1
00:00:05,829 --> 00:00:04,150
good morning thank you for joining us

2
00:00:07,310 --> 00:00:05,839
here at nasa's kennedy space center in

3
00:00:10,070 --> 00:00:07,320
florida for the

4
00:00:11,749 --> 00:00:10,080
sts-133 pre-countdown status briefing

5
00:00:13,669 --> 00:00:11,759
for space shuttle discovery's mission to

6
00:00:15,910 --> 00:00:13,679
the international space station joining

7
00:00:17,029 --> 00:00:15,920
me today is jeff spalding nasa test

8
00:00:19,750 --> 00:00:17,039
director

9
00:00:24,390 --> 00:00:21,269
and kathy winters shuttle weather

10
00:00:28,550 --> 00:00:25,670
we'll hear from our panelists and take

11
00:00:30,390 --> 00:00:28,560
questions jeff thank you kendra and good

12
00:00:32,150 --> 00:00:30,400
morning to everyone and welcome

13
00:00:33,830 --> 00:00:32,160

i'm very proud to be back here today to

14
00:00:35,270 --> 00:00:33,840
provide launch countdown status it's

15
00:00:36,790 --> 00:00:35,280
been a couple of months obviously since

16
00:00:38,389 --> 00:00:36,800
the last time we did that

17
00:00:41,510 --> 00:00:38,399
um as we're preparing to get discovery

18
00:00:43,590 --> 00:00:41,520
ready to fly on the sts-133 mission

19
00:00:44,709 --> 00:00:43,600
this will be discovery's 39th and final

20
00:00:46,150 --> 00:00:44,719
flight

21
00:00:48,709 --> 00:00:46,160
and she is bringing the permanent

22
00:00:50,389 --> 00:00:48,719
multi-purpose module the pmm up to the

23
00:00:52,150 --> 00:00:50,399
station along with the express logistics

24
00:00:54,229 --> 00:00:52,160
carrier

25
00:00:55,990 --> 00:00:54,239
it's been an interesting and exciting

26
00:00:56,790 --> 00:00:56,000
and probably challenging few months for

27
00:00:59,430 --> 00:00:56,800
us

28
00:01:01,590 --> 00:00:59,440
over the last since uh we've been here

29
00:01:03,270 --> 00:01:01,600
last this will be the second longest

30
00:01:05,509 --> 00:01:03,280
vertical flow for the vehicle of

31
00:01:06,550 --> 00:01:05,519
discovery uh the vertical flow starts

32
00:01:09,030 --> 00:01:06,560
when we roll out of the orbital

33
00:01:12,789 --> 00:01:09,040
processing facility uh the longest one

34
00:01:14,550 --> 00:01:12,799
for us was sts-35 was 183 days and this

35
00:01:16,070 --> 00:01:14,560
one will be 170

36
00:01:17,590 --> 00:01:16,080
if we make our launch date on thursday

37
00:01:19,270 --> 00:01:17,600
the 24th which we're certainly planning

38
00:01:20,630 --> 00:01:19,280

on doing

39
00:01:21,830 --> 00:01:20,640
as you recall this

40
00:01:23,190 --> 00:01:21,840
vertical flow started for us on

41
00:01:24,950 --> 00:01:23,200
september the 9th when we did roll out

42
00:01:27,109 --> 00:01:24,960
of the processing facility

43
00:01:28,870 --> 00:01:27,119
uh and we spent some time in the vab

44
00:01:30,870 --> 00:01:28,880
rolled out on the 20th of september out

45
00:01:32,710 --> 00:01:30,880
to the launch pad for the first time

46
00:01:34,630 --> 00:01:32,720
flow was going very well we did have a

47
00:01:36,069 --> 00:01:34,640
leak as you recall on our ohms pod and

48
00:01:37,350 --> 00:01:36,079
we had to replace one of our flange

49
00:01:38,950 --> 00:01:37,360
seals that was one of the big topics we

50
00:01:40,469 --> 00:01:38,960
had before our first launch

51
00:01:43,510 --> 00:01:40,479
we did make the launch attempt on

52
00:01:45,270 --> 00:01:43,520
november the 5th and again as you all

53
00:01:47,749 --> 00:01:45,280
probably recall we did end up scrubbing

54
00:01:49,990 --> 00:01:47,759
for a leak on our hydrogen vent line

55
00:01:51,749 --> 00:01:50,000
and in addition we found some cracks and

56
00:01:53,350 --> 00:01:51,759
on the external tank foam

57
00:01:54,950 --> 00:01:53,360
those were associated after some further

58
00:01:56,630 --> 00:01:54,960
inspection with the stringer and we went

59
00:01:58,069 --> 00:01:56,640
ahead and repaired those

60
00:02:00,149 --> 00:01:58,079
at the launch pad and we targeted a new

61
00:02:01,990 --> 00:02:00,159
launch date of november the 30th

62
00:02:03,749 --> 00:02:02,000
at that point we did have some further

63
00:02:05,910 --> 00:02:03,759

discussions about how much evaluations

64
00:02:08,070 --> 00:02:05,920
we needed to do with the pad and decided

65
00:02:10,869 --> 00:02:08,080
to go ahead and do a tanking test and we

66
00:02:12,390 --> 00:02:10,879
did that test on december the 17th

67
00:02:13,990 --> 00:02:12,400
we added a lot of instrumentation to the

68
00:02:15,990 --> 00:02:14,000
tank to support that test to give us

69
00:02:17,990 --> 00:02:16,000
some more data so that we understood the

70
00:02:20,229 --> 00:02:18,000
nature of the crack and and what types

71
00:02:21,670 --> 00:02:20,239
of things might have caused that

72
00:02:23,110 --> 00:02:21,680
we also made the decision to roll back

73
00:02:24,949 --> 00:02:23,120
to the vehicle assembly building and did

74
00:02:25,910 --> 00:02:24,959
so on the 21st of december right before

75
00:02:27,430 --> 00:02:25,920
