1
00:00:05,670 --> 00:00:03,990
good morning thank you for joining us

2
00:00:07,870 --> 00:00:05,680
here at nasa's kennedy space center in

3
00:00:10,470 --> 00:00:07,880
florida for space shuttle discovery's

4
00:00:13,030 --> 00:00:10,480
sts-133 l minus two countdown status

5
00:00:16,470 --> 00:00:13,040
briefing joining me today is steve payne

6
00:00:18,390 --> 00:00:16,480
nasa test director good morning and

7
00:00:20,710 --> 00:00:18,400
kathy winters shuttle weather officer

8
00:00:21,990 --> 00:00:20,720
good morning

9
00:00:24,790 --> 00:00:22,000
we'll hear from our panelists and then

10
00:00:26,710 --> 00:00:24,800
take questions steve thank you kennedy

11
00:00:28,830 --> 00:00:26,720
well i'm always happy to be here to give

12
00:00:30,870 --> 00:00:28,840
you status on the progress of our launch

13
00:00:32,069 --> 00:00:30,880

countdown much has happened since last

14
00:00:33,910 --> 00:00:32,079
time we spoke

15
00:00:35,830 --> 00:00:33,920
over the last few months the team has

16
00:00:37,830 --> 00:00:35,840
been very busy affecting repairs of the

17
00:00:38,869 --> 00:00:37,840
external tank and making it stronger

18
00:00:40,470 --> 00:00:38,879
than ever

19
00:00:42,790 --> 00:00:40,480
we've also resolved our problem with our

20
00:00:45,190 --> 00:00:42,800
hydrogen vent system leak and are now

21
00:00:47,510 --> 00:00:45,200
ready to fly again discovery's poised to

22
00:00:48,950 --> 00:00:47,520
lift off on thursday afternoon bound for

23
00:00:50,549 --> 00:00:48,960
the international space station to do

24
00:00:53,270 --> 00:00:50,559
what she does best

25
00:00:54,790 --> 00:00:53,280
this will be her 39th and final flight

26
00:00:56,709 --> 00:00:54,800
she's going to be carrying the permanent

27
00:00:58,229 --> 00:00:56,719
multi-purpose module and the express

28
00:00:59,990 --> 00:00:58,239
logistics carrier to the international

29
00:01:01,910 --> 00:01:00,000
space station

30
00:01:03,510 --> 00:01:01,920
with her visit to the station she will

31
00:01:06,469 --> 00:01:03,520
join five other spacecraft from

32
00:01:08,070 --> 00:01:06,479
international partners the htv-2

33
00:01:10,789 --> 00:01:08,080
the atv2

34
00:01:12,469 --> 00:01:10,799
progress and soyuz modules this is what

35
00:01:13,990 --> 00:01:12,479
the iss was meant to be a truly

36
00:01:15,990 --> 00:01:14,000
international orbiting orbiting

37
00:01:17,270 --> 00:01:16,000
laboratory

38
00:01:19,109 --> 00:01:17,280

our launch countdown is proceeding

39
00:01:21,350 --> 00:01:19,119
smoothly and is on schedule we're

40
00:01:23,350 --> 00:01:21,360
working only one minor issue we have a

41
00:01:25,670 --> 00:01:23,360
slight internal leakage on a reaction

42
00:01:27,590 --> 00:01:25,680
control system regulator however we've

43
00:01:29,590 --> 00:01:27,600
seen this condition before it is well

44
00:01:30,870 --> 00:01:29,600
within acceptable limits and we're going

45
00:01:33,190 --> 00:01:30,880
to accept it for flight it should be

46
00:01:34,630 --> 00:01:33,200
waived here shortly

47
00:01:36,469 --> 00:01:34,640
our call to stations took place

48
00:01:37,990 --> 00:01:36,479
yesterday at 2 30 p.m

49
00:01:40,469 --> 00:01:38,000
and we have now completed check on

50
00:01:42,149 --> 00:01:40,479
configuration of avionic systems we've

51
00:01:44,149 --> 00:01:42,159
completed preparations for fuel cell

52
00:01:45,109 --> 00:01:44,159
reactant loading and have cleared our

53
00:01:47,109 --> 00:01:45,119
pad

54
00:01:49,590 --> 00:01:47,119
we completed our

55
00:01:51,670 --> 00:01:49,600
pyrotechnic systems and range safety

56
00:01:53,429 --> 00:01:51,680
systems checks and they were successful

57
00:01:55,590 --> 00:01:53,439
and we're scheduled to begin purging the

58
00:01:56,950 --> 00:01:55,600
mid-body with inert gas shortly in

59
00:01:58,870 --> 00:01:56,960
preparation for the reactant loading

60
00:02:00,389 --> 00:01:58,880
which should begin at around 12 30 this

61
00:02:02,149 --> 00:02:00,399
afternoon

62
00:02:03,990 --> 00:02:02,159
we should be loading through about 6 pm

63
00:02:05,910 --> 00:02:04,000

tonight at which point we'll reopen the

64
00:02:07,030 --> 00:02:05,920
pad and go into a four hour offload

65
00:02:08,869 --> 00:02:07,040
period where we'll take off

66
00:02:10,469 --> 00:02:08,879
approximately 120 pounds of liquid

67
00:02:12,470 --> 00:02:10,479
oxygen

68
00:02:14,229 --> 00:02:12,480
we'll also begin initial ground systems

69
00:02:16,390 --> 00:02:14,239
preparations for external tank loading

70
00:02:17,830 --> 00:02:16,400
on thursday morning

71
00:02:19,430 --> 00:02:17,840
at three o'clock on wednesday morning

72
00:02:21,589 --> 00:02:19,440
we'll begin main engine powerup and

73
00:02:23,030 --> 00:02:21,599
avionics checkout as well as check out

74
00:02:24,869 --> 00:02:23,040
of the engine pneumatics and health

75
00:02:26,710 --> 00:02:24,879
monitoring systems

76
00:02:27,910 --> 00:02:26,720
during the day we'll begin removal of

77
00:02:29,510 --> 00:02:27,920
ground instrumentation and other

78
00:02:31,509 --> 00:02:29,520
miscellaneous equipment not required at

79
00:02:34,150 --> 00:02:31,519
the pad for launch

80
00:02:35,750 --> 00:02:34,160
our t-minus 11 hold begins at 11 o'clock

81
00:02:37,350 --> 00:02:35,760
on wednesday

82
00:02:39,190 --> 00:02:37,360
during that time we'll begin retracting

83
00:02:41,910 --> 00:02:39,200
access platforms the engine support

84
00:02:43,350 --> 00:02:41,920
platforms or orbital weather protection

85
00:02:44,869 --> 00:02:43,360
uh conducting inspections of the

86
00:02:46,710 --> 00:02:44,879
external tank and taking closeout

87
00:02:47,990 --> 00:02:46,720
photography

88
00:02:49,509 --> 00:02:48,000

checkout of the orbiter and ground

89
00:02:52,229 --> 00:02:49,519
communications network is planned for

90
00:02:54,150 --> 00:02:52,239
wednesday afternoon at 2 30.

