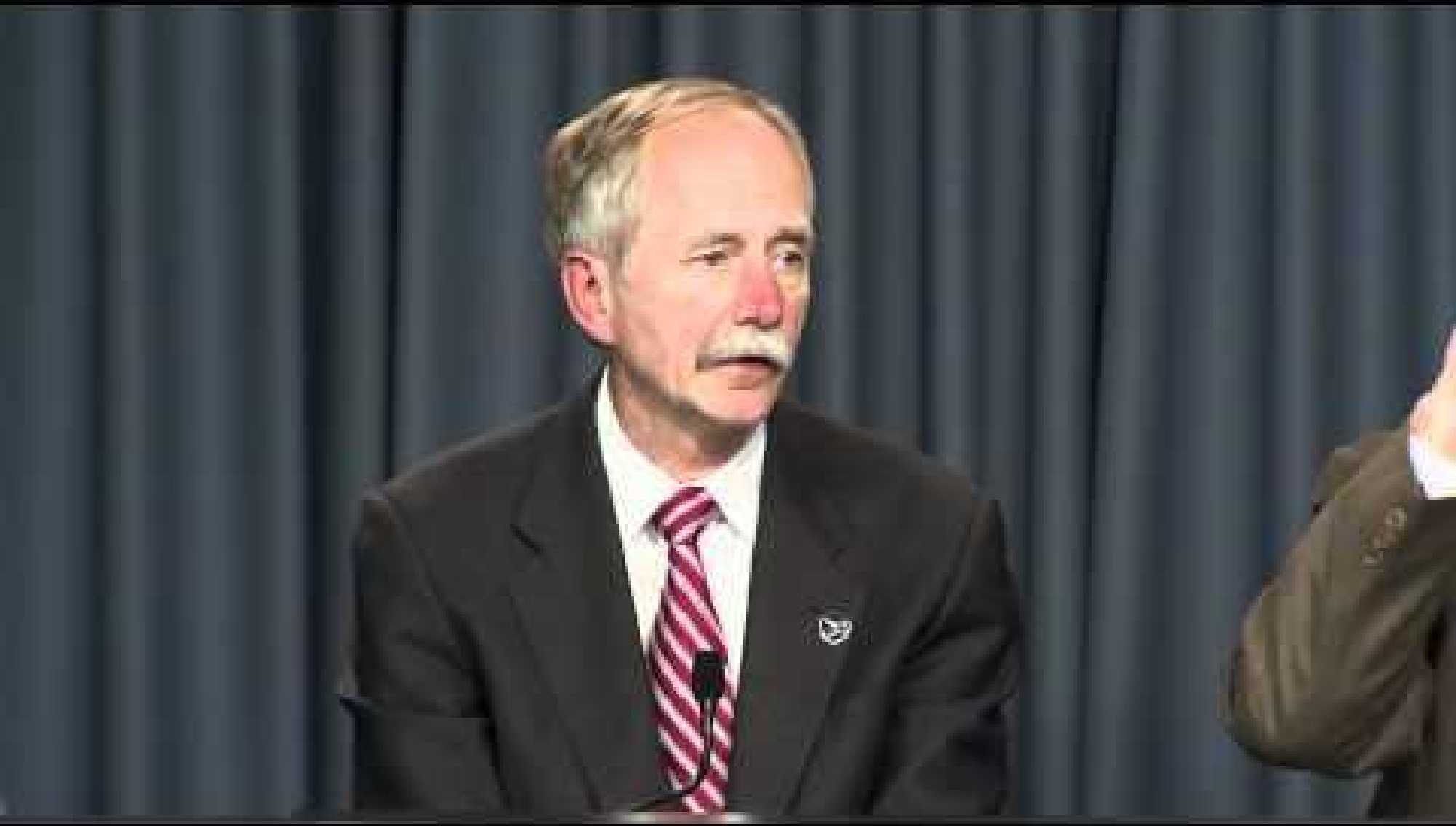

1
00:00:07,700 --> 00:00:05,440
good afternoon and welcome to our

2
00:00:10,160 --> 00:00:07,710
sts-134 post Flight Readiness review

3
00:00:12,400 --> 00:00:10,170
news conference we are here today to

4
00:00:14,870 --> 00:00:12,410
talk about the day-long meeting that

5
00:00:17,450 --> 00:00:14,880
arrived at a decision for the official

6
00:00:19,340 --> 00:00:17,460
launch date and here to talk to us about

7
00:00:21,650 --> 00:00:19,350
it our NASA's associate administrator

8
00:00:25,700 --> 00:00:21,660
for Space Operations mr. bill

9
00:00:26,900 --> 00:00:25,710
Gerstenmaier afternoon Mike Moses the

10
00:00:30,109 --> 00:00:26,910
space shuttle program launched

11
00:00:31,790 --> 00:00:30,119
integration manager definitely and Mike

12
00:00:34,040 --> 00:00:31,800
Leinbach the shuttle launch director

13
00:00:35,870 --> 00:00:34,050

good afternoon we'll begin with opening

14
00:00:38,270 --> 00:00:35,880
comments and then we'll be happy to take

15
00:00:41,770 --> 00:00:38,280
your questions mr Bruce Meyer thanks

16
00:00:44,660 --> 00:00:41,780
Mike again we set Friday April 29th that

17
00:00:49,940 --> 00:00:44,670
347 p.m. is a launch time for the

18
00:00:52,850 --> 00:00:49,950
mission we had a very extensive review

19
00:00:54,740 --> 00:00:52,860
thorough review today I think the things

20
00:00:58,220 --> 00:00:54,750
that impressed me the most is that the

21
00:01:01,369 --> 00:00:58,230
team is still continuing to really work

22
00:01:02,840 --> 00:01:01,379
issues and look look at the vehicle

23
00:01:05,630 --> 00:01:02,850
performance on each and every flight

24
00:01:07,940 --> 00:01:05,640
just like if they would during any

25
00:01:09,950 --> 00:01:07,950
normal mission you know from a good

26
00:01:11,960 --> 00:01:09,960
example is on the last flight when they

27
00:01:15,249 --> 00:01:11,970
were doing the ascent reconstruction

28
00:01:17,300 --> 00:01:15,259
data they did they looked at the

29
00:01:19,010 --> 00:01:17,310
reconstructed essent performance and

30
00:01:21,859 --> 00:01:19,020
they saw some temperature increases in

31
00:01:24,140 --> 00:01:21,869
the data around the 502nd point and that

32
00:01:26,120 --> 00:01:24,150
was due to the fact that the beta angle

33
00:01:28,550 --> 00:01:26,130
was a little bit higher and the alpha

34
00:01:30,530 --> 00:01:28,560
angle was a little bit higher because of

35
00:01:31,700 --> 00:01:30,540
the delay in the launch window typically

36
00:01:33,469 --> 00:01:31,710
launched in the middle of the launch

37
00:01:35,210 --> 00:01:33,479
window at the optimum time but we were

38
00:01:36,410 --> 00:01:35,220

at the end of the window and that caused

39
00:01:38,539 --> 00:01:36,420
a little bit of steering to be a little

40
00:01:40,100 --> 00:01:38,549
bit different and that caused additional

41
00:01:42,230 --> 00:01:40,110
heating on the wings more than they

42
00:01:43,609 --> 00:01:42,240
expected so they went back and they

43
00:01:45,319 --> 00:01:43,619
actually looked at the certification

44
00:01:47,090 --> 00:01:45,329
models and they found a small error and

45
00:01:49,310 --> 00:01:47,100
the certification models that some of

46
00:01:51,440 --> 00:01:49,320
those outlying cases were not really

47
00:01:53,389 --> 00:01:51,450
accurately modeled in the model so they

48
00:01:54,950 --> 00:01:53,399
went back and redid that for this flight

49
00:01:57,080 --> 00:01:54,960
to show that we have plenty of margin

50
00:01:58,490 --> 00:01:57,090
and then for the remaining flight

51
00:01:59,450 --> 00:01:58,500
they're also going to go take a look at

52
00:02:01,160 --> 00:01:59,460
that and actually change our

53
00:02:03,380 --> 00:02:01,170
certification model so I think it's a

54
00:02:05,780 --> 00:02:03,390
tribute to the team that they're not

55
00:02:07,429 --> 00:02:05,790
just taking the data and just looking at

56
00:02:09,199 --> 00:02:07,439
it and saying it's okay they're actually

57
00:02:11,570 --> 00:02:09,209
understanding what the data means and

58
00:02:13,250 --> 00:02:11,580
continue to understand how they can

59
00:02:13,559 --> 00:02:13,260
improve the performance of the vehicles

60
00:02:18,000 --> 00:02:13,569
and

61
00:02:20,160 --> 00:02:18,010
vehicle will have more of the breat I'll

62
00:02:21,449 --> 00:02:20,170
that's the tougher tile on the bottom of

63
00:02:23,399 --> 00:02:21,459

the orbit than any other vehicle we've

64
00:02:26,520 --> 00:02:23,409
flown before we've been putting that

65
00:02:29,280 --> 00:02:26,530
around the landing gear doors and the

66
00:02:30,780 --> 00:02:29,290
external tank doors to provide a little

67
00:02:33,030 --> 00:02:30,790
more debris protection and we've got

68
00:02:34,890 --> 00:02:33,040
those additional tile the tougher tile

69
00:02:37,410 --> 00:02:34,900
installed and that's good here on

70
00:02:38,910 --> 00:02:37,420
endeavour we also spent quite a bit of

71
00:02:40,740 --> 00:02:38,920
time talking about the systems onboard

72
00:02:42,360 --> 00:02:40,750
the space station and they all seem to

73
00:02:44,429 --> 00:02:42,370
be functioning well we're still

74
00:02:46,229 --> 00:02:44,439
continuing to learn a lot about the

75
00:02:48,360 --> 00:02:46,239
environmental control system on Space

76
00:02:50,879 --> 00:02:48,370
Station the oxygen generation system the

77
00:02:52,619 --> 00:02:50,889
water processors some of the equipment

78
00:02:54,330 --> 00:02:52,629
we've been flying up on the shuttle will

79
00:02:56,099 --> 00:02:54,340
be critical to keep those systems up and

80
00:02:58,379 --> 00:02:56,109
operating and moving forward as well

81
00:03:00,780 --> 00:02:58,389
some of the samples have really been

82
00:03:02,369 --> 00:03:00,790
helpful coming back from station that we

83
00:03:04,679 --> 00:03:02,379
can actually understand what's going on

84
00:03:06,530 --> 00:03:04,689
with station we also talked a little bit

85
00:03:08,909 --> 00:03:06,540
about the Alpha Magnetic Spectrometer

86
00:03:10,830 --> 00:03:08,919
professor ting gave us a little

87
00:03:12,720 --> 00:03:10,840
discussion on what he hopes to see from

88
00:03:15,300 --> 00:03:12,730

his instrument onboard space station and

89
00:03:16,979 --> 00:03:15,310
that was a pretty exciting discussion

90
00:03:18,569 --> 00:03:16,989
that he gave us that you know the fact

91
00:03:20,429 --> 00:03:18,579
that we get a chance to look back at the

92
00:03:22,289 --> 00:03:20,439
the Big Bang and see if there's

93
00:03:25,259 --> 00:03:22,299
antimatter that occurred then is a

94
00:03:27,449 --> 00:03:25,269
pretty promising piece also to look at

95
00:03:29,789 --> 00:03:27,459
high-energy particle physics kind of

96
00:03:31,319 --> 00:03:29,799
parameters similar to what we see in a

97
00:03:34,020 --> 00:03:31,329
ground super collider will be also

98
00:03:37,469 --> 00:03:34,030
another outcome of the AMS and then the

99
00:03:41,640 --> 00:03:37,479
third thing it it'll allow us to do is

100
00:03:43,259 --> 00:03:41,650
to kind of just just learn more about

101
00:03:45,210 --> 00:03:43,269
dark matter which makes up a large

102
00:03:47,189 --> 00:03:45,220
portion of the universe which we really

103
00:03:48,990 --> 00:03:47,199
don't understand why it's there or

104
00:03:51,089 --> 00:03:49,000
matter that we can't see with the

105
00:03:53,249 --> 00:03:51,099
classical instruments so it was very

106
00:03:54,629 --> 00:03:53,259
interesting hearing about AMS then the

107
00:03:57,300 --> 00:03:54,639
last thing we spent quite a bit of time

108
00:04:00,959 --> 00:03:57,310
talking about was the external tank this

109
00:04:03,030 --> 00:04:00,969
is et 122 if you remember it was at math

110
00:04:05,819 --> 00:04:03,040
during Katrina when Katrina hit a

111
00:04:08,300 --> 00:04:05,829
portion of the roof came down and struck

112
00:04:11,099 --> 00:04:08,310
the tank and we reviewed and

113
00:04:12,569 --> 00:04:11,109

excruciating detail that this tank is

114
00:04:15,479 --> 00:04:12,579
really ready to fly that there's no

115
00:04:16,920 --> 00:04:15,489
concerns we reviewed all the analysis

116
00:04:19,229 --> 00:04:16,930
they did to show that this tank was

117
00:04:21,509 --> 00:04:19,239
certified to go fly we also talked about

118
00:04:23,370 --> 00:04:21,519
this tank from a stringer standpoint and

119
00:04:25,740 --> 00:04:23,380
are the stringers of the right material

120
00:04:27,120 --> 00:04:25,750
to go fly I think we have three strong

121
00:04:28,410 --> 00:04:27,130
indications that the

122
00:04:30,390 --> 00:04:28,420
are the right stringers the right

123
00:04:32,340 --> 00:04:30,400
material and they're not the defective

124
00:04:34,800 --> 00:04:32,350
material so that's it was encouraging to

125
00:04:36,900 --> 00:04:34,810
us and then the last thing we went over

126
00:04:38,850 --> 00:04:36,910
was that this tank doesn't have some of

127
00:04:40,680 --> 00:04:38,860
the modifications to it that other tanks

128
00:04:43,020 --> 00:04:40,690
external tanks have had so we expect to

129
00:04:46,140 --> 00:04:43,030
see some foam loss if you remember we

130
00:04:49,050 --> 00:04:46,150
used to lose foam around the LH to ice

131
00:04:51,300 --> 00:04:49,060
frost ramps on the hydrogen tank because

132
00:04:53,700 --> 00:04:51,310
there was a little guide pin or

133
00:04:55,920 --> 00:04:53,710
alignment pin that would allow some cryo

134
00:04:57,780 --> 00:04:55,930
pumping and an ingestion around the ice

135
00:04:59,880 --> 00:04:57,790
frost ramps which would cause some foam

136
00:05:03,800 --> 00:04:59,890
to come off from those areas we fully

137
00:05:06,300 --> 00:05:03,810
expected this to occur on this tank we

138
00:05:09,510 --> 00:05:06,310

didn't make the modifications to do that

139
00:05:11,220 --> 00:05:09,520
it'll again be late losses of foam but

140
00:05:14,100 --> 00:05:11,230
we expect to see some foam losses in

141
00:05:16,080 --> 00:05:14,110
that area the et team also looked pretty

142
00:05:19,380 --> 00:05:16,090
extensively at the foam loss we saw on

143
00:05:22,470 --> 00:05:19,390
the just below the inner tank region on

144
00:05:23,850 --> 00:05:22,480
the LH to side and we understand or we

145
00:05:27,030 --> 00:05:23,860
