1
00:00:06,550 --> 00:00:04,710
good morning thank you for joining us

2
00:00:08,710 --> 00:00:06,560
here at nasa's kennedy space center in

3
00:00:10,230 --> 00:00:08,720
florida for the l minus one countdown

4
00:00:12,709 --> 00:00:10,240
status briefing for space shuttle

5
00:00:14,709 --> 00:00:12,719
discovery's sts-133 mission to the

6
00:00:17,670 --> 00:00:14,719
international space station joining me

7
00:00:20,150 --> 00:00:17,680
today is steve payne nasa test director

8
00:00:22,950 --> 00:00:20,160
good morning

9
00:00:25,349 --> 00:00:22,960
scott higginbotham sts-133 payload

10
00:00:27,029 --> 00:00:25,359
manager good morning

11
00:00:29,189 --> 00:00:27,039
and kathy winters shuttle weather

12
00:00:30,390 --> 00:00:29,199
officer good morning

13
00:00:33,270 --> 00:00:30,400

we'll hear from our panelists and then

14
00:00:34,709 --> 00:00:33,280
we'll take questions steve thank you

15
00:00:36,630 --> 00:00:34,719
you know next to the launch itself this

16
00:00:39,030 --> 00:00:36,640
is the part i like best uh we're in

17
00:00:41,030 --> 00:00:39,040
launch countdown within a day of launch

18
00:00:42,389 --> 00:00:41,040
there's a lot of excitement in the air

19
00:00:43,430 --> 00:00:42,399
everyone's putting on their game face

20
00:00:44,790 --> 00:00:43,440
and getting ready for the launch

21
00:00:46,310 --> 00:00:44,800
tomorrow

22
00:00:48,150 --> 00:00:46,320
the launch team's in preparing discovery

23
00:00:49,510 --> 00:00:48,160
for her 39th and final flight that's

24
00:00:51,830 --> 00:00:49,520
going to be putting a permanent

25
00:00:53,670 --> 00:00:51,840
multi-purpose module and the express

26
00:00:55,830 --> 00:00:53,680
logistics carrier up at the

27
00:00:57,590 --> 00:00:55,840
international space station

28
00:01:00,310 --> 00:00:57,600
after addressing a couple of issues last

29
00:01:02,150 --> 00:01:00,320
night and this morning our countdown

30
00:01:04,950 --> 00:01:02,160
work is currently on schedule back on

31
00:01:06,469 --> 00:01:04,960
schedule we had a good reactant load and

32
00:01:08,149 --> 00:01:06,479
offload last night

33
00:01:09,270 --> 00:01:08,159
that's enough whole time to take us

34
00:01:11,830 --> 00:01:09,280
through the end of our window without

35
00:01:13,270 --> 00:01:11,840
having to top off which is a good thing

36
00:01:16,070 --> 00:01:13,280
last night we had a couple of issues we

37
00:01:18,469 --> 00:01:16,080
had to go repair a faulty regulator on

38
00:01:21,190 --> 00:01:18,479

our launch pad nitrogen purge system it

39
00:01:22,710 --> 00:01:21,200
has a primary and a secondary leg to it

40
00:01:25,510 --> 00:01:22,720
they're redundant systems the primary

41
00:01:27,270 --> 00:01:25,520
side had a bad regulator so

42
00:01:29,510 --> 00:01:27,280
we finished our load our reactant load

43
00:01:31,190 --> 00:01:29,520
as we intended to and in the time after

44
00:01:32,710 --> 00:01:31,200
that we went repaired our primary side

45
00:01:35,590 --> 00:01:32,720
and it's back up and supporting it's in

46
00:01:37,350 --> 00:01:35,600
launch configuration now it's good to go

47
00:01:38,710 --> 00:01:37,360
we also had a little excitement early

48
00:01:40,789 --> 00:01:38,720
this morning

49
00:01:42,630 --> 00:01:40,799
when we're doing our engine checkouts we

50
00:01:44,950 --> 00:01:42,640
brought up our engine controllers

51
00:01:46,469 --> 00:01:44,960
when we got to our engine 3 backup

52
00:01:48,310 --> 00:01:46,479
engine controller it didn't come up as

53
00:01:49,670 --> 00:01:48,320
we had expected apparently there was

54
00:01:52,630 --> 00:01:49,680
something wrong with one of the three

55
00:01:54,230 --> 00:01:52,640
phases that provide power to it

56
00:01:55,749 --> 00:01:54,240
after doing some troubleshooting we

57
00:01:59,109 --> 00:01:55,759
narrowed it down to either the circuit

58
00:02:00,709 --> 00:01:59,119
breaker or switch that provides it power

59
00:02:03,670 --> 00:02:00,719
we did some troubleshooting recycle the

60
00:02:05,270 --> 00:02:03,680
breaker recycle the switch

61
00:02:06,709 --> 00:02:05,280
we kind of narrowed it down to transient

62
00:02:07,830 --> 00:02:06,719
contamination once in a while you get

63
00:02:08,869 --> 00:02:07,840

that when you push a switch and it

64
00:02:10,309 --> 00:02:08,879
doesn't go

65
00:02:12,150 --> 00:02:10,319
after cycling the switch in the breaker

66
00:02:13,589 --> 00:02:12,160
a few times it cleared up the controller

67
00:02:15,270 --> 00:02:13,599
is powered up normally we did the

68
00:02:16,309 --> 00:02:15,280
checkout and they are now back up and

69
00:02:18,869 --> 00:02:16,319
supporting

70
00:02:20,390 --> 00:02:18,879
we just recently completed the

71
00:02:21,750 --> 00:02:20,400
the engine checkout so they're back up

72
00:02:24,790 --> 00:02:21,760
and running and they should be that way

73
00:02:26,070 --> 00:02:24,800
all the way through t0

74
00:02:28,070 --> 00:02:26,080
they're still talking about final

75
00:02:29,110 --> 00:02:28,080
disposition so the the paperwork isn't

76
00:02:31,270 --> 00:02:29,120
closed but i think we're going to be

77
00:02:32,949 --> 00:02:31,280
okay on that one as well

78
00:02:35,350 --> 00:02:32,959
currently the countdown clock is holding

79
00:02:37,030 --> 00:02:35,360
at t minus 11 hours we're working preps

80
00:02:38,550 --> 00:02:37,040
for the checkout for the orbital ground

81
00:02:40,869 --> 00:02:38,560
communications network and that should

82
00:02:42,790 --> 00:02:40,879
start this afternoon at 1 30.