91
00:02:55,589 --> 00:02:54,160
our final flight crew equipment stowage

92
00:02:57,430 --> 00:02:55,599
begins at 4 o'clock on wednesday

93
00:02:58,949 --> 00:02:57,440
afternoon where they install the mid

94
00:03:00,070 --> 00:02:58,959
deck experiments and other perishable

95
00:03:01,430 --> 00:03:00,080
items

96
00:03:03,509 --> 00:03:01,440
our rotating service structure is

97
00:03:05,670 --> 00:03:03,519
scheduled to be retracted at 8 o'clock

98
00:03:07,589 --> 00:03:05,680
eight pm on wednesday evening

99
00:03:10,149 --> 00:03:07,599
at which point we'll begin our final

100
00:03:12,309 --> 00:03:10,159
crew module stowage for for

101
00:03:14,470 --> 00:03:12,319
load and perform our ascent switch list

102
00:03:16,149 --> 00:03:14,480
starting about 9 30 verifying all switch

103
00:03:17,830 --> 00:03:16,159
positions for launch

104
00:03:19,910 --> 00:03:17,840
the countdown clock should resume its

105
00:03:22,710 --> 00:03:19,920
count at t minus 11 hours on thursday

106
00:03:24,149 --> 00:03:22,720
morning at 25 minutes after midnight

107
00:03:26,710 --> 00:03:24,159
at which point we'll begin our final

108
00:03:28,550 --> 00:03:26,720
loading preparations activate fuel cells

109
00:03:31,030 --> 00:03:28,560
and begin clearing the pad just after

110
00:03:32,550 --> 00:03:31,040
two o'clock in the morning on thursday

111
00:03:35,509 --> 00:03:32,560
we plan to begin tanking on thursday

112
00:03:38,789 --> 00:03:35,519
morning at 7 25 a.m and that should take

113
00:03:42,630 --> 00:03:40,630

coincident with the end of our tanking

114
00:03:45,509 --> 00:03:42,640
we have our atv ii docking which should

115
00:03:47,270 --> 00:03:45,519
take place at about 10 45 in the morning

116
00:03:49,589 --> 00:03:47,280
just after we send our final inspection

117
00:03:51,270 --> 00:03:49,599
teams and close our crews to the pad

118
00:03:55,270 --> 00:03:51,280
if all is successful with atv will

119
00:03:56,710 --> 00:03:55,280
continue through us a launch on thursday

120
00:04:00,630 --> 00:03:56,720
the flight crew will arrive at the pad

121
00:04:02,309 --> 00:04:00,640
for ingress at about 1 30 pm our launch

122
00:04:04,390 --> 00:04:02,319
window is standard for an iss mission

123
00:04:05,990 --> 00:04:04,400
it's about 10 minutes long we typically

124
00:04:09,429 --> 00:04:06,000
target the middle of the window wind

125
00:04:11,750 --> 00:04:09,439
opens at 16 45 4 45 pm

126
00:04:13,509 --> 00:04:11,760
middle of the window sometime just after

127
00:04:15,270 --> 00:04:13,519
4 50 pm

128
00:04:17,590 --> 00:04:15,280
we have flight day three opportunities

129
00:04:19,349 --> 00:04:17,600
on our first day on thursday

130
00:04:21,349 --> 00:04:19,359
every other day after that every odd day

131
00:04:23,670 --> 00:04:21,359
on the calendar is flight day three and

132
00:04:25,110 --> 00:04:23,680
flight day four opportunities

133
00:04:26,550 --> 00:04:25,120
that would add about three minutes to

134
00:04:29,430 --> 00:04:26,560
our launch window should we choose to

135
00:04:30,790 --> 00:04:29,440
use those opportunities

136
00:04:33,590 --> 00:04:30,800
we have

137
00:04:35,350 --> 00:04:33,600
available opportunities up to march 6th

138
00:04:37,110 --> 00:04:35,360

at which point we run into a constraint

139
00:04:38,150 --> 00:04:37,120
with our dual docked operations with

140
00:04:40,150 --> 00:04:38,160
soyuz

141
00:04:42,070 --> 00:04:40,160
that may have some flexibility at it

142
00:04:43,749 --> 00:04:42,080
because we're considering an operation

143
00:04:45,990 --> 00:04:43,759
on orbit uh where we're going to go try

144
00:04:47,749 --> 00:04:46,000
to photograph all the all the vehicles

145
00:04:49,270 --> 00:04:47,759
out there at the same time

146
00:04:50,629 --> 00:04:49,280
get a family picture and see some

147
00:04:53,830 --> 00:04:50,639
interesting imagery we've never seen at

148
00:04:55,909 --> 00:04:53,840
the space station before

149
00:04:57,270 --> 00:04:55,919
so that constraint might be relaxed and

150
00:04:59,189 --> 00:04:57,280
we may get another couple of days at the

151
00:05:00,870 --> 00:04:59,199
end of that if need be

152
00:05:02,550 --> 00:05:00,880
we have some range constraints there are

153
00:05:05,270 --> 00:05:02,560
two other rockets that are going to be

154
00:05:08,390 --> 00:05:05,280
launching in and near to us there's the

155
00:05:09,990 --> 00:05:08,400
atlas 5 which launches march 4th

156
00:05:11,670 --> 00:05:10,000
and there's range reconfiguration the

157
00:05:13,510 --> 00:05:11,680
day prior for that

158
00:05:15,270 --> 00:05:13,520
and the day after

159
00:05:16,710 --> 00:05:15,280
there's also a delta iv which launches

160
00:05:18,469 --> 00:05:16,720
on march 11th and it has range

161
00:05:19,590 --> 00:05:18,479
reconfiguration days on either side as

162
00:05:21,909 --> 00:05:19,600
well

163
00:05:23,990 --> 00:05:21,919

so we would get our first three attempts

164
00:05:26,390 --> 00:05:24,000
fairly easy we could work on the 27th if

165
00:05:27,830 --> 00:05:26,400
we needed it we'd have to negotiate with