christmas

76
00:02:29,750 --> 00:02:27,440
so that we could complete all of the

77
00:02:31,350 --> 00:02:29,760
non-destructive evaluations of the tank

78
00:02:33,030 --> 00:02:31,360
because at the pad we only have access

79
00:02:34,150 --> 00:02:33,040
to a portion of the tank and by rolling

80
00:02:35,910 --> 00:02:34,160
back to the vehicle assembly building

81
00:02:37,750 --> 00:02:35,920
that gave us full access 360 degrees

82
00:02:39,270 --> 00:02:37,760
around the tank itself

83
00:02:41,190 --> 00:02:39,280
so those evaluations went well and we

84
00:02:43,750 --> 00:02:41,200
decided based on the data that we did of

85
00:02:45,589 --> 00:02:43,760
those evaluations to do a radius block

86
00:02:47,830 --> 00:02:45,599
mod on the stringers where we had seen

87
00:02:49,110 --> 00:02:47,840
some cracks uh to beef those up a little

88
00:02:50,790 --> 00:02:49,120

bit and give us some more structural

89
00:02:52,790 --> 00:02:50,800
integrity

90
00:02:53,910 --> 00:02:52,800
those mods went extremely well and we

91
00:02:56,390 --> 00:02:53,920
were able to roll back to the pad on

92
00:02:57,910 --> 00:02:56,400
january the 31st and since that time

93
00:03:00,149 --> 00:02:57,920
we've been working diligently to get the

94
00:03:01,910 --> 00:03:00,159
vehicle back into launch configuration

95
00:03:03,990 --> 00:03:01,920
changing out some of those time-based

96
00:03:05,750 --> 00:03:04,000
consumables like batteries and and some

97
00:03:07,270 --> 00:03:05,760
provisions and other things

98
00:03:08,869 --> 00:03:07,280
additionally we had replaced mission

99
00:03:11,030 --> 00:03:08,879
specialist uh

100
00:03:13,350 --> 00:03:11,040
tim kopra with steve bowen on this

101
00:03:15,030 --> 00:03:13,360
mission and steve will be performing all

102
00:03:17,030 --> 00:03:15,040
the duties that mr copper would have

103
00:03:18,309 --> 00:03:17,040
been doing and as a result that we also

104
00:03:21,670 --> 00:03:18,319
changed out the spacesuit since he's

105
00:03:24,309 --> 00:03:21,680
going to be doing our spacewalks as well

106
00:03:26,070 --> 00:03:24,319
so that got us to where we are today

107
00:03:28,470 --> 00:03:26,080
last night we did complete our flight

108
00:03:29,750 --> 00:03:28,480
pressurization of our on-orbit control

109
00:03:31,270 --> 00:03:29,760
system tanks as well as our main

110
00:03:34,550 --> 00:03:31,280
propulsion system tanks and that

111
00:03:36,789 --> 00:03:34,560
operation went very well just as planned

112
00:03:38,070 --> 00:03:36,799
i got the pad back open about 5 45 this

113
00:03:40,229 --> 00:03:38,080

morning since that time we've been

114
00:03:41,750 --> 00:03:40,239
working deconfiguring from that up and

115
00:03:43,830 --> 00:03:41,760
also getting ready to perform our launch

116
00:03:45,190 --> 00:03:43,840
countdown preparations and all of that

117
00:03:46,949 --> 00:03:45,200
will continue throughout the day as we

118
00:03:49,509 --> 00:03:46,959
get into called stations this afternoon

119
00:03:50,869 --> 00:03:49,519
at 2 30 for the launch countdown and

120
00:03:53,110 --> 00:03:50,879
then our countdown clock will begin

121
00:03:54,229 --> 00:03:53,120
counting at 3 o'clock from t minus 43

122
00:03:55,750 --> 00:03:54,239
hours

123
00:03:57,589 --> 00:03:55,760
at that point we'll get right into our

124
00:03:59,509 --> 00:03:57,599
final checkout and configuration of our

125
00:04:00,869 --> 00:03:59,519
onboard avionics systems

126
00:04:03,110 --> 00:04:00,879
and then we'll work preparations for

127
00:04:04,789 --> 00:04:03,120
fuel cell reactants later tonight

128
00:04:06,630 --> 00:04:04,799
at seven o'clock tomorrow morning we

129
00:04:08,789 --> 00:04:06,640
will clear the pad for the loading of

130
00:04:10,229 --> 00:04:08,799
those reactant operations and continue

131
00:04:12,710 --> 00:04:10,239
those preps until the actual loading

132
00:04:14,309 --> 00:04:12,720
which starts at 12 30 in the afternoon

133
00:04:16,469 --> 00:04:14,319
we expect the pad to open up about six

134
00:04:18,550 --> 00:04:16,479
tomorrow evening from that up and then

135
00:04:21,110 --> 00:04:18,560
we'll continue with about 120 pounds of

136
00:04:22,230 --> 00:04:21,120
liquid oxygen and we continue to offload

137
00:04:24,469 --> 00:04:22,240
of the vehicle to get us to our

138
00:04:26,390 --> 00:04:24,479

appropriate flight load and flight mass

139
00:04:28,629 --> 00:04:26,400
for that system which is about four more

140
00:04:29,990 --> 00:04:28,639
hours of work to do there we will

141
00:04:31,590 --> 00:04:30,000
proceed with our checkout of our order

142
00:04:33,189 --> 00:04:31,600
and ground communication systems and all

143
00:04:35,430 --> 00:04:33,199
of the networks associated with those on

144
00:04:37,030 --> 00:04:35,440
wednesday afternoon at about 2 30

145
00:04:40,390 --> 00:04:37,040
followed then by our final flight crew

146
00:04:41,830 --> 00:04:40,400
equipment stowage operations at about 4.

