1
00:00:07,190 --> 00:00:05,349
good morning thank you for joining us

2
00:00:09,669 --> 00:00:07,200
here at nasa's kennedy space center in

3
00:00:11,030 --> 00:00:09,679
florida for the l minus one countdown

4
00:00:14,070 --> 00:00:11,040
status briefing for space shuttle

5
00:00:15,829 --> 00:00:14,080
atlantis's final mission sts-135 to the

6
00:00:17,830 --> 00:00:15,839
international space station joining me

7
00:00:18,790 --> 00:00:17,840
today is jeff spaulding nasa test

8
00:00:20,950 --> 00:00:18,800
director

9
00:00:24,070 --> 00:00:20,960
good morning

10
00:00:25,750 --> 00:00:24,080
joe duly sts-135 payload manager good

11
00:00:27,189 --> 00:00:25,760
morning

12
00:00:28,830 --> 00:00:27,199
and kathy winters shuttle weather

13
00:00:30,950 --> 00:00:28,840

officer good

14
00:00:32,870 --> 00:00:30,960
morning we'll hear from our panelists

15
00:00:34,549 --> 00:00:32,880
and then take questions jeff all right

16
00:00:36,630 --> 00:00:34,559
thank you kendra and good morning to

17
00:00:37,990 --> 00:00:36,640
everyone i'm extremely proud to be here

18
00:00:39,510 --> 00:00:38,000
this morning

19
00:00:42,069 --> 00:00:39,520
which may very likely be our last

20
00:00:43,590 --> 00:00:42,079
shuttle launch countdown status briefing

21
00:00:45,990 --> 00:00:43,600
but i am here to represent the entire

22
00:00:47,990 --> 00:00:46,000
shuttle team for uh the upcoming launch

23
00:00:48,950 --> 00:00:48,000
of the space shuttle atlantis on friday

24
00:00:50,310 --> 00:00:48,960
tomorrow

25
00:00:52,389 --> 00:00:50,320
our last couple of days out at the

26
00:00:54,150 --> 00:00:52,399
launch pad um have gone extremely well

27
00:00:56,470 --> 00:00:54,160
and we've gotten a lot of work done and

28
00:00:58,549 --> 00:00:56,480
and we're proceeding on the timeline as

29
00:01:00,630 --> 00:00:58,559
we had uh had hoped and are working

30
00:01:02,549 --> 00:01:00,640
towards tomorrow's launch

31
00:01:05,189 --> 00:01:02,559
did a couple of minor items last night

32
00:01:06,950 --> 00:01:05,199
and i'll give you a little more on that

33
00:01:08,469 --> 00:01:06,960
as we go through here

34
00:01:11,030 --> 00:01:08,479
we did finish our fuel cell reactant

35
00:01:12,710 --> 00:01:11,040
loading yesterday on time as planned

36
00:01:14,469 --> 00:01:12,720
and got through that and we do have our

37
00:01:16,630 --> 00:01:14,479
three days of plan hold time for liquid

38
00:01:18,070 --> 00:01:16,640

hydrogen and and we are at nine days for

39
00:01:20,710 --> 00:01:18,080
the liquid oxygen now so we did pick up

40
00:01:22,390 --> 00:01:20,720
an extra day there with a good load um

41
00:01:24,070 --> 00:01:22,400
we also finished our main engine final

42
00:01:25,190 --> 00:01:24,080
preps and checkouts and those all went

43
00:01:26,630 --> 00:01:25,200
very well

44
00:01:28,070 --> 00:01:26,640
yesterday as well and we're just

45
00:01:29,749 --> 00:01:28,080
completing up all of our final

46
00:01:31,749 --> 00:01:29,759
inspections on the external tank and our

47
00:01:33,190 --> 00:01:31,759
solid rocket boosters as we make sure

48
00:01:34,230 --> 00:01:33,200
that those are configured and ready for

49
00:01:35,670 --> 00:01:34,240
flight

50
00:01:37,429 --> 00:01:35,680
all of those things have gone well as i

51
00:01:39,190 --> 00:01:37,439
mentioned we did just finish up the

52
00:01:41,830 --> 00:01:39,200
checkout of our orbiter and groundcom

53
00:01:44,389 --> 00:01:41,840
communications networks and that job was

54
00:01:45,910 --> 00:01:44,399
completed satisfactorily as well

55
00:01:47,350 --> 00:01:45,920
last night we did have an inadvertent

56
00:01:48,950 --> 00:01:47,360
fire alarm on our pad which is just a

57
00:01:50,870 --> 00:01:48,960
very minor thing but did clear us off

58
00:01:52,870 --> 00:01:50,880
for just a little bit while we did an

59
00:01:54,550 --> 00:01:52,880
assessment and then let folks get back

60
00:01:56,389 --> 00:01:54,560
in and since that time we did change out

61
00:01:58,550 --> 00:01:56,399
that faulty fire alarm as it turned out

62
00:02:00,149 --> 00:01:58,560
it was a false alarm as as expected but

63
00:02:01,990 --> 00:02:00,159

we changed out that faulty fire alarm on

64
00:02:03,590 --> 00:02:02,000
our 115 foot level of the fixed service

65
00:02:05,510 --> 00:02:03,600
structure and that system's back up and

66
00:02:07,190 --> 00:02:05,520
functionally normally

67
00:02:09,350 --> 00:02:07,200
we did also change out a few of our

68
00:02:11,350 --> 00:02:09,360
tyvek covers on the forward reaction

69
00:02:13,670 --> 00:02:11,360
control system

70
00:02:15,350 --> 00:02:13,680
the rtv or room temperature vulcanized

71
00:02:16,229 --> 00:02:15,360
rubber that we use as an adhesive for

72
00:02:18,229 --> 00:02:16,239
those

73
00:02:20,150 --> 00:02:18,239
we also put a coupon

74
00:02:22,070 --> 00:02:20,160
on this that we have didn't do a test on

75
00:02:23,990 --> 00:02:22,080
to make sure that the bonds set up

76
00:02:26,470 --> 00:02:24,000
appropriately and that bond really

77
00:02:28,390 --> 00:02:26,480
wasn't um up to our liking so we decided

78
00:02:29,750 --> 00:02:28,400
to change out um some of the covers up

79
00:02:31,589 --> 00:02:29,760
on the the forward reaction control

80
00:02:32,949 --> 00:02:31,599
system and we have completed that and

81
00:02:36,229 --> 00:02:32,959
all the tyvek covers that are up there

82
00:02:37,509 --> 00:02:36,239
now are in shape and ready for launch

83
00:02:39,750 --> 00:02:37,519
the other thing that happened last night

84
00:02:41,750 --> 00:02:39,760
is we did have our pad chillers which

85
00:02:43,990 --> 00:02:41,760
provide a chilled water to some of our

86
00:02:45,750 --> 00:02:44,000
ground systems as well provide orbital

87
00:02:47,030 --> 00:02:45,760
ground cooling were acting up on us a

88
00:02:48,710 --> 00:02:47,040

little bit

89
00:02:50,070 --> 00:02:48,720
so we did lose a couple of those and had

90
00:02:52,470 --> 00:02:50,080
to swap in some others and there was a

91
00:02:53,830 --> 00:02:52,480
brief period of time where um all three

92
00:02:55,430 --> 00:02:53,840
of the pad chillers which we have a

93
00:02:57,270 --> 00:02:55,440
triple redundancy on we're down for a

94
00:02:58,710 --> 00:02:57,280
period where we're using our paddle

95
00:03:01,110 --> 00:02:58,720
water system to provide cooling which is

96
00:03:02,790 --> 00:03:01,120
our fourth backup but we do have two of

97
00:03:04,149 --> 00:03:02,800
those chillers back online and there's

98
00:03:05,990 --> 00:03:04,159
one that's faulty and we're looking at

99
00:03:07,190 --> 00:03:06,000
that today to figure out what if

100
00:03:09,430 --> 00:03:07,200
anything we need to do with that

101
00:03:10,869 --> 00:03:09,440
particular chiller but we only need one

102
00:03:12,550 --> 00:03:10,879
chiller for launch and we do have

103
00:03:13,910 --> 00:03:12,560
redundancy still available to us with

104
00:03:16,149 --> 00:03:13,920
the two up and functioning and providing

105
00:03:19,030 --> 00:03:16,159
plenty of cooling to all of our vehicle

106
00:03:20,710 --> 00:03:19,040
and ground systems at the pad currently

107
00:03:22,149 --> 00:03:20,720
let's see um some of the launch

108
00:03:24,710 --> 00:03:22,159
countdown events that will be coming up

109
00:03:25,670 --> 00:03:24,720
throughout the day and and into tomorrow

110
00:03:27,110 --> 00:03:25,680
we do have our final flight crew

111
00:03:29,430 --> 00:03:27,120
equipment stow and a crew module

112
00:03:30,789 --> 00:03:29,440
starting in about an hour this morning

113
00:03:32,710 --> 00:03:30,799

that's going to be a fairly energetic

114
00:03:34,149 --> 00:03:32,720
one this time we have quite a bit of

115
00:03:35,350 --> 00:03:34,159
extra things that we'll be putting on

116
00:03:37,030 --> 00:03:35,360
the vehicle not extra things but

117
00:03:39,750 --> 00:03:37,040
certainly quite a few things planned for

118
00:03:41,509 --> 00:03:39,760
this particular launch um we'd have the

119
00:03:43,270 --> 00:03:41,519
remaining launch preps to get into our

120
00:03:44,470 --> 00:03:43,280
rotating service structure retract this

121
00:03:46,630 --> 00:03:44,480
afternoon and we'll of course be

122
00:03:47,910 --> 00:03:46,640
watching the weather on that as we're

123
00:03:49,430 --> 00:03:47,920
all aware there is some weather coming

124
00:03:51,270 --> 00:03:49,440
in today and we'll be watching that um

125
00:03:53,670 --> 00:03:51,280
for launch day as well

126
00:03:55,270 --> 00:03:53,680
um we'll be powering up our onboard fuel

127
00:03:57,030 --> 00:03:55,280
cells tonight at about eight o'clock and

128
00:03:59,429 --> 00:03:57,040
that will be providing some of our

129
00:04:01,030 --> 00:03:59,439
onboard power once we get into orbit and

130
00:04:02,309 --> 00:04:01,040
we'll continue configuring our ground

131
00:04:04,149 --> 00:04:02,319
flight systems

132
00:04:05,830 --> 00:04:04,159
throughout the day until we start our

133
00:04:07,190 --> 00:04:05,840
initial pad clears at about nine o'clock

134
00:04:08,789 --> 00:04:07,200
tonight

135
00:04:11,030 --> 00:04:08,799
we do get into our

136
00:04:13,030 --> 00:04:11,040
earliest external tank load at two

137
00:04:14,630 --> 00:04:13,040
o'clock in the morning just after two

138
00:04:16,229 --> 00:04:14,640

and that's about a three hour operation

139
00:04:17,590 --> 00:04:16,239
at which time we send our ground crews

140
00:04:19,110 --> 00:04:17,600
out to the pad which include our final

141
00:04:20,710 --> 00:04:19,120
inspection team to take one final look

142
00:04:22,230 --> 00:04:20,720
at the tank and the vehicle make sure

143
00:04:23,749 --> 00:04:22,240
everything's ready for launch and we

144
00:04:24,870 --> 00:04:23,759
also send out our closeout crew into the

145
00:04:26,150 --> 00:04:24,880
crew module and make sure the crew

146
00:04:27,110 --> 00:04:26,160
module is ready for the flight crew to

147
00:04:28,390 --> 00:04:27,120
come out

148
00:04:29,830 --> 00:04:28,400
and the flight crew is scheduled to come

149
00:04:31,670 --> 00:04:29,840
out just after eight o'clock tomorrow

150
00:04:33,030 --> 00:04:31,680
morning and we'll get them out at the

151
00:04:34,950 --> 00:04:33,040
pad and get everything in shape and

152
00:04:37,670 --> 00:04:34,960
ready to go and looking for on time

153
00:04:39,830 --> 00:04:37,680
launch on friday window open time is 11

154
00:04:41,510 --> 00:04:39,840
21 and we generally target the middle of

155
00:04:43,430 --> 00:04:41,520
that 10 minute window which is about 11

156
00:04:45,189 --> 00:04:43,440
26 and there'll be some seconds

157
00:04:46,870 --> 00:04:45,199
associated with that we update all those

158
00:04:48,150 --> 00:04:46,880
