



# STS-133 TAL LAUNCH



	ZZA	MRN	FMI
<b>Clouds</b>	SCT 250	SKC	SCT 060 SCT 120 BKN 250
<b>Visibility</b>	7 Miles	7 Miles	7 Miles
<b>Winds</b>	290/9kt Peak 13kt	070/5kt Peak 8kt	350/7kt Peak 12kt

1  
00:00:06,630 --> 00:00:04,870  
good morning and happy halloween thank

2  
00:00:08,310 --> 00:00:06,640  
you for joining us here at nasa's

3  
00:00:10,549 --> 00:00:08,320  
kennedy space center in florida for the

4  
00:00:13,830 --> 00:00:10,559  
pre-countdown status briefing for space

5  
00:00:16,390 --> 00:00:13,840  
shuttle discovery's sts-133 launch

6  
00:00:19,510 --> 00:00:16,400  
joining me today is steve payne nasa

7  
00:00:21,109 --> 00:00:19,520  
test director good morning

8  
00:00:24,230 --> 00:00:21,119  
and kathy winters shuttle weather

9  
00:00:27,910 --> 00:00:25,429  
we'll hear from our panelists and then

10  
00:00:29,589 --> 00:00:27,920  
take questions steve thank you

11  
00:00:31,669 --> 00:00:29,599  
well i'm proud to be here today to bring

12  
00:00:33,830 --> 00:00:31,679  
your status on our upcoming countdown

13  
00:00:36,069 --> 00:00:33,840

for the uh launch of discovery for on

14

00:00:37,430 --> 00:00:36,079

the sts-133 mission i'm here to

15

00:00:39,990 --> 00:00:37,440

represent the team that's been working

16

00:00:42,069 --> 00:00:40,000

so hard to get discovery ready to fly

17

00:00:43,910 --> 00:00:42,079

uh this is going to be discovery's 39th

18

00:00:45,350 --> 00:00:43,920

and final flight and it's going to be

19

00:00:47,190 --> 00:00:45,360

bringing the permanent multi-purpose

20

00:00:49,350 --> 00:00:47,200

module up to the space station

21

00:00:50,470 --> 00:00:49,360

as well as the express logistics carrier

22

00:00:52,790 --> 00:00:50,480

number four

23

00:00:54,790 --> 00:00:52,800

and the robonaut to the space station as

24

00:00:56,790 --> 00:00:54,800

well we expect a lot of interest on this

25

00:00:58,549 --> 00:00:56,800

one and we expect a very good turnout

26

00:01:00,549 --> 00:00:58,559

for launch countdown

27

00:01:02,150 --> 00:01:00,559

work is currently on schedule

28

00:01:04,149 --> 00:01:02,160

as we prepare discovery for launch on

29

00:01:05,990 --> 00:01:04,159

wednesday afternoon we completed early

30

00:01:08,070 --> 00:01:06,000

this morning our in our flight

31

00:01:09,429 --> 00:01:08,080

pressurization of our on-orbit

32

00:01:12,390 --> 00:01:09,439

control system tanks and the main

33

00:01:13,830 --> 00:01:12,400

propulsion tanks and all went well that

34

00:01:15,510 --> 00:01:13,840

is behind us now

35

00:01:17,109 --> 00:01:15,520

we resolved our remaining issues with

36

00:01:18,070 --> 00:01:17,119

our nitrogen quick disconnect poppet

37

00:01:19,590 --> 00:01:18,080

valve

38

00:01:21,109 --> 00:01:19,600

it turns out it was a ground support

39

00:01:22,630 --> 00:01:21,119

equipment valve upstream that was

40

00:01:25,350 --> 00:01:22,640

providing too much pressure and not

41

00:01:28,149 --> 00:01:25,360

allowing the poppet to close we isolated

42

00:01:29,749 --> 00:01:28,159

that with another valve upstream of that

43

00:01:32,069 --> 00:01:29,759

and we're able to close a puppet and the

44

00:01:33,749 --> 00:01:32,079

leak is now behind us so those issues

45

00:01:35,429 --> 00:01:33,759

that we were having are now resolved and

46

00:01:38,069 --> 00:01:35,439

we're pressing on for our call to

47

00:01:39,190 --> 00:01:38,079

stations at 13 30 this afternoon

48

00:01:40,789 --> 00:01:39,200

all right

49

00:01:43,190 --> 00:01:40,799

uh call the stations like i said at 13

50

00:01:44,789 --> 00:01:43,200

30 we'll begin the clock at 2 pm

51  
00:01:46,710 --> 00:01:44,799  
uh we'll get it right into final check

52  
00:01:48,950 --> 00:01:46,720  
on configuration of our avionics control

53  
00:01:50,710 --> 00:01:48,960  
systems uh we'll begin preparations for

54  
00:01:53,270 --> 00:01:50,720  
loading the fuel cell reactants that

55  
00:01:55,109 --> 00:01:53,280  
begins uh the preparations tonight

56  
00:01:56,550 --> 00:01:55,119  
we'll be clearing the pad at six o'clock

57  
00:01:57,830 --> 00:01:56,560  
saturday morning

58  
00:01:59,590 --> 00:01:57,840  
do our

59  
00:02:02,069 --> 00:01:59,600  
pyrotechnics checks and then go into

60  
00:02:04,389 --> 00:02:02,079  
reactant loading at 11 30.