147
00:04:43,110 --> 00:04:41,840
on wednesday evening the rotating

148
00:04:44,629 --> 00:04:43,120
service structure will be pulled back

149
00:04:46,629 --> 00:04:44,639
away from the vehicle and the xenon

150
00:04:48,790 --> 00:04:46,639
lights will be turned on uh revealing

151
00:04:50,230 --> 00:04:48,800
the vehicle in its launch form uh for

152
00:04:51,590 --> 00:04:50,240
the last time and that will be about

153
00:04:53,189 --> 00:04:51,600
eight o'clock on wednesday evening when

154
00:04:54,710 --> 00:04:53,199
we do that

155
00:04:56,790 --> 00:04:54,720
then as we go just past midnight about

156
00:04:59,350 --> 00:04:56,800
12 30 or so our countdown clock will

157
00:05:01,029 --> 00:04:59,360
resume from t minus 11 hours

158
00:05:02,550 --> 00:05:01,039
and then at that point we'll begin our

159
00:05:04,790 --> 00:05:02,560
final loading preparations and begin

160
00:05:05,670 --> 00:05:04,800
clearing the pad about 2 am on thursday

161
00:05:08,070 --> 00:05:05,680
morning

162
00:05:09,909 --> 00:05:08,080
our earliest tanking time is at 7 25

163
00:05:11,510 --> 00:05:09,919

thursday morning takes about three hours

164
00:05:12,629 --> 00:05:11,520
as normal and then we'll bring the

165
00:05:14,469 --> 00:05:12,639
flight crew out once we get the crew

166
00:05:16,629 --> 00:05:14,479
module configured at about 1 30 on

167
00:05:18,790 --> 00:05:16,639
thursday afternoon

168
00:05:21,189 --> 00:05:18,800
our launch window is about 10 minutes or

169
00:05:23,590 --> 00:05:21,199
so in length opens at 4 45 on thursday

170
00:05:24,870 --> 00:05:23,600
the 24th we will target the middle of

171
00:05:27,670 --> 00:05:24,880
that window which correlates to about

172
00:05:29,670 --> 00:05:27,680
450 450 pm

173
00:05:31,110 --> 00:05:29,680
on friday february the 25th and then

174
00:05:33,350 --> 00:05:31,120
every day thereafter we do have some

175
00:05:35,350 --> 00:05:33,360
flight day 4 rendezvous capability from

176
00:05:36,710 --> 00:05:35,360
a launch window perspective which means

177
00:05:38,469 --> 00:05:36,720
they'll give us about three extra

178
00:05:40,150 --> 00:05:38,479
minutes or so on that 10-minute launch

179
00:05:42,230 --> 00:05:40,160
window for those days beginning on

180
00:05:43,830 --> 00:05:42,240
friday the 25th

181
00:05:45,990 --> 00:05:43,840
now we do have launch opportunities up

182
00:05:48,070 --> 00:05:46,000
through including march the 6th before

183
00:05:50,150 --> 00:05:48,080
we run into some station constraints on

184
00:05:52,070 --> 00:05:50,160
our dual dock operations because we have

185
00:05:53,830 --> 00:05:52,080
quite a few vehicles up there and and

186
00:05:55,830 --> 00:05:53,840
things will be moving around the soyuz

187
00:05:58,309 --> 00:05:55,840
and the htvs etc

188
00:05:59,909 --> 00:05:58,319

um we do um before we get upon that

189
00:06:01,590 --> 00:05:59,919
though we do have some range constraints

190
00:06:03,430 --> 00:06:01,600
that are out there there's an atlas 5 on

191
00:06:05,430 --> 00:06:03,440
the range on march the 4th

192
00:06:07,189 --> 00:06:05,440
and a delta 4 on the range on march the

193
00:06:09,430 --> 00:06:07,199
11th

194
00:06:10,790 --> 00:06:09,440
so what that says is right now we have

195
00:06:13,749 --> 00:06:10,800
from a planning perspective we'll have

196
00:06:15,590 --> 00:06:13,759
the february 24th through the 26th with

197
00:06:17,590 --> 00:06:15,600
no issues at all

198
00:06:19,029 --> 00:06:17,600
once we get to the 27th we actually come

199
00:06:21,350 --> 00:06:19,039
up against the delta even though that's

200
00:06:23,110 --> 00:06:21,360
later that constraint first because that

201
00:06:24,790 --> 00:06:23,120
will be our landing dates will start to

202
00:06:27,110 --> 00:06:24,800
impinge on the preparations needed to

203
00:06:28,870 --> 00:06:27,120
prepare that delta for launch and then

204
00:06:29,749 --> 00:06:28,880
as we if we end up going out a day or

205
00:06:31,510 --> 00:06:29,759
more

206
00:06:32,629 --> 00:06:31,520
beyond that then we would start

207
00:06:33,990 --> 00:06:32,639
potentially

208
00:06:35,189 --> 00:06:34,000
overlapping right on top of their launch

209
00:06:37,189 --> 00:06:35,199
date with landing

210
00:06:39,430 --> 00:06:37,199
so that constraint is out there as well

211
00:06:41,510 --> 00:06:39,440
as the ones uh for the atlas on the on

212
00:06:43,350 --> 00:06:41,520
the fourth so we'll be evaluating those

213
00:06:44,870 --> 00:06:43,360

but right now the 24th through 26th are

214
00:06:47,029 --> 00:06:44,880
very clear for us

215
00:06:48,629 --> 00:06:47,039
we have three row capability available

216
00:06:50,390 --> 00:06:48,639
if needed we do the evaluations that we

217
00:06:51,510 --> 00:06:50,400
normally do for that

218
00:06:52,710 --> 00:06:51,520
and we don't have any beta angle

219
00:06:55,110 --> 00:06:52,720
concerns at all all the way through

220
00:06:57,510 --> 00:06:55,120
february or march our pad hold time is

221
00:06:59,110 --> 00:06:57,520
eight days for liquid hydrogen nine for

222