83
00:02:44,550 --> 00:02:42,800
we're doing our final flight crew

84
00:02:45,990 --> 00:02:44,560
equipment stowe this afternoon at 3 and

85
00:02:47,589 --> 00:02:46,000
that's where they put in the late

86
00:02:49,990 --> 00:02:47,599
experiments and food and other things

87
00:02:51,350 --> 00:02:50,000
that are perishable in last minute uh

88
00:02:53,270 --> 00:02:51,360

we'll be performing a number of final

89
00:02:55,910 --> 00:02:53,280
inspections of the tank the boosters and

90
00:02:57,509 --> 00:02:55,920
thrusters and removing access platforms

91
00:02:59,430 --> 00:02:57,519
of various kinds in preparation for

92
00:03:00,550 --> 00:02:59,440
rotating the rotating service structure

93
00:03:02,229 --> 00:03:00,560
this evening

94
00:03:04,229 --> 00:03:02,239
at 7 00 pm tonight we're going to be

95
00:03:05,990 --> 00:03:04,239
taking the rotating service structure

96
00:03:09,030 --> 00:03:06,000
back and we'll begin final crew module

97
00:03:11,430 --> 00:03:09,040
configuration for load

98
00:03:13,990 --> 00:03:11,440
at 11 30 tonight we'll pick up the clock

99
00:03:15,830 --> 00:03:14,000
again and resume it count at t minus 11

100
00:03:18,070 --> 00:03:15,840
hours and then we'll begin final loading

101
00:03:20,790 --> 00:03:18,080
preparations and begin clearing the pad

102
00:03:22,390 --> 00:03:20,800
at about 1 30 in the morning tomorrow

103
00:03:24,390 --> 00:03:22,400
at that time we'll begin purging the mid

104
00:03:25,830 --> 00:03:24,400
body and aft compartment and forward and

105
00:03:28,229 --> 00:03:25,840
half reaction control systems with

106
00:03:29,430 --> 00:03:28,239
nitrogen and work final preparations for

107
00:03:33,670 --> 00:03:29,440
tanking

108
00:03:34,949 --> 00:03:33,680
for 6 27 in the morning tomorrow should

109
00:03:36,070 --> 00:03:34,959
take us about three hours to get the

110
00:03:38,070 --> 00:03:36,080
tank filled

111
00:03:41,670 --> 00:03:38,080
our flight crew is scheduled to arrive

112
00:03:43,030 --> 00:03:41,680
just before 1 pm on wednesday

113
00:03:45,589 --> 00:03:43,040

launch window remains the same it's a

114
00:03:48,070 --> 00:03:45,599
10-minute window for station flights

115
00:03:49,509 --> 00:03:48,080
we have opportunities for a flight day

116
00:03:50,789 --> 00:03:49,519
three and flight day four rendezvous

117
00:03:52,869 --> 00:03:50,799
which adds about another three minutes

118
00:03:54,789 --> 00:03:52,879
to that typically we pick the middle of

119
00:03:56,470 --> 00:03:54,799
the window so we'll

120
00:03:58,309 --> 00:03:56,480
go about five minutes into it we're

121
00:04:00,550 --> 00:03:58,319
expecting somewhere around

122
00:04:02,309 --> 00:04:00,560
347 for window open

123
00:04:03,830 --> 00:04:02,319
and about five minutes later for middle

124
00:04:04,949 --> 00:04:03,840
of the window

125
00:04:07,910 --> 00:04:04,959
let's see

126
00:04:09,350 --> 00:04:07,920
we have through the seventh of november

127
00:04:11,270 --> 00:04:09,360
to get off the ground it gives us plenty

128
00:04:13,030 --> 00:04:11,280
of opportunities to have our four

129
00:04:14,550 --> 00:04:13,040
attempts in five days scenario which is

130
00:04:15,910 --> 00:04:14,560
our standard

131
00:04:18,069 --> 00:04:15,920
plenty of hold time so it's not a

132
00:04:19,830 --> 00:04:18,079
concern there it's an 11 day mission

133
00:04:21,349 --> 00:04:19,840
with one contingency day for admission

134
00:04:22,950 --> 00:04:21,359
extension should we need it and two

135
00:04:24,390 --> 00:04:22,960
weather contingency days in case we need

136
00:04:26,070 --> 00:04:24,400
those as well

137
00:04:30,790 --> 00:04:26,080
our end-of-mission landing is planned

138
00:04:32,790 --> 00:04:30,800

for a sunday november 14th at 9 59

139
00:04:34,629 --> 00:04:32,800
eastern time

140
00:04:36,070 --> 00:04:34,639
right now it's uh i'm sure you've heard

141
00:04:37,510 --> 00:04:36,080
a great deal about discovery in her

142
00:04:38,629 --> 00:04:37,520
history and her long and distinguished

143
00:04:40,150 --> 00:04:38,639
career

144
00:04:42,150 --> 00:04:40,160
but i'd also like to comment on the

145
00:04:43,670 --> 00:04:42,160
remarkable team that gets her ready to

146
00:04:45,350 --> 00:04:43,680
fly

147
00:04:47,430 --> 00:04:45,360
they put their heart and soul into this

148
00:04:49,670 --> 00:04:47,440
one and they know it's their last flight

149
00:04:50,950 --> 00:04:49,680
and they put everything they can to make

150
00:04:53,189 --> 00:04:50,960
it as good as every other flight we've

151
00:04:54,830 --> 00:04:53,199
had in the past

152
00:04:56,950 --> 00:04:54,840
she's now poised to take to the skies

153
00:04:58,310 --> 00:04:56,960
tomorrow and when she goes she's going

154
00:04:59,430 --> 00:04:58,320
to take a little bit of every one of us

155
00:05:00,150 --> 00:04:59,440
with her

156
00:05:01,909 --> 00:05:00,160
and

157
00:05:03,350 --> 00:05:01,919
we're ready

158
00:05:04,790 --> 00:05:03,360
thank you steve

159
00:05:07,029 --> 00:05:04,800
scott

160
00:05:08,550 --> 00:05:07,039
good morning everyone i'd like to start

161
00:05:11,189 --> 00:05:08,560
this morning with a little video

162
00:05:13,110 --> 00:05:11,199
compilation of the processing campaign

163
00:05:16,390 --> 00:05:13,120

for both the permanent multi-purpose

164
00:05:18,310 --> 00:05:16,400
module and express logistics carrier 4.

