 00:09:21,370
the end of June bill Harwood CBS News

208
00:09:25,350 --> 00:09:23,350
are two quick ones for me Nero without

209
00:09:26,970 --> 00:09:25,360
having to go consult the data books or

210
00:09:28,620 --> 00:09:26,980
whatever I can't remember a post

211
00:09:31,290 --> 00:09:28,630
Colombia flight that was as clean as

212
00:09:34,500 --> 00:09:31,300
this one from a TPS standpoint and from

213
00:09:35,520 --> 00:09:34,510

system anomalies not not that it's

214
00:09:37,200 --> 00:09:35,530
you've got to give me a definitive

215
00:09:40,860 --> 00:09:37,210
answer but is that your impression as

216
00:09:43,380 --> 00:09:40,870
well or am i overlooking one now it's

217
00:09:45,540 --> 00:09:43,390
it's I'm smiling a little bit bill

218
00:09:47,460 --> 00:09:45,550
because I was talking with one of my

219
00:09:52,020 --> 00:09:47,470
colleagues before I came over about that

220
00:09:55,140 --> 00:09:52,030
very thing and you know I would be

221
00:09:57,030 --> 00:09:55,150
hard-pressed to find a mission of any

222
00:09:59,760 --> 00:09:57,040
one of the orbiters that that has been

223
00:10:02,880 --> 00:09:59,770
cleaner and then I can even go further

224
00:10:06,090 --> 00:10:02,890
than that and say the entire space

225
00:10:08,850 --> 00:10:06,100
shuttle system to include the motors the

226
00:10:13,190 --> 00:10:08,860
boosters the Space Shuttle main engine

227
00:10:17,280 --> 00:10:13,200
is the external tank the ground systems

228
00:10:22,190 --> 00:10:17,290
you know for launching the entire STS

229
00:10:24,990 --> 00:10:22,200
system I think has been as clean or

230
00:10:26,880 --> 00:10:25,000
cleaner and the performance has been as

231
00:10:29,400 --> 00:10:26,890
good or better than any that we've ever

232
00:10:30,930 --> 00:10:29,410
flown to my knowledge now as soon as I

233
00:10:33,180 --> 00:10:30,940
say that or you say that somebody will

234
00:10:35,820 --> 00:10:33,190
challenge me on that but it's it's a

235
00:10:40,410 --> 00:10:35,830
very difficult thing to to argue that

236
00:10:43,200 --> 00:10:40,420
point I think quantitatively and so I

237
00:10:45,120 --> 00:10:43,210
think you're you're on the money and I

238
00:10:49,250 --> 00:10:45,130

would agree with you if if you were to

239
00:10:50,990 --> 00:10:49,260
say that this has been the cleanest

240
00:10:55,910 --> 00:10:51,000
and that's performing mission and we've

241
00:10:57,830 --> 00:10:55,920
seen discovery thanks and one last one

242
00:10:59,030 --> 00:10:57,840
from here this is really a shuttle

243
00:11:01,190 --> 00:10:59,040
program question but since you're

244
00:11:02,420 --> 00:11:01,200
sitting there I'll ask you anyway I'm

245
00:11:04,580 --> 00:11:02,430
hearing that you guys are not going to

246
00:11:06,290 --> 00:11:04,590
do a tanking tests for 134 and since

247
00:11:08,420 --> 00:11:06,300
this is related to tank performance and

248
00:11:11,030 --> 00:11:08,430
you were involved in that can you give

249
00:11:14,870 --> 00:11:11,040
us an update on that Thanks sure bill

250
00:11:16,910 --> 00:11:14,880
yeah we we've been discussing it and we

251
00:11:19,910 --> 00:11:16,920
have talked about the pros and cons of a

252
00:11:24,230 --> 00:11:19,920
tanking tests and we and based on where

253
00:11:25,760 --> 00:11:24,240
we are with ET 122 and the work that

254