final times on launch day once we

159
00:04:50,070 --> 00:04:48,160
understand all of the wins in our day

160
00:04:51,909 --> 00:04:50,080
launch parameters so we'll be ready to

161
00:04:53,830 --> 00:04:51,919
go for that as well

162
00:04:55,670 --> 00:04:53,840
as far as launch availability goes we

163
00:04:57,670 --> 00:04:55,680

currently as we've been reporting have

164
00:04:59,270 --> 00:04:57,680
the 8th 9th and 10th available to us the

165
00:05:00,469 --> 00:04:59,280
delta starts to come onto the range on

166
00:05:01,749 --> 00:05:00,479
the 11th

167
00:05:03,670 --> 00:05:01,759
we've talked to them a little bit but

168
00:05:05,510 --> 00:05:03,680
certainly no real negotiations will

169
00:05:06,950 --> 00:05:05,520
happen and unless we get into a scrub

170
00:05:09,270 --> 00:05:06,960
scenario and then we'll start looking to

171
00:05:11,590 --> 00:05:09,280
see if we can potentially get that 11th

172
00:05:13,590 --> 00:05:11,600
as a potential launch date as well

173
00:05:15,590 --> 00:05:13,600
so in general we'll pick the best two

174
00:05:17,430 --> 00:05:15,600
attempts in those particular time frames

175
00:05:19,270 --> 00:05:17,440
or possibly three if we were to get the

176
00:05:21,510 --> 00:05:19,280
11th but we would have to see how that

177
00:05:23,909 --> 00:05:21,520
scrub scenario works out because

178
00:05:25,749 --> 00:05:23,919
as we also reported if we get into a

179
00:05:26,629 --> 00:05:25,759
scenario where we scrub very late in

180
00:05:29,029 --> 00:05:26,639
account

181
00:05:31,270 --> 00:05:29,039
in order to provide a crew rest we would

182
00:05:33,830 --> 00:05:31,280
probably most likely go to a 48 hour

183
00:05:35,990 --> 00:05:33,840
scrub scenario that line and the sand if

184
00:05:37,670 --> 00:05:36,000
you will it's not a fixed line but

185
00:05:40,070 --> 00:05:37,680
it's a line that we would look at as at

186
00:05:42,230 --> 00:05:40,080
l minus four hours and if we scrub after

187
00:05:43,749 --> 00:05:42,240
that time frame and all things being

188
00:05:45,510 --> 00:05:43,759

equal from a technical rationale

189
00:05:47,350 --> 00:05:45,520
perspective then we may

190
00:05:49,270 --> 00:05:47,360
like to go 48 hours to give our teams a

191
00:05:51,510 --> 00:05:49,280
chance to get back

192
00:05:52,710 --> 00:05:51,520
get home and get back to work

193
00:05:53,909 --> 00:05:52,720
with the amount of people that we are

194
00:05:55,110 --> 00:05:53,919
expecting

195
00:05:56,870 --> 00:05:55,120
upwards of half a million to

196
00:05:58,950 --> 00:05:56,880
three-quarter million folks in the

197
00:06:00,469 --> 00:05:58,960
general area getting home is going to be

198
00:06:02,150 --> 00:06:00,479
very challenging for even the folks who

199
00:06:03,189 --> 00:06:02,160
live very close to work so we want to

200
00:06:05,189 --> 00:06:03,199
make sure that we can give our teams

201
00:06:07,110 --> 00:06:05,199
rest as required

202
00:06:09,110 --> 00:06:07,120
it's a 12-day mission uh zero

203
00:06:12,070 --> 00:06:09,120
contingency days and two weather days

204
00:06:14,070 --> 00:06:12,080
we're hopeful to get a 13th day and uh

205
00:06:16,230 --> 00:06:14,080
right now with the load that we did get

206
00:06:17,590 --> 00:06:16,240
on our prsd system we're close to that

207
00:06:19,670 --> 00:06:17,600
and we can think we can manage the rest

208
00:06:21,510 --> 00:06:19,680
of that on orbit if we are able to

209
00:06:22,870 --> 00:06:21,520
launch on our first attempt after that

210
00:06:24,469 --> 00:06:22,880
it becomes

211
00:06:26,309 --> 00:06:24,479
quite a bit more challenging to be able

212
00:06:28,230 --> 00:06:26,319
to have enough commodity on board to be

213
00:06:30,150 --> 00:06:28,240

able to get that 13th day if we don't go

214
00:06:31,830 --> 00:06:30,160
right at the first day

215
00:06:33,029 --> 00:06:31,840
end-to-emissions planned in ksc on the

216
00:06:35,110 --> 00:06:33,039
20th

217
00:06:36,150 --> 00:06:35,120
57 is our current landing time on that

218
00:06:38,790 --> 00:06:36,160
date

219
00:06:40,150 --> 00:06:38,800
if we need the 21st the 6am in the

220
00:06:42,629 --> 00:06:40,160
morning would be our our next

221
00:06:44,469 --> 00:06:42,639
opportunity here at ksc

222
00:06:45,590 --> 00:06:44,479
so let's see that our teams here and and

223
00:06:47,670 --> 00:06:45,600
really all around the world have been

224
00:06:49,110 --> 00:06:47,680
working extremely hard for for quite a

225
00:06:50,309 --> 00:06:49,120
while on this particular mission to get

226
00:06:52,629 --> 00:06:50,319
everything ready and make sure that the

227
00:06:55,589 --> 00:06:52,639
vehicle and the payload are ready for uh

228
00:06:57,029 --> 00:06:55,599
hopefully a magnificent launch on friday

229
00:06:58,710 --> 00:06:57,039
there's an old saying

230
00:07:00,469 --> 00:06:58,720
that says it's better to travel well

231
00:07:01,350 --> 00:07:00,479
than to arrive

232
00:07:03,270 --> 00:07:01,360
and

233
00:07:04,469 --> 00:07:03,280
i'd have to say after the last 30 years

234
00:07:06,150 --> 00:07:04,479
certainly um

235
00:07:07,430 --> 00:07:06,160
our program and these shuttles

236
00:07:10,469 --> 00:07:07,440
throughout all of their missions have

237
00:07:12,390 --> 00:07:10,479
traveled very well and after uh 135's

238
00:07:15,350 --> 00:07:12,400

landing i think we can say at that point

239
00:07:17,029 --> 00:07:15,360
that we've arrived thank you

240
00:07:17,909 --> 00:07:17,039
thank you jeff joe

241
00:07:20,150 --> 00:07:17,919
thank you

242
00:07:21,110 --> 00:07:20,160
okay good morning my name is uh joseph

243
00:07:23,909 --> 00:07:21,120
de lai

244
00:07:25,110 --> 00:07:23,919
and i am the nasa kc mission payload

245
00:07:27,029 --> 00:07:25,120
manager

246
00:07:28,950 --> 00:07:27,039
and i'd like to spend just a few minutes

247
00:07:33,510 --> 00:07:28,960
talking about the payloads we have on

248
00:07:35,270 --> 00:07:33,520
uf7 so if we can get the first slide

249
00:07:38,150 --> 00:07:35,280
okay so when the objectives of the

250
00:07:39,589 --> 00:07:38,160
mission is to resupply the station

251
00:07:41,430 --> 00:07:39,599
with cargo

252
00:07:43,749 --> 00:07:41,440
supplies and science

253
00:07:45,110 --> 00:07:43,759
and in order to keep station on track

254
00:07:46,710 --> 00:07:45,120
for another year

255
00:07:48,790 --> 00:07:46,720
so we're going to bring up about 8 200

256
00:07:50,710 --> 00:07:48,800
pounds of supplies

257
00:07:55,510 --> 00:07:50,720
and to date that's the largest volume

258
00:07:58,869 --> 00:07:57,430
so the module as you see from the

259
00:08:00,309 --> 00:07:58,879
picture which has the majority of the

260
00:08:02,270 --> 00:08:00,319
cargo weight

261
00:08:05,350 --> 00:08:02,280
is uh 25

262
00:08:06,390 --> 00:08:05,360
359 pounds we also have an external

263
00:08:07,830 --> 00:08:06,400

carrier

264
00:08:09,670 --> 00:08:07,840
which will bring up a satellite

265
00:08:11,430 --> 00:08:09,680
refueling experiment

266
00:08:13,270 --> 00:08:11,440
and then we'll bring back a

267
00:08:14,950 --> 00:08:13,280
failed pump module i'll talk about that

268
00:08:16,469 --> 00:08:14,960
in a second

269
00:08:19,830 --> 00:08:16,479
and on the other side of the orbiter

270
00:08:21,510 --> 00:08:19,840
we'll be carrying up a dod picosat

271
00:08:25,589 --> 00:08:21,520
satellite called pssc and we'll get into

272
00:08:30,710 --> 00:08:27,830
okay here we kind of have a cartoon

273
00:08:31,830 --> 00:08:30,720
picture of the 16 racks that are inside

274
00:08:33,829 --> 00:08:31,840
a module

275
00:08:34,949 --> 00:08:33,839
that are being used to carry up the iss

276
00:08:36,310 --> 00:08:34,959
supplies

277
00:08:38,389 --> 00:08:36,320
one thing

278
00:08:40,949 --> 00:08:38,399
that we did at ksc is the program

279
00:08:44,230 --> 00:08:40,959
challenged us to

280
00:08:46,550 --> 00:08:44,240
modify the the racks to allow

281
00:08:49,110 --> 00:08:46,560
more carrying capability

282
00:08:50,870 --> 00:08:49,120
by about two 250 pounds

283
00:08:53,269 --> 00:08:50,880
at the same time they challenge us to

284
00:08:54,949 --> 00:08:53,279
keep the hatch open as late as possible

285
00:08:55,670 --> 00:08:54,959
and try to go to the pad as late as we

286
00:08:57,190 --> 00:08:55,680
can

287
00:08:59,350 --> 00:08:57,200
in order to accommodate getting all the

288
00:09:02,710 --> 00:08:59,360

supplies here on time from

289
00:09:04,310 --> 00:09:02,720
various pis and various customers really

290
00:09:05,910 --> 00:09:04,320
around the world

291
00:09:08,070 --> 00:09:05,920
so one thing that we did was we modified

292
00:09:09,990 --> 00:09:08,080
the racks that was very successful and

293
00:09:12,630 --> 00:09:10,000
we did keep the hatch open

294
00:09:14,389 --> 00:09:12,640
and went to the pad as late as we could

295
00:09:19,190 --> 00:09:14,399
and this was a first time operation at

296
00:09:24,389 --> 00:09:22,310
this is a beautiful picture and this was

297
00:09:26,470 --> 00:09:24,399
taken before we installed the aft end

298
00:09:30,310 --> 00:09:26,480
cone and you can see the racks in there

299
00:09:33,750 --> 00:09:30,320
and the 8200 pounds of iss supplies

300
00:09:35,430 --> 00:09:33,760
and i was taken in the sspf

301
00:09:37,030 --> 00:09:35,440
okay this picture

302
00:09:39,269 --> 00:09:37,040
as i mentioned earlier

303
00:09:40,230 --> 00:09:39,279
we are we're bringing up a first of its

304
00:09:43,350 --> 00:09:40,240
kind

305
00:09:44,949 --> 00:09:43,360
robotic refueling mission called rrm

306
00:09:47,110 --> 00:09:44,959
i know you guys had a fantastic

307
00:09:48,550 --> 00:09:47,120
demonstration yesterday

308
00:09:50,550 --> 00:09:48,560
and we also have some folks here from

309
00:09:52,470 --> 00:09:50,560
the rm team so we have some

310
00:09:54,310 --> 00:09:52,480
real deep technical questions we can we

311
00:09:56,070 --> 00:09:54,320
can do it after the briefing

312
00:09:57,829 --> 00:09:56,080
but um this is going to be located on

313
00:10:00,550 --> 00:09:57,839

the outside of the external carrier as

314
00:10:03,030 --> 00:10:00,560
you can see from the top right picture

315
00:10:04,949 --> 00:10:03,040
and on that on that picture you also see

316
00:10:06,230 --> 00:10:04,959
what is called the pump module adapter

317
00:10:09,030 --> 00:10:06,240
plate

318
00:10:11,190 --> 00:10:09,040
and the pump module oiu which is part of

319
00:10:12,470 --> 00:10:11,200
the cooling system on orbit we'll be

320
00:10:14,069 --> 00:10:12,480
bringing that back

321
00:10:16,310 --> 00:10:14,079
to do some research and figure out why

322
00:10:18,310 --> 00:10:16,320
it failed and i'll be mounted

323