00:07:00,309 --> 00:06:59,120
liquid oxygen so we have plenty of time

223
00:07:02,469 --> 00:07:00,319
there

224
00:07:04,629 --> 00:07:02,479
with that 120 pound offload though we do

225
00:07:06,629 --> 00:07:04,639
eliminate our 48 hour turn capability if

226
00:07:08,790 --> 00:07:06,639
we have to do a top off meaning if we do

227
00:07:11,029 --> 00:07:08,800
any top off ops it'll take at least 72

228
00:07:12,390 --> 00:07:11,039
hours to perform that

229
00:07:15,029 --> 00:07:12,400
it's an 11 day mission with one

230
00:07:17,189 --> 00:07:15,039
contingency day two weather days planned

231
00:07:19,029 --> 00:07:17,199
and mission landing is at ksc a little

232
00:07:20,950 --> 00:07:19,039
before one o'clock on monday march the

233
00:07:23,270 --> 00:07:20,960
7th and then the eighth would be the

234
00:07:25,510 --> 00:07:23,280
plus one day and that's around 11 30 or

235
00:07:27,670 --> 00:07:25,520
so in the morning on that day

236
00:07:29,909 --> 00:07:27,680
there is atv 2 docking if you recall

237
00:07:31,830 --> 00:07:29,919
that did launch a few days back that

238
00:07:33,510 --> 00:07:31,840

docking is planned for about five hours

239
00:07:34,790 --> 00:07:33,520
prior to our launch so it's pretty close

240
00:07:36,710 --> 00:07:34,800
to the time frame in which we're getting

241
00:07:38,309 --> 00:07:36,720
ready to get off the ground and we'll be

242
00:07:39,830 --> 00:07:38,319
watching that closely

243
00:07:41,589 --> 00:07:39,840
and if there are any issues with that

244
00:07:43,110 --> 00:07:41,599
docking then we'd the program would go

245
00:07:45,510 --> 00:07:43,120
off and assess

246
00:07:47,670 --> 00:07:45,520
any issues or impacts to launch

247
00:07:49,029 --> 00:07:47,680
at that time and if if needed we could

248
00:07:50,869 --> 00:07:49,039
hold at any point in the countdown from

249
00:07:52,390 --> 00:07:50,879
that point forward so

250
00:07:54,869 --> 00:07:52,400
we'll be ready to be prepared for any of

251
00:07:56,150 --> 00:07:54,879
those things if if needed

252
00:07:57,830 --> 00:07:56,160
so in summary

253
00:08:00,390 --> 00:07:57,840
discovery has been a really remarkable

254
00:08:01,990 --> 00:08:00,400
vehicle for us and for the program uh

255
00:08:04,230 --> 00:08:02,000
she still has a few more miles to go

256
00:08:06,150 --> 00:08:04,240
before she sleeps though uh she's taken

257
00:08:07,990 --> 00:08:06,160
us on many amazing journeys throughout

258
00:08:11,110 --> 00:08:08,000
the years and we expect this flight to

259
00:08:12,950 --> 00:08:11,120
be no different than any of those thanks

260
00:08:14,790 --> 00:08:12,960
thank you jeff kathy

261
00:08:16,309 --> 00:08:14,800
well um weather is looking very good

262
00:08:17,830 --> 00:08:16,319
we've had some great weather coming up

263
00:08:19,589 --> 00:08:17,840

to launch particularly when we look at

264
00:08:21,029 --> 00:08:19,599
temperatures cold temperatures often

265
00:08:23,189 --> 00:08:21,039
become a concern for us this time of

266
00:08:24,550 --> 00:08:23,199
year but we've had some really nice mild

267
00:08:26,469 --> 00:08:24,560
conditions with temperatures in the

268
00:08:28,309 --> 00:08:26,479
upper 50s for low temperatures at the

269
00:08:31,110 --> 00:08:28,319
pad or ranging between the upper 50s and

270
00:08:32,709 --> 00:08:31,120
low 60s so it's been really nice weather

271
00:08:34,709 --> 00:08:32,719
for pre-launch processing and that's

272
00:08:36,149 --> 00:08:34,719
going to continue so i think we do tend

273
00:08:37,829 --> 00:08:36,159
to get in the situation we're in now

274
00:08:39,350 --> 00:08:37,839
where we have a high pressure ridge

275
00:08:41,509 --> 00:08:39,360
that's offshore we have an upper level

276
00:08:43,509 --> 00:08:41,519
ridge that's over the gulf of mexico and

277
00:08:45,590 --> 00:08:43,519
over florida and what happens in that

278
00:08:47,509 --> 00:08:45,600
case is all the cold fronts tend to stay

279
00:08:49,269 --> 00:08:47,519
to the north of us and we may just get

280
00:08:50,150 --> 00:08:49,279
the tail end of the boundaries that come

281
00:08:51,910 --> 00:08:50,160
through

282
00:08:53,829 --> 00:08:51,920
when that occurs sometimes we get some

283
00:08:56,070 --> 00:08:53,839
fog in the morning hours and it also can

284
00:08:57,430 --> 00:08:56,080
cause some ceilings and so on launch day

285
00:08:59,030 --> 00:08:57,440
everything looks good right now if we do

286
00:09:00,949 --> 00:08:59,040
happen to delay a couple of days that

287
00:09:02,630 --> 00:09:00,959
that does become a concern we start

288
00:09:04,550 --> 00:09:02,640

having an increase in concern for for

289
00:09:06,550 --> 00:09:04,560
low clouds and ceilings but for now

290
00:09:07,750 --> 00:09:06,560
launch day is looking very good

291
00:09:09,110 --> 00:09:07,760
overall let's go ahead and look at the

292
00:09:10,389 --> 00:09:09,120
satellite picture we do have an upper

293
00:09:12,470 --> 00:09:10,399
level ridge that's built in over the

294
00:09:14,389 --> 00:09:12,480
gulf of mexico and florida and so what