165
00:05:20,870 --> 00:05:18,320
the work for those two elements took

166
00:05:22,390 --> 00:05:20,880
place over the span of about 13 months

167
00:05:23,749 --> 00:05:22,400
but we're going to compress it down into

168
00:05:25,830 --> 00:05:23,759
about four and a half minutes so i'm

169
00:05:27,749 --> 00:05:25,840
going to try to talk fast and it does

170
00:05:29,189 --> 00:05:27,759
bounce around from element to element so

171
00:05:31,110 --> 00:05:29,199
along the way i'll try to keep it

172
00:05:34,469 --> 00:05:31,120
straight for you this is the arrival of

173
00:05:37,270 --> 00:05:34,479
elc-4 it came in via air force c5

174
00:05:39,029 --> 00:05:37,280
back on august 15th of last year

175
00:05:41,029 --> 00:05:39,039
flew down from the goddard space flight

176
00:05:43,350 --> 00:05:41,039
center where the fine people there under

177
00:05:46,390 --> 00:05:43,360
kevin carmack put this and the other

178
00:05:48,950 --> 00:05:46,400
elc's together for us to go fly

179
00:05:51,670 --> 00:05:48,960
this is the module fm1 leonardo that

180
00:05:53,670 --> 00:05:51,680
returned on the sts-131 mission and we

181
00:05:55,350 --> 00:05:53,680
got it back into our work stand on the

182
00:05:57,830 --> 00:05:55,360
26th of april

183
00:05:59,749 --> 00:05:57,840
of this year and began the process to

184
00:06:01,590 --> 00:05:59,759
turn it into a pmm

185
00:06:03,430 --> 00:06:01,600
this is uh some views of the

186
00:06:05,029 --> 00:06:03,440
de-integration of the cargo that took

187
00:06:06,629 --> 00:06:05,039
place for a couple of weeks before we

188
00:06:09,430 --> 00:06:06,639

actually started the modifications of

189
00:06:11,670 --> 00:06:09,440
the element to uh to convert it this is

190
00:06:13,670 --> 00:06:11,680
a view of our common birthing mechanism

191
00:06:15,590 --> 00:06:13,680
checkout equipment that we lift up to

192
00:06:17,830 --> 00:06:15,600
simulate the station side of the docking

193
00:06:20,070 --> 00:06:17,840
interface and this took place back in

194
00:06:21,749 --> 00:06:20,080
mid-may of this year and we do that to

195
00:06:23,189 --> 00:06:21,759
make sure that all those mechanisms are

196
00:06:25,189 --> 00:06:23,199
going to work right and seal

197
00:06:27,029 --> 00:06:25,199
appropriately once we do dock the

198
00:06:29,670 --> 00:06:27,039
element to the station

199
00:06:32,950 --> 00:06:29,680
the work to modify the element primarily

200
00:06:35,350 --> 00:06:32,960
took place in may in in june and july

201
00:06:37,830 --> 00:06:35,360
this is a lift of elc 4

202
00:06:40,390 --> 00:06:37,840
over to the rotation stand one of many

203
00:06:41,909 --> 00:06:40,400
times that we flipped it 180 degrees so

204
00:06:43,510 --> 00:06:41,919
that we could work on the top side or

205
00:06:45,110 --> 00:06:43,520
the bottom side

206
00:06:47,430 --> 00:06:45,120
we started installing racks after the

207
00:06:49,909 --> 00:06:47,440
mods were complete into the pmm the

208
00:06:51,990 --> 00:06:49,919
first track went in on the 7th of july

209
00:06:54,790 --> 00:06:52,000
and the last rack went in on the 22nd of

210
00:06:56,230 --> 00:06:54,800
july we have 14 racks flying up with us

211
00:06:58,550 --> 00:06:56,240
inside the vehicle

212
00:07:00,469 --> 00:06:58,560
our tallest helina space friends working

213
00:07:02,550 --> 00:07:00,479

for roberto barretto and that great team

214
00:07:04,070 --> 00:07:02,560
they they did a lot of the mods on the

215
00:07:06,309 --> 00:07:04,080
vehicle and there they were installing

216
00:07:08,230 --> 00:07:06,319
some of the nextil kevlar

217
00:07:11,110 --> 00:07:08,240
shielding on the vehicle

218
00:07:12,710 --> 00:07:11,120
on the 22nd of july we installed the

219
00:07:14,790 --> 00:07:12,720
thermal radiator the big hunk and

220
00:07:16,870 --> 00:07:14,800
radiator as some of us call it on top of

221
00:07:18,629 --> 00:07:16,880
the lc4 it's the one and only oru that

222
00:07:21,189 --> 00:07:18,639
we're flying up on this mission because

223
00:07:22,710 --> 00:07:21,199
of mass property limitations

224
00:07:25,510 --> 00:07:22,720
on the bottom side of the deck there are

225
00:07:26,790 --> 00:07:25,520
four five sites for future payloads and

226
00:07:30,230 --> 00:07:26,800
they were used to be installed two of

227
00:07:32,230 --> 00:07:30,240
which are launching on htv2 in january

228
00:07:33,830 --> 00:07:32,240
this is a scene of the mate of the deck

229
00:07:36,629 --> 00:07:33,840
to its keel

230
00:07:37,909 --> 00:07:36,639
that took place on the 4th of august of

231
00:07:39,830 --> 00:07:37,919
this year

232
00:07:41,510 --> 00:07:39,840
and that keel comes home it's the only

233
00:07:43,510 --> 00:07:41,520
piece of this compliment for the two

234
00:07:46,309 --> 00:07:43,520
major elements that comes home

235
00:07:48,150 --> 00:07:46,319
robonaut 2 our favorite uh robot

236
00:07:49,670 --> 00:07:48,160
astronaut he is uh

237
00:07:52,150 --> 00:07:49,680
flying up with us on this mission he

238
00:07:54,230 --> 00:07:52,160

arrived in early august and spent about

239
00:07:56,150 --> 00:07:54,240
uh about 10 days being prepared for

240
00:07:58,469 --> 00:07:56,160
installation into its uh protective

241
00:08:00,150 --> 00:07:58,479
enclosure which is called sleeper and

242
00:08:02,070 --> 00:08:00,160
ultimately that enclosure was installed

243
00:08:04,629 --> 00:08:02,080
in the module as the last major big

244
00:08:06,869 --> 00:08:04,639
thing that we put on board

245
00:08:09,270 --> 00:08:06,879
the module was lifted on the 5th of

246
00:08:11,670 --> 00:08:09,280
october and weighed one last time before

247
00:08:13,830 --> 00:08:11,680
it went into the transportation canister

248
00:08:16,629 --> 00:08:13,840
where it joined up with elc-4 that was

249
00:08:19,830 --> 00:08:16,639
installed back in in late september it

250
00:08:21,350 --> 00:08:19,840
was done a little bit earlier

251
00:08:23,589 --> 00:08:21,360
and then once both elements were in the

252
00:08:26,469 --> 00:08:23,599
canister the doors were closed up and we

253
00:08:28,469 --> 00:08:26,479
left the sspf and went down to our

254
00:08:30,950 --> 00:08:28,479
canister rotation facility where the

255
00:08:33,110 --> 00:08:30,960
canister is picked up on end and set

256
00:08:36,870 --> 00:08:33,120
back down onto the transporter

257
00:08:40,870 --> 00:08:37,750
the

258
00:08:44,310 --> 00:08:40,880
canister rolled out to pad a

259
00:08:47,670 --> 00:08:44,320
on the 7th of october of this year my

260
00:08:49,670 --> 00:08:47,680
21st wedding anniversary

261
00:08:51,350 --> 00:08:49,680
my wife's here in the audience

262
00:08:52,790 --> 00:08:51,360
and rolled out to the pad arriving in

263
00:08:54,550 --> 00:08:52,800

the early morning hours where it was

264
00:08:56,150 --> 00:08:54,560
then hoisted up into the rotating

265
00:08:57,350 --> 00:08:56,160
service structure

266
00:08:59,269 --> 00:08:57,360
and then the payload elements were

267
00:09:00,790 --> 00:08:59,279
transferred into the payload ground

268
00:09:02,470 --> 00:09:00,800
handling mechanism which is in the

269
00:09:05,030 --> 00:09:02,480
payload changeout room that's part of

270
00:09:06,550 --> 00:09:05,040