00:10:20,949 --> 00:10:18,320
to the other side of the external

324
00:10:22,790 --> 00:10:20,959
carrier so if you remember that that

325
00:10:24,550 --> 00:10:22,800
pump failed it was part of the s1

326
00:10:25,590 --> 00:10:24,560
cooling system it failed back in july of

327
00:10:27,590 --> 00:10:25,600
2010

328
00:10:29,030 --> 00:10:27,600
we do have three other spares up there

329
00:10:30,470 --> 00:10:29,040
but we're not quite sure what's going on

330
00:10:31,590 --> 00:10:30,480
so we need to get this back take a look

331
00:10:33,750 --> 00:10:31,600
at it and

332
00:10:34,949 --> 00:10:33,760
some lessons learned and so we don't if

333
00:10:36,230 --> 00:10:34,959
it happens again we know what to do in

334
00:10:37,670 --> 00:10:36,240
orbit with the other with the other

335
00:10:40,550 --> 00:10:37,680
three pumps

336
00:10:42,870 --> 00:10:40,560
so as a summary um just for this page uh

337
00:10:44,069 --> 00:10:42,880
the mission is currently 12 days as as

338
00:10:46,150 --> 00:10:44,079

jeff mentioned

339
00:10:48,389 --> 00:10:46,160
flight day three the orbiter will dock

340
00:10:50,389 --> 00:10:48,399
and flight day four

341
00:10:52,230 --> 00:10:50,399
the mplm the module will be attached to

342
00:10:53,910 --> 00:10:52,240
node two

343
00:10:55,430 --> 00:10:53,920
and then flight day five the robotic

344
00:10:57,350 --> 00:10:55,440
refueling mission

345
00:11:00,150 --> 00:10:57,360
will be attached to iss

346
00:11:02,470 --> 00:11:00,160
and the pump module will be returned and

347
00:11:03,509 --> 00:11:02,480
attached to the to the lmc the external

348
00:11:05,509 --> 00:11:03,519
carrier

349
00:11:10,470 --> 00:11:05,519
and then on flight day 12 we'll go ahead

350
00:11:14,949 --> 00:11:13,269
okay here's a picture i think you guys

351
00:11:15,829 --> 00:11:14,959
saw rosie that's out in their press

352
00:11:19,590 --> 00:11:15,839
sites

353
00:11:22,389 --> 00:11:20,550
that they did

354
00:11:24,069 --> 00:11:22,399
that is flying

355
00:11:27,190 --> 00:11:24,079
in the payload bay

356
00:11:30,470 --> 00:11:27,200
and in preparation so basically rrm

357
00:11:33,590 --> 00:11:30,480
is in preparations for future refueling

358
00:11:35,350 --> 00:11:33,600
and repair of on-orbit spacecraft the rm

359
00:11:36,550 --> 00:11:35,360
will perform what we call representative

360
00:11:39,509 --> 00:11:36,560
tasks

361
00:11:41,030 --> 00:11:39,519
like locate valves turn valves

362
00:11:42,550 --> 00:11:41,040
simulate

363
00:11:44,470 --> 00:11:42,560

transfer on the field

364
00:11:47,190 --> 00:11:44,480
and these tasks will require

365
00:11:49,269 --> 00:11:47,200
telerobotically you feel a spacecraft

366
00:11:51,269 --> 00:11:49,279
via its ground propellant fill

367
00:11:52,949 --> 00:11:51,279
and drain valve in addition to other

368
00:11:55,030 --> 00:11:52,959
servicing tasks so that's why at the

369
00:11:57,509 --> 00:11:55,040
beginning i said it was the first of its

370
00:11:58,790 --> 00:11:57,519
kind and it really is very unique so if

371
00:12:00,150 --> 00:11:58,800
you haven't had a chance to see it out

372
00:12:01,590 --> 00:12:00,160
on the press site you might want to get

373
00:12:02,629 --> 00:12:01,600
there after

374
00:12:04,310 --> 00:12:02,639
um

375
00:12:07,190 --> 00:12:04,320
this demonstration on orbit will use the

376
00:12:12,629 --> 00:12:07,200
iss spdm robotic arm to locate and

377
00:12:15,509 --> 00:12:13,990
okay this is i just picked this is a

378
00:12:17,590 --> 00:12:15,519
picture of the adapter plate that's on

379
00:12:18,949 --> 00:12:17,600
the external carrier

380
00:12:20,470 --> 00:12:18,959
and

381
00:12:25,269 --> 00:12:20,480
the pm we

382
00:12:28,629 --> 00:12:27,190
um here's a picture

383
00:12:30,629 --> 00:12:28,639
this is an actual ground picture of the

384
00:12:32,069 --> 00:12:30,639
s1 pump module

385
00:12:34,069 --> 00:12:32,079
that will be returning so this was the

386
00:12:39,190 --> 00:12:34,079
ground picture before it flew and this

387
00:12:43,110 --> 00:12:40,629
this is a great picture of the external

388
00:12:47,190 --> 00:12:43,120

carrier going to the canister which will

389
00:12:51,350 --> 00:12:50,150
okay the picosat solar cell 2 this is a

390
00:12:53,990 --> 00:12:51,360
great picture

391
00:12:55,509 --> 00:12:54,000
of the department of defense pssc

392
00:12:58,069 --> 00:12:55,519
and as i mentioned earlier it will be

393
00:13:00,629 --> 00:12:58,079
deployed from the orbiter via a

394
00:13:03,030 --> 00:13:00,639
spring-loaded box and basically its main

395
00:13:08,870 --> 00:13:03,040
objective is to perform tracking

396
00:13:12,230 --> 00:13:09,990
well i don't know what to say about this

397
00:13:13,829 --> 00:13:12,240
this is just beautiful

398
00:13:15,750 --> 00:13:13,839
i don't know i can't find words for it

399
00:13:17,829 --> 00:13:15,760
it's just uh the payloads are the

400
00:13:20,230 --> 00:13:17,839
payloads in the uh orbiter before we

401
00:13:22,150 --> 00:13:20,240
close the doors

402
00:13:24,470 --> 00:13:22,160
it's fascinating as jeff mentioned you

403
00:13:26,710 --> 00:13:24,480
work here for almost 30 years

404
00:13:30,150 --> 00:13:26,720
uh i never take this for granted never

405
00:13:31,750 --> 00:13:30,160
take it for granted so okay next page

406
00:13:34,629 --> 00:13:31,760
so let me um i kind of gave you an

407
00:13:37,110 --> 00:13:34,639
overview of the payloads itself the

408
00:13:39,509 --> 00:13:37,120
supplies and the cargo

409
00:13:41,430 --> 00:13:39,519
that were flying in the mplm

410
00:13:44,069 --> 00:13:41,440
and i talked about the external payloads

411
00:13:45,829 --> 00:13:44,079
that were flying on our external carrier

412
00:13:50,470 --> 00:13:45,839
and the pico sat so let me just spend a

413
00:13:54,230 --> 00:13:52,069

we're trying to get

414
00:13:56,310 --> 00:13:54,240
the information that we need here we've

415
00:13:58,629 --> 00:13:56,320
got all of this in our press kit we're

416
00:13:59,509 --> 00:13:58,639
running out of time

417
00:14:01,829 --> 00:13:59,519
jay

418
00:14:03,509 --> 00:14:01,839
please don't interrupt

419
00:14:05,430 --> 00:14:03,519
joe

420
00:14:07,189 --> 00:14:05,440
okay we'll uh we'll let the briefing

421
00:14:08,629 --> 00:14:07,199
continue please and uh we'll take

422
00:14:11,189 --> 00:14:08,639
questions as soon as the participants

423
00:14:14,150 --> 00:14:11,199
have finished their presentations

424
00:14:15,269 --> 00:14:14,160
okay i'll continue thank you

425
00:14:16,550 --> 00:14:15,279
so i'm going to spend a couple of

426
00:14:18,470 --> 00:14:16,560
minutes talking about we have a lot of

427
00:14:20,790 --> 00:14:18,480
mid-decks going up this flight

428
00:14:23,110 --> 00:14:20,800
we have six powered

429
00:14:24,150 --> 00:14:23,120
and we have four passive and this is the

430
00:14:25,750 --> 00:14:24,160
first time that we're going to be

431
00:14:26,629 --> 00:14:25,760
loading so many mid decks so i'll just

432
00:14:28,389 --> 00:14:26,639
spend a couple minutes going through

433
00:14:30,389 --> 00:14:28,399
some of the main ones

434
00:14:33,350 --> 00:14:30,399
next page please

435
00:14:35,910 --> 00:14:33,360
okay so one of them is called the rsv

436
00:14:38,069 --> 00:14:35,920
the recumbent attenuated salmonella

437
00:14:41,110 --> 00:14:38,079
vaccine and this is an investigation to

438
00:14:42,870 --> 00:14:41,120

evaluate specific strains of salmonella

439
00:14:44,470 --> 00:14:42,880
that have been modified to serve as

440
00:14:46,550 --> 00:14:44,480
potential vaccines so they'll actually

441
00:14:48,150 --> 00:14:46,560
fly the vaccine on orbit do some

442
00:14:49,590 --> 00:14:48,160
modifications

443
00:14:51,910 --> 00:14:49,600
bring it back to earth and turn over the

444
00:14:53,910 --> 00:14:51,920
pis and we'll close some groundbreaking

445
00:14:55,590 --> 00:14:53,920
news here so this is a good one

446
00:14:58,069 --> 00:14:55,600
the glacier we've flown this before this

447
00:15:00,470 --> 00:14:58,079
is a cryogenic freezer refrigerator

448
00:15:02,550 --> 00:15:00,480
designed to provide transportation and

449
00:15:04,790 --> 00:15:02,560
preservation capability for samples

450
00:15:07,350 --> 00:15:04,800
requiring thermal control

451
00:15:09,590 --> 00:15:07,360
next plates please

452
00:15:11,590 --> 00:15:09,600
micro2a is a commercial payload that

453
00:15:12,470 --> 00:15:11,600
investigates the ability of biofilms to

454
00:15:14,310 --> 00:15:12,480
survive

455
00:15:16,310 --> 00:15:14,320
and propagate on various substrate

456
00:15:17,750 --> 00:15:16,320
materials in microgravity so the

457
00:15:19,910 --> 00:15:17,760
objective is really to further our

458
00:15:21,590 --> 00:15:19,920
understanding of both materials and

459
00:15:22,870 --> 00:15:21,600
mitigation techniques

460
00:15:25,110 --> 00:15:22,880
which will preclude and reduce the

461
00:15:27,590 --> 00:15:25,120
buildup of biofilms and water systems

462
00:15:29,030 --> 00:15:27,600
and air handlers here on earth

463
00:15:31,910 --> 00:15:29,040

and then the one below that the brick

464
00:15:34,310 --> 00:15:31,920
synergy that is actually a kc payload

465
00:15:36,069 --> 00:15:34,320
and i just again it's going to be

466
00:15:38,550 --> 00:15:36,079
more research about grown plants in

467
00:15:40,629 --> 00:15:38,560
space and long-term space flights

468
00:15:43,269 --> 00:15:40,639
next page please

469
00:15:45,030 --> 00:15:43,279
and we have the cube lab 7 and 8 and

470
00:15:47,829 --> 00:15:45,040
this is really it's a it's a commercial

471
00:15:50,389 --> 00:15:47,839
company called nanorack cubelab it's

472
00:15:53,749 --> 00:15:50,399
really a low-cost educational platform

473
00:15:56,870 --> 00:15:53,759
to fly various projects on the iss these

474
00:15:58,710 --> 00:15:56,880
particular projects will be flying

475
00:16:01,110 --> 00:15:58,720
liquids for crystal growth

476
00:16:02,870 --> 00:16:01,120
which of course talks about

477
00:16:04,550 --> 00:16:02,880
you know protein crystals for

478
00:16:06,230 --> 00:16:04,560
pharmaceutical research

479
00:16:08,629 --> 00:16:06,240
and then we'll be mixing uh two or three

480
00:16:10,389 --> 00:16:08,639
different fluids at precise times

481
00:16:12,470 --> 00:16:10,399
and the last one that page is another

482
00:16:15,990 --> 00:16:12,480
ksc and you had a demonstration on this

483
00:16:18,069 --> 00:16:16,000
yesterday the ford osmosis bag and and

484
00:16:19,749 --> 00:16:18,079
basically this will aid in the design of

485
00:16:23,189 --> 00:16:19,759
untreated water

486
00:16:25,269 --> 00:16:23,199
into potable water so again some some

487
00:16:27,670 --> 00:16:25,279
applications for long-term space flight