295
00:09:15,990 --> 00:09:14,399
happens in that case is the fronts just

296
00:09:18,550 --> 00:09:16,000
don't quite make their way down all the

297
00:09:19,910 --> 00:09:18,560
way to us or if they do it's not really

298
00:09:21,910 --> 00:09:19,920
the the portion of the front that has

299
00:09:23,910 --> 00:09:21,920
all the weather so we tend to have just

300
00:09:26,150 --> 00:09:23,920
uh some clouds that roll in with the

301
00:09:27,670 --> 00:09:26,160
front and nothing real significant

302
00:09:28,949 --> 00:09:27,680
we're not expecting any fronts in the

303
00:09:30,949 --> 00:09:28,959
area until the end of the week until the

304
00:09:33,910 --> 00:09:30,959
day after launch so right now weather

305
00:09:35,670 --> 00:09:33,920
does look favorable for launch day

306
00:09:37,670 --> 00:09:35,680
as we go into our let's go ahead and

307
00:09:39,509 --> 00:09:37,680
look at our forecast for the tanking

308
00:09:40,630 --> 00:09:39,519
forecast the only concern is sometimes

309
00:09:42,470 --> 00:09:40,640
in the southeast flow we get some

310
00:09:44,870 --> 00:09:42,480
morning coastal showers it's not a

311
00:09:46,389 --> 00:09:44,880
constraint for tanking and so overall

312
00:09:48,550 --> 00:09:46,399
temperatures are nice and mild winds are

313
00:09:50,550 --> 00:09:48,560

from the east eight knots and then above

314
00:09:51,750 --> 00:09:50,560
the surface will be southeasterly so we

315
00:09:53,110 --> 00:09:51,760
get a little sometimes we get some

316
00:09:54,550 --> 00:09:53,120
convergent bands when that occurs and

317
00:09:55,350 --> 00:09:54,560
we'll get an isolated shower here or

318
00:09:59,190 --> 00:09:55,360
there

319
00:10:01,750 --> 00:09:59,200
tanking we're not expecting to violate

320
00:10:02,949 --> 00:10:01,760
any constraints for our launch forecast

321
00:10:04,230 --> 00:10:02,959
when we get those morning coastal

322
00:10:05,910 --> 00:10:04,240
showers they tend to die off in the

323
00:10:07,829 --> 00:10:05,920
afternoon as the air temperature warms

324
00:10:09,430 --> 00:10:07,839
up and and gets warmer than the sea

325
00:10:10,949 --> 00:10:09,440
temperatures so we're not expecting

326
00:10:12,230 --> 00:10:10,959
those to continue winds should be from

327
00:10:14,150 --> 00:10:12,240
the southeast a little bit breezy

328
00:10:17,110 --> 00:10:14,160
gusting to 20 knots but right up the

329
00:10:18,949 --> 00:10:17,120
runway at the for rtls and not violating

330
00:10:20,630 --> 00:10:18,959
any of our wind constraints with that

331
00:10:22,310 --> 00:10:20,640
the only concern would be is if we had a

332
00:10:25,110 --> 00:10:22,320
slight chance for a shower in the area

333
00:10:28,470 --> 00:10:25,120
or ceiling but overall just a 20 chance

334
00:10:30,630 --> 00:10:28,480
of ksc weather prohibiting launch

335
00:10:32,630 --> 00:10:30,640
for srb recovery it's just a little bit

336
00:10:34,069 --> 00:10:32,640
bumpy there but no

337
00:10:35,670 --> 00:10:34,079
no constraints will be violated winds

338
00:10:37,110 --> 00:10:35,680

will be from the southeast gusting to 18

339
00:10:39,670 --> 00:10:37,120
knots seas

340
00:10:42,790 --> 00:10:39,680
are going to be right around 69 degrees

341
00:10:46,310 --> 00:10:45,110
and for our conus our abort landing

342
00:10:48,710 --> 00:10:46,320
sites in the conus there are some

343
00:10:50,790 --> 00:10:48,720
concerns particularly with wind

344
00:10:52,310 --> 00:10:50,800
for edwards air force base we have a 34

345
00:10:54,470 --> 00:10:52,320
night

346
00:10:56,790 --> 00:10:54,480
peak wind there and that is

347
00:10:58,870 --> 00:10:56,800
a head and tail wind constraint

348
00:11:01,030 --> 00:10:58,880
violation also we do have a chance for

349
00:11:02,949 --> 00:11:01,040
showers within 30 nautical miles and at

350
00:11:05,269 --> 00:11:02,959
northrop field we do have a chance for

351
00:11:06,150 --> 00:11:05,279
some blowing dust at

352
00:11:08,069 --> 00:11:06,160
four

353
00:11:10,389 --> 00:11:08,079
mile visibility so that does violate the

354
00:11:11,910 --> 00:11:10,399
visibility constraint

355
00:11:14,150 --> 00:11:11,920
for the tile sites weather does look

356
00:11:15,590 --> 00:11:14,160
good as there goes san maroon for estrus

357
00:11:18,550 --> 00:11:15,600
though there is concern with winds

358
00:11:20,949 --> 00:11:18,560
they're gusting up to 33 knots and so

359
00:11:23,430 --> 00:11:20,959
with that that is a headwind um of 33

360
00:11:25,350 --> 00:11:23,440
knots so there that's the only concern

361
00:11:26,710 --> 00:11:25,360
though the other two sites no violations

362
00:11:28,710 --> 00:11:26,720
so we do have at least one good towel

363
00:11:31,110 --> 00:11:28,720

site

364
00:11:32,389 --> 00:11:31,120
if we do happen to delay 24 hours this

365
00:11:34,550 --> 00:11:32,399
is when a frontal boundary will start

366
00:11:35,750 --> 00:11:34,560
coming into the northern florida on this

367
00:11:38,949 --> 00:11:35,760
day winds will shift around to the

368
00:11:40,949 --> 00:11:38,959
southwest gusting about 19 knots