166
00:05:30,550 --> 00:05:27,840
our other rockets on the range if we

167
00:05:32,230 --> 00:05:30,560
needed additional days

168
00:05:34,469 --> 00:05:32,240
we have three in a row available if we

169
00:05:36,310 --> 00:05:34,479
needed to for the 24th fifth and sixth

170
00:05:39,270 --> 00:05:36,320
and then we'd have to work each other

171
00:05:41,350 --> 00:05:39,280
option as it came we have no beta angle

172
00:05:42,710 --> 00:05:41,360
concerns until april 7th so that's not

173
00:05:45,510 --> 00:05:42,720
an issue for us

174
00:05:47,189 --> 00:05:45,520
we have a ample pad hold time with eight

175
00:05:49,749 --> 00:05:47,199
days of liquid hydrogen and nine days of

176
00:05:51,110 --> 00:05:49,759
liquid oxygen available to us

177
00:05:53,270 --> 00:05:51,120
because we have the offload we don't

178
00:05:54,870 --> 00:05:53,280
have the 48 hour turnaround with top off

179
00:05:56,150 --> 00:05:54,880
we can just do a standard 48 hour

180
00:05:57,909 --> 00:05:56,160
turnaround

181
00:06:00,629 --> 00:05:57,919
it should be an 11 day plus one

182
00:06:02,469 --> 00:06:00,639
contingency day should we choose

183
00:06:04,469 --> 00:06:02,479
to take the opportunity to do the fly

184
00:06:06,309 --> 00:06:04,479
around with a soyuz vehicle that would

185
00:06:07,749 --> 00:06:06,319
add a plus one day to the mission and it

186
00:06:09,590 --> 00:06:07,759
would give us some constraints on our

187
00:06:11,350 --> 00:06:09,600
launch day because of that

188
00:06:14,550 --> 00:06:11,360

our end of mission is currently planned

189
00:06:17,590 --> 00:06:14,560
for ksc at about 12 44 eastern on monday

190
00:06:21,270 --> 00:06:19,189
at the moment everything's going well

191
00:06:24,150 --> 00:06:21,280
with a countdown i can tell you my own

192
00:06:25,830 --> 00:06:24,160
opinion but uh we all take immense pride

193
00:06:27,590 --> 00:06:25,840
in the work and the accomplishments of

194
00:06:28,870 --> 00:06:27,600
the team and of this vehicle and we're

195
00:06:30,230 --> 00:06:28,880
all looking forward to a successful

196
00:06:33,029 --> 00:06:30,240
launch on thursday

197
00:06:34,469 --> 00:06:33,039
thank you thank you steve kathy

198
00:06:36,070 --> 00:06:34,479
well weather does look very favorable

199
00:06:37,990 --> 00:06:36,080
for the next few days coming up into

200
00:06:39,670 --> 00:06:38,000
launch um we do have a high pressure

201
00:06:41,430 --> 00:06:39,680
ridge that's built in the upper levels

202
00:06:42,950 --> 00:06:41,440
over the gulf of mexico and florida with

203
00:06:43,830 --> 00:06:42,960
that that's blocking a lot of the

204
00:06:45,189 --> 00:06:43,840
frontal

205
00:06:46,870 --> 00:06:45,199
boundaries that come in and they just

206
00:06:49,350 --> 00:06:46,880
mainly stay to the north and we may get

207
00:06:51,189 --> 00:06:49,360
the dry end of a front for example

208
00:06:52,710 --> 00:06:51,199
tomorrow you won't really notice it too

209
00:06:54,150 --> 00:06:52,720
much we'll get a dry

210
00:06:56,390 --> 00:06:54,160
frontal passage and the winds will just

211
00:06:58,390 --> 00:06:56,400
shift around to the north so overall

212
00:07:00,870 --> 00:06:58,400
really no significant weather

213
00:07:02,950 --> 00:07:00,880

expected through launch day if we happen

214
00:07:04,870 --> 00:07:02,960
to delay a day or two then we start

215
00:07:07,110 --> 00:07:04,880
getting a concern that one of the fronts

216
00:07:09,110 --> 00:07:07,120
will come into the area as the upper

217
00:07:10,870 --> 00:07:09,120
level ridge does break down some and

218
00:07:13,670 --> 00:07:10,880
that could cause concern for showers

219
00:07:17,110 --> 00:07:13,680
within 20 nautical miles and a ceiling

220
00:07:19,350 --> 00:07:17,120
low cloud ceiling

221
00:07:20,870 --> 00:07:19,360
chance of kc weather prohibiting launch

222
00:07:23,350 --> 00:07:20,880
just a slight concern for a shower in

223
00:07:25,270 --> 00:07:23,360
the area or a low cloud ceiling

224
00:07:26,790 --> 00:07:25,280
looking at our satellite picture you can

225
00:07:28,230 --> 00:07:26,800
see there is a pleasant weather over

226
00:07:29,749 --> 00:07:28,240
florida we did have some fog this

227
00:07:31,350 --> 00:07:29,759
morning that tends to happen when we get

228
00:07:34,230 --> 00:07:31,360
into this situation

229
00:07:35,430 --> 00:07:34,240
but overall the weather is good and is

230
00:07:37,589 --> 00:07:35,440
going to remain good all the way through

231
00:07:39,830 --> 00:07:37,599
all of our pre-launch processing and

232
00:07:42,230 --> 00:07:39,840
into launch day

233
00:07:44,390 --> 00:07:42,240
and going into our tanking forecast then

234
00:07:45,909 --> 00:07:44,400
for tanking there's just a chance that

235
00:07:48,629 --> 00:07:45,919
we could get some isolated coastal

236
00:07:50,150 --> 00:07:48,639
showers in the morning due to we'll be

237
00:07:51,909 --> 00:07:50,160
in a southeast flow there'll be a high

238
00:07:53,189 --> 00:07:51,919

pressure ridge off to our northeast

239
00:07:55,270 --> 00:07:53,199
putting us in a southeast low and