00:11:27,920 --> 00:11:25,770
we've done on it and the data that we

255
00:11:29,750 --> 00:11:27,930
have on the tank we feel her comfortable

256
00:11:32,390 --> 00:11:29,760
not giving a tanking tests and so our

257
00:11:36,440 --> 00:11:32,400
current plan is to not do a tanking test

258
00:11:40,370 --> 00:11:36,450
once we get out to the pad and so we've

259
00:11:42,020 --> 00:11:40,380
we've the schedule will reflect us a pad

260
00:11:48,410 --> 00:11:42,030
flow that does not have a tanking test

261
00:11:51,620 --> 00:11:48,420
in it okay I think that's it from KSC if

262
00:11:56,060 --> 00:11:51,630
it is we'll check with the phone bridge

263
00:11:58,070 --> 00:11:56,070

I think Irene Klotz is on Irene yes I'm

264
00:11:59,960 --> 00:11:58,080
here um thank you the array just had a

265
00:12:02,150 --> 00:11:59,970
question and sorry this is going to

266
00:12:03,500 --> 00:12:02,160
sound kind of blunt but um you know a

267
00:12:05,180 --> 00:12:03,510
minor the fact that there is no

268
00:12:06,890 --> 00:12:05,190
follow-on program right now for the

269
00:12:14,750 --> 00:12:06,900
shuttle do you think it's a mistake to

270
00:12:18,410 --> 00:12:14,760
end it well I think it's always been our

271
00:12:21,950 --> 00:12:18,420
plan that at some point we would no

272
00:12:25,730 --> 00:12:21,960
longer fly the shuttles and so I feel

273
00:12:27,650 --> 00:12:25,740
very strongly that the agency is is

274
00:12:31,010 --> 00:12:27,660
about exploration and about getting

275
00:12:34,130 --> 00:12:31,020
beyond low-earth orbit and so at some

276
00:12:36,080 --> 00:12:34,140
point we need a system that can can do

277
00:12:41,380 --> 00:12:36,090
those missions and the shuttles frankly

278
00:12:44,060 --> 00:12:41,390
not that system so we we will move on

279
00:12:46,910 --> 00:12:44,070
from the shuttle program and from the

280
00:12:51,050 --> 00:12:46,920
flying the shuttles as we go toward the

281
00:12:54,880 --> 00:12:51,060
future here and I think in years to come

282
00:12:58,250 --> 00:12:54,890
history will tell about timing and and

283
00:13:03,290 --> 00:12:58,260
decision points in and people can judge

284
00:13:05,630 --> 00:13:03,300
things looking back in that regard but

285
00:13:08,810 --> 00:13:05,640
it's been a great great vehicle for us

286
00:13:11,120 --> 00:13:08,820
you can't argue with with the success

287
00:13:13,610 --> 00:13:11,130
and the accomplishments of of the

288
00:13:15,200 --> 00:13:13,620

construction and operation of the space

289
00:13:17,990 --> 00:13:15,210
station which would not have been

290
00:13:20,840 --> 00:13:18,000
possible without space shuttle system of

291
00:13:22,250 --> 00:13:20,850
the rescue satellite rescue missions

292
00:13:23,870 --> 00:13:22,260
that have been performed the Hubble

293
00:13:27,440 --> 00:13:23,880
servicing missions and we can go on and

294
00:13:30,170 --> 00:13:27,450
on as as we talk about the legacy of the

295
00:13:33,250 --> 00:13:30,180
show system so we're moving forward I

296
00:13:35,480 --> 00:13:33,260
think we're moving forward in a way that

297
00:13:37,370 --> 00:13:35,490
that we'll be able to look back on the

298
00:13:41,210 --> 00:13:37,380
shuttle system and be very proud of what

299
00:13:42,410 --> 00:13:41,220
we were able to accomplish thank you and

300
00:13:46,070 --> 00:13:42,420
I had just one other question about