that rotating service structure

271
00:09:08,070 --> 00:09:06,560
that whole rotating service structure

272
00:09:09,910 --> 00:09:08,080
then comes back around the orbiter we

273
00:09:12,389 --> 00:09:09,920
open up the doors and we insert the

274
00:09:14,310 --> 00:09:12,399
payload elements into the orbiter

275
00:09:16,389 --> 00:09:14,320
make all the necessary mechanical and

276
00:09:18,389 --> 00:09:16,399
electrical connections test those

277
00:09:20,070 --> 00:09:18,399
interfaces and then do our final

278
00:09:21,269 --> 00:09:20,080
closeouts and then on the 16th of

279
00:09:23,350 --> 00:09:21,279
october

280
00:09:26,550 --> 00:09:23,360
it all came to a conclusion when we

281
00:09:28,870 --> 00:09:26,560
closed the payload doors for flight

282
00:09:30,550 --> 00:09:28,880
it was a very bittersweet moment for me

283
00:09:31,829 --> 00:09:30,560
and my team

284
00:09:33,750 --> 00:09:31,839
i wouldn't have missed it though for the

285
00:09:36,710 --> 00:09:33,760
world it was neat to kiss leonardo

286
00:09:38,389 --> 00:09:36,720
goodbye

287
00:09:40,710 --> 00:09:38,399
and that brings us basically up to where

288
00:09:43,350 --> 00:09:40,720

we stand today the two primary elements

289
00:09:45,910 --> 00:09:43,360
in the payload bay are ready to go fly

290
00:09:48,550 --> 00:09:45,920
and they are quite content to uh to set

291
00:09:50,550 --> 00:09:48,560
as long as is necessary to get discovery

292
00:09:52,070 --> 00:09:50,560
on orbit where it belongs

293
00:09:53,670 --> 00:09:52,080
we have no scrub turnaround

294
00:09:55,990 --> 00:09:53,680
considerations for either of the two

295
00:09:58,710 --> 00:09:56,000
primary elements

296
00:10:00,310 --> 00:09:58,720
for the middeck complement we have quite

297
00:10:01,590 --> 00:10:00,320
a few items that were flying up in the

298
00:10:03,030 --> 00:10:01,600
mid deck

299
00:10:05,190 --> 00:10:03,040
research-wise

300
00:10:06,870 --> 00:10:05,200
and uh the the major push to get all

301
00:10:09,190 --> 00:10:06,880
those installed in the vehicle uh will

302
00:10:11,190 --> 00:10:09,200
happen today starting at noon and

303
00:10:12,230 --> 00:10:11,200
running until about 7 pm tonight we have

304
00:10:13,990 --> 00:10:12,240
nine different things that we're

305
00:10:15,750 --> 00:10:14,000
installing into the vehicle

306
00:10:17,829 --> 00:10:15,760
as far as scrub turnarounds

307
00:10:20,470 --> 00:10:17,839
is concerned for the experiments they

308
00:10:22,310 --> 00:10:20,480
run the the full spectrum we have one

309
00:10:24,470 --> 00:10:22,320
item that has to be swapped out after

310
00:10:26,470 --> 00:10:24,480
every launch attempt and when we have

311
00:10:28,470 --> 00:10:26,480
another item that's good for 30 days and

312
00:10:30,389 --> 00:10:28,480
everything in between so our team has a

313
00:10:32,630 --> 00:10:30,399

lot of different plans in place and

314
00:10:34,150 --> 00:10:32,640
we're prepared for whatever whatever the

315
00:10:35,750 --> 00:10:34,160
weather or the vehicle throws at us

316
00:10:38,230 --> 00:10:35,760
we'll be prepared to go get the the

317
00:10:41,110 --> 00:10:38,240
samples freshened and ready to go fly to

318
00:10:43,509 --> 00:10:41,120
maximize our science return

319
00:10:46,230 --> 00:10:43,519
so uh at this point uh we're about ready

320
00:10:48,710 --> 00:10:46,240
to go put the ulf5 complement into space

321
00:10:50,949 --> 00:10:48,720
and add this this amazing pressurized

322
00:10:52,790 --> 00:10:50,959
vehicle to the station it's been part of

323
00:10:54,870 --> 00:10:52,800
our family here for a long time it's

324
00:10:56,550 --> 00:10:54,880
leonardo's been here for over 10 years

325
00:10:58,630 --> 00:10:56,560
and in some respects we're sad to see

326
00:11:01,590 --> 00:10:58,640
him go because again he's a he's an old

327
00:11:03,750 --> 00:11:01,600
friend of ours but spacecraft belong in

328
00:11:06,069 --> 00:11:03,760
space not on the ground and this is a

329
00:11:07,509 --> 00:11:06,079
fitting place for him to end his uh and

330
00:11:09,590 --> 00:11:07,519
his career

331
00:11:11,829 --> 00:11:09,600
over the seven flights that leonardo has

332
00:11:14,310 --> 00:11:11,839
flown so far it has

333
00:11:16,790 --> 00:11:14,320
been in space for about 91 days it's

334
00:11:19,030 --> 00:11:16,800
made 1500 orbits of the earth and has

335
00:11:21,190 --> 00:11:19,040
traveled about 40 million miles

336
00:11:22,310 --> 00:11:21,200
but as far as you spacecraft go it's a

337
00:11:23,829 --> 00:11:22,320
cream puff

338
00:11:25,509 --> 00:11:23,839

it's still got a lot of good miles left

339
00:11:27,350 --> 00:11:25,519
in it and in fact if we leave it up

340
00:11:29,430 --> 00:11:27,360
there for the full 10 years planned

341
00:11:32,150 --> 00:11:29,440
we're going to put another 1.5 billion

342
00:11:33,190 --> 00:11:32,160
miles on that spacecraft

343
00:11:34,710 --> 00:11:33,200
so

344
00:11:35,990 --> 00:11:34,720
our team's excited we're looking forward

345
00:11:38,389 --> 00:11:36,000
to the launch and seeing our fine

346
00:11:39,990 --> 00:11:38,399
hardware added to the station and then

347
00:11:40,949 --> 00:11:40,000
we can move on to the next chapter in

348
00:11:42,630 --> 00:11:40,959
our lives

349
00:11:45,430 --> 00:11:42,640
so that's all i have for you today

350
00:11:46,870 --> 00:11:45,440
kendria thank you scott kathy

351
00:11:48,230 --> 00:11:46,880
good morning well the weather this

352
00:11:50,230 --> 00:11:48,240
morning is a little bit cloudy out there

353
00:11:52,310 --> 00:11:50,240
here ksc we also had some isolated

354
00:11:53,910 --> 00:11:52,320
showers in the area this morning this is

355
00:11:55,509 --> 00:11:53,920
all a result of an upper level low

356
00:11:57,190 --> 00:11:55,519
that's dipping down into texas and

357
00:11:59,590 --> 00:11:57,200
drawing a lot of moisture back up into

358
00:12:01,269 --> 00:11:59,600
our into our area and we kind of

359
00:12:03,190 --> 00:12:01,279
expected to see some isolated showers

360
00:12:05,269 --> 00:12:03,200
start to occur and that did start

361
00:12:06,629 --> 00:12:05,279
happening today that is our concern

362
00:12:08,470 --> 00:12:06,639
again for tomorrow is that we could have

363
00:12:10,389 --> 00:12:08,480

some showers in the area and also a low

364
00:12:12,470 --> 00:12:10,399
cloud ceiling a lot of that moisture is

365
00:12:14,550 --> 00:12:12,480
going to pull to the north we still have

366
00:12:15,990 --> 00:12:14,560
a very moist atmosphere though and so

367
00:12:17,750 --> 00:12:16,000
with that we do expect that it's

368
00:12:19,190 --> 00:12:17,760
possible during the countdown tomorrow

369
00:12:21,430 --> 00:12:19,200
that we may have to go red for a low

370
00:12:23,590 --> 00:12:21,440
cloud ceiling or an isolated shower or

371
00:12:25,190 --> 00:12:23,600
maybe observe no go for a little while

372
00:12:26,310 --> 00:12:25,200
in the early portion of the afternoon

373
00:12:27,509 --> 00:12:26,320
late portion of the morning early

374
00:12:29,430 --> 00:12:27,519
afternoon

375
00:12:31,030 --> 00:12:29,440
as the showers push inland with the sea

376
00:12:33,110 --> 00:12:31,040
breeze but then we expect that

377
00:12:35,030 --> 00:12:33,120