240
00:07:57,189 --> 00:07:55,280
sometimes we get some convergent bands

241
00:07:58,550 --> 00:07:57,199
off of the bahamas when this occurs

242
00:08:00,070 --> 00:07:58,560
that's not expected though to violate

243
00:08:01,430 --> 00:08:00,080
any constraints we aren't expecting any

244
00:08:03,510 --> 00:08:01,440
lightning so with that we have a zero

245
00:08:05,430 --> 00:08:03,520
percent chance of ksc weather

246
00:08:06,950 --> 00:08:05,440
prohibiting tanking

247
00:08:08,629 --> 00:08:06,960
now as we get to launch those showers

248
00:08:10,869 --> 00:08:08,639
tend to dissipate in the afternoon as

249
00:08:12,309 --> 00:08:10,879
the air temperature warms up and so with

250
00:08:14,150 --> 00:08:12,319
that weather does look favorable for

251
00:08:16,869 --> 00:08:14,160
launch with just scattered skies winds

252
00:08:18,629 --> 00:08:16,879
from the southeast 14 peaking at 20

253
00:08:20,710 --> 00:08:18,639
knots a little bit gusty but well within

254
00:08:23,189 --> 00:08:20,720
the constraints i'm going right up the

255
00:08:25,350 --> 00:08:23,199
runway also for rtls there

256
00:08:27,430 --> 00:08:25,360
temperature around 73 degrees and just a

257
00:08:29,189 --> 00:08:27,440
20 chance of kc weather prohibiting

258
00:08:30,710 --> 00:08:29,199
launch

259
00:08:32,149 --> 00:08:30,720
for srb recovery it's just going to be a

260
00:08:33,829 --> 00:08:32,159
little bit bumpy out there due to the

261
00:08:36,389 --> 00:08:33,839
winds being a little bit strong from the

262
00:08:38,070 --> 00:08:36,399
southeast 12 gusts into 18 knots so we

263
00:08:40,389 --> 00:08:38,080

do expect seas to be about five to six

264
00:08:43,029 --> 00:08:40,399
feet but again this is no constraint for

265
00:08:44,550 --> 00:08:43,039
srb recovery

266
00:08:46,230 --> 00:08:44,560
spaceflight meteorology group is

267
00:08:48,070 --> 00:08:46,240
forecasting some concerns at the abort

268
00:08:50,070 --> 00:08:48,080
landing sites in the u.s

269
00:08:52,389 --> 00:08:50,080
we do have edwards air force base winds

270
00:08:53,190 --> 00:08:52,399
expected to gust up to 30 knots this is

271
00:09:04,310 --> 00:08:53,200
a

272
00:09:06,070 --> 00:09:04,320
dust visibility coming down due to

273
00:09:07,829 --> 00:09:06,080
the wind kicking up some dust out there

274
00:09:09,509 --> 00:09:07,839
but the wind the winds are within

275
00:09:11,190 --> 00:09:09,519
constraints

276
00:09:12,470 --> 00:09:11,200
and for our tile weather forecast we do

277
00:09:14,710 --> 00:09:12,480
have a good towel site we have a couple

278
00:09:16,470 --> 00:09:14,720
actually zaragoza and marone

279
00:09:18,230 --> 00:09:16,480
we do have concern space light

280
00:09:20,550 --> 00:09:18,240
meteorology group is forecasting winds

281
00:09:22,470 --> 00:09:20,560
being a bit gusty there at estrus

282
00:09:23,829 --> 00:09:22,480
gusting up to 28 knots

283
00:09:27,430 --> 00:09:23,839
and with that that is a headwind

284
00:09:29,590 --> 00:09:27,440
constraint of 27 knots

285
00:09:31,269 --> 00:09:29,600
if we happen to delay 24 hours we start

286
00:09:32,949 --> 00:09:31,279
to become more concerned about showers

287
00:09:35,350 --> 00:09:32,959
in the area due to that front that's

288
00:09:37,350 --> 00:09:35,360

going to be moving into northern florida

289
00:09:39,269 --> 00:09:37,360
still overall it's not too bad but just

290
00:09:42,310 --> 00:09:39,279
additional concerns bumps our number up

291
00:09:44,389 --> 00:09:42,320
to a 30 percent chance of ksc weather

292
00:09:45,910 --> 00:09:44,399
prohibiting launch primary concern being

293
00:09:47,670 --> 00:09:45,920
showers within 20 nautical miles of the

294
00:09:49,990 --> 00:09:47,680
shuttle landing facility and a low cloud

295
00:09:51,670 --> 00:09:50,000
ceiling

296
00:09:52,949 --> 00:09:51,680
abort landing sites are still having

297
00:09:54,790 --> 00:09:52,959
some bad weather out there that's really

298
00:09:57,269 --> 00:09:54,800
expected to last into or the early

299
00:09:58,630 --> 00:09:57,279
portion of next week as our long wave

300
00:10:00,389 --> 00:09:58,640
weather pattern pretty much stays the

301
00:10:03,430 --> 00:10:00,399
same until that time and so with edwards

302
00:10:05,190 --> 00:10:03,440
again winds gusting up to 29 knots

303
00:10:06,949 --> 00:10:05,200
and this is a again a headwind

304
00:10:08,870 --> 00:10:06,959
constraint and a tailwind constraint

305
00:10:10,790 --> 00:10:08,880
also for northrop field we do again have

306
00:10:12,550 --> 00:10:10,800
visibility coming down due to

307
00:10:14,310 --> 00:10:12,560
the windy weather kicking up

308
00:10:17,269 --> 00:10:14,320
some sand and dust and with that we also

309
00:10:19,750 --> 00:10:17,279
have a crosswind constraint violation of

310
00:10:22,150 --> 00:10:19,760
26 knots so the crosswind would be 23

311
00:10:23,990 --> 00:10:22,160
knot component

312
00:10:26,069 --> 00:10:24,000
and for towel sites weather looks great

313
00:10:28,389 --> 00:10:26,079

on second day at the tile sites all

314
00:10:31,750 --> 00:10:28,399