301
00:13:48,830 --> 00:13:46,080
landing is there any kind of extra

302
00:13:51,130 --> 00:13:48,840
issues involved because this being the

303
00:13:55,250 --> 00:13:51,140
last flight of returning the shuttle to

304
00:13:57,170 --> 00:13:55,260
Florida for money savings reasons or

305
00:14:01,580 --> 00:13:57,180
anything else are you going to basically

306
00:14:03,110 --> 00:14:01,590
let the landing flight team call it the

307
00:14:06,920 --> 00:14:03,120
way they normally would if this was any

308
00:14:10,580 --> 00:14:06,930
other mission thanks no changes

309
00:14:12,260 --> 00:14:10,590
whatsoever we were not asking for and

310
00:14:13,760 --> 00:14:12,270
and having directed the team to do

311
00:14:17,540 --> 00:14:13,770
anything different and they'll operate

312
00:14:21,350 --> 00:14:17,550
under their normal the normal course of

313
00:14:24,190 --> 00:14:21,360

their operations and and and that's true

314
00:14:26,810 --> 00:14:24,200
of the orbit entering landing as well

315
00:14:34,250 --> 00:14:26,820
let's see James Dean Florida today James

316
00:14:36,920 --> 00:14:34,260
II on the line just wondering from a

317
00:14:39,860 --> 00:14:36,930
management perspective has it been has

318
00:14:41,960 --> 00:14:39,870
it been a more difficult fight to to

319
00:14:44,030 --> 00:14:41,970
handle being a Bisby no the last one for

320
00:14:47,360 --> 00:14:44,040
an orbiter obviously there's no negative

321
00:14:49,580 --> 00:14:47,370
impact to the mission itself but you had

322
00:14:51,860 --> 00:14:49,590
there been have you had a sense of

323
00:14:54,440 --> 00:14:51,870
distractions having to be dealt with and

324
00:14:56,240 --> 00:14:54,450
you know I've seen people on their last

325
00:14:58,340 --> 00:14:56,250
day on the job and all those sorts of

326
00:15:02,150 --> 00:14:58,350
things have been any kind of issue for

327
00:15:04,460 --> 00:15:02,160
the place no no not at all and and to

328
00:15:06,950 --> 00:15:04,470
the contrary I mean I've never seen

329
00:15:09,470 --> 00:15:06,960
people more focused and more intent on

330
00:15:15,710 --> 00:15:09,480
on doing a good job than than what they

331
00:15:16,220 --> 00:15:15,720
are today so when we get about inside

332
00:15:18,320 --> 00:15:16,230
the flight

333
00:15:20,060 --> 00:15:18,330
review timeframe on in to launch and

334
00:15:21,440 --> 00:15:20,070
then and then launching and getting on

335
00:15:24,410 --> 00:15:21,450
orbit and executing the mission and then

336
00:15:26,660 --> 00:15:24,420
landing and in post landing we get in

337
00:15:29,540 --> 00:15:26,670
sort of that timeframe we're kind of in

338
00:15:34,450 --> 00:15:29,550

the zone and the people that work on the

339
00:15:36,560 --> 00:15:34,460
program pretty much are in that zone and

340
00:15:39,020 --> 00:15:36,570
and I've seen no exception in that

341
00:15:42,560 --> 00:15:39,030
regard during this mission as I said to

342
00:15:45,440 --> 00:15:42,570
the contrary I've never seen the team as

343
00:15:48,970 --> 00:15:45,450
focused as they are now and so it makes

344
00:15:52,610 --> 00:15:48,980
me very proud to be part of this team

345
00:15:56,570 --> 00:15:52,620
and how satisfying is it given all the

346
00:16:00,050 --> 00:15:56,580
questions for a year or two or so about

347
00:16:02,510 --> 00:16:00,060