61  
00:02:05,990 --> 00:02:04,399  
the pad should reopen at about 6 pm on

62  
00:02:08,150 --> 00:02:06,000  
monday evening

63  
00:02:09,510 --> 00:02:08,160

and we'll begin offloading 180 pounds of

64

00:02:11,430 --> 00:02:09,520

liquid oxygen

65

00:02:13,270 --> 00:02:11,440

from our react intensity to get our

66

00:02:15,030 --> 00:02:13,280

appropriate flight load that adds about

67

00:02:16,309 --> 00:02:15,040

four hours to our countdown schedule

68

00:02:17,430 --> 00:02:16,319

this is why it's a little bit longer

69

00:02:18,869 --> 00:02:17,440

than typical

70

00:02:20,630 --> 00:02:18,879

a checkout of our orbiter and ground

71

00:02:22,710 --> 00:02:20,640

communications network is planned for

72

00:02:25,510 --> 00:02:22,720

tuesday afternoon starting at about 13

73

00:02:27,270 --> 00:02:25,520

30 or 1 30 p.m local as followed by

74

00:02:29,670 --> 00:02:27,280

final flight crew equipment stowe at

75

00:02:32,150 --> 00:02:29,680

three o'clock on tuesday afternoon

76

00:02:33,509 --> 00:02:32,160

by seven on tuesday evening

77

00:02:35,589 --> 00:02:33,519

the rotating service structure will be

78

00:02:37,589 --> 00:02:35,599

retracted and we'll begin our final crew

79

00:02:40,229 --> 00:02:37,599

module configuration for load

80

00:02:41,830 --> 00:02:40,239

uh just before midnight on tuesday we're

81

00:02:44,550 --> 00:02:41,840

looking at the countdown clock to resume

82

00:02:46,550 --> 00:02:44,560

its count at t minus 11 hours then we'll

83

00:02:48,070 --> 00:02:46,560

begin final loading preparations and

84

00:02:50,630 --> 00:02:48,080

begin clearing the pad just after one

85

00:02:53,830 --> 00:02:50,640

o'clock in the morning on wednesday

86

00:02:55,430 --> 00:02:53,840

earliest tanking time is at 6 27 a.m on

87

00:02:56,869 --> 00:02:55,440

wednesday morning we expect about three

88

00:02:58,470 --> 00:02:56,879

hours of tanking

89

00:03:00,630 --> 00:02:58,480

the flight crew should arrive at the pad

90

00:03:02,550 --> 00:03:00,640

just after noon on wednesday

91

00:03:04,309 --> 00:03:02,560

this is a space station mission

92

00:03:06,949 --> 00:03:04,319

obviously and it's a 10-minute duration

93

00:03:09,509 --> 00:03:06,959

window approximately and it opens at 3

94

00:03:10,710 --> 00:03:09,519

47 on wednesday the third

95

00:03:12,390 --> 00:03:10,720

we always target the middle of the

96

00:03:13,830 --> 00:03:12,400

window and there are some seconds

97

00:03:15,990 --> 00:03:13,840

adjustment for a day of launch

98

00:03:18,070 --> 00:03:16,000

parameters we have opportunities from

99

00:03:19,509 --> 00:03:18,080

the 3rd through the 7th of november so

100

00:03:21,830 --> 00:03:19,519

it gives us 5 days and we have our

101  
00:03:24,070 --> 00:03:21,840  
typical 4 attempts and 5 days scenario

102  
00:03:26,789 --> 00:03:24,080  
we can use if we need it

103  
00:03:29,110 --> 00:03:26,799  
we have on the 3rd of november we have

104  
00:03:31,190 --> 00:03:29,120  
both flight day 3 and flight day 4

105  
00:03:32,550 --> 00:03:31,200  
rendezvous opportunities so we can use

106  
00:03:33,990 --> 00:03:32,560  
either of those if we needed to that

107  
00:03:35,190 --> 00:03:34,000  
would add about three minutes to our

108  
00:03:36,710 --> 00:03:35,200  
launch window

109  
00:03:38,470 --> 00:03:36,720  
and we have that every other day

110  
00:03:40,710 --> 00:03:38,480  
starting today starting on the third and

111  
00:03:43,670 --> 00:03:40,720  
then every other day from there

112  
00:03:44,789 --> 00:03:43,680  
we have through the 7th to launch there

113  
00:03:46,710 --> 00:03:44,799

are

114

00:03:48,949 --> 00:03:46,720

starting on the 8th of november we have

115

00:03:51,110 --> 00:03:48,959

a beta angle constraint which doesn't

116

00:03:53,270 --> 00:03:51,120

allow us to go dock to the station due

117

00:03:54,949 --> 00:03:53,280

to thermal constraints

118

00:03:56,550 --> 00:03:54,959

after that there are a number of other

119

00:03:58,070 --> 00:03:56,560

constraints there's a small window of

120

00:03:59,190 --> 00:03:58,080

opportunity early december should we

121

00:04:01,350 --> 00:03:59,200

need that

122

00:04:03,910 --> 00:04:01,360

our pad hold time is

123

00:04:05,910 --> 00:04:03,920

plenty adequate we have uh seven days of

124

00:04:07,830 --> 00:04:05,920

liquid oxygen whole time eight of liquid

125

00:04:09,190 --> 00:04:07,840