three tile sites are forecast by space

315
00:10:34,389 --> 00:10:31,760
space flight meteorology group to be go

316
00:10:35,750 --> 00:10:34,399
if we happen to delay 48 hours this is

317
00:10:37,990 --> 00:10:35,760
where the frontal boundary does move

318
00:10:39,670 --> 00:10:38,000
into the central florida area possibly

319
00:10:41,269 --> 00:10:39,680
passing just to our south and if that

320
00:10:43,030 --> 00:10:41,279
occurs it's really mainly passing

321
00:10:45,509 --> 00:10:43,040
through only at the surface

322
00:10:47,750 --> 00:10:45,519
the fronts come in at a tilt if you will

323
00:10:49,670 --> 00:10:47,760
and so the entire front really isn't

324
00:10:51,750 --> 00:10:49,680
through our area yet when this occurs we

325
00:10:53,509 --> 00:10:51,760
tend to get low cloud ceilings so our

326
00:10:55,190 --> 00:10:53,519
primary concern if we happen to delay to

327
00:10:57,430 --> 00:10:55,200
saturday would be a ceiling at around

328
00:10:58,630 --> 00:10:57,440
5000 feet and it would really depend on

329
00:11:00,870 --> 00:10:58,640
the thickness of the ceiling at that

330
00:11:02,870 --> 00:11:00,880
point and if that's a violation and

331
00:11:05,350 --> 00:11:02,880
anything below 5000 would also be an

332
00:11:07,350 --> 00:11:05,360
rtls violation we also are concerned

333
00:11:09,269 --> 00:11:07,360
just the chance of showers in the area

334
00:11:11,430 --> 00:11:09,279
as well so with that we did increase the

335
00:11:14,710 --> 00:11:11,440
probability on this day of ksc weather

336
00:11:16,069 --> 00:11:14,720
prohibiting launch to 40 percent

337
00:11:17,990 --> 00:11:16,079
spaceflight meteorology groups still

338
00:11:19,910 --> 00:11:18,000

forecasting pretty bad conditions out

339
00:11:22,710 --> 00:11:19,920
there at the abort landing sites out

340
00:11:24,550 --> 00:11:22,720
west with a ceiling at edwards at 4 000

341
00:11:26,870 --> 00:11:24,560
feet still wind concerns and still

342
00:11:29,269 --> 00:11:26,880
concerns for showers within 30 nautical

343
00:11:30,949 --> 00:11:29,279
miles and again also at northrop field

344
00:11:32,790 --> 00:11:30,959
again windy weather violating

345
00:11:34,550 --> 00:11:32,800
constraints and also the visibility

346
00:11:36,310 --> 00:11:34,560
coming down due to the sand and dust in

347
00:11:38,630 --> 00:11:36,320
the area

348
00:11:40,550 --> 00:11:38,640
so overall the first day for launch

349
00:11:41,990 --> 00:11:40,560
weather is our oh excuse me i'm sorry i

350
00:11:43,910 --> 00:11:42,000
forgot to brief day three on the tile

351
00:11:45,750 --> 00:11:43,920
sites if we happen to delay 48 hours we

352
00:11:47,509 --> 00:11:45,760
do have two good towel sites both at

353
00:11:49,509 --> 00:11:47,519
zaragosa and marone with estrus just

354
00:11:51,350 --> 00:11:49,519
having a concern there due to a frontal

355
00:11:53,829 --> 00:11:51,360
boundary in the area of showers within

356
00:11:55,509 --> 00:11:53,839
20 nautical miles

357
00:11:57,430 --> 00:11:55,519
so overall weather does look good on

358
00:11:59,350 --> 00:11:57,440
launch day 20 chance of kc weather

359
00:12:01,030 --> 00:11:59,360
prohibiting launch if we happen to delay

360
00:12:02,389 --> 00:12:01,040
a day or two then we start just to get

361
00:12:04,949 --> 00:12:02,399
more concerned about weather due to a

362
00:12:07,030 --> 00:12:04,959
frontal boundary coming into the area

363
00:12:08,629 --> 00:12:07,040

that's all you have thank you we'll now

364
00:12:09,990 --> 00:12:08,639
take questions when the microphone comes

365
00:12:11,190 --> 00:12:10,000
your way please state your name

366
00:12:12,389 --> 00:12:11,200
affiliation and to whom you're

367
00:12:14,949 --> 00:12:12,399
addressing your question we'll start

368
00:12:17,910 --> 00:12:14,959
with marcia marcia done associated press

369
00:12:19,910 --> 00:12:17,920
for steve for the final inspection team

370
00:12:21,269 --> 00:12:19,920
um are you sending extra people out

371
00:12:22,310 --> 00:12:21,279
doing anything

372
00:12:25,190 --> 00:12:22,320
extra

373
00:12:26,790 --> 00:12:25,200
because of the potential for cracks even

374
00:12:28,870 --> 00:12:26,800
though you believe you fixed all that

375
00:12:30,949 --> 00:12:28,880
problem uh we're sending the same size

376
00:12:32,470 --> 00:12:30,959
team uh what they're doing differently

377
00:12:35,430 --> 00:12:32,480
is that they're going to specifically

378
00:12:37,110 --> 00:12:35,440
take pictures of our locks in lh2 flange

379
00:12:39,269 --> 00:12:37,120
area to make sure that

380
00:12:41,430 --> 00:12:39,279
we've have good imagery of everything we

381
00:12:42,790 --> 00:12:41,440
have a good long hard look at it and we

382
00:12:44,790 --> 00:12:42,800
can send it back and have the team look

383
00:12:46,470 --> 00:12:44,800
at it before we go

384
00:12:48,470 --> 00:12:46,480
we don't expect any problems it's

385
00:12:50,870 --> 00:12:48,480
stronger than it was when it was new

386
00:12:52,310 --> 00:12:50,880
but just in case

387
00:12:53,350 --> 00:12:52,320
and another question for you you