how these final flights could be flown

348
00:16:05,560 --> 00:16:02,520
out safely with all the pressures

349
00:16:11,360 --> 00:16:05,570
involved to get this first one back in

350
00:16:13,640 --> 00:16:11,370
tomorrow how do you feel about that well

351
00:16:16,820 --> 00:16:13,650
as I said earlier of course this is

352
00:16:18,050 --> 00:16:16,830
never easy right if it was easy anybody

353
00:16:21,470 --> 00:16:18,060
could do it and a lot of people probably

354
00:16:24,380 --> 00:16:21,480
would be doing it but it's very

355
00:16:25,850 --> 00:16:24,390
challenging to launch rockets and to fly

356
00:16:27,110 --> 00:16:25,860
them in orbit and to do things when

357
00:16:28,750 --> 00:16:27,120
you're flying in orbit and then to

358
00:16:34,100 --> 00:16:28,760
return them safely to the earth

359
00:16:37,010 --> 00:16:34,110
is is just real hard to do and so we

360
00:16:40,550 --> 00:16:37,020
knew that it was going to be a challenge

361
00:16:42,160 --> 00:16:40,560
to fly out the program and we knew that

362
00:16:45,680 --> 00:16:42,170
we'd be a little bit more challenged

363
00:16:50,360 --> 00:16:45,690

just because we have to draw down as we

364
00:16:53,870 --> 00:16:50,370
go along and and so we've done that and

365
00:16:56,630 --> 00:16:53,880
and but we've we've executed and we

366
00:16:58,610 --> 00:16:56,640
haven't deviated from our core

367
00:17:00,650 --> 00:16:58,620
principles and our core values of how we

368
00:17:03,980 --> 00:17:00,660
want to run the program and how we want

369
00:17:05,390 --> 00:17:03,990
things to happen and that is to say when

370
00:17:08,000 --> 00:17:05,400
we show up to launch we want to know

371
00:17:10,220 --> 00:17:08,010
that we've turned over every Rock and

372
00:17:12,410 --> 00:17:10,230
we're ready to go I think the work that

373
00:17:12,920 --> 00:17:12,420
the team did on the problems we had with

374
00:17:19,070 --> 00:17:12,930
the tank

375
00:17:21,350 --> 00:17:19,080
Stringer's just it illustrates the fact

376
00:17:25,300 --> 00:17:21,360
that there is no give up in this team

377
00:17:29,410 --> 00:17:25,310
there is no quit they were as intent on

378
00:17:31,750 --> 00:17:29,420
technical excellence and getting to the

379
00:17:33,670 --> 00:17:31,760
the real root of the problem in working

380
00:17:36,640 --> 00:17:33,680
that problem as I've seen this team on

381
00:17:37,960 --> 00:17:36,650
any problem in the history of the

382
00:17:42,520 --> 00:17:37,970
shuttle program that I've been

383
00:17:44,170 --> 00:17:42,530
associated with so we knew that it would

384
00:17:46,720 --> 00:17:44,180
be more challenging because we have

385
00:17:48,670 --> 00:17:46,730
fewer numbers to work with and we also

386
00:17:50,680 --> 00:17:48,680
knew that that may mean it may take us a

387
00:17:53,080 --> 00:17:50,690
little longer to solve any any given

388
00:17:55,230 --> 00:17:53,090

problem but we also knew that we weren't

389
00:17:58,630 --> 00:17:55,240
going to satisfy for anything less than

390
00:18:00,250 --> 00:17:58,640
being absolutely comfortable that we're

391
00:18:02,470 --> 00:18:00,260
ready to go fly safely and we

392
00:18:04,120 --> 00:18:02,480
demonstrated that before we launched

393
00:18:07,560 --> 00:18:04,130
this mission as we work through those

394
00:18:10,180 --> 00:18:07,570
tank problems so that's an example of

395