conditions will improve as we get closer

378
00:12:36,150 --> 00:12:35,040
to launch time we had something similar

379
00:12:37,910 --> 00:12:36,160
like that happened yesterday with our

380
00:12:39,829 --> 00:12:37,920
low cloud ceiling in the area as we got

381
00:12:41,430 --> 00:12:39,839
into the afternoon hours the sea breeze

382
00:12:43,350 --> 00:12:41,440
push in and we get some sinking air

383
00:12:46,069 --> 00:12:43,360
behind that sea breeze and it helps us

384
00:12:47,430 --> 00:12:46,079
out here along the coast and so tomorrow

385
00:12:49,190 --> 00:12:47,440
we'll see something similar like that

386
00:12:51,190 --> 00:12:49,200
happen and so with that we we are

387
00:12:53,350 --> 00:12:51,200
optimistic on the forecast even though

388
00:12:55,670 --> 00:12:53,360

we know that it's possible we could go

389
00:12:57,350 --> 00:12:55,680
red during the countdown

390
00:12:59,350 --> 00:12:57,360
right now we are still forecasting a 30

391
00:13:01,030 --> 00:12:59,360
percent chance of ksc weather

392
00:13:03,670 --> 00:13:01,040
prohibiting launch

393
00:13:05,190 --> 00:13:03,680
now if we get into a delay though you'll

394
00:13:07,590 --> 00:13:05,200
you'll see the forecast it looks a lot

395
00:13:09,110 --> 00:13:07,600
worse as if that entire frontal system

396
00:13:11,030 --> 00:13:09,120
is going to be coming across our area

397
00:13:12,389 --> 00:13:11,040
what's happening is an upper level

398
00:13:14,310 --> 00:13:12,399
trough is dipping down from the north

399
00:13:16,310 --> 00:13:14,320
into the eastern u.s that's going to

400
00:13:17,110 --> 00:13:16,320
pick up that cutoff low that's going to

401
00:13:18,550 --> 00:13:17,120
be

402
00:13:20,230 --> 00:13:18,560
sort of drifting in the western gulf of

403
00:13:21,990 --> 00:13:20,240
mexico and all that is going to march

404
00:13:24,550 --> 00:13:22,000
over florida so we'll finally get some

405
00:13:26,150 --> 00:13:24,560
much-needed rain on thursday but it will

406
00:13:29,030 --> 00:13:26,160
deteriorate our launch forecast and with

407
00:13:31,110 --> 00:13:29,040
that we have a 70 chance on on thursday

408
00:13:32,310 --> 00:13:31,120
of ksc weather prohibiting launch let me

409
00:13:33,670 --> 00:13:32,320
go and show you all this on the

410
00:13:35,509 --> 00:13:33,680
satellite picture when you look at the

411
00:13:37,829 --> 00:13:35,519
satellite picture you can see that upper

412
00:13:40,069 --> 00:13:37,839
level low is dipping down into texas

413
00:13:42,629 --> 00:13:40,079

the weather at the surface is all on the

414
00:13:44,550 --> 00:13:42,639
east side of that low and so with that

415
00:13:46,069 --> 00:13:44,560
you can see our friends in houston did

416
00:13:48,389 --> 00:13:46,079
wake up to some thunderstorm activity

417
00:13:50,230 --> 00:13:48,399
this morning and all of that is going to

418
00:13:53,509 --> 00:13:50,240
be lingering out in that area for the

419
00:13:55,350 --> 00:13:53,519
next 24 hours as that low cuts off in

420
00:13:57,750 --> 00:13:55,360
the upper levels out in that area and

421
00:13:59,590 --> 00:13:57,760
drifts into the western gulf of mexico

422
00:14:01,990 --> 00:13:59,600
with that though we will be expecting

423
00:14:04,389 --> 00:14:02,000
moisture to pull up into our area also

424
00:14:06,389 --> 00:14:04,399
to note is a tropical storm tomas that's

425
00:14:09,030 --> 00:14:06,399
down in the caribbean about 250 miles

426
00:14:10,710 --> 00:14:09,040
south of the island of hispaniola that's

427
00:14:12,389 --> 00:14:10,720
continuing to be forecast to march

428
00:14:14,389 --> 00:14:12,399
towards the west and then make a turn

429
00:14:15,990 --> 00:14:14,399
northeast and unfortunately it's

430
00:14:17,350 --> 00:14:16,000
probably going to give haiti some

431
00:14:18,550 --> 00:14:17,360
trouble here as we get it to the end of

432
00:14:20,230 --> 00:14:18,560
the week

433
00:14:22,230 --> 00:14:20,240
let me show you a closer picture of our

434
00:14:25,030 --> 00:14:22,240
satellite here in the local area a good

435
00:14:26,629 --> 00:14:25,040
visible satellite picture

436
00:14:28,470 --> 00:14:26,639
you can see a lot of clouds in the area

437
00:14:30,389 --> 00:14:28,480
here in florida right now

438
00:14:32,230 --> 00:14:30,399

basically an old frontal boundary

439
00:14:34,069 --> 00:14:32,240
migrate is migraine back north through

440
00:14:36,069 --> 00:14:34,079
the area today with bringing all that

441
00:14:37,350 --> 00:14:36,079
moisture and we'll get on the moist side

442
00:14:39,350 --> 00:14:37,360
of this boundary

443
00:14:40,629 --> 00:14:39,360
after it moves to the north but we do

444
00:14:42,790 --> 00:14:40,639
expect the conditions to look a little

445
00:14:44,790 --> 00:14:42,800
bit better tomorrow than what this looks

446
00:14:46,550 --> 00:14:44,800
like right now and then of course

447
00:14:48,389 --> 00:14:46,560
through the mid-morning then we'd expect

448
00:14:50,310 --> 00:14:48,399
to see some clouds kind of accumulate as

449
00:14:52,389 --> 00:14:50,320
the sea breeze first forms and then as

450
00:14:53,990 --> 00:14:52,399
that all migrates inland and we expect

451
00:14:56,949 --> 00:14:54,000
the coast to start improving as we get

452
00:14:59,269 --> 00:14:56,959
in the afternoon towards launch time

453
00:15:01,189 --> 00:14:59,279
so let's go ahead and let me before we

454
00:15:02,550 --> 00:15:01,199
go on to our launch forecast information

455
00:15:05,030 --> 00:15:02,560
let me show you the the hurricane

456
00:15:08,150 --> 00:15:05,040
center's forecast for tomas you can see

457
00:15:09,910 --> 00:15:08,160
that right turn that is expected at the

458
00:15:11,829 --> 00:15:09,920
end of the week and now the models

459
00:15:13,910 --> 00:15:11,839
differ a little bit on the last four to

460
00:15:16,150 --> 00:15:13,920
five days for tomas but still not a

461
00:15:18,310 --> 00:15:16,160
threat to florida mainly the threat is

462
00:15:19,509 --> 00:15:18,320
to haiti if the storm starts lingering

463
00:15:20,949 --> 00:15:19,519

in that area

464
00:15:23,350 --> 00:15:20,959
some of the models pull it out to the

465
00:15:24,550 --> 00:15:23,360
northeast away into the atlantic and

466
00:15:26,150 --> 00:15:24,560
then there's a couple of them that are

467
00:15:27,509 --> 00:15:26,160
starting to linger it in the area of

468
00:15:28,870 --> 00:15:27,519
haiti which would be unfortunate for

469
00:15:30,230 --> 00:15:28,880
them because of the

470
00:15:32,230 --> 00:15:30,240
amount of rainfall that they could

471
00:15:34,870 --> 00:15:32,240
experience there in the entire island of

472
00:15:37,430 --> 00:15:34,880
hispaniola so that'll be a concern for

473
00:15:39,189 --> 00:15:37,440
them but for us this is not a threat and

474
00:15:40,949 --> 00:15:39,199
it's still not a threat also for the srb

475
00:15:43,030 --> 00:15:40,959
recovery area

476
00:15:44,949 --> 00:15:43,040
so let's go ahead and move to our tanki

477
00:15:46,150 --> 00:15:44,959
forecast for tomorrow weather does look

478
00:15:47,749 --> 00:15:46,160
like we'll probably see some more of

479
00:15:49,430 --> 00:15:47,759
those isolated showers in the area for

480
00:15:51,749 --> 00:15:49,440