388
00:12:55,910 --> 00:12:53,360

mentioned you might have some

389
00:12:58,150 --> 00:12:55,920
flexibility beyond march 6 depending on

390
00:12:59,350 --> 00:12:58,160
because of the soyuz fly around and i

391
00:13:01,670 --> 00:12:59,360
i'm not sure i understand the

392
00:13:03,590 --> 00:13:01,680
relationship between those two events in

393
00:13:05,110 --> 00:13:03,600
the past we have not really wanted to be

394
00:13:06,550 --> 00:13:05,120
flying other vehicles around when the

395
00:13:07,509 --> 00:13:06,560
when the shuttle was parked at the

396
00:13:09,750 --> 00:13:07,519
station

397
00:13:12,310 --> 00:13:09,760
because there are some some concerns

398
00:13:14,150 --> 00:13:12,320
about the plume impingement uh on the on

399
00:13:16,230 --> 00:13:14,160
the vehicle's windows because of the

400
00:13:18,310 --> 00:13:16,240
unique configuration we're in this time

401
00:13:19,590 --> 00:13:18,320
our the htv vehicle is parked right in

402
00:13:21,269 --> 00:13:19,600
front of the window so it's protecting

403
00:13:22,389 --> 00:13:21,279
it from any plume that the soyuz might

404
00:13:23,910 --> 00:13:22,399
generate

405
00:13:26,389 --> 00:13:23,920
so the plan they've come up with is very

406
00:13:28,389 --> 00:13:26,399
benign it protects us from the concerns

407
00:13:29,670 --> 00:13:28,399
we had and

408
00:13:31,910 --> 00:13:29,680
given that

409
00:13:33,750 --> 00:13:31,920
we're not quite as concerned

410
00:13:35,670 --> 00:13:33,760
about launching with another vehicle up

411
00:13:37,110 --> 00:13:35,680
there that may be coming or going

412
00:13:38,949 --> 00:13:37,120
so we have a little bit of flexibility

413
00:13:41,110 --> 00:13:38,959

where we normally wouldn't go

414
00:13:43,030 --> 00:13:41,120
if we choose to do this we may have a

415
00:13:44,949 --> 00:13:43,040
couple of days extra flexibility that we

416
00:13:46,230 --> 00:13:44,959
didn't have in the past

417
00:13:48,230 --> 00:13:46,240
and it's because of the configuration

418
00:13:51,590 --> 00:13:48,240
we're in

419
00:13:55,269 --> 00:13:53,990
stephen young with spaceflightnow.com

420
00:13:57,189 --> 00:13:55,279
for steve could you just go into a

421
00:13:59,269 --> 00:13:57,199
little more detail about the regulator

422
00:14:01,030 --> 00:13:59,279
issue you mentioned and why that can be

423
00:14:03,269 --> 00:14:01,040
waived

424
00:14:05,670 --> 00:14:03,279
we have a number of redundant systems in

425
00:14:07,110 --> 00:14:05,680
our reaction control system uh we have a

426
00:14:08,629 --> 00:14:07,120
helium tank that pressurizes our

427
00:14:11,110 --> 00:14:08,639
propellant tanks

428
00:14:13,269 --> 00:14:11,120
uh it is fed through two separate legs

429
00:14:16,389 --> 00:14:13,279
each of which has redundant uh

430
00:14:18,389 --> 00:14:16,399
regulators that can adjust the pressure

431
00:14:21,030 --> 00:14:18,399
one regulator on one leg has got a

432
00:14:22,310 --> 00:14:21,040
slight leak which means that uh instead

433
00:14:23,269 --> 00:14:22,320
of shutting off completely like it

434
00:14:26,230 --> 00:14:23,279
should

435
00:14:28,550 --> 00:14:26,240
uh a slight amount of helium is going

436
00:14:29,829 --> 00:14:28,560
into the propellant tank and adding a

437
00:14:31,990 --> 00:14:29,839
little more pressure in there than we

438
00:14:33,350 --> 00:14:32,000

typically would like

439
00:14:35,189 --> 00:14:33,360
what we generally do is just shut off

440
00:14:37,030 --> 00:14:35,199
that leg we isolate it and it doesn't

441
00:14:39,030 --> 00:14:37,040
leak anymore and we're okay

442
00:14:40,629 --> 00:14:39,040
there are a number if we went if we had

443
00:14:42,150 --> 00:14:40,639
further issues or further actions we

444
00:14:44,389 --> 00:14:42,160
could take if we needed to

445
00:14:46,230 --> 00:14:44,399
but in this case we've seen it before

446
00:14:48,150 --> 00:14:46,240
it's because of the way we test our

447
00:14:49,670 --> 00:14:48,160
equipment at the launch pad

448
00:14:51,189 --> 00:14:49,680
we do one in the orbiter processing

449
00:14:52,790 --> 00:14:51,199
facility where it operates just like it

450
00:14:54,949 --> 00:14:52,800
does on orbit and it passed with flying

451
00:14:56,230 --> 00:14:54,959
colors it always does that

452
00:14:58,069 --> 00:14:56,240
at the pad because of the way we

453
00:15:00,069 --> 00:14:58,079
pressurize our tanks and we approach the

454
00:15:02,470 --> 00:15:00,079
the lock up pressure very gently it

455
00:15:04,550 --> 00:15:02,480
doesn't always seat all the way

456
00:15:06,389 --> 00:15:04,560
uh as soon as we light them up the

457
00:15:07,990 --> 00:15:06,399
pressure increases and it seals so it's

458
00:15:09,189 --> 00:15:08,000
not a problem once we're on orbit

459
00:15:11,269 --> 00:15:09,199
typically what we'll do is we'll just

460
00:15:13,509 --> 00:15:11,279
open it back up just before launch and

461
00:15:15,269 --> 00:15:13,519
we're fine and we had that back in

462
00:15:17,430 --> 00:15:15,279
sts-116

463
00:15:18,710 --> 00:15:17,440

with a larger leak rate and we accepted