think we understand again why that

146
00:05:28,230 --> 00:05:27,040
occurred and and we'll see and we've

147
00:05:29,850 --> 00:05:28,240
really done the right things to make

148
00:05:31,440 --> 00:05:29,860
sure that it's okay the performance was

149
00:05:33,420 --> 00:05:31,450
also acceptable in the fact that it came

150
00:05:35,610 --> 00:05:33,430
off late just as we have predicted but

151
00:05:37,050 --> 00:05:35,620
the teams went back and they just didn't

152
00:05:38,910 --> 00:05:37,060
accept the fact that it came off late

153
00:05:41,400 --> 00:05:38,920
they actually went back and redid models

154
00:05:42,960 --> 00:05:41,410
updated risk assessments to make sure

155
00:05:45,030 --> 00:05:42,970
that we're still okay to fly so it

156
00:05:46,710 --> 00:05:45,040
wasn't just saying we lost foam and it

157
00:05:48,840 --> 00:05:46,720
didn't cause us any problem it was okay

158
00:05:50,940 --> 00:05:48,850
they took it a step further said how big

159
00:05:52,800 --> 00:05:50,950
could the foam lost be could it be at a

160
00:05:54,630 --> 00:05:52,810
different slightly different time would

161
00:05:56,700 --> 00:05:54,640
any of that cause us any concern so they

162
00:05:58,020 --> 00:05:56,710
spent quite a bit of time reviewing that

163
00:05:59,730 --> 00:05:58,030

to make sure we were comfortable with

164
00:06:02,070 --> 00:05:59,740
what we'd seen from the last flight so

165
00:06:03,780 --> 00:06:02,080
again I'd say we we reviewed everything

166
00:06:06,210 --> 00:06:03,790
we spent quite a bit of time talking

167
00:06:08,010 --> 00:06:06,220
about all the things and I think the

168
00:06:10,170 --> 00:06:08,020
team was unanimous and we're ready to go

169
00:06:14,040 --> 00:06:10,180
flies as I described earlier so it was a

170
00:06:16,080 --> 00:06:14,050
very good review so Mike thanks Bill so

171
00:06:17,460 --> 00:06:16,090
again yeah it was a really good review

172
00:06:20,430 --> 00:06:17,470
today from both station and shuttles

173
00:06:23,280 --> 00:06:20,440
perspective just to continue on the

174
00:06:24,960 --> 00:06:23,290
external tank discussion ET 122 s can

175
00:06:27,540 --> 00:06:24,970
kind of called the hurricane tank since

176
00:06:29,640 --> 00:06:27,550
it went through Hurricane Katrina it had

177
00:06:31,650 --> 00:06:29,650
the return to flight mods made to it

178
00:06:34,650 --> 00:06:31,660
like like bill said to make its debris

179
00:06:36,120 --> 00:06:34,660
to help reduce the any debris liberation

180
00:06:38,370 --> 00:06:36,130
off of it with the exception of a few

181
00:06:41,129 --> 00:06:38,380
areas we decided based on risk that we

182
00:06:43,469 --> 00:06:41,139
did not need to address and then we went

183
00:06:45,899 --> 00:06:43,479
did the et stringer mod to it even

184
00:06:47,730 --> 00:06:45,909
though we we subsequently got enough

185
00:06:49,439 --> 00:06:47,740
data to prove that that the stringer

186
00:06:51,089 --> 00:06:49,449
material on this tank is not of the same

187
00:06:53,670 --> 00:06:51,099
family as what we had on the last tank

188
00:06:55,260 --> 00:06:53,680

and will have on the next one on sts-135

189
00:06:57,330 --> 00:06:55,270
stank and so it didn't really need that

190
00:06:58,980 --> 00:06:57,340
stringer modification but when the time

191
00:07:00,269 --> 00:06:58,990
came in the schedule to be able to do

192
00:07:03,510 --> 00:07:00,279
that work and have enough time to still

193
00:07:05,909 --> 00:07:03,520
make the launch date we needed to move

194
00:07:07,499 --> 00:07:05,919
out on doing it without all the data and

195
00:07:08,670 --> 00:07:07,509
then we found out afterwards that we

196
00:07:09,689 --> 00:07:08,680
didn't really need to do it so the team

197
00:07:11,730 --> 00:07:09,699
did a really good job but just

198
00:07:13,679 --> 00:07:11,740
double-checking that we have plenty of

199
00:07:15,420 --> 00:07:13,689
test and analysis to show that this

200
00:07:17,249 --> 00:07:15,430
modification made the good stringers

201
00:07:19,110 --> 00:07:17,259
doesn't change our dynamics or our

202
00:07:21,510 --> 00:07:19,120
performance on the tank at all but

203
00:07:22,619 --> 00:07:21,520
really what kind of wraps it up is it's

204
00:07:23,850 --> 00:07:22,629
hard to see because it's around the

205
00:07:26,490 --> 00:07:23,860
corner but you might see it in some of

206
00:07:28,469 --> 00:07:26,500
the shots there's a door on the side of

207
00:07:30,839 --> 00:07:28,479
the inner tank we caught the entertained

208
00:07:31,920 --> 00:07:30,849
or and it has a logo painted on it for

209
00:07:33,869 --> 00:07:31,930
the first time ever in the history the

210
00:07:36,510 --> 00:07:33,879
shuttle program we've actually painted a

211
00:07:37,709 --> 00:07:36,520
logo it's the it's a hurricane with the

212
00:07:40,320 --> 00:07:37,719
shuttle stack lifting off through the

213
00:07:41,550 --> 00:07:40,330

eye of the storm really try to kind of

214
00:07:43,950 --> 00:07:41,560
represents what this tank has been

215
00:07:45,390 --> 00:07:43,960
through but but to me more importantly

216
00:07:47,429 --> 00:07:45,400
what it represents is what the external

217
00:07:50,550 --> 00:07:47,439
tank team has been through if you think

218
00:07:53,070 --> 00:07:50,560
of it we had the tank at at math in

219
00:07:55,200 --> 00:07:53,080
machine near New Orleans when the

220
00:07:56,429 --> 00:07:55,210
Columbia accident occurred they looked

221
00:07:58,379 --> 00:07:56,439
at that tank to see what we could do to

222
00:08:00,689 --> 00:07:58,389
get it back in line and start flying it

223
00:08:02,850 --> 00:08:00,699
again then Katrina hit damage to the

224
00:08:04,800 --> 00:08:02,860
tank we had to stop work on it and in

225
00:08:08,189 --> 00:08:04,810
fact stop work across most of the plant

226
00:08:10,290 --> 00:08:08,199
and recover so that logo kind of really

227
00:08:11,519 --> 00:08:10,300
represents to us emotionally what the

228
00:08:13,290 --> 00:08:11,529
the tank has been through but more

229
00:08:14,879 --> 00:08:13,300
importantly what what the team has been

230
00:08:16,589 --> 00:08:14,889
through if you think about it Katrina

231
00:08:17,999 --> 00:08:16,599
did nothing to our tank compared to what

232
00:08:19,950 --> 00:08:18,009
it did to the people's lives down there

233
00:08:22,499 --> 00:08:19,960
and and even to this day they're still

234
00:08:24,179 --> 00:08:22,509
recovering from that so an absolutely

235
00:08:26,249 --> 00:08:24,189
amazing job by our external tank team

236
00:08:27,360 --> 00:08:26,259
the motto of that group has been to

237
00:08:29,429 --> 00:08:27,370
finish strong and they are most

238
00:08:30,540 --> 00:08:29,439

certainly doing that not only with the

239
00:08:32,790 --> 00:08:30,550
stringer issue we had on the last flight

240
00:08:34,860 --> 00:08:32,800
but but just this tank to get get it

241
00:08:36,899 --> 00:08:34,870
back into the flight assets given where

242
00:08:38,790 --> 00:08:36,909
it went with its pedigree is a really

243
00:08:41,399 --> 00:08:38,800
testament to the the dedication and the

244
00:08:42,329 --> 00:08:41,409
resiliency of that team focus a little

245
00:08:44,730 --> 00:08:42,339
bit on the mission that we're going to

246
00:08:46,079 --> 00:08:44,740
do we talked a lot about our timeline

247
00:08:49,740 --> 00:08:46,089
this is going to be a very complex

248
00:08:51,150 --> 00:08:49,750
choreography a lot of small tasks that

249
00:08:52,889 --> 00:08:51,160
all have to go when they're supposed to

250
00:08:54,600 --> 00:08:52,899
or they have to ripple down and find new

251
00:08:54,840 --> 00:08:54,610
homes which makes it a big challenge for

252
00:08:56,639 --> 00:08:54,850
them

253
00:08:58,740 --> 00:08:56,649
operations team and they have a pretty

254
00:09:00,540 --> 00:08:58,750
good plan with a lot of backups in it to

255
00:09:02,550 --> 00:09:00,550
be able to handle that on flight day

256
00:09:05,309 --> 00:09:02,560
three after we docked to the station we

257
00:09:07,530 --> 00:09:05,319
will take the ELC pallet out which has a

258
00:09:09,509 --> 00:09:07,540
bunch of external oru that are spares

259
00:09:11,730 --> 00:09:09,519
for the station and so they'll go stow

260
00:09:14,400 --> 00:09:11,740
that on the station on flight day for

261
00:09:16,530 --> 00:09:14,410
will lift out AMS and go put it on the

262
00:09:18,120 --> 00:09:16,540
other side of the station so by flight

263
00:09:19,769 --> 00:09:18,130

day for will have both of the big main

264
00:09:20,879 --> 00:09:19,779
payloads out of the bay and then I'm

265
00:09:22,889 --> 00:09:20,889
flight day 10 we're actually going to

266
00:09:26,280 --> 00:09:22,899
leave behind our boom our inspection

267
00:09:29,220 --> 00:09:26,290
boom the OBS s this is the the extension

268
00:09:31,220 --> 00:09:29,230
arm that we use to do shuttle TPS style

269
00:09:34,110 --> 00:09:31,230
and wing leading edge protection

270
00:09:35,699 --> 00:09:34,120
inspections we do it on flight day 2

271
00:09:37,050 --> 00:09:35,709
after we get in orbit we make sure we

272
00:09:39,480 --> 00:09:37,060
didn't have any asset damage and then we

273
00:09:40,259 --> 00:09:39,490
do it a couple days before we land to

274
00:09:42,210 --> 00:09:40,269
make sure we didn't have any

275
00:09:44,370 --> 00:09:42,220
micrometeorite or orbital debris impacts

276
00:09:47,160 --> 00:09:44,380
to the to the RCC on the wing leading

277
00:09:48,600 --> 00:09:47,170
edges where the nose cap we're going to

278
00:09:51,269 --> 00:09:48,610
leave that boom behind on station we've

279
00:09:55,079 --> 00:09:51,279
left it behind once before if you

280
00:09:56,910 --> 00:09:55,089
remember way back STS 123 and 124 that

281
00:09:59,040 --> 00:09:56,920
boom came about after some of those

282
00:10:01,079 --> 00:09:59,050
modules were built the Japanese the gem

283
00:10:02,610 --> 00:10:01,089
module was a little too big to have the

284
00:10:04,980 --> 00:10:02,620
OBS s in the payload base of the mission

285
00:10:06,269 --> 00:10:04,990
before it left its boom behind and after

286
00:10:07,530 --> 00:10:06,279
they installed the gem on the following

287
00:10:09,269 --> 00:10:07,540
mission they grabbed that boom and used

288