hydrogen that's outside of our launch

126  
00:04:11,750 --> 00:04:09,200  
window so we don't have to worry about

127  
00:04:14,470 --> 00:04:11,760  
doing any top off or reaction uh

128  
00:04:16,229 --> 00:04:14,480  
reactant offload during the count

129  
00:04:18,150 --> 00:04:16,239  
it's an 11 day mission with one day

130  
00:04:20,150 --> 00:04:18,160  
contingency and two weather contingency

131  
00:04:21,909 --> 00:04:20,160  
days should we need them as well

132  
00:04:24,950 --> 00:04:21,919  
our end of mission is currently planned

133  
00:04:26,230 --> 00:04:24,960  
for 9 59 eastern on sunday november the

134  
00:04:28,469 --> 00:04:26,240  
14th

135  
00:04:31,270 --> 00:04:28,479  
and so far it's been a

136  
00:04:32,950 --> 00:04:31,280  
remarkable flow for discovery

137  
00:04:35,590 --> 00:04:32,960  
she's been an incredible vehicle and she

138  
00:04:37,590 --> 00:04:35,600

caps along a distinguished career

139

00:04:38,950 --> 00:04:37,600

with this particular flight she's always

140

00:04:41,030 --> 00:04:38,960

amazed us with everything that she can

141

00:04:42,550 --> 00:04:41,040

do and we expect this flight should be

142

00:04:45,430 --> 00:04:42,560

no different and we're looking forward

143

00:04:46,390 --> 00:04:45,440

to launch on wednesday afternoon

144

00:04:47,590 --> 00:04:46,400

thank you

145

00:04:49,270 --> 00:04:47,600

kathy

146

00:04:50,710 --> 00:04:49,280

well we are going to be watching an

147

00:04:53,030 --> 00:04:50,720

upper level low over the next few days

148

00:04:55,350 --> 00:04:53,040

that will be dipping down into the area

149

00:04:57,030 --> 00:04:55,360

of western of the western gulf of mexico

150

00:04:58,390 --> 00:04:57,040

what that will do here for us on launch

151  
00:05:00,629 --> 00:04:58,400  
day is draw some moisture up from the

152  
00:05:02,070 --> 00:05:00,639  
south and as that occurs we'll just be a

153  
00:05:04,469 --> 00:05:02,080  
little bit concerned about low cloud

154  
00:05:06,070 --> 00:05:04,479  
ceilings and also having some showers

155  
00:05:08,230 --> 00:05:06,080  
within 20 nautical miles of the shuttle

156  
00:05:10,710 --> 00:05:08,240  
landing facility so with that we do have

157  
00:05:13,590 --> 00:05:10,720  
a 30 chance of ksc weather prohibiting

158  
00:05:14,629 --> 00:05:13,600  
launch now if we happen to delay a day

159  
00:05:16,230 --> 00:05:14,639  
the weather becomes much more

160  
00:05:17,830 --> 00:05:16,240  
problematic it looks like that frontal

161  
00:05:20,230 --> 00:05:17,840  
boundary is going to be pushing down

162  
00:05:21,830 --> 00:05:20,240  
into the area of central florida causing

163  
00:05:23,510 --> 00:05:21,840

more concerns for showers and even

164

00:05:25,909 --> 00:05:23,520

possibly a thunderstorm

165

00:05:27,430 --> 00:05:25,919

in the central florida area so with that

166

00:05:29,749 --> 00:05:27,440

we did increase the probability if we

167

00:05:33,430 --> 00:05:29,759

happen to delay 24 hours up to a 40

168

00:05:35,430 --> 00:05:33,440

chance for um for thursday so right now

169

00:05:37,909 --> 00:05:35,440

though looking like just 30 chance on

170

00:05:39,189 --> 00:05:37,919

launch day of violating constraints

171

00:05:41,510 --> 00:05:39,199

let's go ahead and look at the satellite

172

00:05:43,029 --> 00:05:41,520

picture we do have hurricane tomas we're

173

00:05:43,990 --> 00:05:43,039

keeping an eye out for it's moved

174

00:05:46,550 --> 00:05:44,000

through

175

00:05:47,830 --> 00:05:46,560

the the lesser antilles and is now

176

00:05:49,909 --> 00:05:47,840

moving into the cr

177

00:05:50,950 --> 00:05:49,919

the caribbean and it's a category two

178

00:05:53,110 --> 00:05:50,960

hurricane

179

00:05:55,830 --> 00:05:53,120

it's forecast to by launch day be south

180

00:05:57,350 --> 00:05:55,840

of hispaniola and still be category 2 at

181

00:05:59,029 --> 00:05:57,360

that time the hurricane center is

182

00:06:00,230 --> 00:05:59,039

expecting that the storm will just

183

00:06:02,390 --> 00:06:00,240

continue to march towards the west

184

00:06:04,550 --> 00:06:02,400

northwest now at the end of that time

185

00:06:07,029 --> 00:06:04,560

period the models tend to want to pull

186

00:06:08,230 --> 00:06:07,039

the storm a little more northeast but as

187

00:06:10,070 --> 00:06:08,240

that front moves through that i was

188

00:06:11,430 --> 00:06:10,080