369
00:11:43,430 --> 00:11:40,959
we do have just a slight concern for

370
00:11:44,949 --> 00:11:43,440
showers and also ceiling in the area we

371
00:11:46,550 --> 00:11:44,959
do have more a little more concern about

372
00:11:48,389 --> 00:11:46,560
the ceiling with the there being more

373
00:11:50,550 --> 00:11:48,399
clouds coming into the area so with that

374
00:11:53,430 --> 00:11:50,560
we have a 30 percent chance of ksc

375
00:11:55,350 --> 00:11:53,440
weather prohibiting launch

376
00:11:57,910 --> 00:11:55,360
for our abort landing sites in the u.s

377
00:11:59,829 --> 00:11:57,920
we do have some windy weather again 29

378
00:12:02,150 --> 00:11:59,839
knots there at edwards air force base

379
00:12:03,670 --> 00:12:02,160
and also at northrop and also blowing

380
00:12:06,230 --> 00:12:03,680
with blowing dust being a concern there

381
00:12:07,829 --> 00:12:06,240
again so overall we do still have windy

382
00:12:10,710 --> 00:12:07,839
conditions on day two for the abort

383
00:12:12,550 --> 00:12:10,720
landing sites in the u.s

384
00:12:14,230 --> 00:12:12,560
but the towel sites do improve on this

385
00:12:16,069 --> 00:12:14,240
day all three tile sites do look good we

386
00:12:19,430 --> 00:12:16,079
do have a peak wind there it's just a 22

387
00:12:21,190 --> 00:12:19,440
knots but that is not a violation

388
00:12:22,389 --> 00:12:21,200

and if we happen to delay 48 hours this

389
00:12:23,990 --> 00:12:22,399
is where we start getting concerned

390
00:12:25,269 --> 00:12:24,000
about a ceiling because a front will

391
00:12:26,710 --> 00:12:25,279
come down into the area but it's not

392
00:12:27,990 --> 00:12:26,720
going to push through real cleanly

393
00:12:29,829 --> 00:12:28,000
because we have the upper level ridge in

394
00:12:31,350 --> 00:12:29,839
the area it just tends to get squelched

395
00:12:33,829 --> 00:12:31,360
a little bit but no real significant

396
00:12:35,350 --> 00:12:33,839
trough comes in and so the fronts linger

397
00:12:37,350 --> 00:12:35,360
with that we do have more of a chance

398
00:12:39,750 --> 00:12:37,360
for a ceiling on this day around 5000

399
00:12:41,190 --> 00:12:39,760
feet and that does uh could potentially

400
00:12:43,190 --> 00:12:41,200
violate it will depend on the thickness

401
00:12:45,190 --> 00:12:43,200
of the ceiling and it would also depend

402
00:12:47,590 --> 00:12:45,200
on if the forward observers get good

403
00:12:49,350 --> 00:12:47,600
visibility on the vehicle

404
00:12:50,949 --> 00:12:49,360
we also do have a chance for showers on

405
00:12:52,470 --> 00:12:50,959
this day so with that we do have a 40

406
00:12:55,350 --> 00:12:52,480
percent chance of ksc weather

407
00:12:59,590 --> 00:12:57,269
for the abort landing sites

408
00:13:01,590 --> 00:12:59,600
out west again more concerns still with

409
00:13:03,350 --> 00:13:01,600
wind just so not good weather there all

410
00:13:06,710 --> 00:13:03,360
three days

411
00:13:07,990 --> 00:13:06,720
and for the tile sites

412
00:13:09,910 --> 00:13:08,000
we do have some concerns both with

413
00:13:11,910 --> 00:13:09,920

zaragoza and estrus space light

414
00:13:13,350 --> 00:13:11,920
meteorology group is forecasting showers

415
00:13:15,829 --> 00:13:13,360
within 20 nautical miles of both of

416
00:13:18,710 --> 00:13:15,839
those locations but is still a

417
00:13:20,629 --> 00:13:18,720
good towel site on this day

418
00:13:21,829 --> 00:13:20,639
so overall the first day of

419
00:13:23,670 --> 00:13:21,839
our launch day is the best day

420
00:13:25,509 --> 00:13:23,680
weather-wise before that front comes

421
00:13:28,470 --> 00:13:25,519
down into the area and a 20 chance of

422
00:13:30,629 --> 00:13:28,480
ksc weather prohibiting launch

423
00:13:31,910 --> 00:13:30,639
thank you we'll now take questions when

424
00:13:33,750 --> 00:13:31,920
the microphone comes your way please

425
00:13:34,949 --> 00:13:33,760
state your name affiliation and to whom

426
00:13:37,110 --> 00:13:34,959
you're addressing your question let's

427
00:13:39,509 --> 00:13:37,120
start with marcia

428
00:13:41,829 --> 00:13:39,519
press for kathy is this the same weather

429
00:13:43,750 --> 00:13:41,839
system that's affecting both aoe

430
00:13:45,110 --> 00:13:43,760
sites or is this just coincidentally bad

431
00:13:48,550 --> 00:13:45,120
at both and

432
00:13:50,629 --> 00:13:48,560
how long is that going to continue

433
00:13:52,230 --> 00:13:50,639
um well it is the same system and

434
00:13:53,670 --> 00:13:52,240
basically what happens is they're in the

435
00:13:55,110 --> 00:13:53,680
trough situation out there where they

436
00:13:57,189 --> 00:13:55,120
get the trough and we have the ridge and

437
00:13:59,350 --> 00:13:57,199
so we get the lows that come through and

438
00:14:01,509 --> 00:13:59,360

tighten up the gradient out there so it

439
00:14:02,710 --> 00:14:01,519
is that but i'm not sure how long it's

440
00:14:03,990 --> 00:14:02,720
supposed to continue i need to check

441
00:14:04,710 --> 00:14:04,000
with space light meteorology group on