464
00:15:20,870 --> 00:15:18,720
it because we had a workaround that was

465
00:15:22,310 --> 00:15:20,880
good

466
00:15:26,470 --> 00:15:22,320
james

467
00:15:28,710 --> 00:15:26,480
could those conus sites keep you

468
00:15:29,910 --> 00:15:28,720
grounded if if they're

469
00:15:32,790 --> 00:15:29,920
no go on

470
00:15:34,389 --> 00:15:32,800
on whether no the aoa sites support once

471
00:15:36,310 --> 00:15:34,399
around sites are

472
00:15:37,910 --> 00:15:36,320
deemed highly desirable but not

473
00:15:39,430 --> 00:15:37,920
mandatory there are very few very

474
00:15:40,629 --> 00:15:39,440
limited situations in which you wouldn't

475
00:15:43,189 --> 00:15:40,639
need them as mandatory and they're

476
00:15:44,870 --> 00:15:43,199
generally for low inclination orbits

477
00:15:46,790 --> 00:15:44,880
first space station we're very high

478
00:15:48,550 --> 00:15:46,800
inclination it doesn't apply so that one

479
00:15:50,790 --> 00:15:48,560
flight rule that could have possibly

480
00:15:52,550 --> 00:15:50,800
affected us does not apply in this case

481
00:15:55,030 --> 00:15:52,560
so it's just highly desirable but we

482
00:15:56,470 --> 00:15:55,040
have other alternatives okay thanks and

483
00:15:57,990 --> 00:15:56,480
uh we're just wondering if you had any

484
00:15:59,189 --> 00:15:58,000
sense of the

485
00:16:00,949 --> 00:15:59,199
the kind of crowds that we're going to

486
00:16:04,069 --> 00:16:00,959
see in the interest and this being the

487
00:16:05,749 --> 00:16:04,079
first last flight uh we expect of one of

488
00:16:06,829 --> 00:16:05,759

the orbiters it's pretty good prime time

489
00:16:09,829 --> 00:16:06,839
sort of

490
00:16:11,509 --> 00:16:09,839
uh launch timing um what do you think

491
00:16:13,749 --> 00:16:11,519
kind of is going to be the

492
00:16:15,269 --> 00:16:13,759
the scene in the community and as well

493
00:16:17,829 --> 00:16:15,279
kathy i don't know if you could sort of

494
00:16:20,629 --> 00:16:17,839
give a sense of uh if things hold up the

495
00:16:23,590 --> 00:16:20,639
way they look now kind of what what

496
00:16:25,030 --> 00:16:23,600
what the crowds will get to see uh

497
00:16:26,710 --> 00:16:25,040
in terms of well

498
00:16:28,470 --> 00:16:26,720
clouds or whatever yeah i can tell you

499
00:16:29,829 --> 00:16:28,480
it's generated a lot of interest in the

500
00:16:31,749 --> 00:16:29,839
last few missions people are starting to

501
00:16:33,430 --> 00:16:31,759
realize that they either see one now or

502
00:16:34,710 --> 00:16:33,440
they don't get to see one at all

503
00:16:36,550 --> 00:16:34,720
so we've had some pretty good crowds

504
00:16:38,550 --> 00:16:36,560
come in the last couple of times

505
00:16:40,310 --> 00:16:38,560
we expect an equally large crowd coming

506
00:16:41,670 --> 00:16:40,320
to see this one there's been a lot of

507
00:16:42,389 --> 00:16:41,680
interest a lot of people trying to come

508
00:16:43,590 --> 00:16:42,399
out

509
00:16:45,910 --> 00:16:43,600
it ought to be a good show it's a good

510
00:16:47,910 --> 00:16:45,920
time of day it's an excellent vehicle

511
00:16:50,870 --> 00:16:47,920
and it's always impressive to watch so

512
00:16:52,949 --> 00:16:50,880
i'm sure we'll have a full house

513
00:16:54,389 --> 00:16:52,959

and weather-wise just maybe in the

514
00:16:55,990 --> 00:16:54,399
morning if that people come out early

515
00:16:57,269 --> 00:16:56,000
might see an isolated coastal shower and

516
00:16:58,389 --> 00:16:57,279
then by the afternoon those will start

517
00:17:00,470 --> 00:16:58,399
clearing up and it'll be sort of one of

518
00:17:01,430 --> 00:17:00,480
those fair weather cumulus cloud type

519
00:17:03,350 --> 00:17:01,440
days

520
00:17:06,230 --> 00:17:03,360
so it should be pretty sunny and pretty

521
00:17:13,429 --> 00:17:08,710
are there any further questions

522
00:17:17,669 --> 00:17:15,350
um denise ciao with space.com just a

523
00:17:18,949 --> 00:17:17,679
clarification actually the regulator

524
00:17:21,829 --> 00:17:18,959
leak was that found this morning at the

525
00:17:22,870 --> 00:17:21,839
pad no that was found on

526
00:17:26,949 --> 00:17:22,880
sunday

527
00:17:28,950 --> 00:17:26,959
our our pressurization for our helium

528
00:17:30,310 --> 00:17:28,960
tanks that was a very slight leak at

529
00:17:31,990 --> 00:17:30,320
that point we'd been watching it to see

530
00:17:33,350 --> 00:17:32,000
what it did trying to isolate which one

531
00:17:34,870 --> 00:17:33,360
it was and so we could shut down the

532
00:17:36,630 --> 00:17:34,880
appropriate leg it just takes some time

533
00:17:39,350 --> 00:17:36,640
because it's very slight

534
00:17:43,110 --> 00:17:39,360
and also um what's the crew up to today

535
00:17:44,390 --> 00:17:43,120
important what is the crew up to today

536
00:17:46,470 --> 00:17:44,400
i didn't look at the crew schedule i'm

537
00:17:48,950 --> 00:17:46,480
not really sure at the moment but we can

538
00:17:51,350 --> 00:17:48,960

get you that

539
00:17:56,310 --> 00:17:51,360
are there any other questions