talking about for thursday

189

00:06:13,270 --> 00:06:11,440

as it pushes in

190

00:06:15,909 --> 00:06:13,280

to that area it'll draw that storm

191

00:06:17,270 --> 00:06:15,919

northeast likely

192

00:06:18,629 --> 00:06:17,280

the furthest east i think it would come

193

00:06:20,230 --> 00:06:18,639

at least right now so far the way it

194

00:06:21,830 --> 00:06:20,240

looks would be the the southeastern

195

00:06:23,749 --> 00:06:21,840

portion of the bahamas

196

00:06:25,670 --> 00:06:23,759

moving northeast so it doesn't look like

197

00:06:26,950 --> 00:06:25,680

it would be a direct threat to florida

198

00:06:28,870 --> 00:06:26,960

we'll watch it to see if it's going to

199

00:06:29,830 --> 00:06:28,880

increase the seas for the srb recovery

200

00:06:31,749 --> 00:06:29,840

area

201  
00:06:33,110 --> 00:06:31,759  
at the end of the week i'm actually just

202  
00:06:35,110 --> 00:06:33,120  
more concerned that the winds behind the

203  
00:06:37,189 --> 00:06:35,120  
boundary will do that for friday as

204  
00:06:38,629 --> 00:06:37,199  
they're returning so overall right now

205  
00:06:41,110 --> 00:06:38,639  
it doesn't look like that storm is going

206  
00:06:43,749 --> 00:06:41,120  
to threaten our launch date or be an

207  
00:06:45,909 --> 00:06:43,759  
issue for florida at least right now but

208  
00:06:47,510 --> 00:06:45,919  
we do continue to monitor these because

209  
00:06:49,350 --> 00:06:47,520  
we know how unpredictable sometimes they

210  
00:06:51,029 --> 00:06:49,360  
can be five to seven days out on the

211  
00:06:52,469 --> 00:06:51,039  
forecast

212  
00:06:54,550 --> 00:06:52,479  
so let me go and show you the hurricane

213  
00:06:55,830 --> 00:06:54,560

center's forecast for tomas you can see

214

00:06:58,070 --> 00:06:55,840

that track that i was talking about

215

00:06:58,870 --> 00:06:58,080

bringing the storm into the area south

216

00:07:00,230 --> 00:06:58,880

of

217

00:07:01,909 --> 00:07:00,240

hispaniola

218

00:07:03,670 --> 00:07:01,919

and making a slight turn to the north at

219

00:07:05,189 --> 00:07:03,680

the end there and again at that point

220

00:07:06,950 --> 00:07:05,199

the models most of them have the

221

00:07:08,230 --> 00:07:06,960

influence of that trough affecting the

222

00:07:10,390 --> 00:07:08,240

storm pulling it northeast it would

223

00:07:12,469 --> 00:07:10,400

likely be under a lot of sheer as it

224

00:07:14,629 --> 00:07:12,479

gets under the influence of the trough

225

00:07:16,150 --> 00:07:14,639

as well so it would likely become extra

226

00:07:17,189 --> 00:07:16,160

tropical as it moves off into the

227

00:07:20,230 --> 00:07:17,199

atlantic

228

00:07:21,909 --> 00:07:20,240

in the long range forecast

229

00:07:23,670 --> 00:07:21,919

let's go ahead and get into our forecast

230

00:07:25,510 --> 00:07:23,680

for launch our tanking forecast still

231

00:07:27,110 --> 00:07:25,520

looks good we do just have some

232

00:07:29,430 --> 00:07:27,120

scattered skies in the low levels with

233

00:07:30,390 --> 00:07:29,440

the high ceiling in the area we expect

234

00:07:32,550 --> 00:07:30,400

to see

235

00:07:34,790 --> 00:07:32,560

winds from the east northeast 10 peaking

236

00:07:36,710 --> 00:07:34,800

to 15 knots and temperatures right

237

00:07:38,469 --> 00:07:36,720

around 74 degrees good weather overall

238

00:07:40,070 --> 00:07:38,479

for tanking just went with a slight

239

00:07:42,150 --> 00:07:40,080

chance of violating constrained at five

240

00:07:43,589 --> 00:07:42,160

percent in case the front happens to

241

00:07:45,510 --> 00:07:43,599

move along a little bit more quickly

242

00:07:47,909 --> 00:07:45,520

than expected

243

00:07:49,270 --> 00:07:47,919

for our launch forecast overall the sky

244

00:07:50,869 --> 00:07:49,280

conditions look good in the low levels

245

00:07:53,749 --> 00:07:50,879

we do have expected ceiling on and off

246

00:07:55,909 --> 00:07:53,759

around the 9000 foot area winds will be

247

00:07:57,589 --> 00:07:55,919

from the east 11 peaking to 17 knots the

248

00:07:59,350 --> 00:07:57,599

models have toggled around quite a bit

249

00:08:01,029 --> 00:07:59,360

on the wind direction and so we're

250

00:08:02,469 --> 00:08:01,039

keeping an eye on that but right now so

251  
00:08:04,150 --> 00:08:02,479  
far it's within constraints and there's

252  
00:08:05,350 --> 00:08:04,160  
a chance of showers