488
00:16:29,430 --> 00:16:27,680

and here on earth

489
00:16:31,189 --> 00:16:29,440
and lastly i want to mention this this

490
00:16:32,310 --> 00:16:31,199
is kind of unique this is uh you guys

491
00:16:33,430 --> 00:16:32,320
have been hearing about the smartphone

492
00:16:35,590 --> 00:16:33,440
that's going to be flying on this

493
00:16:37,590 --> 00:16:35,600
mission there's actually two of them so

494
00:16:38,870 --> 00:16:37,600
the space lab app will make its way to

495
00:16:41,910 --> 00:16:38,880
the iss

496
00:16:44,790 --> 00:16:41,920
via smartphone on sts-135 it's going to

497
00:16:46,629 --> 00:16:44,800
remain there for a for several months

498
00:16:47,990 --> 00:16:46,639
for the iss crew to conduct a series of

499
00:16:49,670 --> 00:16:48,000
experiments

500
00:16:51,749 --> 00:16:49,680
odyssey has also announced it is

501
00:16:54,230 --> 00:16:51,759
bringing the astronauts on orbit

502
00:16:56,470 --> 00:16:54,240
experimental tasks down to what we call

503
00:16:59,189 --> 00:16:56,480
earth for terrestrial consumers

504
00:17:00,230 --> 00:16:59,199
to enjoy via the space lab app so

505
00:17:08,470 --> 00:17:00,240
in

506
00:17:10,150 --> 00:17:08,480
so i thank you for your time and hope

507
00:17:12,069 --> 00:17:10,160
you enjoyed it

508
00:17:13,590 --> 00:17:12,079
thank you joe kathy

509
00:17:15,270 --> 00:17:13,600
thanks kendra

510
00:17:16,789 --> 00:17:15,280
well weather is not looking good for

511
00:17:18,870 --> 00:17:16,799
launch as you know we've been talking

512
00:17:20,870 --> 00:17:18,880
about this for a few days now and as you

513
00:17:21,669 --> 00:17:20,880

can see outside the clouds have rolled

514
00:17:25,510 --> 00:17:21,679
in

515
00:17:28,630 --> 00:17:25,520
even had a thunderstorm show up this

516
00:17:30,310 --> 00:17:28,640
morning along cocoa beach so we are

517
00:17:31,750 --> 00:17:30,320
expecting more of this for the next

518
00:17:33,190 --> 00:17:31,760
couple of days

519
00:17:35,430 --> 00:17:33,200
today our big challenge will be getting

520
00:17:36,870 --> 00:17:35,440
through the rss retract operations we

521
00:17:38,390 --> 00:17:36,880
are we already are looking at the

522
00:17:40,230 --> 00:17:38,400
weather for that and we're going to what

523
00:17:41,909 --> 00:17:40,240
we'll do is we'll just work it real time

524
00:17:43,750 --> 00:17:41,919
and and be talking to the nasa test

525
00:17:45,669 --> 00:17:43,760
director as they're managing the

526
00:17:48,470 --> 00:17:45,679
operation and find a window of

527
00:17:50,390 --> 00:17:48,480
opportunity to get the rss retracted

528
00:17:51,909 --> 00:17:50,400
for launch our main concern is still

529
00:17:53,990 --> 00:17:51,919
having showers and thunderstorms in the

530
00:17:55,909 --> 00:17:54,000
area so with that we do have a 70

531
00:17:57,510 --> 00:17:55,919
percent chance of ksc weather

532
00:17:59,190 --> 00:17:57,520
prohibiting launch

533
00:18:00,870 --> 00:17:59,200
looking at our satellite picture you can

534
00:18:02,950 --> 00:18:00,880
see that we do have that tropical wave

535
00:18:04,630 --> 00:18:02,960
and that large trough and it basically

536
00:18:07,110 --> 00:18:04,640
extends from the southeast gulf of

537
00:18:09,270 --> 00:18:07,120
mexico all the way across into off of

538
00:18:11,430 --> 00:18:09,280

our coast and that's moving into the

539
00:18:12,789 --> 00:18:11,440
area today we've already seen the wind

540
00:18:14,070 --> 00:18:12,799
shift around this morning they're from

541
00:18:15,830 --> 00:18:14,080
the northwest they'll be coming around

542
00:18:18,230 --> 00:18:15,840
to the northeast and then around to the

543
00:18:19,750 --> 00:18:18,240
southeast as that rolls through and by

544
00:18:21,430 --> 00:18:19,760
launch time tomorrow will be from the

545
00:18:23,190 --> 00:18:21,440
south southwest

546
00:18:25,430 --> 00:18:23,200
as that rolls through it's just bringing

547
00:18:27,430 --> 00:18:25,440
a lot of cloud cover a lot of showers

548
00:18:29,350 --> 00:18:27,440
and even some isolated thunderstorms

549
00:18:31,590 --> 00:18:29,360
mostly with these waves we get a lot of

550
00:18:33,590 --> 00:18:31,600
shower activity not as much lightning

551
00:18:35,350 --> 00:18:33,600
but there usually is some and so we'll

552
00:18:36,870 --> 00:18:35,360
be watching for that as well we do not

553
00:18:38,789 --> 00:18:36,880
expect severe weather which would be

554
00:18:40,470 --> 00:18:38,799
winds greater than 50 knots or hail we

555
00:18:42,710 --> 00:18:40,480
don't expect any of that with this it's

556
00:18:45,029 --> 00:18:42,720
just it's just our typical tropical

557
00:18:46,789 --> 00:18:45,039
stuff that we get here we don't get it

558
00:18:48,549 --> 00:18:46,799
every day like this but we do get it in

559
00:18:50,470 --> 00:18:48,559
waves sort of if you will

560
00:18:52,390 --> 00:18:50,480
as these tropical waves come through

561
00:18:53,510 --> 00:18:52,400
during the summertime

562
00:18:54,950 --> 00:18:53,520
let's go and look at the tanking

563
00:18:56,310 --> 00:18:54,960

forecast for tanking tonight we think

564
00:18:58,070 --> 00:18:56,320
things will quiet down when it comes to

565
00:19:00,549 --> 00:18:58,080
lightning but i do expect that we'll see

566
00:19:02,150 --> 00:19:00,559
some showers in the area this evening

567
00:19:04,470 --> 00:19:02,160
so right now we are expecting some cloud

568
00:19:05,750 --> 00:19:04,480
cover in the area showers in the area

569
00:19:07,990 --> 00:19:05,760
real light winds from the south

570
00:19:09,510 --> 00:19:08,000
southwest just five knots our main

571
00:19:10,870 --> 00:19:09,520
concern for tanking will be lightning

572
00:19:12,950 --> 00:19:10,880
within five nautical miles and we do

573
00:19:15,190 --> 00:19:12,960
have a 20 percent chance of ksc weather

574
00:19:17,270 --> 00:19:15,200
prohibiting tanking

575
00:19:18,549 --> 00:19:17,280
for our launch forecast again we're

576
00:19:19,909 --> 00:19:18,559
still expecting showers and

577
00:19:22,150 --> 00:19:19,919
thunderstorms in the area the

578
00:19:23,909 --> 00:19:22,160
constraints a little broader for rtls is

579
00:19:25,510 --> 00:19:23,919
a 20 nautical mile

580
00:19:27,909 --> 00:19:25,520
condition we can't have any showers or

581
00:19:30,470 --> 00:19:27,919
thunderstorms for the rtls landing

582
00:19:32,710 --> 00:19:30,480
weather abort landing weather and so due

583
00:19:34,549 --> 00:19:32,720
to that concern and also cumulus clouds

584
00:19:36,150 --> 00:19:34,559
developing within 10 nautical miles of

585
00:19:38,390 --> 00:19:36,160
the launch pad for that's a lightning

586
00:19:40,390 --> 00:19:38,400
launch commit criteria and also a flight

587
00:19:42,549 --> 00:19:40,400
through precipitation criteria that

588
00:19:45,110 --> 00:19:42,559

shuttle has specifically due to those

589
00:19:48,390 --> 00:19:45,120
concerns we have a 70 percent chance of

590
00:19:50,549 --> 00:19:48,400
ksc weather prohibiting launch

591
00:19:52,710 --> 00:19:50,559
for srb recovery the weather overall is

592
00:19:54,230 --> 00:19:52,720
pretty good mainly we get concerned

593
00:19:55,909 --> 00:19:54,240
about seas in that area and seas are

594
00:19:58,310 --> 00:19:55,919
just three to four feet and actually be

595
00:19:59,510 --> 00:19:58,320
decreasing the following couple of days

596
00:20:00,630 --> 00:19:59,520
they are going to be experiencing

597
00:20:01,990 --> 00:20:00,640
probably some of this shower and

598
00:20:03,270 --> 00:20:02,000
thunderstorm activity and what they

599
00:20:05,110 --> 00:20:03,280
usually do out there is to just work

600
00:20:07,110 --> 00:20:05,120
around that kind of weather and just

601
00:20:10,789 --> 00:20:07,120
wait it out so right now everything

602
00:20:12,070 --> 00:20:10,799
looks looks workable for srb recovery

603
00:20:13,590 --> 00:20:12,080
spaceflight meteorology group is

604
00:20:16,549 --> 00:20:13,600
forecasting good weather in the abort

605
00:20:18,230 --> 00:20:16,559
landing sites no concerns there

606
00:20:20,310 --> 00:20:18,240
and for the la abort landing sites

607
00:20:22,310 --> 00:20:20,320
overseas they're also forecasting all

608
00:20:23,909 --> 00:20:22,320
three sites to be go so weather is

609
00:20:26,149 --> 00:20:23,919
looking good for the overseas board

610
00:20:28,470 --> 00:20:26,159
landing sites

611
00:20:29,669 --> 00:20:28,480
if we do happen to delay 24 hours we

612
00:20:31,590 --> 00:20:29,679
still are going to continue to have

613
00:20:33,669 --> 00:20:31,600

moisture for the following couple of

614
00:20:35,350 --> 00:20:33,679
days but we don't have as much dynamics

615
00:20:37,110 --> 00:20:35,360
with that wave a lot of that will move

616
00:20:38,870 --> 00:20:37,120
up to the north we'll still be very

617
00:20:40,789 --> 00:20:38,880
moist though so our primary concern will

618
00:20:42,870 --> 00:20:40,799
be cumulus clouds and showers developing

619
00:20:44,789 --> 00:20:42,880
as the sea breeze forms which will be a

620
00:20:47,270 --> 00:20:44,799
little bit just about half hour to an

621
00:20:49,750 --> 00:20:47,280
hour before launch time so with that we

622
00:20:52,070 --> 00:20:49,760
have a 60 percent chance of ksc weather

623
00:20:53,190 --> 00:20:52,080
prohibiting launch

624
00:20:54,470 --> 00:20:53,200
spaceflight meteorology group's

625
00:20:56,549 --> 00:20:54,480
forecasting good weather again at the

626
00:20:58,630 --> 00:20:56,559
board landing sites on day two

627
00:21:01,190 --> 00:20:58,640
and for the taos sites also good weather

628
00:21:03,590 --> 00:21:01,200
at all three sites

629
00:21:05,510 --> 00:21:03,600
if we happen to delay 48 hours the

630
00:21:06,950 --> 00:21:05,520
weather again we just continue to see

631
00:21:08,230 --> 00:21:06,960
the launch time is a little bit earlier

632
00:21:09,590 --> 00:21:08,240
we'll still have a lot of moisture but

633
00:21:12,470 --> 00:21:09,600
with that earlier launch time there'll

634
00:21:14,390 --> 00:21:12,480
be less chance of of a violation because

635
00:21:16,470 --> 00:21:14,400
that we won't have as much development

636
00:21:18,710 --> 00:21:16,480
along the sea breeze just yet

637
00:21:21,990 --> 00:21:18,720
so with that we have a 40 percent chance

638
00:21:23,909 --> 00:21:22,000

of ksc weather prohibiting launch

639
00:21:25,510 --> 00:21:23,919
for the abort landing sites space flight

640
00:21:27,350 --> 00:21:25,520
meteorology again forecasting good

641
00:21:29,110 --> 00:21:27,360
weather there for the overseas sites

642
00:21:30,630 --> 00:21:29,120
though it does change a bit on day three

643
00:21:32,710 --> 00:21:30,640
zaragoza does have a chance for

644