tanking but that's not a

481
00:15:53,430 --> 00:15:51,759
constraint for tanking and so overall

482
00:15:54,949 --> 00:15:53,440
weather looks very good will be pretty

483
00:15:57,110 --> 00:15:54,959
humid tomorrow and the temperature be

484
00:15:58,550 --> 00:15:57,120
around 74 degrees and the probability of

485
00:16:00,310 --> 00:15:58,560
violating tanking constraints i did go

486
00:16:01,670 --> 00:16:00,320
with the 10 percent chance there the

487
00:16:03,749 --> 00:16:01,680
atmosphere is just starting to trend

488
00:16:05,509 --> 00:16:03,759

more unstable but it's not likely we'd

489
00:16:07,509 --> 00:16:05,519
see any lightning in the morning but i

490
00:16:08,870 --> 00:16:07,519
did just drop a temp i did

491
00:16:11,269 --> 00:16:08,880
increase that number from five to ten

492
00:16:14,069 --> 00:16:11,279
percent due to just that unstable

493
00:16:15,910 --> 00:16:14,079
atmosphere that's starting to occur but

494
00:16:17,990 --> 00:16:15,920
we expect that to really come more into

495
00:16:19,590 --> 00:16:18,000
the following 24 hours

496
00:16:21,350 --> 00:16:19,600
let's go ahead and go to our launch

497
00:16:23,189 --> 00:16:21,360
forecast you can see there's a chance

498
00:16:25,030 --> 00:16:23,199
for some isolated showers still expect

499
00:16:26,870 --> 00:16:25,040
that they'd mostly be off to the west

500
00:16:29,030 --> 00:16:26,880
and inland question mark will be if

501
00:16:31,430 --> 00:16:29,040
those are going to be within 20 nautical

502
00:16:34,230 --> 00:16:31,440
miles of the shuttle landing facility if

503
00:16:36,710 --> 00:16:34,240
so then that would be an rtls violation

504
00:16:38,710 --> 00:16:36,720
for the shuttle landing facility um also

505
00:16:40,629 --> 00:16:38,720
we're just slightly concerned that cloud

506
00:16:41,990 --> 00:16:40,639
deck at the 3000 feet we know we'll

507
00:16:43,110 --> 00:16:42,000
probably see a ceiling in the early

508
00:16:44,550 --> 00:16:43,120
portion of the afternoon as we get

509
00:16:47,030 --> 00:16:44,560
closer to launch time that should

510
00:16:49,910 --> 00:16:47,040
improve and scatter out but for those

511
00:16:52,470 --> 00:16:49,920
concerns we do have a 30 chance of ksc

512
00:16:54,550 --> 00:16:52,480
weather prohibiting launch

513
00:16:56,150 --> 00:16:54,560

for srb recovery the weather is not bad

514
00:16:58,470 --> 00:16:56,160
at all on launch day just some isolated

515
00:17:00,710 --> 00:16:58,480
showers expected in the area the seas

516
00:17:02,870 --> 00:17:00,720
are going to be five to six feet however

517
00:17:04,150 --> 00:17:02,880
over the next several days of the trend

518
00:17:05,750 --> 00:17:04,160
is going to be that the seas are going

519
00:17:07,189 --> 00:17:05,760
to be on the increase

520
00:17:08,949 --> 00:17:07,199
first of all with that weather system

521
00:17:10,549 --> 00:17:08,959
that moves through on thursday and then

522
00:17:12,549 --> 00:17:10,559
particularly on friday the seas will

523
00:17:14,630 --> 00:17:12,559
pick up as that strong wind comes in

524
00:17:16,150 --> 00:17:14,640
behind the frontal boundary so the main

525
00:17:17,189 --> 00:17:16,160
concern is just that while they're out

526
00:17:18,710 --> 00:17:17,199
there recovering they're going to be

527
00:17:20,470 --> 00:17:18,720
dealing with a lot of weather and then

528
00:17:23,750 --> 00:17:20,480
on friday the seas will be increasing to

529
00:17:26,710 --> 00:17:25,110
space flight meteorology group is

530
00:17:29,190 --> 00:17:26,720
forecasting good conditions at our abort

531
00:17:30,789 --> 00:17:29,200
landing sites here in the u.s

532
00:17:32,470 --> 00:17:30,799
and for our tile sites the weather still

533
00:17:35,750 --> 00:17:32,480
looks very good out there at all three

534
00:17:37,669 --> 00:17:35,760
towel sites for launch day

535
00:17:39,990 --> 00:17:37,679
if we do happen to delay 24 hours things

536
00:17:41,350 --> 00:17:40,000
change quite a bit here that

537
00:17:43,270 --> 00:17:41,360
front comes in the area that we talked

538
00:17:44,870 --> 00:17:43,280

about that low comes across we could get

539
00:17:47,270 --> 00:17:44,880
up to an inch of rain in the central

540
00:17:49,430 --> 00:17:47,280
florida area here on the east coast and

541
00:17:50,789 --> 00:17:49,440
so with the potential for showers in the

542
00:17:52,950 --> 00:17:50,799
area and even potential for

543
00:17:55,510 --> 00:17:52,960
thunderstorms in the area as well as low

544
00:17:57,350 --> 00:17:55,520
cloud ceilings we do have a 70 percent

545
00:18:00,549 --> 00:17:57,360
chance on this day of ksc weather

546
00:18:02,390 --> 00:18:00,559
prohibiting launch

547
00:18:04,310 --> 00:18:02,400
the abort landing sites though in the us

548
00:18:06,630 --> 00:18:04,320
still do look good for at both edwards

549
00:18:07,909 --> 00:18:06,640
and at northrop field

550
00:18:10,070 --> 00:18:07,919
and the only concern space flight

551
00:18:12,549 --> 00:18:10,080
meteorology group has at the tao sites

552
00:18:14,870 --> 00:18:12,559
is for a chance of four miles visibility

553
00:18:16,710 --> 00:18:14,880
and fog as aragosa but we only need one

554
00:18:18,950 --> 00:18:16,720
good tile site and and estrus both

555
00:18:21,029 --> 00:18:18,960
look good

556
00:18:22,150 --> 00:18:21,039
for the 48 hour delay we expect that the

557
00:18:23,750 --> 00:18:22,160
frontal boundary will move through

558
00:18:25,590 --> 00:18:23,760
sometime either thursday night or friday

559
00:18:27,350 --> 00:18:25,600
morning it will pass completely through

560
00:18:28,630 --> 00:18:27,360
the area with some lingering cloud cover

561
00:18:30,870 --> 00:18:28,640
behind it

562
00:18:33,270 --> 00:18:30,880
but that will also eventually clear

563
00:18:35,909 --> 00:18:33,280

the bigger concern is the winds picking

564
00:18:37,990 --> 00:18:35,919
up on this day from the direction of 340

565
00:18:39,669 --> 00:18:38,000
degrees the pad wind constraint is 34

566
00:18:41,669 --> 00:18:39,679
knots but if it happens to be a little

567
00:18:43,510 --> 00:18:41,679
bit more northerly it starts to decrease

568
00:18:45,990 --> 00:18:43,520
and from straight north it's actually

569
00:18:47,669 --> 00:18:46,000
down to 23 knots so that's our only

570
00:18:49,590 --> 00:18:47,679
concern our main concern on this day

571
00:18:51,190 --> 00:18:49,600
there's just a slight concern also for a

572
00:18:52,310 --> 00:18:51,200
low cloud ceiling during this time in

573
00:18:53,990 --> 00:18:52,320
case that boundary moves through a

574
00:18:56,230 --> 00:18:54,000
little bit slower than the models are

575
00:18:58,950 --> 00:18:56,240
forecasting so overall we have a 30

576
00:19:00,390 --> 00:18:58,960
chance of ksc weather prohibiting launch

577
00:19:02,630 --> 00:19:00,400
i will note the upper level winds do get

578
00:19:03,909 --> 00:19:02,640
very strong on this day so

579
00:19:06,310 --> 00:19:03,919
sometimes when we have strong jet

580
00:19:09,590 --> 00:19:06,320
streams come in that can cause a concern

581
00:19:10,870 --> 00:19:09,600
for our folks on at ascent at jsc and

582
00:19:13,909 --> 00:19:10,880
marshall that will be working the upper

583
00:19:17,270 --> 00:19:13,919