253  
00:08:07,510 --> 00:08:05,360  
in the area

254  
00:08:10,070 --> 00:08:07,520  
overall a 30 percent chance of ksc

255  
00:08:12,150 --> 00:08:10,080  
weather prohibiting launch

256  
00:08:13,749 --> 00:08:12,160  
srb recovery looks good overall with

257  
00:08:16,070 --> 00:08:13,759  
seas just a little bit high at five to

258  
00:08:18,629 --> 00:08:16,080  
six feet in that area winds from the

259  
00:08:20,230 --> 00:08:18,639  
east 12 to 17 knots

260  
00:08:21,749 --> 00:08:20,240  
again i'm more concerned for them as we

261  
00:08:22,869 --> 00:08:21,759  
get into friday and that front moves

262  
00:08:24,309 --> 00:08:22,879  
through and the winds will pick up and

263  
00:08:25,670 --> 00:08:24,319

that could increase the seas in that

264

00:08:26,390 --> 00:08:25,680

area and we'll be briefing them tomorrow

265

00:08:29,270 --> 00:08:26,400

morning

266

00:08:30,790 --> 00:08:29,280

for srb recovery

267

00:08:32,550 --> 00:08:30,800

for spaceflight meteorology groups

268

00:08:34,070 --> 00:08:32,560

forecast for the abort landing sites in

269

00:08:37,029 --> 00:08:34,080

the u.s the weather does look good both

270

00:08:38,630 --> 00:08:37,039

at edwards and at northrop field

271

00:08:41,190 --> 00:08:38,640

and for the towel sites we do have three

272

00:08:44,710 --> 00:08:41,200

good tile sites on the first day with no

273

00:08:47,910 --> 00:08:46,389

if we do happen to delay 24 hours this

274

00:08:49,829 --> 00:08:47,920

is a day that we think we'd be mostly

275

00:08:51,829 --> 00:08:49,839

influenced by the front coming into the

276

00:08:53,590 --> 00:08:51,839

area we do have a chance for showers on

277

00:08:55,190 --> 00:08:53,600

this day also thunderstorms could be in

278

00:08:56,710 --> 00:08:55,200

the area mainly over in the gulf but

279

00:08:58,070 --> 00:08:56,720

anvils could stream in for those

280

00:08:59,670 --> 00:08:58,080

thunderstorms

281

00:09:01,430 --> 00:08:59,680

the tops of the high clouds that come

282

00:09:03,430 --> 00:09:01,440

off the top those can be a triggered

283

00:09:05,590 --> 00:09:03,440

lightning threat with that we have a 40

284

00:09:08,230 --> 00:09:05,600

percent chance of ksc weather

285

00:09:09,990 --> 00:09:08,240

prohibiting launch

286

00:09:11,990 --> 00:09:10,000

the abort landing sites in the us remain

287

00:09:13,590 --> 00:09:12,000

good on day two

288

00:09:15,750 --> 00:09:13,600

and spaceflight meteorology group only

289

00:09:17,350 --> 00:09:15,760

has a slight concern at zaragoza which

290

00:09:20,150 --> 00:09:17,360

have visibility come down to four miles

291

00:09:24,630 --> 00:09:22,470

if we do happen to delay 48 hours so the

292

00:09:25,829 --> 00:09:24,640

front should move through florida again

293

00:09:27,750 --> 00:09:25,839

this is the same front that would be

294

00:09:28,630 --> 00:09:27,760

pulling tomas off to the northeast if

295

00:09:29,910 --> 00:09:28,640

this

296

00:09:31,430 --> 00:09:29,920

if tomas was

297

00:09:33,509 --> 00:09:31,440

in that location down in the caribbean

298

00:09:35,350 --> 00:09:33,519

that the hurricane center is forecasting

299

00:09:37,190 --> 00:09:35,360

and at this point we'd mainly be

300

00:09:39,030 --> 00:09:37,200

concerned about low cloud ceilings in

301  
00:09:41,269 --> 00:09:39,040  
the area and also winds are getting a

302  
00:09:43,030 --> 00:09:41,279  
bit strong and if they turn from three

303  
00:09:45,110 --> 00:09:43,040  
pfizer they're about the the ground wind

304  
00:09:47,590 --> 00:09:45,120  
constraint is 27 knots but it starts to

305  
00:09:48,949 --> 00:09:47,600  
drop as we turn more northerly so from

306  
00:09:51,269 --> 00:09:48,959  
if it came straight from the north it

307  
00:09:53,190 --> 00:09:51,279  
would be down to 23 knots forecasting

308  
00:09:54,790 --> 00:09:53,200  
right now a peak went to 21 not so i did

309  
00:09:57,110 --> 00:09:54,800  
increase the probability on this day to

310  
00:09:59,350 --> 00:09:57,120  
a 30 percent chance of ksc weather

311  
00:10:01,190 --> 00:09:59,360  
prohibiting launch

312  
00:10:03,910 --> 00:10:01,200  
the abort landing sites again in the u.s

313  
00:10:06,069 --> 00:10:03,920

still look good on on the third day and

314

00:10:07,750 --> 00:10:06,079

we have similar concerns at the towel at

315

00:10:09,990 --> 00:10:07,760

zaragoza one of the towel sites just a

316