00:10:10,710 --> 00:10:09,279

it for their inspections and brought it

289
00:10:12,420 --> 00:10:10,720
back home we're going to use that same

290
00:10:15,210 --> 00:10:12,430
hardware to stow the OB SS but this time

291
00:10:19,259 --> 00:10:15,220
it's going to stay on station and you go

292
00:10:21,929 --> 00:10:19,269
way back to sts 117 119 I can't remember

293
00:10:24,900 --> 00:10:21,939
my numbers but when we were moving the

294
00:10:26,699 --> 00:10:24,910
p6 solar rate we had the that tear in

295
00:10:28,769 --> 00:10:26,709
the solar array we used our boom on the

296
00:10:30,809 --> 00:10:28,779
station arm as an extension to let Scott

297
00:10:33,210 --> 00:10:30,819
pairs in ski go out extend the reach and

298
00:10:34,740 --> 00:10:33,220
do a repair that's basically why station

299
00:10:36,540 --> 00:10:34,750
once that boom it gives him some extra

300
00:10:38,129 --> 00:10:36,550
reach and can get to some pieces of

301
00:10:39,960 --> 00:10:38,139
station that they can't get to right now

302
00:10:42,509 --> 00:10:39,970
just with their station arm so that boom

303
00:10:43,710 --> 00:10:42,519
will stay up on station it it'll be

304
00:10:46,160 --> 00:10:43,720
modified a little bit so that it can be

305
00:10:48,449 --> 00:10:46,170
grappled by the SS RMS the station arm

306
00:10:49,829 --> 00:10:48,459
down at the end right now it can only

307
00:10:51,090 --> 00:10:49,839
grapple it in the middle of the boom so

308
00:10:53,429 --> 00:10:51,100
we'll move that fixture down to the end

309
00:10:54,809 --> 00:10:53,439
the sensor pack that we use the laser

310
00:10:56,400 --> 00:10:54,819
sensors and the cameras are going to

311
00:10:57,660 --> 00:10:56,410
stay on but they're not going to be

312
00:10:59,699 --> 00:10:57,670
powered so they're going to die pretty

313
00:11:02,400 --> 00:10:59,709

quickly there's no plans for the station

314
00:11:03,840 --> 00:11:02,410
team to use those sensors but the boom

315
00:11:05,549 --> 00:11:03,850
will have the mods to be able to go add

316
00:11:08,090 --> 00:11:05,559
sensors at a later date if it becomes

317
00:11:09,410 --> 00:11:08,100
necessary and they find an operational

318
00:11:12,079 --> 00:11:09,420
to do that but for now it's just going

319
00:11:13,699 --> 00:11:12,089
to basically be an extension stick that

320
00:11:15,259 --> 00:11:13,709
we're going to leave behind on station

321
00:11:17,749 --> 00:11:15,269
so because of that we're going to do

322
00:11:20,480 --> 00:11:17,759
just like we've done on sts-1 23 and

323
00:11:23,120 --> 00:11:20,490
then we did again on sts-131 when our K

324
00:11:24,889 --> 00:11:23,130
you band antenna failed we're going to

325
00:11:26,930 --> 00:11:24,899
do our late inspection with that that

326
00:11:28,879 --> 00:11:26,940
final inspection of the orbiter TPS well

327
00:11:30,290 --> 00:11:28,889
we're docked to the space station before

328
00:11:31,999 --> 00:11:30,300
we leave the boom behind so we'll do

329
00:11:33,740 --> 00:11:32,009
that very well understood playing like I

330
00:11:34,759 --> 00:11:33,750
said we've done it twice before the crew

331
00:11:36,290 --> 00:11:34,769
has been very well trained that should

332
00:11:38,480 --> 00:11:36,300
go off without a hitch that's going to

333
00:11:41,030 --> 00:11:38,490
happen on flight day 11 it's like a 12o

334
00:11:42,439 --> 00:11:41,040
beva for the finally VA and that require

335
00:11:44,420 --> 00:11:42,449
an e VA to go install the boom on

336
00:11:46,939 --> 00:11:44,430
station so so you'll see that sequence

337
00:11:49,090 --> 00:11:46,949
of we do a late inspection then we stow

338
00:11:51,199 --> 00:11:49,100

the boom on the e VA the following day

339
00:11:52,999 --> 00:11:51,209
we talked a little bit about our mission

340
00:11:55,970 --> 00:11:53,009
duration we're going to lift off with a

341
00:11:57,800 --> 00:11:55,980
14-day planned mission we have two

342
00:11:59,870 --> 00:11:57,810
extension days in addition to the two

343
00:12:01,040 --> 00:11:59,880
weather and systems wave off days that

344
00:12:03,079 --> 00:12:01,050
we keep for deorbit landing

345
00:12:04,910 --> 00:12:03,089
contingencies but so we have two mission

346
00:12:06,769 --> 00:12:04,920
extension days this time we do plan on

347
00:12:08,840 --> 00:12:06,779
using those we didn't want to commit

348
00:12:10,819 --> 00:12:08,850
them pre-flight just in case something

349
00:12:12,740 --> 00:12:10,829
happened that made us want to redress

350
00:12:14,030 --> 00:12:12,750
why we had committed them so after we

351
00:12:16,249 --> 00:12:14,040
get doc to station probably around

352
00:12:17,749 --> 00:12:16,259
flight day five or so the mission

353
00:12:19,429 --> 00:12:17,759
management team both on the station in

354
00:12:21,019 --> 00:12:19,439
the shuttle side we'll take a look at

355
00:12:22,519 --> 00:12:21,029
where we're at the mission ops team has

356
00:12:24,230 --> 00:12:22,529
a really good plan where those two extra

357
00:12:26,120 --> 00:12:24,240
days we'll go in and we'll probably add

358
00:12:28,189 --> 00:12:26,130
those two days taking it to a 16-day

359
00:12:30,710 --> 00:12:28,199
mission but we won't do that until we

360
00:12:32,300 --> 00:12:30,720
get in orbit and see what we got the the

361
00:12:33,439 --> 00:12:32,310
main activities are really station

362
00:12:36,170 --> 00:12:33,449
outfitting that need to be done the

363
00:12:37,759 --> 00:12:36,180

station we already know have a whole

364
00:12:39,350 --> 00:12:37,769
host of tasks we need to fill in on

365
00:12:41,629 --> 00:12:39,360
those two days so those will be very

366
00:12:43,009 --> 00:12:41,639
helpful and if we lift off on time we'll

367
00:12:46,460 --> 00:12:43,019
have plenty of cryo to be able to do

368
00:12:48,740 --> 00:12:46,470
that like I've mentioned TVA's we have

369
00:12:49,759 --> 00:12:48,750
four of on this mission we're gonna

370
00:12:51,829 --> 00:12:49,769
you're going to see us use a new

371
00:12:54,710 --> 00:12:51,839
pre-breathe protocol pre-breathe is what

372
00:12:56,269 --> 00:12:54,720
we have the crew do it's a lot like when

373
00:12:57,199 --> 00:12:56,279
you're scuba diving the guys who go out

374
00:12:59,150 --> 00:12:57,209
in their suits go down at a lower

375
00:13:00,819 --> 00:12:59,160
pressure we have the suits at a lower

376
00:13:02,960 --> 00:13:00,829
pressure brother than atmospheric ax

377
00:13:04,340 --> 00:13:02,970
14.7 PSI so we need to purge the

378
00:13:06,590 --> 00:13:04,350
nitrogen out of their blood before they

379
00:13:08,389 --> 00:13:06,600
go to that lower pressure the protocol

380
00:13:10,699 --> 00:13:08,399
we mainly use these days is called camp

381
00:13:12,230 --> 00:13:10,709
out the night before the tui VA

382
00:13:14,150 --> 00:13:12,240
astronauts go into the airlock they shut

383
00:13:15,769 --> 00:13:14,160
the door they lower the pressure just in

384
00:13:17,480 --> 00:13:15,779
that airlock rather than in the entire

385
00:13:18,949 --> 00:13:17,490
station and then they kind of camp out

386
00:13:21,230 --> 00:13:18,959
all night long at that lower pressure

387
00:13:21,870 --> 00:13:21,240
get up in the morning get on masks do

388
00:13:24,360 --> 00:13:21,880

their activities

389
00:13:26,700 --> 00:13:24,370
their suits this new activity basically

390
00:13:30,030 --> 00:13:26,710
is called in suit light exercise

391
00:13:31,710 --> 00:13:30,040
protocol and exercises a real stretch so

392
00:13:33,080 --> 00:13:31,720
the morning of the crew doesn't have to

393
00:13:35,130 --> 00:13:33,090
camp out so the morning of they'll go in

394
00:13:36,780 --> 00:13:35,140
they'll they'll get into their suits

395
00:13:39,630 --> 00:13:36,790
they'll start breathing pure o2 for

396
00:13:41,640 --> 00:13:39,640
about 50 minutes more 50 minutes more

397
00:13:43,110 --> 00:13:41,650
than they normally would and then during

398
00:13:45,840 --> 00:13:43,120
that time they'll do what we call light

399
00:13:48,480 --> 00:13:45,850
exercises which is really just very slow

400
00:13:49,770 --> 00:13:48,490
flexing of their elbows and legs and so

401
00:13:51,900 --> 00:13:49,780
they're going to basically bend their

402
00:13:54,180 --> 00:13:51,910
knees a little bit than their hips build

403
00:13:56,010 --> 00:13:54,190
their arms like I said calling exercises

404
00:13:57,840 --> 00:13:56,020
is a stretch there not really going to

405
00:13:59,100 --> 00:13:57,850
do much at all but just to get your

406
00:14:00,960 --> 00:13:59,110
metabolic rate up a little bit and then

407
00:14:03,510 --> 00:14:00,970
after that 50 minutes they'll have 50

408
00:14:05,910 --> 00:14:03,520
minutes arrests again still on pro2 so

409
00:14:07,590 --> 00:14:05,920
100 minutes of pre-breathe will will

410
00:14:09,540 --> 00:14:07,600
make the equivalent of having camped out

411
00:14:10,650 --> 00:14:09,550
overnight at a lower pressure you still

412
00:14:12,660 --> 00:14:10,660
get all the nitrogen out of your system

413
00:14:15,270 --> 00:14:12,670

and operationally it's a much more

414
00:14:16,950 --> 00:14:15,280
friendly operational system of pre

415
00:14:19,470 --> 00:14:16,960
breeze protocol than than either the

416
00:14:20,490 --> 00:14:19,480
other methods we use mostly because the

417
00:14:22,890 --> 00:14:20,500
crew doesn't have to be camped out by

418
00:14:25,230 --> 00:14:22,900
themselves overnight and you avoid some

419
00:14:27,780 --> 00:14:25,240
of the the problems like for example a

420
00:14:29,190 --> 00:14:27,790
false smoke alarm station would cause

421
00:14:31,230 --> 00:14:29,200
that airlock to be repressed which would

422
00:14:32,640 --> 00:14:31,240
break the protocol and prevent you from

423
00:14:34,950 --> 00:14:32,650
going eevee a the next day this will

424
00:14:37,020 --> 00:14:34,960
avoid any of those problems so both the

425
00:14:38,550 --> 00:14:37,030
operations team in Houston and the crew

426
00:14:40,020 --> 00:14:38,560
are looking forward to this protocol

427
00:14:42,480 --> 00:14:40,030
we're going to use that on EV a 3 as

428
00:14:44,010 --> 00:14:42,490
kind of a test run and if it goes well

429
00:14:45,840 --> 00:14:44,020
we'll probably use it also an EV a for

430
00:14:48,090 --> 00:14:45,850
its been through extensive ground