00:21:35,110 --> 00:21:32,720
thunderstorms within 20 nautical miles

645
00:21:36,710 --> 00:21:35,120
and estrus also has a slight chance for

646
00:21:39,750 --> 00:21:36,720
thunderstorms within 20 nautical miles

647
00:21:41,270 --> 00:21:39,760
but we do have a good site at marone

648
00:21:43,669 --> 00:21:41,280
so i wish i had better weather for you

649
00:21:45,190 --> 00:21:43,679
but we do have a 70 percent chance of kc

650
00:21:46,789 --> 00:21:45,200
weather prohibiting launch due to the

651
00:21:48,789 --> 00:21:46,799
showers and thunderstorms that we expect

652
00:21:50,310 --> 00:21:48,799
in the area tomorrow

653
00:21:52,390 --> 00:21:50,320
andrea thank you

654
00:21:53,909 --> 00:21:52,400
we'll now take questions i'd like to ask

655
00:21:55,270 --> 00:21:53,919
everyone to limit themselves to one

656
00:21:56,390 --> 00:21:55,280
question at the end if we have extra

657
00:21:58,390 --> 00:21:56,400
time we'll come back around for

658
00:21:59,750 --> 00:21:58,400
follow-ups when the microphone comes

659
00:22:01,350 --> 00:21:59,760
your way please state your name

660
00:22:04,310 --> 00:22:01,360
affiliation and whom you're addressing

661
00:22:05,190 --> 00:22:04,320
your question let's uh start over

662
00:22:06,230 --> 00:22:05,200
here

663
00:22:10,390 --> 00:22:06,240

with

664
00:22:14,789 --> 00:22:12,070
jim siegel celebration independent

665
00:22:18,630 --> 00:22:14,799
newspaper uh i think this might be a

666
00:22:22,070 --> 00:22:18,640
question for you uh jeff but um

667
00:22:25,350 --> 00:22:22,080
the what would be the window for the rss

668
00:22:30,710 --> 00:22:28,070
is there a window a time after which you

669
00:22:31,909 --> 00:22:30,720
this will postpone the launch for a day

670
00:22:33,430 --> 00:22:31,919
or more

671
00:22:35,270 --> 00:22:33,440
it's um

672
00:22:37,350 --> 00:22:35,280
it's not as easy to answer as you'd like

673
00:22:39,270 --> 00:22:37,360
to think but um what we would normally

674
00:22:41,029 --> 00:22:39,280
do is if we get into a posture where we

675
00:22:42,230 --> 00:22:41,039
can't retract it at our scheduled time

676
00:22:43,669 --> 00:22:42,240
we're actually looking to try to do it a

677
00:22:45,430 --> 00:22:43,679
little bit early if we can get there

678
00:22:47,350 --> 00:22:45,440
with the work it's it's always a

679
00:22:50,630 --> 00:22:47,360
challenge because the amount of work on

680
00:22:51,909 --> 00:22:50,640
our on at this particular time frame um

681
00:22:53,270 --> 00:22:51,919
is amazing the amount of work that we

682
00:22:55,029 --> 00:22:53,280
have going on simultaneously at the pad

683
00:22:57,350 --> 00:22:55,039
but um

684
00:22:58,390 --> 00:22:57,360
we generally can do it four or so hours

685
00:23:00,149 --> 00:22:58,400
later

686
00:23:02,310 --> 00:23:00,159
and we've shown that that we can get

687
00:23:05,110 --> 00:23:02,320
about that time frame if we're able to

688
00:23:08,470 --> 00:23:05,120

resequence the work after the rss and

689
00:23:09,669 --> 00:23:08,480
still try to get to a tanking on time

690
00:23:11,750 --> 00:23:09,679
and that says that we are making

691
00:23:13,190 --> 00:23:11,760
decisions earlier than that time frame

692
00:23:14,950 --> 00:23:13,200
to pull some of that work in and use

693
00:23:16,950 --> 00:23:14,960
those people that are available and that

694
00:23:19,190 --> 00:23:16,960
the weather that we may have that's

695
00:23:21,430 --> 00:23:19,200
that's holding up the rss doesn't also

696
00:23:22,950 --> 00:23:21,440
constrain that other work so you kind of

697
00:23:24,630 --> 00:23:22,960
are on a double-edged sword there you've

698
00:23:25,990 --> 00:23:24,640
got to be you know you may not be able

699
00:23:27,029 --> 00:23:26,000
to get there even if you know you're

700
00:23:28,070 --> 00:23:27,039
trying to pull in some of that other

701
00:23:29,990 --> 00:23:28,080
work so

702
00:23:31,669 --> 00:23:30,000
in general that's about where you're at

703
00:23:33,669 --> 00:23:31,679
um with that there is still a little bit

704
00:23:34,870 --> 00:23:33,679
more flexibility if you're willing to

705
00:23:36,710 --> 00:23:34,880
accept some

706
00:23:38,070 --> 00:23:36,720
delays to that tanking time frame but

707
00:23:40,230 --> 00:23:38,080
that's a that's a different decision

708
00:23:41,590 --> 00:23:40,240
process to do that but generally around

709
00:23:43,269 --> 00:23:41,600
four hours is what we use as our

710
00:23:45,430 --> 00:23:43,279
standard

711
00:23:47,269 --> 00:23:45,440
marcia

712
00:23:48,789 --> 00:23:47,279
marshad and associated press joe i know

713
00:23:50,710 --> 00:23:48,799

you've got some commemorative things

714
00:23:52,310 --> 00:23:50,720
going up payload wise could you talk

715
00:23:55,269 --> 00:23:52,320
about all the special things to mark the

716
00:24:00,870 --> 00:23:57,029
that's a good question some of the items

717
00:24:02,789 --> 00:24:00,880
that i saw that are going up we have

718
00:24:04,630 --> 00:24:02,799
they have patches from all the previous

719
00:24:05,909 --> 00:24:04,640
flights that are going up

720
00:24:07,830 --> 00:24:05,919
pins

721
00:24:09,190 --> 00:24:07,840
educational bookmarks

722
00:24:10,549 --> 00:24:09,200
and i think

723
00:24:12,710 --> 00:24:10,559
we i think we can probably work through

724
00:24:15,190 --> 00:24:12,720
pao somehow those are going to get back

725
00:24:16,870 --> 00:24:15,200
to pao and i know the bookmarks

726
00:24:18,950 --> 00:24:16,880
are going to be distributed to various

727
00:24:20,549 --> 00:24:18,960
schools throughout the country

728
00:24:22,230 --> 00:24:20,559
and um

729
00:24:24,470 --> 00:24:22,240
as far as the patches and pins i i can

730
00:24:26,470 --> 00:24:24,480
find out but so between the patches the

731
00:24:30,070 --> 00:24:26,480
pins and and the bookmarks that's that's

732
00:24:33,990 --> 00:24:31,430
uh the ones that i saw are actually in

733
00:24:36,390 --> 00:24:34,000
the mplm in a small little bag

734
00:24:38,470 --> 00:24:36,400
i can't quite tell you how many but um i

735
00:24:39,350 --> 00:24:38,480
saw a good amount of uh bookmarks for

736
00:24:41,029 --> 00:24:39,360
kids

737
00:24:42,870 --> 00:24:41,039
i do know that once they fly they come

738
00:24:45,590 --> 00:24:42,880

back they'll go to various schools

739
00:24:47,269 --> 00:24:45,600
so kids will enjoy that

740
00:24:53,110 --> 00:24:47,279
dan

741
00:24:55,029 --> 00:24:53,120
jeff are you firmly ruling out a

742
00:24:59,190 --> 00:24:55,039
an attempt on all three days friday

743
00:25:02,149 --> 00:25:00,870
well we would get ready to go on all

744
00:25:03,590 --> 00:25:02,159
three of those days if possible

745
00:25:05,269 --> 00:25:03,600
certainly our scrub scenarios dictate

746
00:25:06,549 --> 00:25:05,279
what we can and can't do

747
00:25:07,830 --> 00:25:06,559
um

748
00:25:09,510 --> 00:25:07,840
again as i mentioned earlier we do have

749
00:25:11,029 --> 00:25:09,520
that kind of l minus four line in the

750
00:25:13,430 --> 00:25:11,039
sand it says if we go later than that if

751
00:25:14,950 --> 00:25:13,440
we if we make an attempt and scrub after

752
00:25:17,510 --> 00:25:14,960
that time frame we're kind of driven

753
00:25:19,190 --> 00:25:17,520
driving ourselves to a 48 hour scrub so

754
00:25:20,789 --> 00:25:19,200
that would take that your ability to do

755
00:25:22,870 --> 00:25:20,799
three in a row if you were to scrub

756
00:25:24,710 --> 00:25:22,880
before tanking for example

757
00:25:26,870 --> 00:25:24,720
certainly you could come in each day and

758
00:25:28,789 --> 00:25:26,880
look at the weather and do those type of

759
00:25:30,149 --> 00:25:28,799
things a lot more easily but we still

760
00:25:31,350 --> 00:25:30,159
have that kind of line in the sand that

761
00:25:32,789 --> 00:25:31,360
says

762
00:25:34,549 --> 00:25:32,799
if you're going to make an attempt and

763
00:25:36,230 --> 00:25:34,559

you go past that time frame your ability

764
00:25:38,149 --> 00:25:36,240
to hit every day doesn't you don't have

765
00:25:39,430 --> 00:25:38,159
that capability

766
00:25:41,269 --> 00:25:39,440
okay but

767
00:25:43,669 --> 00:25:41,279
so if you find yourself having scrubbed

768
00:25:45,990 --> 00:25:43,679
both friday and saturday for whatever

769
00:25:50,470 --> 00:25:46,000
reason and there's no mechanical

770
00:25:53,269 --> 00:25:51,590
again it sort of depends on our

771
00:25:55,029 --> 00:25:53,279
guidelines if we're able to come back

772
00:25:56,230 --> 00:25:55,039
and and get the team back here during

773
00:25:57,269 --> 00:25:56,240
that time frame it depends on when we

774
00:25:58,470 --> 00:25:57,279
scrub the nature of the scrub

775
00:25:59,350 --> 00:25:58,480
technically whether we're able to do

776
00:26:01,269 --> 00:25:59,360
that

777
00:26:03,430 --> 00:26:01,279
um all of our days are available to us

778
00:26:04,870 --> 00:26:03,440
as as we briefed and it really depends

779
00:26:06,549 --> 00:26:04,880
on what scenario we end up finding

780
00:26:07,269 --> 00:26:06,559
ourselves in and what our capabilities

781
00:26:09,350 --> 00:26:07,279
are

782
00:26:10,950 --> 00:26:09,360
okay again i'll remind everyone one

783
00:26:12,470 --> 00:26:10,960
question for the first time around we'll

784
00:26:14,310 --> 00:26:12,480
come over here in the front row please

785
00:26:16,230 --> 00:26:14,320
hi simpson space flight magazine uh

786
00:26:19,669 --> 00:26:16,240
question for jeff the callers that you

787
00:26:22,470 --> 00:26:19,679
lost last night um isn't it unusual for

788
00:26:24,390 --> 00:26:22,480

three to go down at once and uh could

789
00:26:26,470 --> 00:26:24,400
you just explain what they do

790
00:26:28,390 --> 00:26:26,480
it's a little unusual sometimes we do

791
00:26:30,149 --> 00:26:28,400
have and these were as it turned out it

792
00:26:31,669 --> 00:26:30,159
looks as though they were all unrelated

793
00:26:33,190 --> 00:26:31,679
as to why they went down different

794
00:26:34,710 --> 00:26:33,200
things one we think we may have a pump

795
00:26:36,390 --> 00:26:34,720
motor which is the most serious the one

796
00:26:38,070 --> 00:26:36,400
that is not back in service at this time

797
00:26:39,110 --> 00:26:38,080
but they're they're out there currently

798
00:26:41,830 --> 00:26:39,120
actually troubleshooting that they were

799
00:26:43,350 --> 00:26:41,840
troubling that this morning um

800
00:26:45,590 --> 00:26:43,360
the other two though have come up

801
00:26:47,190 --> 00:26:45,600
without incident um we're looking at

802
00:26:49,669 --> 00:26:47,200
those also to make sure we understand

803
00:26:51,750 --> 00:26:49,679
why when one went down the other it's

804