00:10:11,670 --> 00:10:10,000

chance for four miles of fog but overall

317

00:10:13,750 --> 00:10:11,680

two other good towel sizes both at

318

00:10:15,350 --> 00:10:13,760

and nistris

319

00:10:16,389 --> 00:10:15,360

so we'll keep an eye on tomas but right

320

00:10:18,790 --> 00:10:16,399

now it doesn't look like it'll be a

321

00:10:19,990 --> 00:10:18,800

factor for launch and our main concern

322

00:10:21,990 --> 00:10:20,000

will just be if we happen to delay so

323

00:10:24,230 --> 00:10:22,000

right now launch day we have a 30 chance

324

00:10:25,750 --> 00:10:24,240

of kc weather prohibiting launch if we

325

00:10:26,870 --> 00:10:25,760

happen to delay 24 hours that's when a

326

00:10:28,630 --> 00:10:26,880

front will come into the area and we

327

00:10:30,550 --> 00:10:28,640

have more concerns and we'll keep

328

00:10:31,910 --> 00:10:30,560

watching that trend if it looks like the

329

00:10:33,350 --> 00:10:31,920

models are going to keep timing it out

330

00:10:36,150 --> 00:10:33,360

that way we may have to increase that

331

00:10:37,350 --> 00:10:36,160

24-hour delay number if if they come in

332

00:10:38,870 --> 00:10:37,360

line better right now there's some

333

00:10:41,110 --> 00:10:38,880

differences on the timing of that so

334

00:10:44,949 --> 00:10:41,120

we're just keeping it at 40 for day two

335

00:10:46,389 --> 00:10:44,959

but day one still looking good

336

00:10:47,750 --> 00:10:46,399

thank you well i'll take questions when

337

00:10:49,509 --> 00:10:47,760

the microphone comes your way please

338

00:10:50,630 --> 00:10:49,519

state your name affiliation and to whom

339

00:10:52,310 --> 00:10:50,640

you're addressing your question we'll

340

00:10:55,190 --> 00:10:52,320

start with bill

341

00:10:56,710 --> 00:10:55,200

hi bill harwood cbs news for steve uh

342

00:10:57,990 --> 00:10:56,720

would you um

343

00:10:59,190 --> 00:10:58,000

what did what did the troubleshooting

344

00:11:00,630 --> 00:10:59,200

show where the problem was i was

345

00:11:02,790 --> 00:11:00,640

confused was that both nitrogen and

346

00:11:04,870 --> 00:11:02,800

helium or just helium well initially

347

00:11:06,310 --> 00:11:04,880

we'd had two different issues with uh

348

00:11:07,750 --> 00:11:06,320

with our quick disconnects one with a

349

00:11:09,829 --> 00:11:07,760

with a nitrogen side and one with a

350

00:11:11,269 --> 00:11:09,839

helium side

351

00:11:12,790 --> 00:11:11,279

the one that was a long pole the one

352

00:11:14,150 --> 00:11:12,800

that took us a long time to resolve was

353

00:11:16,150 --> 00:11:14,160

the one on the helium side because it

354

00:11:18,150 --> 00:11:16,160

required venting down our tanks

355

00:11:19,110 --> 00:11:18,160

and repressurizing and that just takes a

356

00:11:20,710 --> 00:11:19,120

long time because you have to do it

357

00:11:21,829 --> 00:11:20,720

slowly to allow the thermal conditioning

358

00:11:22,949 --> 00:11:21,839

to happen

359

00:11:24,949 --> 00:11:22,959

for the

360

00:11:26,630 --> 00:11:24,959

nitrogen tank it's fairly

361

00:11:28,310 --> 00:11:26,640

straightforward it's a quick process the

362

00:11:30,230 --> 00:11:28,320

size is about the tank is about the size

363

00:11:32,550 --> 00:11:30,240

of a softball so it takes a couple of

364

00:11:33,910 --> 00:11:32,560  
minutes to fill and empty

365

00:11:35,269 --> 00:11:33,920  
we thought it was a quick disconnect

366

00:11:36,870 --> 00:11:35,279  
valve and it's

367

00:11:38,389 --> 00:11:36,880  
i believe you saw one of these earlier

368

00:11:39,750 --> 00:11:38,399  
it's the same kind of quick disconnect

369

00:11:41,509 --> 00:11:39,760  
valve

370

00:11:43,829 --> 00:11:41,519  
there's a little poppet inside that's

371

00:11:45,110 --> 00:11:43,839  
held open by pressure

372

00:11:46,310 --> 00:11:45,120  
and when the pressure goes down it

373

00:11:47,910 --> 00:11:46,320  
closes again

374

00:11:50,389 --> 00:11:47,920  
the valve that was supposed to stop

375

00:11:51,990 --> 00:11:50,399  
supplying pressure to it was

376

00:11:53,670 --> 00:11:52,000

providing too much and it couldn't close

377

00:11:55,910 --> 00:11:53,680

properly so we just went upstream and

378

00:11:57,269 --> 00:11:55,920

closed closed the gas off to that one so

379

00:12:00,230 --> 00:11:57,279

that the pressure would bleed down and

380

00:12:01,509 --> 00:12:00,240

the qd could close and it worked