442
00:14:06,710 --> 00:14:04,720
that

443
00:14:08,710 --> 00:14:06,720
but it certainly is a factor for these

444
00:14:10,949 --> 00:14:08,720
days here and i'm wondering if either of

445
00:14:12,790 --> 00:14:10,959
you ever remember a launch scrub for aoa

446
00:14:14,550 --> 00:14:12,800
weather

447
00:14:17,269 --> 00:14:14,560
i know we've had tail problems in the

448
00:14:18,629 --> 00:14:17,279
past usually as long as we have uh rtls

449
00:14:19,990 --> 00:14:18,639
it's good but we would have to check on

450
00:14:21,990 --> 00:14:20,000
that there certainly depends on the

451
00:14:23,910 --> 00:14:22,000
situation if it's uh mandatory but

452
00:14:25,350 --> 00:14:23,920
usually i can't remember myself yeah i

453
00:14:27,590 --> 00:14:25,360
don't i don't know of any time we have

454
00:14:29,430 --> 00:14:27,600
boarded just for just for aoa yes

455
00:14:32,150 --> 00:14:29,440
usually usually we're good as long as we

456
00:14:34,710 --> 00:14:32,160
have kennedy space center as a rtls and

457
00:14:36,389 --> 00:14:34,720
aoa site which we do so so this would

458
00:14:37,910 --> 00:14:36,399
not be a factor

459
00:14:39,350 --> 00:14:37,920
you're saying we'll check on that yeah

460
00:14:40,310 --> 00:14:39,360
for sure yeah

461
00:14:42,470 --> 00:14:40,320
yeah

462
00:14:44,710 --> 00:14:42,480
and secondly for jeff um

463
00:14:47,110 --> 00:14:44,720

you know is this sort of a silver lining

464
00:14:48,870 --> 00:14:47,120
that your team has had discovery to

465
00:14:51,350 --> 00:14:48,880
maybe you know to

466
00:14:52,870 --> 00:14:51,360
pamper and get ready for four extra

467
00:14:54,069 --> 00:14:52,880
months that normally wouldn't have

468
00:14:56,389 --> 00:14:54,079
happened

469
00:14:58,710 --> 00:14:56,399
well i think the team uh always

470
00:14:59,509 --> 00:14:58,720
appreciates the vehicle discovery

471
00:15:01,590 --> 00:14:59,519
they've

472
00:15:03,430 --> 00:15:01,600
the people that worked on this team

473
00:15:04,790 --> 00:15:03,440
have loved this vehicle you know for

474
00:15:07,030 --> 00:15:04,800
many many years

475
00:15:09,030 --> 00:15:07,040
and so it's it's a bittersweet thing for

476
00:15:11,110 --> 00:15:09,040
them to say goodbye to her for on her

477
00:15:13,350 --> 00:15:11,120
last mission but i think they also have

478
00:15:15,430 --> 00:15:13,360
put the pride and the dedication and

479
00:15:17,269 --> 00:15:15,440
that we've seen throughout the years and

480
00:15:19,350 --> 00:15:17,279
this last you know few months have been

481
00:15:20,470 --> 00:15:19,360
no different than than that so you know

482
00:15:22,150 --> 00:15:20,480
i think everybody's proud in what

483
00:15:25,430 --> 00:15:22,160
they've done and they're really happy to

484
00:15:28,870 --> 00:15:25,440
see her go off on this last mission

485
00:15:32,389 --> 00:15:28,880
todd todd halverson of florida today um

486
00:15:36,629 --> 00:15:32,399
first for uh jeff i wanted to clear up

487
00:15:38,829 --> 00:15:36,639
the aoa launch commit criteria um

488
00:15:40,870 --> 00:15:38,839

does one of those two sites have to be

489
00:15:42,949 --> 00:15:40,880
available and

490
00:15:45,110 --> 00:15:42,959
also i wanted to know what would happen

491
00:15:47,910 --> 00:15:45,120
if you guys were

492
00:15:50,310 --> 00:15:47,920
delayed up until the point

493
00:15:52,550 --> 00:15:50,320
of march 4th in the government shutdown

494
00:15:55,749 --> 00:15:52,560
would you be able to

495
00:15:58,629 --> 00:15:55,759
make a launch attempt in that case

496
00:16:00,230 --> 00:15:58,639
okay and the first one

497
00:16:02,550 --> 00:16:00,240
and i would have to go back and review

498
00:16:04,629 --> 00:16:02,560
where we are on all of our

499
00:16:06,629 --> 00:16:04,639
launch abort boundaries

500
00:16:08,310 --> 00:16:06,639
from the aoa perspective and to see

501
00:16:10,949 --> 00:16:08,320
whether we have coverage and overlap on

502
00:16:12,550 --> 00:16:10,959
those on and for this particular mission

503
00:16:14,230 --> 00:16:12,560
um and i haven't looked at those

504
00:16:15,350 --> 00:16:14,240
specifically and but we can take a look

505
00:16:16,870 --> 00:16:15,360
at that and make sure that we have

506
00:16:18,949 --> 00:16:16,880
coverage and where we don't have

507
00:16:20,629 --> 00:16:18,959
coverage on the aoa ones to make sure

508
00:16:22,629 --> 00:16:20,639
and maybe kathy knows a little bit more

509
00:16:23,430 --> 00:16:22,639
on the weather side of it but

510
00:16:25,350 --> 00:16:23,440
um

511
00:16:27,590 --> 00:16:25,360
we would have to review that

512
00:16:29,350 --> 00:16:27,600
and then on the second question

513
00:16:31,350 --> 00:16:29,360

clearly we're going to go down the path

514
00:16:33,269 --> 00:16:31,360
and be ready to go whatever the program

515
00:16:34,870 --> 00:16:33,279
comes back and whatever

516
00:16:36,150 --> 00:16:34,880
you know everybody comes back and says

517
00:16:37,670 --> 00:16:36,160
this is going to be our plan for

518
00:16:39,829 --> 00:16:37,680
whatever it is and we'll be ready to