00:26:53,430 --> 00:26:51,760
not unusual for a chiller to go offline

805
00:26:54,789 --> 00:26:53,440
for some period of time

806
00:26:56,870 --> 00:26:54,799
which is why you have other ones up and

807
00:26:58,230 --> 00:26:56,880
running and you swap over to them for

808
00:26:59,590 --> 00:26:58,240
various there's a lot of different

809
00:27:00,549 --> 00:26:59,600
reasons where that where that might

810
00:27:02,070 --> 00:27:00,559
happen

811
00:27:03,990 --> 00:27:02,080
and the systems are designed fail safe

812
00:27:06,149 --> 00:27:04,000
to do that if they detect something that

813
00:27:07,909 --> 00:27:06,159

the the system isn't isn't uh doesn't

814
00:27:09,510 --> 00:27:07,919
liking at that time but it is unusual

815
00:27:10,789 --> 00:27:09,520
for all three of them to go down but

816
00:27:12,310 --> 00:27:10,799
it's another reason why we have more

817
00:27:13,909 --> 00:27:12,320
capability than just

818
00:27:15,590 --> 00:27:13,919
those chillers available to us we can

819
00:27:16,870 --> 00:27:15,600
also use the potable water system which

820
00:27:18,230 --> 00:27:16,880
is what we did and that provides

821
00:27:19,750 --> 00:27:18,240
adequate cooling for the vehicle to

822
00:27:21,029 --> 00:27:19,760
continue processing which is what we

823
00:27:22,470 --> 00:27:21,039
were doing as well some of our other

824
00:27:23,990 --> 00:27:22,480
ground systems rely on that cooling

825
00:27:25,830 --> 00:27:24,000
which was the thing that was giving us a

826
00:27:27,510 --> 00:27:25,840
little bit more consternation which is

827
00:27:29,269 --> 00:27:27,520
why we wanted to get those uh chillers

828
00:27:30,950 --> 00:27:29,279
back up but like i said they're all back

829
00:27:31,909 --> 00:27:30,960
up aren't two of the three are back up

830
00:27:34,549 --> 00:27:31,919
providing

831
00:27:36,389 --> 00:27:34,559
nominal cooling at this point all right

832
00:27:38,870 --> 00:27:36,399
have your please stephen young with

833
00:27:40,149 --> 00:27:38,880
spaceflightnow.com um probably for jeff

834
00:27:42,230 --> 00:27:40,159
and kathy

835
00:27:46,070 --> 00:27:42,240
when is the earliest that you could roll

836
00:27:48,470 --> 00:27:46,080
the rss and could you sort of quantify

837
00:27:50,789 --> 00:27:48,480
how serious a threat the weather is to

838
00:27:51,990 --> 00:27:50,799

rss retraction today i'll answer the

839
00:27:55,269 --> 00:27:52,000
first part and then i'll let kathy

840
00:27:57,110 --> 00:27:55,279
answer the second with the weather um

841
00:27:58,789 --> 00:27:57,120
right now from our work perspective as

842
00:28:00,310 --> 00:27:58,799
when i left this morning

843
00:28:01,750 --> 00:28:00,320
maybe about an hour or so earlier than

844
00:28:03,510 --> 00:28:01,760
where we were targeting we could maybe

845
00:28:05,110 --> 00:28:03,520
get to and that's what we were hopeful

846
00:28:06,789 --> 00:28:05,120
for again depending on how the rest of

847
00:28:09,830 --> 00:28:06,799
the work lays out and i'll let kathy

848
00:28:11,830 --> 00:28:09,840
answer the weather part right we

849
00:28:13,510 --> 00:28:11,840
forecast for that it takes one hour to

850
00:28:14,470 --> 00:28:13,520
roll back the rss we try to have

851
00:28:15,830 --> 00:28:14,480
lightning

852
00:28:17,190 --> 00:28:15,840
no more than a twenty percent chance of

853
00:28:19,190 --> 00:28:17,200
lightning within five nautical miles

854
00:28:20,710 --> 00:28:19,200
during that time the other constraints

855
00:28:22,470 --> 00:28:20,720
of wind constraints very high it's like

856
00:28:23,350 --> 00:28:22,480
40 knots sustained wind so we're not

857
00:28:25,110 --> 00:28:23,360
worried about that we're mainly

858
00:28:26,549 --> 00:28:25,120
concerned about lightning within five

859
00:28:27,990 --> 00:28:26,559
and we usually provide that forecast

860
00:28:29,190 --> 00:28:28,000
about a half hour before the roll but we

861
00:28:32,149 --> 00:28:29,200
can talk to them all the way up to when

862
00:28:33,029 --> 00:28:32,159
they start and all and then we watch the

863
00:28:34,389 --> 00:28:33,039

weather all the way through the

864
00:28:36,149 --> 00:28:34,399
operation

865
00:28:37,830 --> 00:28:36,159
okay

866
00:28:39,510 --> 00:28:37,840
leo enright from irish television just

867
00:28:41,029 --> 00:28:39,520
following up on stephen just to be a bit

868
00:28:41,990 --> 00:28:41,039
clearer about this for instance could

869
00:28:44,950 --> 00:28:42,000
you launch

870
00:28:46,470 --> 00:28:44,960
or could you roll back now as it

871
00:28:48,149 --> 00:28:46,480
currently stands

872
00:28:52,230 --> 00:28:48,159
the work right now doesn't allow us to

873
00:28:55,909 --> 00:28:53,590
i'm not looking at the weather right now

874
00:28:57,350 --> 00:28:55,919
i'm sorry but when i when i was looking

875
00:28:58,789 --> 00:28:57,360
at it this morning

876
00:29:01,350 --> 00:28:58,799
it looked like there were some breaks

877
00:29:02,950 --> 00:29:01,360
and so there's probably uh it was

878
00:29:05,269 --> 00:29:02,960
trending down we had a thunderstorm in

879
00:29:06,630 --> 00:29:05,279
the area moving through we had a shower

880
00:29:08,389 --> 00:29:06,640
probably wouldn't have been comfortable

881
00:29:09,269 --> 00:29:08,399
right at that time but we're looking at

882
00:29:14,310 --> 00:29:09,279
that

883
00:29:15,750 --> 00:29:14,320
for now and so what we'll do is we'll

884
00:29:17,590 --> 00:29:15,760
watch the trends up to that point and we

885
00:29:19,029 --> 00:29:17,600
have someone doing that right now

886
00:29:20,470 --> 00:29:19,039
clay flynn actually is watching the

887
00:29:22,230 --> 00:29:20,480
weather for the rss retract he's our

888
00:29:23,510 --> 00:29:22,240

atlas launch weather officer so he's

889
00:29:25,029 --> 00:29:23,520
working with the nasa test director so

890
00:29:26,950 --> 00:29:25,039
i'm sorry i can't give you solid answers

891
00:29:29,110 --> 00:29:26,960
i'm not there but it really is very

892
00:29:30,549 --> 00:29:29,120
dynamic in that we'll call it kind of

893
00:29:32,950 --> 00:29:30,559
close and that's when we can bring the

894
00:29:34,630 --> 00:29:32,960
probabilities down in this situation

895
00:29:36,070 --> 00:29:34,640
if you get too far out in this situation

896
00:29:37,590 --> 00:29:36,080
you just can't bring it down to that 20

897
00:29:39,669 --> 00:29:37,600
percent but as you get closer and you

898
00:29:41,269 --> 00:29:39,679
see how the dynamics are working out in

899
00:29:42,630 --> 00:29:41,279
the atmosphere and what's going on

900
00:29:44,149 --> 00:29:42,640
around the area

901
00:29:45,510 --> 00:29:44,159
we watch for low-level convergence we're

902
00:29:47,510 --> 00:29:45,520
watching all of the instrumentation we

903
00:29:48,789 --> 00:29:47,520
have to see if it looks like a good time

904
00:29:51,110 --> 00:29:48,799
to roll so

905
00:29:52,950 --> 00:29:51,120
um so i'm not sure right now what's

906
00:29:55,590 --> 00:29:52,960
happening but it is that close of a you

907
00:29:57,029 --> 00:29:55,600
know we make that call that close

908
00:30:01,110 --> 00:29:57,039
irene

909
00:30:02,230 --> 00:30:01,120
you have any last requests from station

910
00:30:03,750 --> 00:30:02,240
program

911
00:30:05,990 --> 00:30:03,760
to fly anything and sorry if you've

912
00:30:08,230 --> 00:30:06,000
already covered that and um for for both

913
00:30:10,230 --> 00:30:08,240

of you um either one of you want to take

914
00:30:12,549 --> 00:30:10,240
a guess of how many years it'll be

915
00:30:14,870 --> 00:30:12,559
before there's another launch at

916
00:30:17,029 --> 00:30:14,880
uh 39a or b

917
00:30:19,510 --> 00:30:17,039
well i can talk to payload

918
00:30:21,029 --> 00:30:19,520
the first the first one let me let me

919
00:30:22,470 --> 00:30:21,039
address that

920
00:30:25,430 --> 00:30:22,480
so you want to know if there's any last

921
00:30:29,909 --> 00:30:26,950
compared to other flights this mission

922
00:30:31,669 --> 00:30:29,919
wasn't too bad because we

923
00:30:33,669 --> 00:30:31,679
were able to work with the customers

924
00:30:34,789 --> 00:30:33,679
early enough in the program and got the

925
00:30:36,310 --> 00:30:34,799
word out

926
00:30:38,149 --> 00:30:36,320
and were able to make these

927
00:30:40,710 --> 00:30:38,159
modifications and keep the hatch open as

928
00:30:42,549 --> 00:30:40,720
light as possible

929
00:30:45,110 --> 00:30:42,559
it wasn't it wasn't so bad as what i've

930
00:30:46,549 --> 00:30:45,120
seen in the past

931
00:30:48,310 --> 00:30:46,559
there were a couple

932
00:30:50,789 --> 00:30:48,320
spare parts that

933
00:30:53,029 --> 00:30:50,799
came in uh that we're gonna fly in

934
00:30:54,310 --> 00:30:53,039
mid-deck items that i guess you can call

935
00:30:55,990 --> 00:30:54,320
last minute

936
00:30:58,149 --> 00:30:56,000
um in order to support some of the

937
00:31:00,630 --> 00:30:58,159
eclipse racks they have up there but we

938
00:31:01,990 --> 00:31:00,640

purposely moved a lot of items back to

939
00:31:04,710 --> 00:31:02,000
the mplm

940
00:31:06,789 --> 00:31:04,720
to keep the uh this area of the spaces

941
00:31:08,389 --> 00:31:06,799
open in the mid-decks in case something

942
00:31:10,789 --> 00:31:08,399
came up at the last minute so there was

943
00:31:12,149 --> 00:31:10,799
some eclipse rack spares and that's

944
00:31:14,549 --> 00:31:12,159
that's probably about it and it wasn't

945
00:31:16,310 --> 00:31:14,559
really too bad

946
00:31:17,269 --> 00:31:16,320
as far as the second half the question i

947
00:31:18,950 --> 00:31:17,279
i

948
00:31:19,669 --> 00:31:18,960
don't know about that one

949
00:31:21,350 --> 00:31:19,679
well

950
00:31:22,710 --> 00:31:21,360
in all honestly we don't we don't know

951
00:31:25,029 --> 00:31:22,720
you know there's a lot of things in work

952
00:31:26,630 --> 00:31:25,039
and i know that's um our managers have

953
00:31:28,470 --> 00:31:26,640
been talking about that for for a

954
00:31:29,750 --> 00:31:28,480
significant period of time that there's

955
00:31:31,110 --> 00:31:29,760
a lot of things in the works there's a

956
00:31:32,230 --> 00:31:31,120
lot of plans that are out there for a

957
00:31:34,070 --> 00:31:32,240
lot of different types of either

958
00:31:35,269 --> 00:31:34,080
customers or some of the vehicles that

959
00:31:36,789 --> 00:31:35,279
we're looking at trying to do and

960
00:31:37,750 --> 00:31:36,799
there'll be obviously there'll be test

961
00:31:39,750 --> 00:31:37,760
flights and there'll be other things

962
00:31:42,389 --> 00:31:39,760
associated with them some may be from um

963
00:31:44,070 --> 00:31:42,399

kennedy space center either complex 39a

964
00:31:47,269 --> 00:31:44,080