431
00:14:50,160 --> 00:14:48,100
testing and approval through both NASA

432
00:14:51,420 --> 00:14:50,170
chain and independent medical chains so

433
00:14:53,370 --> 00:14:51,430
it's a it's a very well approved

434
00:14:55,050 --> 00:14:53,380
procedure we just want to kind of make

435
00:14:56,400 --> 00:14:55,060
sure we got the the biggie VA's behind

436
00:14:57,750 --> 00:14:56,410
us and then we'll try it on the on the

437
00:15:00,780 --> 00:14:57,760
last couple just in case we run it in

438
00:15:01,740 --> 00:15:00,790

any hiccups other than that the other

439
00:15:03,590 --> 00:15:01,750
thing you'll see us do a little

440
00:15:05,820 --> 00:15:03,600
different this time we're flying a

441
00:15:08,460 --> 00:15:05,830
sensor in the payload Bay called storm

442
00:15:09,690 --> 00:15:08,470
which is effectively a relative motion

443
00:15:11,310 --> 00:15:09,700
sensor that was going to be flown on

444
00:15:13,950 --> 00:15:11,320
Orion that we'd use for automated

445
00:15:15,630 --> 00:15:13,960
docking it with the shuttle there's a

446
00:15:17,520 --> 00:15:15,640
sensor out there we call TCS a

447
00:15:20,310 --> 00:15:17,530
trajectory control sensor it's basically

448
00:15:21,720 --> 00:15:20,320
a range finding laser the storm payload

449
00:15:24,480 --> 00:15:21,730
has a similar thing but it's a much more

450
00:15:25,830 --> 00:15:24,490
active system so after we undock we'll

451
00:15:27,180 --> 00:15:25,840
do our normal undock we'll fly around

452
00:15:29,100 --> 00:15:27,190
with the space shuttle and we'll do our

453
00:15:30,900 --> 00:15:29,110
separation and then after that set burn

454
00:15:33,270 --> 00:15:30,910
we'll do a couple more burns to put us

455
00:15:34,860 --> 00:15:33,280
on re rendezvous profile grant told

456
00:15:35,940 --> 00:15:34,870
about four hours we'll come back around

457
00:15:37,860 --> 00:15:35,950
again

458
00:15:40,050 --> 00:15:37,870
close back in on station using this this

459
00:15:44,280 --> 00:15:40,060
other sensor the storm sensor rather

460
00:15:46,530 --> 00:15:44,290
than our TCS sensors will go out about

461
00:15:48,510 --> 00:15:46,540
30,000 feet total before we come back in

462
00:15:49,890 --> 00:15:48,520
again and we'll come back up what we

463
00:15:52,170 --> 00:15:49,900

call the rbar so if you think about it

464
00:15:54,180 --> 00:15:52,180
the station will come in directly below

465
00:15:56,040 --> 00:15:54,190
the station that's the same point we do

466
00:15:57,510 --> 00:15:56,050
the RPM the rendezvous pitch maneuver

467
00:15:59,010 --> 00:15:57,520
with the shuttle when we come up the

468
00:16:01,020 --> 00:15:59,020
shuttle then kind of transitions up and

469
00:16:02,280 --> 00:16:01,030
flies in on what we call the v-bar we're

470
00:16:03,960 --> 00:16:02,290
going to come up on that our bar about a

471
00:16:05,130 --> 00:16:03,970
thousand feet away and then we'll stop

472
00:16:06,900 --> 00:16:05,140
and separate away from there we don't

473
00:16:09,090 --> 00:16:06,910
need to go any closer to test out the

474
00:16:10,620 --> 00:16:09,100
storm sensor on this flight so it'll be

475
00:16:12,600 --> 00:16:10,630
a really good hands-on use of some new

476
00:16:14,670 --> 00:16:12,610
technology and to demonstrate its

477
00:16:16,890 --> 00:16:14,680
capabilities in in docking and Rhonda

478
00:16:17,970 --> 00:16:16,900
who's in the future so that's a little

479
00:16:19,200 --> 00:16:17,980
different thing we'll do after we undock

480
00:16:22,650 --> 00:16:19,210
we kind of come back again take another

481
00:16:23,670 --> 00:16:22,660
look at station and then head home all

482
00:16:25,890 --> 00:16:23,680
in all like I said it's going to be a

483
00:16:26,910 --> 00:16:25,900
very busy mission very packed and a very

484
00:16:29,160 --> 00:16:26,920
exciting one to watch I'm looking

485
00:16:30,240 --> 00:16:29,170
forward to it but endeavour and the team

486
00:16:31,650 --> 00:16:30,250
are in great shape all that might tell

487
00:16:33,930 --> 00:16:31,660
you more about how the launch team is

488
00:16:36,450 --> 00:16:33,940

ready to go come 10 days from now okay

489
00:16:37,590 --> 00:16:36,460
thanks Mike well the final processing

490
00:16:39,630 --> 00:16:37,600
flow from Deborah is going extremely

491
00:16:41,370 --> 00:16:39,640
well out the pad especially given the

492
00:16:43,740 --> 00:16:41,380
extra extra days we were given by the

493
00:16:45,690 --> 00:16:43,750
program extra ten days last night we

494
00:16:47,130 --> 00:16:45,700
completed the ordinance installation for

495
00:16:49,950 --> 00:16:47,140
the for the different elements which

496
00:16:51,510 --> 00:16:49,960
separates Britain the orbiter from

497
00:16:52,830 --> 00:16:51,520
living from the MLP and the different

498
00:16:54,870 --> 00:16:52,840
flight elements themselves that's all

499
00:16:57,270 --> 00:16:54,880
complete and good will get into the

500
00:17:00,570 --> 00:16:57,280
pressurization of the high-pressure gas

501
00:17:02,040 --> 00:17:00,580
bottles tomorrow night and rest of the

502
00:17:03,660 --> 00:17:02,050
pad flow is really pretty easy we have

503
00:17:05,579 --> 00:17:03,670
all the Easter weekend off which is nice

504
00:17:07,710 --> 00:17:05,589
for us we'll come back in next Monday

505
00:17:09,390 --> 00:17:07,720
close payload bay doors and a week from

506
00:17:13,590 --> 00:17:09,400
right now will be will be in to launch

507
00:17:15,930 --> 00:17:13,600
countdown for sts-134 one thing to

508
00:17:17,850 --> 00:17:15,940
mention at the end of March we did have

509
00:17:19,550 --> 00:17:17,860
some some adverse weather at the launch

510
00:17:21,990 --> 00:17:19,560
pad that was that was reviewed in detail

511
00:17:24,390 --> 00:17:22,000
throughout the last couple of weeks or

512
00:17:27,050 --> 00:17:24,400
so in addition today each element

513
00:17:29,100 --> 00:17:27,060

reported out we had small hail

514
00:17:31,170 --> 00:17:29,110
experienced small hill and the external

515
00:17:32,850 --> 00:17:31,180
tank we also had some high winds those

516
00:17:34,950 --> 00:17:32,860
were all disposition perfectly fine to

517
00:17:37,830 --> 00:17:34,960
go so no issue from the from the adverse

518
00:17:40,080 --> 00:17:37,840
weather if you hear about that a good

519
00:17:41,490 --> 00:17:40,090
easy launch countdown a standard

520
00:17:43,410 --> 00:17:41,500
countdown for us we do have a little bit

521
00:17:45,510 --> 00:17:43,420
of a note to offload after PR SD load

522
00:17:48,270 --> 00:17:45,520
but we hope to get to the opening of the

523
00:17:49,350 --> 00:17:48,280
launch window friday the 29 to 1542

524
00:17:50,789 --> 00:17:49,360
eastern time

525
00:17:52,470 --> 00:17:50,799
endeavour and her team are doing really

526
00:17:54,720 --> 00:17:52,480
well for a final flow very proud of the

527
00:17:57,150 --> 00:17:54,730
team and we'll have a good good launch

528
00:17:58,530 --> 00:17:57,160
and a good mission Thanks all right

529
00:18:01,340 --> 00:17:58,540
we'll begin with questions here at the

530
00:18:03,990 --> 00:18:01,350
Kennedy Space Center in Florida please

531
00:18:06,990 --> 00:18:04,000
wait for the microphone state your name

532
00:18:09,120 --> 00:18:07,000
and affiliation and please address to

533
00:18:11,430 --> 00:18:09,130
whom you're asking your question and

534
00:18:13,260 --> 00:18:11,440
we'll begin with Marcia Marcia Dunn

535
00:18:15,060 --> 00:18:13,270
Associated Press could one of you just

536
00:18:16,830 --> 00:18:15,070
run through the window what's available

537
00:18:20,430 --> 00:18:16,840
if you don't get off on the twenty-ninth

538
00:18:24,180 --> 00:18:20,440

and then just sort of refresh us on how

539
00:18:26,130 --> 00:18:24,190
jun 28th is looking for Atlantis and how

540
00:18:27,990 --> 00:18:26,140
that's stacking up so for the launch

541
00:18:30,419 --> 00:18:28,000
window we start on the on the

542
00:18:32,700 --> 00:18:30,429
twenty-ninth there's an Atlas launch

543
00:18:34,440 --> 00:18:32,710
coming up on the range on the 6th of May

544
00:18:35,820 --> 00:18:34,450
right now so we would be able to try if

545
00:18:38,640 --> 00:18:35,830
we needed to all the way through and

546
00:18:40,110 --> 00:18:38,650
including the fourth of May before we'd

547
00:18:42,750 --> 00:18:40,120
have to stand down for that Atlas launch

548
00:18:45,570 --> 00:18:42,760
as Mike mentioned with the pad hold we

549
00:18:47,340 --> 00:18:45,580
have in the PSD offload we'd have to top

550
00:18:49,620 --> 00:18:47,350
off and it would take us more than a

551
00:18:51,150 --> 00:18:49,630
normal 48 hours so the timing lines up

552
00:18:52,500 --> 00:18:51,160
pretty good that if we were stretched

553
00:18:55,110 --> 00:18:52,510
out that long for some reason we could

554
00:18:56,909 --> 00:18:55,120
reload our cryo and and be ready to go

555
00:18:58,380 --> 00:18:56,919
on the other side of that window it

556
00:18:59,580 --> 00:18:58,390
would depending on whether they go on

557
00:19:01,830 --> 00:18:59,590
their first or second attempt we could

558
00:19:05,010 --> 00:19:01,840
come back around the 9th or 10th there's

559
00:19:07,799 --> 00:19:05,020
some station Soyuz undocking issues that

560
00:19:09,419 --> 00:19:07,809
we may may or may not have to address if

561
00:19:10,950 --> 00:19:09,429
we come back but somewhere around the

562
00:19:13,260 --> 00:19:10,960
9th or so we'd be coming back for

563
00:19:14,460 --> 00:19:13,270

another launch attempt we'd have to wait

564
00:19:15,510 --> 00:19:14,470
and see why we were having the problems

565
00:19:17,520 --> 00:19:15,520
in the first place before we can make

566
00:19:19,320 --> 00:19:17,530
that for sure and then we can go pretty

567
00:19:21,570 --> 00:19:19,330
much through the end of may with that

568
00:19:23,400 --> 00:19:21,580
launch window there's some implications

569
00:19:24,450 --> 00:19:23,410
to do and so on the station mission we'd

570
00:19:26,250 --> 00:19:24,460
really need to make sure we talk about

571
00:19:29,820 --> 00:19:26,260
but but it's legal launch window for us

572
00:19:31,230 --> 00:19:29,830
if we needed it and Atlantis processing

573
00:19:32,820 --> 00:19:31,240
is going really well we're still

574