540
00:17:59,029 --> 00:17:57,669
thanks again james in florida today

541
00:18:00,470 --> 00:17:59,039
steve it's

542
00:18:01,830 --> 00:18:00,480
been quite a while now since we had a

543
00:18:03,669 --> 00:18:01,840
launch

544
00:18:05,270 --> 00:18:03,679
a couple temps and tanking tests in

545
00:18:07,430 --> 00:18:05,280
between but um

546
00:18:09,270 --> 00:18:07,440
just wondered if is there any sense of

547
00:18:10,950 --> 00:18:09,280
shaking off some rust among the launch

548
00:18:12,470 --> 00:18:10,960
teams or or

549
00:18:15,590 --> 00:18:12,480
is this just sort of

550
00:18:17,510 --> 00:18:15,600
feel like any other countdown

551
00:18:19,590 --> 00:18:17,520
well we have because it's been a while

552
00:18:22,070 --> 00:18:19,600
we've done a lot of extra training over

553
00:18:23,430 --> 00:18:22,080
the summer and over the winter months

554
00:18:26,070 --> 00:18:23,440
we've added a lot of launch countdown

555
00:18:28,310 --> 00:18:26,080
simulations so the team can exercise and

556
00:18:29,909 --> 00:18:28,320
keep their skills sharp so that we took

557
00:18:31,270 --> 00:18:29,919
that into account so

558
00:18:33,830 --> 00:18:31,280
from what i've seen everybody's on the

559
00:18:35,190 --> 00:18:33,840
ball we have our tanking test we did we

560
00:18:36,470 --> 00:18:35,200
have our november launch attempt so

561
00:18:38,870 --> 00:18:36,480
people have been doing countdown or

562
00:18:40,870 --> 00:18:38,880
countdown like activities for the last

563
00:18:42,230 --> 00:18:40,880

few months anyway and the first thing we

564
00:18:43,430 --> 00:18:42,240
did when we came back after the new year

565
00:18:45,110 --> 00:18:43,440
is going to a launch countdown

566
00:18:46,789 --> 00:18:45,120
simulation to make sure that everybody

567
00:18:49,270 --> 00:18:46,799
was up to speed and we're pretty

568
00:18:50,950 --> 00:18:49,280
confident the team's ready

569
00:18:52,230 --> 00:18:50,960
and finally i just wondered if you could

570
00:18:54,630 --> 00:18:52,240
speak a little bit to

571
00:18:55,909 --> 00:18:54,640
the significance of the mission um in

572
00:18:57,909 --> 00:18:55,919
terms of the payloads that you're

573
00:19:00,789 --> 00:18:57,919
bringing up and the pmm and

574
00:19:03,909 --> 00:19:00,799
um just how that's going to help

575
00:19:05,669 --> 00:19:03,919
posture the station long term

576
00:19:08,070 --> 00:19:05,679
i don't have my payload guy here today

577
00:19:10,310 --> 00:19:08,080
but he will be here tomorrow uh in in

578
00:19:12,710 --> 00:19:10,320
very broad terms and since i'm not the

579
00:19:14,310 --> 00:19:12,720
the payload person the the pmm is going

580
00:19:15,750 --> 00:19:14,320
to give us a whole lot more uh square

581
00:19:17,909 --> 00:19:15,760
footage out on station that we can use

582
00:19:19,909 --> 00:19:17,919
for storage and other needs as as

583
00:19:21,350 --> 00:19:19,919
required it's a good module that adds

584
00:19:22,870 --> 00:19:21,360
quite a bit of space

585
00:19:24,950 --> 00:19:22,880
and the spaces that are premium up there

586
00:19:26,870 --> 00:19:24,960
so it's a good thing to have

587
00:19:28,710 --> 00:19:26,880
the express logistics carrier is going

588
00:19:29,990 --> 00:19:28,720

to take up some radiator panels that we

589
00:19:31,830 --> 00:19:30,000
will have for

590
00:19:33,750 --> 00:19:31,840
future need if we had to replace

591
00:19:36,150 --> 00:19:33,760
radiators the place for the spares to be

592
00:19:38,630 --> 00:19:36,160
is up on station so the really big stuff

593
00:19:39,590 --> 00:19:38,640
we need to take up while we can so those

594
00:19:41,669 --> 00:19:39,600
are going to add to it and we'll give

595
00:19:43,669 --> 00:19:41,679
them some storage space in others

596
00:19:44,710 --> 00:19:43,679
plus there are a number of miscellaneous

597
00:19:46,630 --> 00:19:44,720
experiments that they're going to be

598
00:19:48,870 --> 00:19:46,640
taking up and down

599
00:19:51,350 --> 00:19:48,880
bringing back and some mid deck

600
00:19:52,950 --> 00:19:51,360
experiments we're taking along the way

601
00:19:54,310 --> 00:19:52,960
i would hope scott will brief you

602
00:19:56,150 --> 00:19:54,320
tomorrow and all that with with more

603
00:19:58,150 --> 00:19:56,160
detail

604
00:20:00,390 --> 00:19:58,160
as far as the flight crew goes i believe

605
00:20:02,710 --> 00:20:00,400
today they have their

606
00:20:04,390 --> 00:20:02,720
ingress procedure review and they're

607
00:20:07,270 --> 00:20:04,400
doing their sta runs they're going to be

608
00:20:08,470 --> 00:20:07,280
practicing their landings at the slf

609
00:20:11,590 --> 00:20:08,480
okay

610
00:20:16,789 --> 00:20:13,470
that will conclude today's

611
00:20:18,470 --> 00:20:16,799
sts-133 l minus 10 l minus 2 countdown

612
00:20:20,310 --> 00:20:18,480
status briefing our next shuttle

613
00:20:22,070 --> 00:20:20,320

briefing will be tomorrow live on nasa

614
00:20:25,029 --> 00:20:22,080
television with the pre-launch news

615
00:20:27,510 --> 00:20:25,039
conference which is 11 a.m eastern time