00:18:11,440 --> 00:18:10,190
knowing that we can still have problems

396
00:18:13,510 --> 00:18:11,450
we can still have challenges we can

397
00:18:19,450 --> 00:18:13,520
still have issues but we're not going to

398
00:18:21,760 --> 00:18:19,460
deviate from from executing whether it's

399
00:18:24,150 --> 00:18:21,770
before we go fly or or as we're flying

400
00:18:27,880 --> 00:18:24,160
the mission from what we have been doing

401
00:18:33,850 --> 00:18:27,890
and and so I feel very good about the

402
00:18:36,060 --> 00:18:33,860
fact that that we were able to to to fix

403
00:18:38,410 --> 00:18:36,070
the tank and to be able to go fly safely

404
00:18:39,700 --> 00:18:38,420
and the way the team and the vehicles

405
00:18:42,040 --> 00:18:39,710
have performed on orbit during this

406
00:18:45,190 --> 00:18:42,050
mission as I said earlier we couldn't be

407
00:18:48,280 --> 00:18:45,200
more proud and unhappy with the outcome

408
00:18:51,640 --> 00:18:48,290
here this mission is not over obviously

409
00:18:53,230 --> 00:18:51,650
as I said earlier our biggest major

410
00:18:55,060 --> 00:18:53,240
milestone remains and that is to get the

411
00:18:56,500 --> 00:18:55,070
crew and discovery back on the ground

412
00:18:59,650 --> 00:18:56,510
safely tomorrow so we look forward to

413
00:19:03,580 --> 00:18:59,660

that in our mission as a program is not

414
00:19:05,470 --> 00:19:03,590
over you know if we have if we have one

415
00:19:06,640 --> 00:19:05,480
mission laughing we Mazal have ten left

416
00:19:08,190 --> 00:19:06,650
because we don't treat it any

417
00:19:11,260 --> 00:19:08,200
differently we take them one at a time

418
00:19:13,540 --> 00:19:11,270
we plan we train we execute one at a

419
00:19:15,270 --> 00:19:13,550
time and so we're going to do that for

420
00:19:17,620 --> 00:19:15,280
the two remaining missions and I feel

421
00:19:19,210 --> 00:19:17,630
very good about where we are as a

422
00:19:25,620 --> 00:19:19,220
program and our ability to go do that

423
00:19:27,730 --> 00:19:25,630
and and we're gonna finish strong okay

424
00:19:30,130 --> 00:19:27,740
question does the fact that you're not

425
00:19:33,490 --> 00:19:30,140
doing a tanking tests on 122 days I mean

426
00:19:35,380 --> 00:19:33,500
you also will not need to do that on the

427
00:19:39,190 --> 00:19:35,390
next tank or is that a totally separate

428
00:19:40,750 --> 00:19:39,200
decision it's really separate and and

429
00:19:42,970 --> 00:19:40,760
it's separate because there there are

430
00:19:45,050 --> 00:19:42,980
two different tanks in terms of

431
00:19:46,460 --> 00:19:45,060
their heritage there are two different

432
00:19:48,680 --> 00:19:46,470
tanks in terms of the assembly and the

433
00:19:51,920 --> 00:19:48,690
materials in and for a whole range of

434
00:19:53,360 --> 00:19:51,930
reasons technical reasons so it's a

435
00:19:58,880 --> 00:19:53,370
different discussion and you're

436
00:20:01,640 --> 00:19:58,890
referring to ET 138 for sts-135 and so

437
00:20:03,950 --> 00:20:01,650
it's a different it's a different

438
00:20:08,000 --> 00:20:03,960

discussion for eighteen 138 then the one

439
00:20:11,060 --> 00:20:08,010
we've had for ET 122 so we haven't made

440
00:20:12,650 --> 00:20:11,070
a decision yet about eighteen 138 as it

441
00:20:14,570 --> 00:20:12,660
relates to whether or not we'll do a