00:19:34,530 --> 00:19:32,830
shooting for a may the 12th rollout of

575
00:19:38,280 --> 00:19:34,540
the OPF and now to the launch pad on the

576
00:19:40,080 --> 00:19:38,290
20th and we have TC dt on jun 2nd we

577
00:19:42,000 --> 00:19:40,090
have a tanking test plan for the seventh

578
00:19:43,590 --> 00:19:42,010
of june and right now all looks good for

579
00:19:48,030 --> 00:19:43,600
the end of June June twenty eighth for

580
00:19:50,580 --> 00:19:48,040
the final flight James James Dean from

581
00:19:51,659 --> 00:19:50,590
Florida theme is mr. Grissom arcady give

582
00:19:54,030 --> 00:19:51,669
us a status where you are with the

583
00:19:57,480 --> 00:19:54,040
budget after the recent budget deal for

584
00:20:01,590 --> 00:19:57,490
the shuttle program you know for example

585
00:20:02,830 --> 00:20:01,600
how far could you push out one 135 given

586
00:20:05,740 --> 00:20:02,840
the funding that you have

587
00:20:07,720 --> 00:20:05,750
is that why you're now sticking with

588
00:20:10,660 --> 00:20:07,730

your jun 28 and stead pushing it out

589
00:20:12,580 --> 00:20:10,670
later into the into the year I guess

590
00:20:14,590 --> 00:20:12,590
it's really not budget driven we just

591
00:20:17,020 --> 00:20:14,600
take a look at what we need to go do and

592
00:20:19,000 --> 00:20:17,030
if the teams are ready to go fly and the

593
00:20:21,760 --> 00:20:19,010
hardware is ready and then everybody's

594
00:20:23,080 --> 00:20:21,770
trained I think June twenty-eighth is

595
00:20:24,430 --> 00:20:23,090
what we've been planning for and that's

596
00:20:25,990 --> 00:20:24,440
kind of where we're am and if we need to

597
00:20:28,390 --> 00:20:26,000
move a little bit technically will move

598
00:20:30,370 --> 00:20:28,400
a little bit we're not you know overly

599
00:20:32,080 --> 00:20:30,380
constrained budget wise but there's no

600
00:20:34,120 --> 00:20:32,090
big advantage of moving the flight

601
00:20:36,160 --> 00:20:34,130
multiple months to us from a hardware

602
00:20:38,410 --> 00:20:36,170
availability standpoint we reviewed in

603
00:20:40,030 --> 00:20:38,420
detail with the station program what

604
00:20:41,320 --> 00:20:40,040
additional hardware they could fly what

605
00:20:43,150 --> 00:20:41,330
things would help them out and there was

606
00:20:44,740 --> 00:20:43,160
no big driver one way or the other so we

607
00:20:46,600 --> 00:20:44,750
think the end of June is about the right

608
00:20:48,400 --> 00:20:46,610
time to go fly and we'll just continue

609
00:20:50,530 --> 00:20:48,410
to follow the processing and a crew

610
00:20:52,330 --> 00:20:50,540
training and and if something comes up

611
00:20:53,710 --> 00:20:52,340
that makes this move will move where we

612
00:20:56,830 --> 00:20:53,720
need to move so we have sufficient

613
00:20:58,390 --> 00:20:56,840

budget to do what we need to do if

614
00:21:00,040 --> 00:20:58,400
something comes up some kind of new

615
00:21:04,390 --> 00:21:00,050
technical issue or something is there a

616
00:21:06,280 --> 00:21:04,400
essentially a deadline a last date by

617
00:21:08,770 --> 00:21:06,290
which you would you know you have to get

618
00:21:11,050 --> 00:21:08,780
flown or you couldn't pull it off

619
00:21:13,480 --> 00:21:11,060
anymore I don't think there's a really

620
00:21:15,700 --> 00:21:13,490
there's not a hard constraint it will

621
00:21:17,590 --> 00:21:15,710
work it and depend you know where we are

622
00:21:19,240 --> 00:21:17,600
and see what we need to go do but we'll

623
00:21:20,620 --> 00:21:19,250
let the technical data drive us where we

624
00:21:22,150 --> 00:21:20,630
need to and then I'll work the budget

625
00:21:23,740 --> 00:21:22,160
stuff once we understand the technical

626
00:21:26,200 --> 00:21:23,750
problems that pushes where we got to go

627
00:21:28,510 --> 00:21:26,210
push it if it needs to move so I don't

628
00:21:31,390 --> 00:21:28,520
there's not a financial constraint that

629
00:21:35,890 --> 00:21:31,400
says an ex date we can't fly beyond that

630
00:21:37,870 --> 00:21:35,900
date don't build harwood CBS two quick

631
00:21:39,670 --> 00:21:37,880
ones from me could one of you guys give

632
00:21:41,770 --> 00:21:39,680
me the whatever the risk assessment was

633
00:21:43,300 --> 00:21:41,780
for this flight I just was curious if

634
00:21:45,400 --> 00:21:43,310
the use of this tank changed the numbers

635
00:21:47,470 --> 00:21:45,410
even a little bit I was really looking

636
00:21:50,080 --> 00:21:47,480
for the total number and then debris and

637
00:21:53,110 --> 00:21:50,090
SN if you had those in your charts at

638
00:21:54,790 --> 00:21:53,120

cedia the mm OD micrometeorite on over

639
00:22:00,480 --> 00:21:54,800
debris our orbital debris risk number

640
00:22:03,820 --> 00:22:00,490
was one in 277 279 5275 anywhere between

641
00:22:07,150 --> 00:22:03,830
275 and 279 I'll look it up here in just

642
00:22:09,640 --> 00:22:07,160
a sec that's a little lower than it

643
00:22:12,160 --> 00:22:09,650
would be because we're doing this

644
00:22:13,510 --> 00:22:12,170
inspection normally we do it at about

645
00:22:15,130 --> 00:22:13,520
three or four days before landing we're

646
00:22:16,100 --> 00:22:15,140
doing it even earlier than that so

647
00:22:17,120 --> 00:22:16,110
there's a couple

648
00:22:19,070 --> 00:22:17,130
more days that were exposed to

649
00:22:21,650 --> 00:22:19,080
micrometeorite debris that we then don't

650
00:22:23,090 --> 00:22:21,660
go look to make sure we didn't get it so

651
00:22:24,890 --> 00:22:23,100
that makes that risk number go a little

652
00:22:27,020 --> 00:22:24,900
bigger the other piece is when we're

653
00:22:28,310 --> 00:22:27,030
docked a station the the inspection

654
00:22:30,919 --> 00:22:28,320
coverage we get is not a hundred percent

655
00:22:33,169 --> 00:22:30,929
coverage there's a few areas that aren't

656
00:22:34,910 --> 00:22:33,179
that are deemed low-risk on the RCC that

657
00:22:36,260 --> 00:22:34,920
we can't see so that makes that risk

658
00:22:38,330 --> 00:22:36,270
number go up because there's a few areas

659
00:22:39,650 --> 00:22:38,340
that you couldn't see so from that

660
00:22:42,860 --> 00:22:39,660
standpoint the numbers a little lower

661
00:22:44,900 --> 00:22:42,870
but it was a known risk trade with the

662
00:22:48,020 --> 00:22:44,910
gain of leaving the boom behind for

663
00:22:52,789 --> 00:22:48,030

station future ups and we got one in 275

664
00:22:54,590 --> 00:22:52,799
is the number yeah they don't present

665
00:22:56,810 --> 00:22:54,600
that one to us we don't compute that one

666
00:22:58,430 --> 00:22:56,820
per flight anymore yeah and we don't see

667
00:23:01,100 --> 00:22:58,440
it I mean we looked at it kind of from

668
00:23:02,840 --> 00:23:01,110
an overall risk standpoint and we really

669
00:23:04,460 --> 00:23:02,850
don't see a significant difference

670
00:23:07,159 --> 00:23:04,470
between this tank and our other tanks

671
00:23:08,690 --> 00:23:07,169
you know before like but we will see

672
00:23:11,960 --> 00:23:08,700
some potentially some more foam loss

673
00:23:14,270 --> 00:23:11,970
especially after the aerodynamically

674
00:23:15,940 --> 00:23:14,280
sensitive time frame because we know we

675
00:23:19,130 --> 00:23:15,950
have this potential cryo pumping

676
00:23:20,720 --> 00:23:19,140
associated with our hydrogen ice frost

677
00:23:22,250 --> 00:23:20,730
ramp so we know we will see some foam

678
00:23:23,840 --> 00:23:22,260
loss but it again we'll be late enough

679
00:23:25,820 --> 00:23:23,850
that it doesn't impact any of our risk

680
00:23:27,409 --> 00:23:25,830
numbers from an overall standpoint risk

681
00:23:28,940 --> 00:23:27,419
of one in 75 or whatever that number is

682
00:23:30,950 --> 00:23:28,950
that's pretty much the same as always

683
00:23:33,890 --> 00:23:30,960
yes yeah we did review that from an

684
00:23:35,570 --> 00:23:33,900
external tank risk is unchanged and 14

685
00:23:37,880 --> 00:23:35,580
Gerst uh where do you guys stand on

686
00:23:39,110 --> 00:23:37,890
shoehorning a fly around in to 135 I

687
00:23:40,340 --> 00:23:39,120
know y'all are looking at that I know

688
00:23:42,080 --> 00:23:40,350

the Russians are and I know that's a

689
00:23:44,150 --> 00:23:42,090
tight schedule with four-man crew so

690
00:23:45,950 --> 00:23:44,160
where did where does that stand we're

691
00:23:47,690 --> 00:23:45,960
still taking a look at that we're

692
00:23:50,390 --> 00:23:47,700
putting the details of that overall

693
00:23:52,190 --> 00:23:50,400
timeline together the program's made

694
00:23:53,900 --> 00:23:52,200
some decisions about what hardware gets

695
00:23:55,730 --> 00:23:53,910
transferred back and forth and that kind

696
00:23:57,289 --> 00:23:55,740
of freeze some things up and we'll see

697
00:23:59,480 --> 00:23:57,299
how all that fits and see if a fly

698
00:24:01,730 --> 00:23:59,490
around works for 135 so we're off

699
00:24:03,260 --> 00:24:01,740
evaluating that and see if it makes

700
00:24:05,960 --> 00:24:03,270
sense and it's kind of part of the

701
00:24:09,140 --> 00:24:05,970
overall kind of as we get to the the

702
00:24:11,120 --> 00:24:09,150
final mission build or you know the

703
00:24:12,890 --> 00:24:11,130
final timeline tweaks we're going to go

704
00:24:15,200 --> 00:24:12,900
see if that fits and makes sense for us

705
00:24:17,980 --> 00:24:15,210
to go do the Russians at least amenable

706
00:24:20,750 --> 00:24:17,990
going in yeah I think the Russians are

707
00:24:22,520 --> 00:24:20,760
supporting you know they they're there

708
00:24:25,700 --> 00:24:22,530
we're supporting this time but again

709
00:24:28,790 --> 00:24:25,710
with the with the potential launch of

710
00:24:29,690 --> 00:24:28,800
the Soyuz coming up we wanted to delay

711
00:24:33,019 --> 00:24:29,700
the landing

712
00:24:34,730 --> 00:24:33,029
to be consistent with keeping the amount

713
00:24:36,799 --> 00:24:34,740

of time we only have three persons crew

714
00:24:39,110 --> 00:24:36,809
onboard station to us to about the same

715
00:24:40,310 --> 00:24:39,120
time frame as before what the Russians

716
00:24:41,509 --> 00:24:40,320
would have done for this flight is we

717