level winds but right now this number

584
00:19:18,950 --> 00:19:17,280
does not cover that probability

585
00:19:20,390 --> 00:19:18,960
if we do happen to

586
00:19:21,750 --> 00:19:20,400
use the abort landing sites at edwards

587
00:19:22,549 --> 00:19:21,760
and northrop field the weather does look

588
00:19:24,310 --> 00:19:22,559

good

589
00:19:26,310 --> 00:19:24,320
and for the taos sites again just a

590
00:19:28,950 --> 00:19:26,320
concern as aragosa for visibility coming

591
00:19:31,110 --> 00:19:28,960
down with fog

592
00:19:32,310 --> 00:19:31,120
so overall tomorrow looks like a good

593
00:19:33,990 --> 00:19:32,320
day especially when you compare it to

594
00:19:37,830 --> 00:19:34,000
thursday but tomorrow we have 30 percent

595
00:19:39,430 --> 00:19:37,840
chance of ksc weather branding launch

596
00:19:41,190 --> 00:19:39,440
thank you kathy we'll now take your

597
00:19:43,190 --> 00:19:41,200
questions when the microphone comes your

598
00:19:44,390 --> 00:19:43,200
way please state your name affiliation

599
00:19:47,270 --> 00:19:44,400
and to whom you're addressing your

600
00:19:47,280 --> 00:19:54,549
start over here with bill

601
00:19:58,470 --> 00:19:56,950
uh for steve on that controller thing

602
00:19:59,990 --> 00:19:58,480
that's just a paperwork constraint now

603
00:20:01,110 --> 00:20:00,000
you there are no constraints to pressing

604
00:20:03,110 --> 00:20:01,120
with any of the

605
00:20:04,950 --> 00:20:03,120
you know mech power-ups and stuff that

606
00:20:06,789 --> 00:20:04,960
no the rest of the count is proceeding

607
00:20:07,990 --> 00:20:06,799
normally that engineering is still

608
00:20:09,830 --> 00:20:08,000
figuring out how they want to close the

609
00:20:11,270 --> 00:20:09,840
paperwork and what what if anything we

610
00:20:12,789 --> 00:20:11,280
need to do further but you don't think

611
00:20:14,549 --> 00:20:12,799
this one's going to be an issue for us i

612
00:20:17,750 --> 00:20:14,559
don't expect it to thanks

613
00:20:20,149 --> 00:20:17,760

okay in the second row with todd please

614
00:20:23,510 --> 00:20:20,159
um todd halverson of florida today for

615
00:20:27,669 --> 00:20:23,520
scott um do you happen to have uh upmass

616
00:20:29,510 --> 00:20:27,679
and down mass uh totals for leonardo

617
00:20:30,549 --> 00:20:29,520
over seven missions and i haven't

618
00:20:32,310 --> 00:20:30,559
followed

619
00:20:34,630 --> 00:20:32,320
not over the not over the seven missions

620
00:20:36,710 --> 00:20:34,640
although we could go obtain that i

621
00:20:39,190 --> 00:20:36,720
meant to gather that but i didn't sorry

622
00:20:41,909 --> 00:20:39,200
um i do know we're taking up about 6 500

623
00:20:46,470 --> 00:20:41,919
pounds up on this flight of cargo the

624
00:20:48,549 --> 00:20:46,480
module weighs 21 817 pounds as launched

625
00:20:50,870 --> 00:20:48,559
on this mission but over its over its

626
00:20:52,549 --> 00:20:50,880
lifetime uh this is a fairly light load

627
00:20:55,270 --> 00:20:52,559
for an mplm because of our mass

628
00:20:57,669 --> 00:20:55,280
limitations and cg limitations

629
00:20:59,350 --> 00:20:57,679
so uh you know it normally flies with

630
00:21:00,870 --> 00:20:59,360
seven eight thousand pounds of cargo up

631
00:21:03,590 --> 00:21:00,880
for flight

632
00:21:05,270 --> 00:21:03,600
and just to uh follow um

633
00:21:07,990 --> 00:21:05,280
do you know or can you tell us what the

634
00:21:09,669 --> 00:21:08,000
final disposition of the other mplms

635
00:21:12,710 --> 00:21:09,679
will be what's going to happen with the

636
00:21:14,310 --> 00:21:12,720
rafaello and donna tello well for now

637
00:21:17,190 --> 00:21:14,320
we're going to hold on to them because

638
00:21:19,909 --> 00:21:17,200

uh there is some talk about potentially

639
00:21:22,470 --> 00:21:19,919
flying them on unmanned rockets in the

640
00:21:24,470 --> 00:21:22,480
future and and maybe is a another

641
00:21:25,190 --> 00:21:24,480
permanent module to add to the station

642
00:21:26,549 --> 00:21:25,200
so

643
00:21:28,149 --> 00:21:26,559
they're they're good vehicles they've

644
00:21:30,310 --> 00:21:28,159
got a lot of lifetime left in them and

645
00:21:33,029 --> 00:21:30,320
so for now i think the intent is to hold

646
00:21:34,390 --> 00:21:33,039
on to them and and see if an opportunity

647
00:21:36,470 --> 00:21:34,400
arises

648
00:21:38,390 --> 00:21:36,480
just to follow that quickly uh do you

649
00:21:40,070 --> 00:21:38,400
know what unmanned rockets they would be

650
00:21:41,669 --> 00:21:40,080
compatible with

651
00:21:42,830 --> 00:21:41,679
no i really don't off the top of my head

652
00:21:45,750 --> 00:21:42,840
todd

653
00:21:47,510 --> 00:21:45,760
okay marcia

654
00:21:49,750 --> 00:21:47,520
where's your done associated press first

655
00:21:51,270 --> 00:21:49,760
question for kathy what does just for

656
00:21:52,789 --> 00:21:51,280
kicks what does the saturday and sunday

657
00:21:56,710 --> 00:21:52,799
weather look like

658
00:22:00,070 --> 00:21:58,390
even a little bit more northerly

659
00:22:01,510 --> 00:22:00,080
and so we'll be watching that because

660
00:22:03,270 --> 00:22:01,520
from a northerly direction if the winds

661
00:22:06,149 --> 00:22:03,280
are strong then that would drop that pad

662
00:22:08,230 --> 00:22:06,159
wind constraint down to 23 knots and

663
00:22:09,990 --> 00:22:08,240

then if the high continues to move off

664
00:22:11,430 --> 00:22:10,000
then you start running into crosswind

665
00:22:13,190 --> 00:22:11,440
issues so the winds are still going to

666
00:22:15,110 --> 00:22:13,200
be probably the biggest concern as we

667
00:22:16,470 --> 00:22:15,120
get into saturday and sunday eventually

668
00:22:18,470 --> 00:22:16,480
tapering off though and improving

669
00:22:19,990 --> 00:22:18,480
weather conditions probably by maybe

670
00:22:23,669 --> 00:22:20,000
sunday afternoon and into monday so

671
00:22:25,029 --> 00:22:23,679
it'll be trending down during that time

672
00:22:26,870 --> 00:22:25,039
scott

673
00:22:28,710 --> 00:22:26,880
you said there are load limitations with

674
00:22:30,149 --> 00:22:28,720
only the radiator on that cargo carrier

675
00:22:31,830 --> 00:22:30,159
could you explain that a little more why

676
00:22:33,909 --> 00:22:31,840
more things more equipment couldn't have

677
00:22:35,350 --> 00:22:33,919
been loaded on that okay well there's

678
00:22:37,510 --> 00:22:35,360
two things we have to deal with on every

679
00:22:38,789 --> 00:22:37,520
flight the the vehicle itself based on

680
00:22:40,310 --> 00:22:38,799
its performance flying to the

681
00:22:42,310 --> 00:22:40,320
inclination orbit that we're flying to

682
00:22:44,950 --> 00:22:42,320
and the altitude we're flying to has a

683
00:22:46,549 --> 00:22:44,960
limit to how much mass it can carry out

684
00:22:48,549 --> 00:22:46,559
and then furthermore we have to keep the

685
00:22:51,510 --> 00:22:48,559
vehicle within certain center of gravity

686
00:22:53,430 --> 00:22:51,520
limits so that it can safely fly back in

687
00:22:55,590 --> 00:22:53,440
in the event of an emergency or for a

688
00:22:57,270 --> 00:22:55,600

nominal landing and so when you look at

689