or b some maybe from some of the other

965
00:31:49,430 --> 00:31:47,279
areas nearby or adjacent to us so

966
00:31:50,149 --> 00:31:49,440
i don't really have a good guess i i

967
00:31:51,990 --> 00:31:50,159
don't

968
00:31:53,430 --> 00:31:52,000
i'm not in all of those teams to give

969
00:31:54,470 --> 00:31:53,440
you a better feel for how that is but

970
00:31:55,830 --> 00:31:54,480
certainly i know there's folks within

971
00:31:56,950 --> 00:31:55,840
nasa that can tell you something maybe

972
00:32:00,149 --> 00:31:56,960
give you some better feel for when that

973
00:32:04,230 --> 00:32:02,710
sentinel for kathy um yesterday mike

974
00:32:05,909 --> 00:32:04,240
moses was talking about how he almost

975
00:32:07,190 --> 00:32:05,919
preferred weather systems like this i

976
00:32:09,350 --> 00:32:07,200
guess to some alternatives that could

977
00:32:10,789 --> 00:32:09,360
happen because of the prospect that

978
00:32:12,230 --> 00:32:10,799
windows could open up here and there

979
00:32:13,590 --> 00:32:12,240
that could allow for a launch could you

980
00:32:15,110 --> 00:32:13,600
talk a little bit about the prospect of

981
00:32:17,029 --> 00:32:15,120
those windows opening up for example and

982
00:32:19,190 --> 00:32:17,039
whether we're experiencing now

983
00:32:21,110 --> 00:32:19,200
right you know sometimes you get little

984
00:32:23,269 --> 00:32:21,120
breaks in the weather and the reason why

985
00:32:24,710 --> 00:32:23,279
this situation isn't quite um as

986
00:32:26,310 --> 00:32:24,720
troublesome as others is we're not

987
00:32:28,549 --> 00:32:26,320
expecting any severe weather that could

988
00:32:31,029 --> 00:32:28,559

damage the vehicle as it's being exposed

989
00:32:31,750 --> 00:32:31,039
to the weather we're mainly just looking

990
00:32:33,750 --> 00:32:31,760
for

991
00:32:35,029 --> 00:32:33,760
showers and thunderstorms the vehicle is

992
00:32:38,789 --> 00:32:35,039
well protected with the lightning

993
00:32:40,950 --> 00:32:38,799
protection system so our primary concern

994
00:32:42,470 --> 00:32:40,960
on other cases on other typical more

995
00:32:44,310 --> 00:32:42,480
typical afternoon thunderstorm days that

996
00:32:45,909 --> 00:32:44,320
we get kind of daily is in certain

997
00:32:47,990 --> 00:32:45,919
situations we get worried about more

998
00:32:49,430 --> 00:32:48,000
about severe weather particularly late

999
00:32:52,470 --> 00:32:49,440
in the spring

1000
00:32:53,909 --> 00:32:52,480
we get more worried about hail so we can

1001
00:32:55,350 --> 00:32:53,919
expose the vehicle in this case and we

1002
00:32:57,029 --> 00:32:55,360
don't have to worry about the fact that

1003
00:32:58,549 --> 00:32:57,039
the vehicle is going to be damaged by

1004
00:33:00,470 --> 00:32:58,559
the weather we just have to be worried

1005
00:33:02,389 --> 00:33:00,480
about being able to launch the vehicle

1006
00:33:04,070 --> 00:33:02,399
around the weather if you will and so

1007
00:33:07,430 --> 00:33:04,080
hoping for one of those gaps in the

1008
00:33:08,630 --> 00:33:07,440
weather during that that launch window

1009
00:33:10,149 --> 00:33:08,640
tarek

1010
00:33:13,110 --> 00:33:10,159
thank you uh tarik malik with the

1011
00:33:15,190 --> 00:33:13,120
space.com uh for joe just a a quick

1012
00:33:15,990 --> 00:33:15,200
question to this there seem to be a few

1013
00:33:17,430 --> 00:33:16,000

uh

1014
00:33:18,470 --> 00:33:17,440
biological payloads on board just

1015
00:33:20,549 --> 00:33:18,480
wondering if there's anything that you'd

1016
00:33:21,669 --> 00:33:20,559
have to change out given a one or two

1017
00:33:23,350 --> 00:33:21,679
day scrub

1018
00:33:25,669 --> 00:33:23,360
and if your team has snuck any goodies

1019
00:33:27,029 --> 00:33:25,679
aboard for the last shuttle crew

1020
00:33:27,909 --> 00:33:27,039
to maybe find while they're in space

1021
00:33:30,470 --> 00:33:27,919
thanks

1022
00:33:33,509 --> 00:33:30,480
good question

1023
00:33:35,350 --> 00:33:33,519
as far as the mplm there's no what we

1024
00:33:37,430 --> 00:33:35,360
call shelf life items there's no

1025
00:33:38,950 --> 00:33:37,440
constraints so we could go

1026
00:33:40,070 --> 00:33:38,960
you know probably two or three months

1027
00:33:42,710 --> 00:33:40,080
and we wouldn't have to worry about

1028
00:33:44,470 --> 00:33:42,720
anything inside the inside the mplm the

1029
00:33:45,669 --> 00:33:44,480
middeck itself would have a few items

1030
00:33:48,149 --> 00:33:45,679
that would have to change but we could

1031
00:33:50,789 --> 00:33:48,159
probably go a few weeks there

1032
00:33:52,789 --> 00:33:50,799
but it's really not a concern as far as

1033
00:33:57,350 --> 00:33:52,799
goodies uh i wasn't able to get anything

1034
00:34:01,830 --> 00:33:59,029
here please

1035
00:34:04,149 --> 00:34:01,840
donna linewand with usa today uh joe

1036
00:34:05,909 --> 00:34:04,159
describing the picture of the payload

1037
00:34:06,789 --> 00:34:05,919
you you sort of sounded like a man in

1038
00:34:09,990 --> 00:34:06,799

love

1039
00:34:13,109 --> 00:34:10,000
and so can you describe for us your last

1040
00:34:14,550 --> 00:34:13,119
look at this last payload

1041
00:34:16,629 --> 00:34:14,560
yeah that um

1042
00:34:17,669 --> 00:34:16,639
that one picture that that that i showed

1043
00:34:20,149 --> 00:34:17,679
you

1044
00:34:22,389 --> 00:34:20,159
of the uh of the module with the before

1045
00:34:24,230 --> 00:34:22,399
you put the f10 cone on and you could

1046
00:34:26,550 --> 00:34:24,240
see inside the racks

1047
00:34:28,069 --> 00:34:26,560
and all the supplies

1048
00:34:30,389 --> 00:34:28,079
you know it's

1049
00:34:31,829 --> 00:34:30,399
sometimes i talk to people it's like

1050
00:34:34,950 --> 00:34:31,839
you know this isn't a piece it's not a

1051
00:34:37,349 --> 00:34:34,960
piece of metal this is a way of life

1052
00:34:38,389 --> 00:34:37,359
it's it's it's what we do

1053
00:34:39,909 --> 00:34:38,399
um

1054
00:34:43,109 --> 00:34:39,919
you know we work

1055
00:34:45,270 --> 00:34:43,119
countless hours down down here to

1056
00:34:46,790 --> 00:34:45,280
prepare these modules and these payloads

1057
00:34:49,190 --> 00:34:46,800
for flights

1058
00:34:51,589 --> 00:34:49,200
everything we do has a consequence to it

1059
00:34:53,270 --> 00:34:51,599
you know and safety is number one

1060
00:34:56,069 --> 00:34:53,280
and something as simple as making sure

1061
00:34:58,310 --> 00:34:56,079
this belt's not is as tight or a certain

1062
00:35:00,069 --> 00:34:58,320
torque is applied it all goes back to

1063
00:35:02,310 --> 00:35:00,079

crew safety and making sure that we're

1064
00:35:04,310 --> 00:35:02,320
successful on orbit because we realize

1065
00:35:05,589 --> 00:35:04,320
everything we do now

1066
00:35:07,670 --> 00:35:05,599
i mean we're

1067
00:35:08,630 --> 00:35:07,680
you know we're just inches into what we

1068
00:35:10,630 --> 00:35:08,640
know

1069
00:35:12,470 --> 00:35:10,640
and everything we do now is is what i

1070
00:35:14,870 --> 00:35:12,480
consider the foundation

1071
00:35:16,950 --> 00:35:14,880
for uh for human space flight

1072
00:35:17,990 --> 00:35:16,960
so every little thing that we take for

1073
00:35:22,630 --> 00:35:18,000
granted

1074
00:35:24,470 --> 00:35:22,640
and it's a way of life for us and

1075
00:35:26,630 --> 00:35:24,480
yeah it's it's emotional

1076
00:35:27,750 --> 00:35:26,640
but it's also part of history i think

1077
00:35:29,190 --> 00:35:27,760
that's what you're seeing from a lot of

1078
00:35:30,950 --> 00:35:29,200
the folks down here that's a good

1079
00:35:31,750 --> 00:35:30,960
question thank you

1080
00:35:35,589 --> 00:35:31,760
bill

1081
00:35:36,790 --> 00:35:35,599
looking at launch options given the

1082
00:35:39,109 --> 00:35:36,800
forecast

1083
00:35:40,470 --> 00:35:39,119
and where we stand at this moment

1084
00:35:44,230 --> 00:35:40,480
none of us are going to quote you anyway

1085
00:35:48,310 --> 00:35:45,829
but seriously i mean given that the

1086
00:35:49,589 --> 00:35:48,320
saturday prospect i mean from the

1087
00:35:51,589 --> 00:35:49,599
expectation but you guys are going to

1088
00:35:52,790 --> 00:35:51,599

gas this thing up and go for it friday

1089
00:35:54,230 --> 00:35:52,800
and then if you don't make it probably

1090
00:35:55,750 --> 00:35:54,240
slip to sunday i mean putting some

1091
00:35:57,349 --> 00:35:55,760
probably some caveats in there and that

1092
00:36:00,310 --> 00:35:57,359
what it looks like right now

1093
00:36:02,150 --> 00:36:00,320
well and and billy i think you know

1094
00:36:04,150 --> 00:36:02,160
our goal going into the meeting tonight

1095
00:36:06,069 --> 00:36:04,160
is always to try to tank i mean that is

1096
00:36:08,230 --> 00:36:06,079
always our goal our goal is to do what

1097
00:36:09,670 --> 00:36:08,240
we can to get to that launch attempt and

1098
00:36:10,950 --> 00:36:09,680
then we're going to weigh all the risks

1099
00:36:12,790 --> 00:36:10,960
and evaluate where we are and look at

1100
00:36:14,230 --> 00:36:12,800
the forecast and look at the trends and

1101
00:36:16,069 --> 00:36:14,240
all the things that mike moses said

1102
00:36:18,710 --> 00:36:16,079
yesterday to see what our confidence

1103
00:36:19,990 --> 00:36:18,720
level is of making that attempt

1104
00:36:22,069 --> 00:36:20,000
we certainly don't want to get into a

1105
00:36:24,150 --> 00:36:22,079
posture where we don't have any attempt

1106
00:36:27,270 --> 00:36:24,160
but but i think we understand enough

1107
00:36:29,030 --> 00:36:27,280
today to say you know this many hours

1108
00:36:30,550 --> 00:36:29,040
out you know we're a day ahead of where

1109
00:36:31,349 --> 00:36:30,560
we need to be tomorrow

1110
00:36:32,790 --> 00:36:31,359
that

1111
00:36:34,390 --> 00:36:32,800
there's some opportunity there and so

1112
00:36:36,069 --> 00:36:34,400
when we have opportunity i think

1113
00:36:37,349 --> 00:36:36,079

generally we're going to take it and

1114
00:36:39,670 --> 00:36:37,359
that's what we want to do because we

1115
00:36:41,270 --> 00:36:39,680
want to you know it's it's a really

1116
00:36:42,870 --> 00:36:41,280
tough day if you make a decision not to

1117
00:36:44,150 --> 00:36:42,880
go and it turns out to be good weather

1118
00:36:45,990 --> 00:36:44,160
and and we've seen those kind of things

1119
00:36:47,670 --> 00:36:46,000
happen in the past um or you're

1120
00:36:48,630 --> 00:36:47,680
constrained for other reasons so you

1121
00:36:49,990 --> 00:36:48,640
want to make sure that you've set

1122
00:36:51,750 --> 00:36:50,000
yourself into a posture where you think

1123
00:36:53,430 --> 00:36:51,760