00:24:43,039 --> 00:24:41,519
would that they would have undock the

718
00:24:44,960 --> 00:24:43,049
Soyuz as part of their return

719
00:24:46,639 --> 00:24:44,970
configuration done to fly around data

720
00:24:48,980 --> 00:24:46,649
and then returned the Soyuz potentially

721
00:24:51,620 --> 00:24:48,990
to the ground then with the Soyuz launch

722
00:24:53,539 --> 00:24:51,630
delay to june seventh that would allowed

723
00:24:55,460 --> 00:24:53,549
a longer period on orbit with us at

724
00:24:56,779 --> 00:24:55,470
three crew we didn't think that was the

725
00:24:58,279 --> 00:24:56,789
right thing to do from a station

726
00:25:01,580 --> 00:24:58,289
utilization standpoint we want to keep

727
00:25:03,860 --> 00:25:01,590
our crew at six as long as we can so we

728
00:25:05,870 --> 00:25:03,870
asked the Russians to delay that landing

729
00:25:08,060 --> 00:25:05,880
which they've agreed to do to keep the

730
00:25:09,590 --> 00:25:08,070
same amount of time where we're down at

731
00:25:12,860 --> 00:25:09,600
three-person crew so that's why we move

732
00:25:14,419 --> 00:25:12,870
the fly around off of sts-1 34 and then

733
00:25:16,700 --> 00:25:14,429
at the same time we ask the Russians to

734
00:25:17,960 --> 00:25:16,710
take a look at it for 135 but we need to

735
00:25:20,060 --> 00:25:17,970
look at it from an overall timeline

736
00:25:21,950 --> 00:25:20,070
standpoint to make sure we don't put too

737
00:25:24,019 --> 00:25:21,960
much pressure on the crew that with only

738
00:25:25,730 --> 00:25:24,029

two four-person crew there on 135 so

739
00:25:27,379 --> 00:25:25,740
that's I'd say that's normal work in

740
00:25:29,810 --> 00:25:27,389
front of us will evaluate that in next

741
00:25:31,850 --> 00:25:29,820
couple weeks we have some reporters in

742
00:25:33,799 --> 00:25:31,860
Houston so we'll take one more question

743
00:25:35,750 --> 00:25:33,809
here then go to Houston and then come

744
00:25:37,340 --> 00:25:35,760
back go ahead please Jackie got her for

745
00:25:40,039 --> 00:25:37,350
The Times in London and it's a question

746
00:25:43,220 --> 00:25:40,049
for Mike Leinbach if I may the workforce

747
00:25:45,350 --> 00:25:43,230
here seems to have such a close and

748
00:25:47,480 --> 00:25:45,360
respectful bond with the shuttle it

749
00:25:49,430 --> 00:25:47,490
seems a very emotional attachment there

750
00:25:50,750 --> 00:25:49,440
can you tell us how people are coping

751
00:25:52,730 --> 00:25:50,760
with the prospect at the end of the

752
00:25:56,509 --> 00:25:52,740
program and what the mood and atmosphere

753
00:25:57,889 --> 00:25:56,519
is here well the mood I'd say is is has

754
00:25:59,899 --> 00:25:57,899
been consistent over the last several

755
00:26:02,330 --> 00:25:59,909
months and that in that we know the end

756
00:26:05,350 --> 00:26:02,340
is coming and we're dealing with it we

757
00:26:08,930 --> 00:26:05,360
did have a layoff last Friday week ago

758
00:26:10,820 --> 00:26:08,940
535 people so that was a put a little

759
00:26:13,430 --> 00:26:10,830
bit of a somber mood on the team I'd say

760
00:26:14,870 --> 00:26:13,440
and but but we're dealing with it we

761
00:26:16,879 --> 00:26:14,880
have sufficient workforce to get all the

762
00:26:19,070 --> 00:26:16,889
work done and launch this thing and land

763
00:26:21,049 --> 00:26:19,080

it and the next one as well the

764
00:26:22,519 --> 00:26:21,059
emotional aspect is very very real and

765
00:26:25,909 --> 00:26:22,529
it's very difficult to put into words

766
00:26:27,500 --> 00:26:25,919
but I think I think all of Kennedy Space

767
00:26:29,120 --> 00:26:27,510
Center got a big boost when we when we

768
00:26:31,430 --> 00:26:29,130
got the word that we were going to be

769
00:26:32,690 --> 00:26:31,440
able to keep it lantus here and so we're

770
00:26:35,000 --> 00:26:32,700
looking forward to that the ultimate

771
00:26:36,320 --> 00:26:35,010
display of the ultimate spaceship here

772
00:26:39,830 --> 00:26:36,330
at the Kennedy Space Center Visitor

773
00:26:43,100 --> 00:26:39,840
Center okay let's go to Houston and see

774
00:26:45,960 --> 00:26:43,110
if we have any questions there please

775
00:26:48,960 --> 00:26:45,970
jenison sorry ABC News let me give this

776
00:26:50,700 --> 00:26:48,970
to mr. Gerstenmaier I'm stuck asking the

777
00:26:52,860 --> 00:26:50,710
question did you ever consider moving

778
00:26:55,259 --> 00:26:52,870
the launch off April 29th since it

779
00:26:57,210 --> 00:26:55,269
conflicts with a in a vet that's not

780
00:27:03,330 --> 00:26:57,220
happening in this country buts happening

781
00:27:05,399 --> 00:27:03,340
overseas that the frank answer is no i

782
00:27:08,700 --> 00:27:05,409
didn't realize when the wedding was

783
00:27:10,049 --> 00:27:08,710
until we moved the launch date and we

784
00:27:11,820 --> 00:27:10,059
moved the launch date essentially

785
00:27:14,399 --> 00:27:11,830
because we needed to deconflict with the

786
00:27:16,529 --> 00:27:14,409
progress and we wanted to and we wanted

787
00:27:17,999 --> 00:27:16,539
to pick a date that gave us a reasonable

788
00:27:19,649 --> 00:27:18,009

number of attempts before we ran into

789
00:27:21,990 --> 00:27:19,659
any other range conflicts and that's how

790
00:27:23,789 --> 00:27:22,000
we set on the twenty-ninth so we kind of

791
00:27:26,220 --> 00:27:23,799
set that date independently and then as

792
00:27:27,810 --> 00:27:26,230
i was setting the date somebody called

793
00:27:30,450 --> 00:27:27,820
me and told me about the wedding and

794
00:27:32,850 --> 00:27:30,460
that was a consideration but you know we

795
00:27:35,730 --> 00:27:32,860
work beta constraints and we work launch

796
00:27:38,369 --> 00:27:35,740
range constraints I haven't yet put on

797
00:27:40,230 --> 00:27:38,379
our manifest charts wedding constraints

798
00:27:46,289 --> 00:27:40,240
so so we didn't factor that into our

799
00:27:47,970 --> 00:27:46,299
thinking mark karo from the Houston

800
00:27:52,190 --> 00:27:47,980
Chronicle I have a station related

801
00:27:54,990 --> 00:27:52,200
question if i recall correctly you had a

802
00:27:56,970 --> 00:27:55,000
remote power controller issue on the

803
00:27:58,860 --> 00:27:56,980
starboard truss i think at the end of

804
00:28:02,149 --> 00:27:58,870
last week or the beginning of this week

805
00:28:04,619 --> 00:28:02,159
and it's wondered if that has any

806
00:28:11,009 --> 00:28:04,629
ramification at all for plugging in the

807
00:28:13,230 --> 00:28:11,019
AMS no it doesn't it it it it powers

808
00:28:17,129 --> 00:28:13,240
some of the rotary thermal joint

809
00:28:19,499 --> 00:28:17,139
activities and an MDM and s1 MDM and I

810
00:28:21,210 --> 00:28:19,509
think I just got a page prior to coming

811
00:28:23,549 --> 00:28:21,220
here that they actually reset that and

812
00:28:25,710 --> 00:28:23,559
it reset with no over current so I think

813
00:28:27,419 --> 00:28:25,720

we're in good configuration we discussed

814
00:28:29,519 --> 00:28:27,429
that pretty extensively at the review

815
00:28:31,710 --> 00:28:29,529
and it wasn't going to be impacted to

816
00:28:34,529 --> 00:28:31,720
any of our future operations and then I

817
00:28:36,269 --> 00:28:34,539
think last night we lost a camera RPC

818
00:28:39,930 --> 00:28:36,279
and it looked like that was an actual

819
00:28:41,369 --> 00:28:39,940
short we saw a high current event so

820
00:28:43,259 --> 00:28:41,379
we'll just leave the kids if for a

821
00:28:44,879 --> 00:28:43,269
camera heater and what we'll do is we'll

822
00:28:46,230 --> 00:28:44,889
just leave the camera powered and it'll

823
00:28:48,990 --> 00:28:46,240
provide enough heat to keep the

824
00:28:51,659 --> 00:28:49,000
component warm so so I think the RPC em

825
00:28:53,669 --> 00:28:51,669
that the remote power control module

826
00:28:54,630 --> 00:28:53,679
that you talked about mark it will not

827
00:28:55,890 --> 00:28:54,640
be an impact to us

828
00:28:58,080 --> 00:28:55,900
looks like at least it was resolved

829
00:28:59,550 --> 00:28:58,090
today and it wouldn't have been even if

830
00:29:01,950 --> 00:28:59,560
it wasn't resolved we had plenty of time

831
00:29:03,330 --> 00:29:01,960
to go work the issue okay we're back

832
00:29:06,180 --> 00:29:03,340
here at Kennedy Space Center with

833
00:29:08,090 --> 00:29:06,190
questions this is greg polo news 13 this

834
00:29:10,860 --> 00:29:08,100
is for either for bill or either Mike

835
00:29:13,500 --> 00:29:10,870
can you think of any fitting tribute for

836
00:29:15,540 --> 00:29:13,510
endeavor as being the youngest orbiter

837
00:29:17,850 --> 00:29:15,550
is there anything that comes to mind

838
00:29:19,590 --> 00:29:17,860

when you think of endeavor and the fact

839
00:29:21,290 --> 00:29:19,600
that it essentially replaced challenger

840
00:29:24,480 --> 00:29:21,300
are there any thoughts in your head

841
00:29:26,130 --> 00:29:24,490
where you would you would think of some

842
00:29:27,750 --> 00:29:26,140
words to describe endeavour in its

843
00:29:32,970 --> 00:29:27,760
service and the significant missions

844
00:29:36,300 --> 00:29:32,980
that have been accomplished on it let's

845
00:29:38,010 --> 00:29:36,310
see for me yeah you know it kind of it's

846
00:29:39,840 --> 00:29:38,020
the it's the engineering answer but

847
00:29:41,220 --> 00:29:39,850
we're still focused on the mission so to

848
00:29:43,260 --> 00:29:41,230
me the best tribute to endeavour right

849
00:29:45,180 --> 00:29:43,270
now is to go get it launched next week

850
00:29:46,710 --> 00:29:45,190
and get into orbit and let it go finish

851
00:29:48,600 --> 00:29:46,720
out that and finish strong here with the

852
00:29:50,400 --> 00:29:48,610
mission to station and then when it

853
00:29:52,350 --> 00:29:50,410
comes back does then I'll start thinking

854
00:29:54,390 --> 00:29:52,360
about what that what that ship meant and

855
00:29:56,790 --> 00:29:54,400
what did what it's done it's a pretty

856
00:29:57,660 --> 00:29:56,800
big career they gave us a packet on the

857
00:30:00,330 --> 00:29:57,670
way over and I didn't even have a chance

858
00:30:01,650 --> 00:30:00,340
to read some of the history and the

859
00:30:04,230 --> 00:30:01,660