00:22:59,590 --> 00:22:57,280
both of those things it limits you as to

690
00:23:01,190 --> 00:22:59,600
what you can fly and that there's a team

691
00:23:03,270 --> 00:23:01,200
in houston that does very very thorough

692
00:23:05,190 --> 00:23:03,280
analysis looking at mission complements

693
00:23:06,789 --> 00:23:05,200
and coming up with the best way to get

694
00:23:08,870 --> 00:23:06,799
the most bang for our buck so to speak

695
00:23:10,870 --> 00:23:08,880
and how we lay out that cargo and

696
00:23:12,390 --> 00:23:10,880
several several months ago actually it

697
00:23:14,630 --> 00:23:12,400
had been well over a year ago there was

698
00:23:16,230 --> 00:23:14,640
an assessment done to look at some

699
00:23:17,990 --> 00:23:16,240
different configurations for these last

700
00:23:19,830 --> 00:23:18,000
few flights and and the best scenario

701
00:23:21,830 --> 00:23:19,840
they could come up with over those few

702
00:23:24,310 --> 00:23:21,840
flights was to fly this module and this

703
00:23:25,750 --> 00:23:24,320
deck and this configuration loaded out

704
00:23:27,110 --> 00:23:25,760
as they are

705
00:23:28,789 --> 00:23:27,120
and even though they're not completely

706
00:23:30,230 --> 00:23:28,799
full either one it's the best that we

707
00:23:31,750 --> 00:23:30,240
could do under the circumstances and

708
00:23:37,590 --> 00:23:31,760
stay within the orbiter's performance

709
00:23:41,430 --> 00:23:39,590
hi ken kramer for space flight magazine

710
00:23:43,590 --> 00:23:41,440
for scott can you please describe a

711
00:23:45,830 --> 00:23:43,600
little more detail tonight the nine

712
00:23:47,990 --> 00:23:45,840
items you'll be putting on today well

713
00:23:49,830 --> 00:23:48,000

let's see we have uh

714
00:23:51,430 --> 00:23:49,840
we have a glacier which is a fridge

715
00:23:53,190 --> 00:23:51,440
freezer that we're going to install and

716
00:23:55,029 --> 00:23:53,200
in that fridge freezer we're going to be

717
00:23:57,190 --> 00:23:55,039
installing a jacks experiment called

718
00:23:59,269 --> 00:23:57,200
c-spins and that is an acronym that's

719
00:24:00,870 --> 00:23:59,279
about a foot and a half long so i don't

720
00:24:02,789 --> 00:24:00,880
think i can help you with that

721
00:24:04,630 --> 00:24:02,799
we have two animal enclosure modules for

722
00:24:06,149 --> 00:24:04,640
a mouse immunology experiment that are

723
00:24:08,470 --> 00:24:06,159
going on board those those are both

724
00:24:10,549 --> 00:24:08,480
powered the glacier is also powered we

725
00:24:12,390 --> 00:24:10,559
have a commercial generic bioprocessing

726
00:24:14,950 --> 00:24:12,400
apparatus which we've flown many times

727
00:24:17,830 --> 00:24:14,960
this time it's carrying the national lab

728
00:24:19,830 --> 00:24:17,840
pathfinder vaccine 11

729
00:24:21,430 --> 00:24:19,840
and so those those comprise our four

730
00:24:23,830 --> 00:24:21,440
powered experiments

731
00:24:26,070 --> 00:24:23,840
we have a colored fungi and space

732
00:24:27,510 --> 00:24:26,080
experiment that's from europe

733
00:24:29,590 --> 00:24:27,520
we have a

734
00:24:31,110 --> 00:24:29,600
national lab pathfinder cell 6

735
00:24:34,950 --> 00:24:31,120
experiment

736
00:24:37,430 --> 00:24:34,960
mentioned earlier we have lmm bio which

737
00:24:38,950 --> 00:24:37,440
is a it's a biological experiment that's

738
00:24:40,789 --> 00:24:38,960

going to go up and use the the

739
00:24:42,870 --> 00:24:40,799
microscope that's in one of our

740
00:24:45,269 --> 00:24:42,880
microgravity research racks on orbit to

741
00:24:48,070 --> 00:24:45,279
prove that that microscope can be used

742
00:24:49,750 --> 00:24:48,080
to look at biological samples and then

743
00:24:52,390 --> 00:24:49,760
we have a materials processing

744
00:24:53,830 --> 00:24:52,400
experiment called bcat6

745
00:24:55,190 --> 00:24:53,840
that's going up that we're installing

746
00:24:57,669 --> 00:24:55,200
today

747
00:25:00,870 --> 00:24:57,679
i think that's all of them

748
00:25:02,390 --> 00:25:00,880
and on the end here please

749
00:25:03,909 --> 00:25:02,400
justin mullins from new scientists at

750
00:25:05,430 --> 00:25:03,919
first steve

751
00:25:07,029 --> 00:25:05,440
what happens to discovery after the

752
00:25:09,269 --> 00:25:07,039
mission has ended is anyone is it final

753
00:25:11,430 --> 00:25:09,279
resting place being determined

754
00:25:13,110 --> 00:25:11,440
not officially there are a number of uh

755
00:25:14,470 --> 00:25:13,120
organizations bidding for the orbiters

756
00:25:15,909 --> 00:25:14,480
and that there's a panel that's going to

757
00:25:18,070 --> 00:25:15,919
determine where they all end up at some

758
00:25:19,990 --> 00:25:18,080
point they're all going to museums where

759
00:25:21,510 --> 00:25:20,000
the public can enjoy them as much as we

760
00:25:23,190 --> 00:25:21,520
have

761
00:25:25,990 --> 00:25:23,200
but the the official who's getting which

762
00:25:27,510 --> 00:25:26,000
one is not yet been put out so i don't

763
00:25:29,029 --> 00:25:27,520

know the answer to you

764
00:25:31,110 --> 00:25:29,039
decision be made

765
00:25:32,230 --> 00:25:31,120
i'm not sure that we might have to get

766
00:25:34,310 --> 00:25:32,240
back to you with an answer on that one

767
00:25:38,630 --> 00:25:34,320
okay

768
00:25:42,870 --> 00:25:40,230
question for steve mark ratterman with

769
00:25:44,630 --> 00:25:42,880
talking space on the number three engine

770
00:25:47,350 --> 00:25:44,640
the backup controller that you mentioned

771
00:25:48,630 --> 00:25:47,360
the problem powering it up overnight

772
00:25:50,710 --> 00:25:48,640
are those switches i may have missed

773
00:25:52,390 --> 00:25:50,720
this is this orbital or ground support

774
00:25:54,630 --> 00:25:52,400
equipment these are orbiter switches

775
00:25:56,470 --> 00:25:54,640
there is a a circuit breaker on the left

776
00:25:58,310 --> 00:25:56,480
side panel l4

777
00:26:01,190 --> 00:25:58,320
and there is a switch on the right side

778
00:26:03,190 --> 00:26:01,200
panel where the pilot sits r2

779
00:26:05,029 --> 00:26:03,200
and those are the ones we cycled

780
00:26:07,909 --> 00:26:05,039
when did they come into play during the

781
00:26:08,870 --> 00:26:07,919
uh during the countdown or is that a

782
00:26:12,310 --> 00:26:08,880
at this point they're going to stay

783
00:26:12,320 --> 00:26:15,990
okay are there any more questions

784
00:26:21,110 --> 00:26:18,950
that will conclude today's sts-133 l

785
00:26:22,710 --> 00:26:21,120
minus one countdown status briefing as

786
00:26:24,230 --> 00:26:22,720
steve mentioned the rotating service

787
00:26:26,070 --> 00:26:24,240
structure will move away from space

788
00:26:28,630 --> 00:26:26,080

shuttle discovery in preparation for its

789
00:26:31,190 --> 00:26:28,640
launch tomorrow at 7 pm eastern time

790
00:26:32,789 --> 00:26:31,200
that will be shown on nasa television

791
00:26:35,669 --> 00:26:32,799
commentary coverage for the launch

792
00:26:38,470 --> 00:26:35,679
tomorrow will begin with tanking at 6 25

793
00:26:41,110 --> 00:26:38,480
a.m eastern time live on nasa tv for

794
00:26:45,750 --> 00:26:41,120
more information on the sts-133 mission