381

00:12:03,190 --> 00:12:01,519

very well

382

00:12:04,470 --> 00:12:03,200

well i guess what i was asking was are

383

00:12:05,829 --> 00:12:04,480

you saying that there really wasn't

384

00:12:07,190 --> 00:12:05,839

anything wrong with the shuttle hardware

385

00:12:08,710 --> 00:12:07,200

it was an issue on the ground side that

386

00:12:10,389 --> 00:12:08,720

you guys just didn't see well once you

387

00:12:12,389 --> 00:12:10,399

pull it out it's hard to to go back and

388

00:12:14,629 --> 00:12:12,399

and determine that we changed it it

389

00:12:16,629 --> 00:12:14,639

turns out it could have been both or it

390

00:12:18,389 --> 00:12:16,639

could have been just one at this point

391

00:12:20,470 --> 00:12:18,399

we don't know once we take it out

392

00:12:21,910 --> 00:12:20,480

but uh the valve we had originally been

393

00:12:23,750 --> 00:12:21,920

there since the initial build of the

394

00:12:25,829 --> 00:12:23,760

vehicle and we've never had any issues

395

00:12:27,190 --> 00:12:25,839

with it

396

00:12:28,470 --> 00:12:27,200

and that was

397

00:12:31,269 --> 00:12:28,480

back in the

398

00:12:33,110 --> 00:12:31,279

early 80s i believe so

399

00:12:34,230 --> 00:12:33,120

okay so so now everything's buttoned up

400

00:12:35,590 --> 00:12:34,240

and you guys are pretty confident

401

00:12:37,269 --> 00:12:35,600

everything else comes up you'll get

402

00:12:38,949 --> 00:12:37,279

there correct and we're going to spend

403

00:12:40,310 --> 00:12:38,959

the rest of the rest of the afternoon

404

00:12:41,509 --> 00:12:40,320

putting the area back together

405

00:12:43,590 --> 00:12:41,519

disconnecting all the ground support

406

00:12:47,269 --> 00:12:43,600

equipment and putting the doors back on

407

00:12:48,949 --> 00:12:47,279

so that is behind us fortunately

408

00:12:53,829 --> 00:12:48,959

are there any other questions

409

00:12:58,790 --> 00:12:56,949

um denise ciao for space.com um just a

410

00:13:00,389 --> 00:12:58,800

quick question to clarify for steve um

411

00:13:02,470 --> 00:13:00,399

the repressurization has that been

412

00:13:03,350 --> 00:13:02,480

completed or is that ongoing today

413

00:13:07,910 --> 00:13:03,360

of the

414

00:13:09,190 --> 00:13:07,920

the repressurizations are complete at

415

00:13:10,629 --> 00:13:09,200

this point the helium tanks were

416

00:13:11,670 --> 00:13:10,639

repressurized and they were done early

417

00:13:13,350 --> 00:13:11,680

this morning

418

00:13:15,750 --> 00:13:13,360

uh the nitrogen tank would be

419

00:13:17,990 --> 00:13:15,760

pressurized as i was getting out here

420

00:13:21,990 --> 00:13:18,000

and the pressure was holding fine so

421

00:13:22,000 --> 00:13:25,670

okay are there any further questions

422

00:13:25,680 --> 00:13:32,150

okay um bill again

423

00:13:36,550 --> 00:13:33,750

since i promised cathy a question

424

00:13:38,069 --> 00:13:36,560

yesterday no i'm kidding uh what is smg

425

00:13:39,910 --> 00:13:38,079

saying i mean you guys always look at

426  
00:13:42,389 --> 00:13:39,920  
launch weather and i know that you you

427  
00:13:43,990 --> 00:13:42,399  
fold some of what smg says but but i

428  
00:13:45,430 --> 00:13:44,000  
know they're listing constraints for all

429  
00:13:47,430 --> 00:13:45,440  
of those days in terms of chance of

430  
00:13:48,710 --> 00:13:47,440  
showers and all that how confident are

431  
00:13:50,069 --> 00:13:48,720  
they i guess is what it means well we

432  
00:13:51,430 --> 00:13:50,079  
actually coordinate our forecasts and

433  
00:13:53,829 --> 00:13:51,440  
that probability does cover their

434  
00:13:55,590 --> 00:13:53,839  
constraints so we talk every morning um

435  
00:13:57,269 --> 00:13:55,600  
to make sure that our forecasts are all

436  
00:13:58,550 --> 00:13:57,279  
lined up and

437  
00:14:00,629 --> 00:13:58,560  
the main reason why we're keeping the

438  
00:14:02,870 --> 00:14:00,639

number at 40 for day two even though it

439

00:14:04,949 --> 00:14:02,880

lists a lot of violations is because the

440

00:14:07,269 --> 00:14:04,959

uncertainty that we have in the forecast

441

00:14:08,790 --> 00:14:07,279

and the trend the changing of the trend

442

00:14:10,790 --> 00:14:08,800

we just wanted to trend it up and now

443

00:14:12,629 --> 00:14:10,800

tomorrow if it continues to look as it

444

00:14:14,790 --> 00:14:12,639