first that it's done since it's been

860
00:30:07,470 --> 00:30:04,240
delivered here and being being the

861
00:30:08,670 --> 00:30:07,480
youngest ship you know so maybe mike has

862
00:30:10,860 --> 00:30:08,680
some thoughts about haven't worked with

863
00:30:13,290 --> 00:30:10,870

it a little more hands-on but but again

864
00:30:14,700 --> 00:30:13,300
I don't I don't mean to take the cheesy

865
00:30:16,560 --> 00:30:14,710
answer out but we're kind of holding on

866
00:30:17,580 --> 00:30:16,570
reflecting until we're done and and so

867
00:30:20,220 --> 00:30:17,590
we won't be done for a couple more weeks

868
00:30:21,810 --> 00:30:20,230
yet with endeavor what's up I've been

869
00:30:23,580 --> 00:30:21,820
I've been working with endeavour since

870
00:30:25,500 --> 00:30:23,590
she arrived here I was the NASA test

871
00:30:26,910 --> 00:30:25,510
director for her first flow when we did

872
00:30:28,800 --> 00:30:26,920
a Flight Readiness firing out to launch

873
00:30:30,690 --> 00:30:28,810
pad and tested out the NPS system and

874
00:30:33,060 --> 00:30:30,700
the main engines and in the launch of

875
00:30:36,360 --> 00:30:33,070
course so I've been with endeavor for

876
00:30:38,790 --> 00:30:36,370
her whole flow and last week Dana

877
00:30:40,320 --> 00:30:38,800
Hutcherson flow director for 105 and I

878
00:30:42,360 --> 00:30:40,330
went out to the pad went looking around

879
00:30:44,760 --> 00:30:42,370
and just reflecting a little bit there

880
00:30:46,320 --> 00:30:44,770
are a lot of there are a lot of a lot of

881
00:30:48,180 --> 00:30:46,330
views of endeavours still look almost

882
00:30:50,070 --> 00:30:48,190
brand new I mean the top of the wings

883
00:30:52,290 --> 00:30:50,080
the blankets on the wing still look like

884
00:30:55,710 --> 00:30:52,300
they just came out of the factory and so

885
00:30:59,460 --> 00:30:55,720
it for me it's it's it's like retiring a

886
00:31:00,690 --> 00:30:59,470
friend early but it's a good friend and

887
00:31:02,220 --> 00:31:00,700
so we're going to get a good mission off

888
00:31:04,530 --> 00:31:02,230

just like Mike said and we're going to

889
00:31:06,150 --> 00:31:04,540
do the engineering all the engineering

890
00:31:07,270 --> 00:31:06,160
work on this last flight like we did on

891
00:31:09,670 --> 00:31:07,280
the first fight nope

892
00:31:11,440 --> 00:31:09,680
changes there and again we'll be able to

893
00:31:13,540 --> 00:31:11,450
reflect after after she lands and brings

894
00:31:16,300 --> 00:31:13,550
her crew home safely that that was her

895
00:31:17,890 --> 00:31:16,310
final mission and when I look at this

896
00:31:20,110 --> 00:31:17,900
mission I think a little bit about the

897
00:31:22,380 --> 00:31:20,120
AMS and and this is a pretty unique

898
00:31:25,540 --> 00:31:22,390
payload that's going to space station

899
00:31:27,790 --> 00:31:25,550
you know we don't typically fly a you

900
00:31:30,550 --> 00:31:27,800
know a payload that takes as much of the

901
00:31:33,760 --> 00:31:30,560
cargo bay as AMS does and the potential

902
00:31:36,310 --> 00:31:33,770
science that it can return to understand

903
00:31:39,340 --> 00:31:36,320
dark matter that lives in the universe

904
00:31:41,950 --> 00:31:39,350
and to understand these these unique

905
00:31:43,510 --> 00:31:41,960
high-energy particles that that are out

906
00:31:45,310 --> 00:31:43,520
there in space it's going to be

907
00:31:48,280 --> 00:31:45,320
tremendously important so when I when I

908
00:31:50,170 --> 00:31:48,290
see endeavour flying this really unique

909
00:31:51,460 --> 00:31:50,180
instrument to space station that's a

910
00:31:53,590 --> 00:31:51,470
that's a pretty this is a pretty unique

911
00:31:55,450 --> 00:31:53,600
mission to kind of close out endeavours

912
00:31:58,960 --> 00:31:55,460
career it it's not your run-of-the-mill

913
00:32:01,240 --> 00:31:58,970

kind of missions this is a really unique

914
00:32:03,070 --> 00:32:01,250
chance to see this vehicle carry a very

915
00:32:05,820 --> 00:32:03,080
unique science instrument to space that

916
00:32:11,410 --> 00:32:05,830
has a potential of returning really or

917
00:32:13,060 --> 00:32:11,420
shattering science to us aside from all

918
00:32:15,760 --> 00:32:13,070
the wonderful stuff that's happening

919
00:32:17,950 --> 00:32:15,770
with the shuttle on this mission there

920
00:32:19,630 --> 00:32:17,960
is that added public interest of course

921
00:32:21,460 --> 00:32:19,640
in Mark Kelly being commander and the

922
00:32:23,140 --> 00:32:21,470
story of that he's been through over the

923
00:32:25,120 --> 00:32:23,150
last few months can you talk a little

924
00:32:26,890 --> 00:32:25,130
bit about what a roller coaster that's

925
00:32:27,970 --> 00:32:26,900
been for the crew really and and how

926
00:32:29,410 --> 00:32:27,980
they've come through that and work

927
00:32:33,220 --> 00:32:29,420
together to get to this point ready to

928
00:32:36,760 --> 00:32:33,230
launch yeah I can't talk in any

929
00:32:38,200 --> 00:32:36,770
specifics but I will tell you that again

930
00:32:41,290 --> 00:32:38,210
the crew has just done a tremendous job

931
00:32:43,090 --> 00:32:41,300
of staying on focus and being trained

932
00:32:44,980 --> 00:32:43,100
and ready to go fly you know we were

933
00:32:46,870 --> 00:32:44,990
originally scheduled to fly on this day

934
00:32:48,700 --> 00:32:46,880
April nineteenth and the crew was ready

935
00:32:50,470 --> 00:32:48,710
to go to go meet that date they were

936
00:32:52,450 --> 00:32:50,480
fully trained they completed all their

937
00:32:54,250 --> 00:32:52,460
training activities and then when we

938
00:32:55,900 --> 00:32:54,260

slipped to launch 10 days they got to go

939
00:32:57,550 --> 00:32:55,910
ahead and hone some skills and move some

940
00:32:59,770 --> 00:32:57,560
more some more things but again I would

941
00:33:02,520 --> 00:32:59,780
say it's a testimony to the to the

942
00:33:04,480 --> 00:33:02,530
entire crew to stay focused to

943
00:33:06,580 --> 00:33:04,490
compartmentalize and to do what they

944
00:33:09,040 --> 00:33:06,590
need to do for this mission when you see

945
00:33:11,200 --> 00:33:09,050
the EV A's and spacewalks these are not

946
00:33:13,570 --> 00:33:11,210
trivial spacewalks at all especially the

947
00:33:17,020 --> 00:33:13,580
one with the ammonia servicing and

948
00:33:18,880 --> 00:33:17,030
ammonia refilling is a is a big task and

949
00:33:20,060 --> 00:33:18,890
Mark will play a key role and kind of

950
00:33:22,160 --> 00:33:20,070
watching over that

951
00:33:24,830 --> 00:33:22,170
to watch the spacewalkers as they go do

952
00:33:27,110 --> 00:33:24,840
those EV a tasks and going to be the

953
00:33:28,820 --> 00:33:27,120
conductor in a sense of watching some of

954
00:33:31,280 --> 00:33:28,830
those activities occur from an overall

955
00:33:33,200 --> 00:33:31,290
commander standpoint and so he'll play a

956
00:33:34,850 --> 00:33:33,210
key role in all that and he's also plays

957
00:33:36,440 --> 00:33:34,860
a key role obviously in the ascent and

958
00:33:38,900 --> 00:33:36,450
entry and he's done a good job of being

959
00:33:40,250 --> 00:33:38,910
trained with all that so I think the

960
00:33:41,690 --> 00:33:40,260
good thing is that they've been able to

961
00:33:43,400 --> 00:33:41,700
work together as a team and they're

962
00:33:47,060 --> 00:33:43,410
they're about ready to go fly and and

963
00:33:49,280 --> 00:33:47,070

that's that's good Marcia I shouldn't

964
00:33:51,290 --> 00:33:49,290
Associated Press possibly for either the

965
00:33:53,600 --> 00:33:51,300
two mics are there any special

966
00:33:55,850 --> 00:33:53,610
accommodations being taken our or any

967
00:33:57,470 --> 00:33:55,860
plan in case congresswoman giffords can

968
00:34:00,380 --> 00:33:57,480
attend the launch as her husband hopes

969
00:34:02,560 --> 00:34:00,390
and do you expect that to be a

970
00:34:04,430 --> 00:34:02,570
distraction for your teams on launch day

971
00:34:06,590 --> 00:34:04,440
well see from the launch team

972
00:34:08,510 --> 00:34:06,600
perspective it it won't be a distraction

973
00:34:10,700 --> 00:34:08,520
I'd there's a whole separate team

974
00:34:12,140 --> 00:34:10,710
working that that issue I'm not quite

975
00:34:14,330 --> 00:34:12,150
sure if she's coming or not to be honest

976
00:34:15,860 --> 00:34:14,340
with you I've turned that over to other

977
00:34:17,660 --> 00:34:15,870
people that then take care of that so I

978
00:34:20,510 --> 00:34:17,670
can focus on the countdown and the

979
00:34:24,620 --> 00:34:20,520
launch team hope she comes but I don't

980
00:34:26,420 --> 00:34:24,630
know shoe or not well yeah this thistle

981
00:34:27,950 --> 00:34:26,430
this is a dumb question but I've been

982
00:34:29,210 --> 00:34:27,960
asked this a million times since the

983
00:34:30,290 --> 00:34:29,220
announcement last week about where the

984
00:34:31,520 --> 00:34:30,300
orbiters are going some hoping one of

985
00:34:33,500 --> 00:34:31,530
you guys will explain it and I don't

986
00:34:35,840 --> 00:34:33,510
have to answer it anymore why not just

987
00:34:37,340 --> 00:34:35,850
send in Deborah California instead of

988
00:34:39,530 --> 00:34:37,350

bringing it back here why do you have to

989
00:34:42,200 --> 00:34:39,540
bring it back here you mean for upon the

990
00:34:43,610 --> 00:34:42,210
land in California so when it lands

991
00:34:46,400 --> 00:34:43,620
it'll be full of all kinds of hazardous

992
00:34:48,760 --> 00:34:46,410
stuff pyros that haven't been fired yet

993
00:34:51,700 --> 00:34:48,770
hyper Gauls in the ohms and RCS system

994
00:34:54,020 --> 00:34:51,710
hyper Gauls and not in the AP use

995
00:34:55,670 --> 00:34:54,030
hydraulic fluid all over the place you

996
00:34:57,140 --> 00:34:55,680
know it's not something that you'd hand

997
00:34:58,670 --> 00:34:57,150
over to the public in that configuration

998
00:35:00,260 --> 00:34:58,680
so we need to bring it home here to say

999
00:35:05,000 --> 00:35:00,270
fit and we don't have the facilities to

1000
00:35:07,400 --> 00:35:05,010
do that out in California James James

1001
00:35:09,970 --> 00:35:07,410
Dean with floor today to to follow

1002