519
00:16:41,590 --> 00:16:39,839
support that as we always have

520
00:16:43,110 --> 00:16:41,600
regardless of what other things are out

521
00:16:44,389 --> 00:16:43,120
there so

522
00:16:45,670 --> 00:16:44,399
i can't predict what's going to happen

523
00:16:47,509 --> 00:16:45,680
with all of those other things but

524
00:16:49,030 --> 00:16:47,519
certainly you know our job is to make

525
00:16:52,310 --> 00:16:49,040
sure that we're ready for any posture

526
00:16:54,470 --> 00:16:52,320
and anything that does happen out there

527
00:16:58,310 --> 00:16:54,480
robert

528
00:17:00,069 --> 00:16:58,320
um for jeff

529
00:17:01,829 --> 00:17:00,079
i realized that

530
00:17:03,509 --> 00:17:01,839
you said and mike moses said the other

531
00:17:05,669 --> 00:17:03,519
day that the um

532
00:17:07,029 --> 00:17:05,679
that if atv couldn't dock or there was a

533
00:17:09,429 --> 00:17:07,039
problem that would be a real-time

534
00:17:11,350 --> 00:17:09,439
decision but is there a scenario where

535
00:17:13,110 --> 00:17:11,360
if you couldn't dock on that day that

536
00:17:15,029 --> 00:17:13,120
you could still launch that day and the

537
00:17:16,949 --> 00:17:15,039
same thing for the next day would you be

538
00:17:18,789 --> 00:17:16,959

able to is there a scenario where you

539
00:17:19,909 --> 00:17:18,799
could reset that quickly for the next

540
00:17:22,069 --> 00:17:19,919
day

541
00:17:23,909 --> 00:17:22,079
the program um is still looking at all

542
00:17:25,350 --> 00:17:23,919
the different contingency options and

543
00:17:27,029 --> 00:17:25,360
all the different types of things that

544
00:17:28,789 --> 00:17:27,039
that could go wrong

545
00:17:31,590 --> 00:17:28,799
associated with that docking in that

546
00:17:32,870 --> 00:17:31,600
vehicle so um i don't have all of that

547
00:17:34,710 --> 00:17:32,880
data that's going to be a program

548
00:17:36,789 --> 00:17:34,720
decision based on what those contingency

549
00:17:39,190 --> 00:17:36,799
scenarios come back and say that are

550
00:17:41,190 --> 00:17:39,200
acceptable and those that are not

551
00:17:43,029 --> 00:17:41,200
what our job is here is to make sure

552
00:17:44,870 --> 00:17:43,039
that we can support any or all of those

553
00:17:47,350 --> 00:17:44,880
and be ready in a posture from a launch

554
00:17:50,230 --> 00:17:47,360
perspective to be ready to go whenever

555
00:17:52,470 --> 00:17:50,240
they give us that green light so

556
00:17:54,710 --> 00:17:52,480
those are honestly still in work and so

557
00:17:55,830 --> 00:17:54,720
i i can't really comment on where we are

558
00:17:57,990 --> 00:17:55,840
with all of those because i don't

559
00:17:59,990 --> 00:17:58,000
honestly know

560
00:18:02,070 --> 00:18:00,000
thanks and given that this is the last

561
00:18:04,230 --> 00:18:02,080
flight of discovery are

562
00:18:06,870 --> 00:18:04,240
is the launch team at all planning to to

563
00:18:09,029 --> 00:18:06,880

mark that uh milestone during the count

564
00:18:10,549 --> 00:18:09,039
in any way

565
00:18:13,270 --> 00:18:10,559
during the countdown we don't really

566
00:18:14,870 --> 00:18:13,280
have anything planned

567
00:18:17,110 --> 00:18:14,880
because we like to keep everyone focused

568
00:18:18,310 --> 00:18:17,120
and they always are and

569
00:18:20,310 --> 00:18:18,320
i say we like to keep them but they

570
00:18:22,710 --> 00:18:20,320
always are focused and we don't like to

571
00:18:24,549 --> 00:18:22,720
do things to uh to distract them we we

572
00:18:26,549 --> 00:18:24,559
have right along during this particular

573
00:18:28,230 --> 00:18:26,559
flow and the other ones too we've tried

574
00:18:30,630 --> 00:18:28,240
to take time out and mark some of the

575
00:18:32,310 --> 00:18:30,640
milestones along the way um

576
00:18:34,390 --> 00:18:32,320
and i know folks have taken the

577
00:18:36,150 --> 00:18:34,400
opportunities to to reflect on a lot of

578
00:18:37,029 --> 00:18:36,160
different things and and we've done some

579
00:18:39,110 --> 00:18:37,039
things

580
00:18:41,350 --> 00:18:39,120
that are both personal and otherwise

581
00:18:42,789 --> 00:18:41,360
with with the teams and so

582
00:18:44,230 --> 00:18:42,799
we've done a lot of that along the way

583
00:18:45,830 --> 00:18:44,240
and i think people will do a lot of that

584
00:18:47,750 --> 00:18:45,840
in their own way as we go through the

585
00:18:50,630 --> 00:18:47,760
remainder of the countdown it'll be

586
00:18:55,029 --> 00:18:50,640
special to a lot of folks i think

587
00:18:59,510 --> 00:18:57,430
that will conclude today's l minus three

588
00:19:01,590 --> 00:18:59,520

pre-countdown status briefing as a

589
00:19:04,150 --> 00:19:01,600
reminder the countdown begins tonight at

590
00:19:06,070 --> 00:19:04,160
or this afternoon at 3 pm eastern time

591
00:19:07,909 --> 00:19:06,080
please join us live on nasa television

592
00:19:10,390 --> 00:19:07,919
tomorrow at 10 a.m eastern for the l

593
00:19:13,190 --> 00:19:10,400
minus 2 countdown status briefing for