looks on the models today with that

445

00:14:16,230 --> 00:14:14,800

front more solidly where it is

446

00:14:17,910 --> 00:14:16,240

consistently i should say more

447

00:14:19,590 --> 00:14:17,920

consistently then we're going to bump

448

00:14:21,829 --> 00:14:19,600

that number up again we considered it

449

00:14:24,069 --> 00:14:21,839

today for that day too

450

00:14:26,310 --> 00:14:24,079

but uh but we didn't quite do it and on

451

00:14:27,990 --> 00:14:26,320

the first day they listed a chance of a

452

00:14:30,389 --> 00:14:28,000

shower so that's why we have the number

453

00:14:32,230 --> 00:14:30,399

30 percent so we we do talk and

454

00:14:33,269 --> 00:14:32,240

coordinate all that and it's all into

455

00:14:34,629 --> 00:14:33,279

consideration

456

00:14:36,310 --> 00:14:34,639

they're as confident as you are that

457

00:14:37,829 --> 00:14:36,320

thankful yeah we've been talking each

458

00:14:39,110 --> 00:14:37,839

morning you're saying well hopefully

459

00:14:40,949 --> 00:14:39,120

hopefully one of these days the models

460

00:14:44,550 --> 00:14:40,959

will all line up and we expect that to

461

00:14:46,629 --> 00:14:44,560

happen as we get closer to launch day

462

00:14:48,310 --> 00:14:46,639

ken you had a question

463

00:14:50,069 --> 00:14:48,320

thank you ken cramer for space flight

464

00:14:52,230 --> 00:14:50,079

magazine uh for kathy is there any

465

00:14:54,710 --> 00:14:52,240

particular time of the day when these

466

00:14:56,949 --> 00:14:54,720

showers are more likely is the afternoon

467

00:14:59,509 --> 00:14:56,959

the most likely time we usually get an

468

00:15:01,030 --> 00:14:59,519

easterly type flow they're actually more

469

00:15:02,389 --> 00:15:01,040

likely in the morning but the moisture

470

00:15:05,509 --> 00:15:02,399

is increasing in this case in the

471

00:15:07,269 --> 00:15:05,519

afternoon too so so it's probably pretty

472

00:15:08,550 --> 00:15:07,279

even on how much chance we have the

473

00:15:09,829 --> 00:15:08,560

showers in the morning and showers in

474

00:15:12,470 --> 00:15:09,839

the afternoon so we have it listed on

475

00:15:14,230 --> 00:15:12,480

both the tanking and the launch forecast

476  
00:15:15,670 --> 00:15:14,240  
so usually morning time would be more

477  
00:15:17,269 --> 00:15:15,680  
and then as you get in the afternoon the

478  
00:15:19,269 --> 00:15:17,279  
sea breeze will actually squelch these a

479  
00:15:20,710 --> 00:15:19,279  
bit but in this case with that moisture

480  
00:15:22,389 --> 00:15:20,720  
infection there's still a chance for a

481  
00:15:23,910 --> 00:15:22,399  
shower now as we get in the overnight

482  
00:15:25,110 --> 00:15:23,920  
hours we would expect them to increase

483  
00:15:27,030 --> 00:15:25,120  
again

484  
00:15:28,310 --> 00:15:27,040  
the water gets warmer than that than the

485  
00:15:29,670 --> 00:15:28,320  
atmosphere and so you get a little more

486  
00:15:31,030 --> 00:15:29,680  
instability you get a better chance for

487  
00:15:33,990 --> 00:15:31,040  
showers in the overnight hours when you

488  
00:15:36,310 --> 00:15:34,000

have an easterly flow pattern

489

00:15:38,310 --> 00:15:36,320

for steve you mentioned um that this

490

00:15:41,350 --> 00:15:38,320

valve had not been changed on discovery

491

00:15:43,189 --> 00:15:41,360

since it was built i'm curious about

492

00:15:44,550 --> 00:15:43,199

atlantis and endeavor what's the history

493

00:15:46,150 --> 00:15:44,560

there if you know

494

00:15:49,110 --> 00:15:46,160

that's a good question but i don't know

495

00:15:51,269 --> 00:15:50,470

ken we can look that up and get it for

496

00:15:52,949 --> 00:15:51,279

you

497

00:15:54,949 --> 00:15:52,959

okay

498

00:15:57,189 --> 00:15:54,959

if there are no further questions we'll

499

00:15:58,310 --> 00:15:57,199

conclude today's pre-countdown status

500

00:15:59,990 --> 00:15:58,320

briefing

501  
00:16:02,470 --> 00:16:00,000  
as a reminder the countdown begins this

502  
00:16:04,949 --> 00:16:02,480  
afternoon at 2pm eastern time that's not

503  
00:16:06,310 --> 00:16:04,959  
on nasa television the next nasa tv

504  
00:16:07,829 --> 00:16:06,320  
briefing will be tomorrow with the

505  
00:16:10,230 --> 00:16:07,839  
pre-launch news conference which is

506  
00:16:11,269 --> 00:16:10,240  
expected to begin no earlier than 11 a.m

507  
00:16:13,829 --> 00:16:11,279  
eastern