442
00:20:18,350 --> 00:20:14,580
tanking tests that decision is in front

443
00:20:23,180 --> 00:20:18,360
of us and and we'll have those

444
00:20:25,160 --> 00:20:23,190
discussions going forward okay I think

445
00:20:27,020 --> 00:20:25,170
that's all on the phone bridge so we're

446
00:20:30,410 --> 00:20:27,030
back here for any remaining questions

447
00:20:32,180 --> 00:20:30,420
and we'll start there with mark mark

448
00:20:37,430 --> 00:20:32,190
road for Aviation Week I wanted to pick

449
00:20:39,410 --> 00:20:37,440
up on James question on the ETS have all

450
00:20:42,860 --> 00:20:39,420
the tanks now been modified with the

451
00:20:46,130 --> 00:20:42,870
radius block and the other the other

452
00:20:47,420 --> 00:20:46,140
checks or modifications you made to to

453
00:20:52,700 --> 00:20:47,430
the crook to the tank that launch

454
00:20:53,870 --> 00:20:52,710
discovery the ET 122 the one that we

455
00:20:55,700 --> 00:20:53,880
just stacked and we're getting ready to

456
00:20:58,430 --> 00:20:55,710
roll out for us just 130 for the next

457
00:20:59,990 --> 00:20:58,440
mission has been modified and we're in

458
00:21:04,300 --> 00:21:00,000
the process of doing the modifications

459
00:21:08,660 --> 00:21:04,310
on eto 138 or we will be in the process

460
00:21:10,880 --> 00:21:08,670
okay no more questions a couple of

461
00:21:13,250 --> 00:21:10,890
programming Nate notes it's been a great

462
00:21:16,100 --> 00:21:13,260
mission so far with a day to go as Leroy

463
00:21:18,440 --> 00:21:16,110

mentioned Tony ceccacci the entry flight

464
00:21:20,590 --> 00:21:18,450
director is still on console with his

465
00:21:22,970 --> 00:21:20,600
entry team doing there L minus one

466
00:21:25,820 --> 00:21:22,980
checkouts of discovery he'll be over

467
00:21:27,890 --> 00:21:25,830
here to discuss his entry strategy with

468
00:21:29,630 --> 00:21:27,900
you at one o'clock central 2 p.m.

469
00:21:32,180 --> 00:21:29,640
Eastern Time

470
00:21:33,680 --> 00:21:32,190
we'll obviously have our usual flight

471
00:21:36,470 --> 00:21:33,690
day highlights that start at 8 o'clock

472
00:21:38,150 --> 00:21:36,480
tonight after the crew goes to bed the

473
00:21:41,450 --> 00:21:38,160
crew will wake up for entry Wednesday

474
00:21:43,720 --> 00:21:41,460
morning at 2:23 Central time and prepare

475
00:21:45,980 --> 00:21:43,730
for the deorbit preparation activities

476
00:21:48,290 --> 00:21:45,990
Tony and his entry team will be in

477
00:21:50,450 --> 00:21:48,300
shortly after that at 3:30 tomorrow

478
00:21:52,220 --> 00:21:50,460
morning Central time and then the two

479
00:21:54,220 --> 00:21:52,230
landing opportunities that are available

480
00:21:56,260 --> 00:21:54,230
to him and the entry team and the crew

481
00:22:00,120 --> 00:21:56,270
discovery are at the Kennedy Space

482
00:22:03,760 --> 00:22:00,130
Center tomorrow at 10:57 central and

483
00:22:05,110 --> 00:22:03,770
1234 p.m. Central those are the two

484
00:22:06,790 --> 00:22:05,120
landing opportunities so we'll see how

485
00:22:09,520 --> 00:22:06,800
that goes and Tony will lay all that out

486
00:22:10,630 --> 00:22:09,530
for you here in just a little while so

487
00:22:12,280 --> 00:22:10,640
with that well thank you guys for coming

488
00:22:14,740 --> 00:22:12,290

it's been a great mission so far leroy