00:35:13,940 --> 00:35:09,980
questions on any any consideration of

1003
00:35:17,300 --> 00:35:13,950
Atlantis landing in California on its

1004
00:35:20,950 --> 00:35:17,310
flight important on purpose to give it a

1005
00:35:23,630 --> 00:35:20,960
farewell tour of a ferry flight person

1006
00:35:25,760 --> 00:35:23,640
again I I will tell you what I've asked

1007
00:35:27,620 --> 00:35:25,770
the team to do is I want us to make

1008
00:35:30,350 --> 00:35:27,630
these last flights as much as normal

1009
00:35:32,360 --> 00:35:30,360
flights as we can so I didn't we didn't

1010
00:35:33,320 --> 00:35:32,370
plan to do anything special will let the

1011
00:35:34,640 --> 00:35:33,330
weather tell us where

1012
00:35:36,440 --> 00:35:34,650
we're going to goal and we'll do the

1013
00:35:38,360 --> 00:35:36,450

normal mission planning the way we are I

1014
00:35:40,130 --> 00:35:38,370
didn't want to interfere with the team

1015
00:35:43,130 --> 00:35:40,140
planning you know we spent a long time

1016
00:35:44,690 --> 00:35:43,140
many years 30 years you know honing the

1017
00:35:46,310 --> 00:35:44,700
way we do flight rules they'll hold me

1018
00:35:48,350 --> 00:35:46,320
honing the way we build procedures the

1019
00:35:50,180 --> 00:35:48,360
way we do plans and I wanted all these

1020
00:35:51,920 --> 00:35:50,190
flights to be done as much just like the

1021
00:35:54,050 --> 00:35:51,930
ones we've done before as the ones that

1022
00:35:55,820 --> 00:35:54,060
are at the end so so we made no special

1023
00:35:57,890 --> 00:35:55,830
accommodations for that in fact i was

1024
00:36:00,080 --> 00:35:57,900
asked it should we do that i told them i

1025
00:36:02,030 --> 00:36:00,090
did not want to do what you suggested i

1026
00:36:04,190 --> 00:36:02,040
wanted to make it just a nominal into

1027
00:36:05,690 --> 00:36:04,200
mission let us do the plus to weather

1028
00:36:07,010 --> 00:36:05,700
day planning stuff just like we normally

1029
00:36:08,750 --> 00:36:07,020
do and treat it just like a normal

1030
00:36:10,250 --> 00:36:08,760
flight and we'll see what the conditions

1031
00:36:13,040 --> 00:36:10,260
and the flight rules drive us to as we

1032
00:36:15,140 --> 00:36:13,050
move forward and it's one more from me

1033
00:36:16,550 --> 00:36:15,150
that i meant to ask earlier to Gerst the

1034
00:36:18,230 --> 00:36:16,560
business of the leading edges and the

1035
00:36:19,700 --> 00:36:18,240
temperature constraints that you went

1036
00:36:22,280 --> 00:36:19,710
back and reevaluate which way was the

1037
00:36:23,630 --> 00:36:22,290
Arab made was it you had less margin

1038
00:36:24,680 --> 00:36:23,640

than you thought or you had more than

1039
00:36:26,240 --> 00:36:24,690
you thought and I'm just now just

1040
00:36:28,790 --> 00:36:26,250
curious how that played out the the

1041
00:36:30,980 --> 00:36:28,800
model under predicted what we would see

1042
00:36:32,720 --> 00:36:30,990
it at least at launching it late in the

1043
00:36:35,180 --> 00:36:32,730
window so in other words it was warmer

1044
00:36:38,480 --> 00:36:35,190
in the actual case we flew then the

1045
00:36:41,210 --> 00:36:38,490
models would have predicted what the

1046
00:36:43,670 --> 00:36:41,220
actual constraint really is no it was it

1047
00:36:46,250 --> 00:36:43,680
didn't it was yes there was plenty of

1048
00:36:49,340 --> 00:36:46,260
capability in the vehicle beyond what it

1049
00:36:51,440 --> 00:36:49,350
design standpoint but what it showed us

1050
00:36:53,240 --> 00:36:51,450
was our certification analysis if we

1051
00:36:55,370 --> 00:36:53,250
would account it on that wasn't exactly

1052
00:36:56,780 --> 00:36:55,380
done it wasn't done correctly and then

1053
00:36:58,910 --> 00:36:56,790
what's important for that is it's not

1054
00:37:01,040 --> 00:36:58,920
just this case then you want to look at

1055
00:37:03,020 --> 00:37:01,050
transatlantic aborts you want to look at

1056
00:37:04,370 --> 00:37:03,030
all the other scenarios to make sure

1057
00:37:06,230 --> 00:37:04,380
that there's not something from a

1058
00:37:08,060 --> 00:37:06,240
certification standpoint that we missed

1059
00:37:09,710 --> 00:37:08,070
now that we found this model air so it

1060
00:37:11,480 --> 00:37:09,720
was a real tribute to the team that they

1061
00:37:13,760 --> 00:37:11,490
saw this and it surprised them and then

1062
00:37:15,350 --> 00:37:13,770
they just didn't just pass it off they

1063
00:37:16,610 --> 00:37:15,360

actually kept looking to see what that

1064
00:37:18,680 --> 00:37:16,620
would mean to make sure that we are

1065
00:37:21,530 --> 00:37:18,690
really certified for all conditions that

1066
00:37:23,660 --> 00:37:21,540
we expect to fly okay we'll wrap it up

1067
00:37:25,010 --> 00:37:23,670
with a question from James Dean yeah I'm

1068
00:37:26,420 --> 00:37:25,020
sorry just well I was just wondering if

1069
00:37:28,400 --> 00:37:26,430
you could discuss a little further these

1070
00:37:30,200 --> 00:37:28,410
extension days a couple couple in the

1071
00:37:32,260 --> 00:37:30,210
last flight and a couple more probable

1072
00:37:35,360 --> 00:37:32,270
here it seems like to kind of underscore

1073
00:37:36,590 --> 00:37:35,370
shuttles ending and got to just cram

1074
00:37:39,430 --> 00:37:36,600
everything we can and these final

1075
00:37:42,230 --> 00:37:39,440
missions just are you doing it

1076
00:37:43,940 --> 00:37:42,240
essentially because you can or do these

1077
00:37:45,799 --> 00:37:43,950
things really actually need to get done

1078
00:37:47,749 --> 00:37:45,809
in a way that's different from you know

1079
00:37:50,479 --> 00:37:47,759
what happened 10 missions ago a data

1080
00:37:52,189 --> 00:37:50,489
plan and i can i can add a little bit to

1081
00:37:54,499 --> 00:37:52,199
it what's really happening with space

1082
00:37:56,299 --> 00:37:54,509
station is you know we have 17 vehicles

1083
00:37:58,400 --> 00:37:56,309
that go into station during this period

1084
00:38:00,739 --> 00:37:58,410
so this is a very busy time on space

1085
00:38:03,319 --> 00:38:00,749
station so what this that takes a lot of

1086
00:38:07,309 --> 00:38:03,329
time for the crew a way to handle the

1087
00:38:09,170 --> 00:38:07,319
atv docking and departure the HTV

1088
00:38:11,299 --> 00:38:09,180

docking and departure the progress is

1089
00:38:13,309 --> 00:38:11,309
that are coming and going the soyuz etc

1090
00:38:15,019 --> 00:38:13,319
so the crew is it doesn't have as much

1091
00:38:16,579 --> 00:38:15,029
time on orbit and we're also trying to

1092
00:38:18,890 --> 00:38:16,589
focus on research and do a lot of

1093
00:38:20,809 --> 00:38:18,900
research so what the shuttle flights are

1094
00:38:24,529 --> 00:38:20,819
allowing us to do for example our oxygen

1095
00:38:25,849 --> 00:38:24,539
generation system we have a new system

1096
00:38:28,969 --> 00:38:25,859
we'd like to put in there that will

1097
00:38:30,939 --> 00:38:28,979
control the acidity or the pH of the

1098
00:38:34,339 --> 00:38:30,949
loop into the oxygen generation system

1099
00:38:35,959 --> 00:38:34,349
the current filter we have causes too

1100
00:38:37,939 --> 00:38:35,969
high a delta pressure we can't run the

1101
00:38:39,589 --> 00:38:37,949
pump so we have a low pressure system we

1102
00:38:42,140 --> 00:38:39,599
would like to install that's about a

1103
00:38:44,449 --> 00:38:42,150
four or five our task to go do that and

1104
00:38:46,099 --> 00:38:44,459
install that we would like to do that

1105
00:38:47,900 --> 00:38:46,109
during one of these extension day so we

1106
00:38:50,029 --> 00:38:47,910
can get the shuttle team along with a

1107
00:38:51,439 --> 00:38:50,039
station team to go put that in and we

1108
00:38:54,169 --> 00:38:51,449
can get the oxygen generation system

1109
00:38:55,819 --> 00:38:54,179
then fully up and ready to go support if

1110
00:38:57,349 --> 00:38:55,829
it doesn't occur during this mission and

1111
00:38:59,120 --> 00:38:57,359
we can't do it then we can push it off

1112
00:39:00,410 --> 00:38:59,130
to the increment to station crew can do

1113
00:39:02,689 --> 00:39:00,420

it later but then it will take some time

1114
00:39:04,669 --> 00:39:02,699
away from research so what we're trying

1115
00:39:07,189 --> 00:39:04,679
to do is we're identifying tasks that

1116
00:39:08,719 --> 00:39:07,199
that really helped station end up in a

1117
00:39:10,339 --> 00:39:08,729
much better configuration so we're

1118
00:39:12,109 --> 00:39:10,349
taking advantage of that extra work

1119
00:39:14,150 --> 00:39:12,119
force that comes up with the shuttle to

1120
00:39:15,859 --> 00:39:14,160
really take advantage of these items and

1121
00:39:17,900 --> 00:39:15,869
that's why those two days are a pretty

1122
00:39:19,249 --> 00:39:17,910
dog and are unimportant and if you look

1123
00:39:20,900 --> 00:39:19,259
at the actual tasks we're putting in

1124
00:39:22,309 --> 00:39:20,910
there not trivial tasks their high

1125
00:39:23,839 --> 00:39:22,319
priority tasks that we're going to have

1126
00:39:25,849 --> 00:39:23,849
to do probably in the next month or two

1127
00:39:30,349 --> 00:39:25,859
and this allows us to get ahead with

1128
00:39:32,390 --> 00:39:30,359
those tasks okay I think that wraps it

1129
00:39:34,870 --> 00:39:32,400
up by we really appreciate you coming

1130
00:39:37,609 --> 00:39:34,880
today I just wanted to remind you that

1131
00:39:39,410 --> 00:39:37,619
sts-134 activities begin in earnest

1132
00:39:42,229 --> 00:39:39,420
again here on nasa television one week

1133
00:39:44,179 --> 00:39:42,239
from today april twenty sixth at ten

1134
00:39:47,239 --> 00:39:44,189
a.m. eastern time with a pre countdown

1135
00:39:49,039 --> 00:39:47,249
status briefing the sts-134 flight crew

1136
00:39:51,349 --> 00:39:49,049
arrives here at Kennedy Space Center at

1137
00:39:53,089 --> 00:39:51,359
twelve-fifteen that day and a two

1138
00:39:55,279 --> 00:39:53,099

o'clock in the afternoon the countdown

1139
00:39:58,669 --> 00:39:55,289
officially picks up all leading toward

1140
00:39:59,180 --> 00:39:58,679
launched on April 29 that 347 p.m.

1141
00:40:01,280 --> 00:39:59,190
eastern

1142
00:40:06,290 --> 00:40:01,290
time and you can keep up with all the