you have a reasonable chance to get off

1124
00:36:54,550 --> 00:36:53,440
the ground and i think that we'll do

1125
00:36:55,589 --> 00:36:54,560
that

1126
00:36:57,510 --> 00:36:55,599
but we're going to take a look at

1127
00:36:59,030 --> 00:36:57,520
everything we can tonight and i know

1128
00:37:00,390 --> 00:36:59,040
kathy's going to work as hard as she can

1129
00:37:02,630 --> 00:37:00,400
to give us the best forecast and the

1130
00:37:04,150 --> 00:37:02,640
best data and we're going to continually

1131
00:37:05,829 --> 00:37:04,160
update that if in fact we elect to go

1132
00:37:07,270 --> 00:37:05,839
ahead and tank tonight but from my

1133
00:37:09,030 --> 00:37:07,280
perspective

1134
00:37:09,990 --> 00:37:09,040
you know i am expecting until somebody

1135
00:37:12,710 --> 00:37:10,000
says we're not that we're going to go

1136
00:37:15,430 --> 00:37:12,720
ahead and tank tonight

1137
00:37:19,430 --> 00:37:17,270
for joe please can you tell us um you

1138
00:37:21,430 --> 00:37:19,440

held the mplm open to the last moment

1139
00:37:23,589 --> 00:37:21,440
what was the last item or two that you

1140
00:37:26,150 --> 00:37:23,599
put on the mplm and what are the last

1141
00:37:27,990 --> 00:37:26,160
items for the mid deck thank you

1142
00:37:30,230 --> 00:37:28,000
okay ken good question the

1143
00:37:32,630 --> 00:37:30,240
the last couple items that we stowed in

1144
00:37:34,870 --> 00:37:32,640
the mplm were

1145
00:37:37,349 --> 00:37:34,880
the bottom portion of the afternoon cone

1146
00:37:39,750 --> 00:37:37,359
bags if you remember the cartoon it was

1147
00:37:41,750 --> 00:37:39,760
the aft and cone bags you remember the

1148
00:37:42,630 --> 00:37:41,760
cartoon picture you saw the racks and

1149
00:37:44,790 --> 00:37:42,640
then

1150
00:37:47,190 --> 00:37:44,800
on towards the end of the module the

1151
00:37:49,109 --> 00:37:47,200
circular pot we had bags around there

1152
00:37:50,950 --> 00:37:49,119
the last four we installed was actually

1153
00:37:53,190 --> 00:37:50,960
critical

1154
00:37:55,030 --> 00:37:53,200
treadmill hardware

1155
00:37:56,950 --> 00:37:55,040
to resupply some of the treadmills up

1156
00:38:00,230 --> 00:37:56,960
there

1157
00:38:01,750 --> 00:38:00,240
and then as far as the mid deck

1158
00:38:03,349 --> 00:38:01,760
like i

1159
00:38:06,069 --> 00:38:03,359
of course all that's not done yet so we

1160
00:38:07,589 --> 00:38:06,079
haven't completely filled it up yet so

1161
00:38:10,950 --> 00:38:07,599
right oh you want to know what what the

1162
00:38:12,950 --> 00:38:10,960
items are going to be um

1163
00:38:14,950 --> 00:38:12,960

i think the last two items that are

1164
00:38:19,349 --> 00:38:14,960
going on the mid deck again are the

1165
00:38:22,310 --> 00:38:19,359
eclipse spares eclipse rack spares

1166
00:38:24,310 --> 00:38:22,320
okay thank you come over here please

1167
00:38:26,630 --> 00:38:24,320
um mario decoders of florida today for

1168
00:38:28,710 --> 00:38:26,640
kathy we um we've heard several times

1169
00:38:31,030 --> 00:38:28,720
that you're saying we might

1170
00:38:33,270 --> 00:38:31,040
get a break that would allow you to go

1171
00:38:36,069 --> 00:38:33,280
what kind what kind of break or what

1172
00:38:37,829 --> 00:38:36,079
would the race of that break need to be

1173
00:38:38,950 --> 00:38:37,839
for you to be able to go

1174
00:38:40,069 --> 00:38:38,960
well

1175
00:38:42,390 --> 00:38:40,079
the

1176
00:38:43,670 --> 00:38:42,400
launch constraints are

1177
00:38:46,470 --> 00:38:43,680
observed

1178
00:38:48,710 --> 00:38:46,480
so the latest i can call the flight

1179
00:38:50,150 --> 00:38:48,720
through precip constraint would be five

1180
00:38:52,470 --> 00:38:50,160
minutes t minus five minutes and i make

1181
00:38:54,150 --> 00:38:52,480
a forecast for t zero uh when it comes

1182
00:38:56,870 --> 00:38:54,160
to lightning logic criteria we can call

1183
00:38:58,470 --> 00:38:56,880
those down to t minus 10 seconds

1184
00:39:01,109 --> 00:38:58,480
so that's the latest we call those now

1185
00:39:02,310 --> 00:39:01,119
there is rtls i forget the exact time

1186
00:39:05,349 --> 00:39:02,320
but it's somewhere in the neighborhood

1187
00:39:07,510 --> 00:39:05,359
of 15 minutes after launch and so

1188
00:39:08,790 --> 00:39:07,520

spaceflight meteorology group is making

1189
00:39:10,470 --> 00:39:08,800
a forecast

1190
00:39:12,790 --> 00:39:10,480
for rtls

1191
00:39:14,870 --> 00:39:12,800
all the way up to that you know for that

1192
00:39:17,349 --> 00:39:14,880
time period so that is a forecast for

1193
00:39:18,870 --> 00:39:17,359
our tls it's not an observed condition

1194
00:39:20,790 --> 00:39:18,880
and so that's sort of the window if you

1195
00:39:22,069 --> 00:39:20,800
will of when the weather has to be it

1196
00:39:23,750 --> 00:39:22,079
has to be good

1197
00:39:25,109 --> 00:39:23,760
and so what could help us have that well

1198
00:39:26,069 --> 00:39:25,119
if you happen to have a time period we

1199
00:39:27,510 --> 00:39:26,079
don't have a lot of showers and you

1200
00:39:29,270 --> 00:39:27,520
don't and you have enough cloud cover to

1201
00:39:34,550 --> 00:39:29,280
hold off that sea breeze then you could

1202
00:39:39,750 --> 00:39:36,069
jackie

1203
00:39:41,030 --> 00:39:39,760
of london question for kathy

1204
00:39:42,470 --> 00:39:41,040
there's a lot of people going to be

1205
00:39:44,310 --> 00:39:42,480
outside waiting for this hoping it's

1206
00:39:46,230 --> 00:39:44,320
going to be this this great as mike

1207
00:39:49,109 --> 00:39:46,240
lineback said bucket list experience for

1208
00:39:50,870 --> 00:39:49,119
them um even if the shuttle does go

1209
00:39:52,470 --> 00:39:50,880
tomorrow or over the weekend what kind

1210
00:39:54,230 --> 00:39:52,480
of launch experience are those people

1211
00:39:57,109 --> 00:39:54,240
going to get is is the visibility still

1212
00:39:58,310 --> 00:39:57,119
going to be poor well certainly we're

1213
00:39:59,190 --> 00:39:58,320

thinking we're going to have some cloud

1214
00:40:01,589 --> 00:39:59,200
cover

1215
00:40:03,670 --> 00:40:01,599
particularly the pricey around 8 000

1216
00:40:04,950 --> 00:40:03,680
feet is right now what we're calling for

1217
00:40:06,710 --> 00:40:04,960
the ceiling

1218
00:40:08,950 --> 00:40:06,720
so there'll be a low deck around 3000

1219
00:40:10,710 --> 00:40:08,960
feet and probably a mid deck what we

1220
00:40:13,510 --> 00:40:10,720
call mid deck right around probably 8

1221
00:40:15,910 --> 00:40:13,520
000 feet so they if they're on the coast

1222
00:40:17,910 --> 00:40:15,920
here they'll see it up to that point and

1223
00:40:19,750 --> 00:40:17,920
then it'll just be on if we get some

1224
00:40:21,430 --> 00:40:19,760
luck and get some breaks in the cloud

1225
00:40:22,710 --> 00:40:21,440
obviously if we're launching we're green

1226
00:40:24,470 --> 00:40:22,720
enough you know we're green on the

1227
00:40:26,630 --> 00:40:24,480
constraints so possibly we've had a

1228
00:40:28,069 --> 00:40:26,640
break but we do expect either way that

1229
00:40:30,470 --> 00:40:28,079
we're going to have some cloud cover in

1230
00:40:33,109 --> 00:40:30,480
the area

1231
00:40:35,109 --> 00:40:33,119
okay we have time for one last question

1232
00:40:42,309 --> 00:40:35,119
and gentlemen right here in the middle

1233
00:40:48,069 --> 00:40:44,950
hi i'm alan boyle with msnbc

1234
00:40:51,750 --> 00:40:48,079
i wanted to ask about the cost per day

1235
00:40:53,589 --> 00:40:51,760
of a scrub and also

1236
00:40:56,069 --> 00:40:53,599
how many days would have to be set aside

1237
00:40:57,670 --> 00:40:56,079
for that launch that kind of dictates

1238
00:40:59,990 --> 00:40:57,680

what the break is going to be between

1239
00:41:03,510 --> 00:41:00,000
launch opportunities

1240
00:41:04,710 --> 00:41:03,520
um the cost per um scrub i know we have

1241
00:41:06,790 --> 00:41:04,720
some numbers that we probably can

1242
00:41:08,230 --> 00:41:06,800
provide to you that the the agency

1243
00:41:10,630 --> 00:41:08,240
generally

1244
00:41:12,309 --> 00:41:10,640
would go ahead and have determine what

1245
00:41:13,670 --> 00:41:12,319
those numbers might be but what was the

1246
00:41:15,109 --> 00:41:13,680
second part of the question i'm sorry

1247
00:41:16,710 --> 00:41:15,119
the

1248
00:41:19,510 --> 00:41:16,720
interval you'd have to wait for that

1249
00:41:22,950 --> 00:41:21,109
in between

1250
00:41:24,870 --> 00:41:22,960
well generally we have either 24 or 48

1251
00:41:27,349 --> 00:41:24,880
hour capability and anything that splits

1252
00:41:30,309 --> 00:41:27,359
that it would be whether we you know go

1253
00:41:31,910 --> 00:41:30,319
really late i.e after l minus four um in

1254
00:41:33,109 --> 00:41:31,920
that first attempt if we scrub after

1255
00:41:35,510 --> 00:41:33,119
that then generally we're going to go to

1256
00:41:37,109 --> 00:41:35,520
a 48 hour scrub meaning if we don't try

1257
00:41:39,190 --> 00:41:37,119
friday we would try sunday if we go past

1258
00:41:40,470 --> 00:41:39,200
at l minus 4. if we scrub early and we

1259
00:41:42,230 --> 00:41:40,480
don't have any technical issues because

1260
00:41:43,910 --> 00:41:42,240
again if you scrub generally it's

1261
00:41:44,790 --> 00:41:43,920
because there's a problem i mean that's

1262
00:41:45,990 --> 00:41:44,800
generally the reason you're going to

1263
00:41:47,510 --> 00:41:46,000

scrub early

1264
00:41:49,430 --> 00:41:47,520
and if you can get it fixed and taken

1265
00:41:53,109 --> 00:41:49,440
care of then maybe you still have a 24

1266
00:41:56,390 --> 00:41:55,030
sunday there's the delta launch there's

1267
00:41:58,470 --> 00:41:56,400
a delta launch

1268
00:42:00,470 --> 00:41:58,480
that has the range tied up from the 11th

1269
00:42:02,150 --> 00:42:00,480
through the 15th

1270
00:42:04,470 --> 00:42:02,160
we're still talking to them to maybe

1271
00:42:06,150 --> 00:42:04,480
potentially get the 11th from them which

1272
00:42:07,510 --> 00:42:06,160
would move that block of time one day

1273
00:42:09,190 --> 00:42:07,520
over meaning we would come back on the

1274
00:42:10,870 --> 00:42:09,200
backside of that if we needed it one day

1275
00:42:12,790 --> 00:42:10,880
later

1276
00:42:14,950 --> 00:42:12,800
that's all the time we have for today's

1277
00:42:18,309 --> 00:42:14,960
l minus one countdown status briefing

1278
00:42:20,710 --> 00:42:18,319
please join us next on nasa tv at 11 45

1279
00:42:23,109 --> 00:42:20,720
a.m eastern time for the what's next in

1280
00:42:25,829 --> 00:42:23,119
nasa human space flight news conference

1281
00:42:27,430 --> 00:42:25,839
for more information on the sts-135