



1
00:00:10,709 --> 00:00:08,950
well good evening and welcome back to

2
00:00:13,350 --> 00:00:10,719
the johnson space center as we hit the

3
00:00:14,950 --> 00:00:13,360
top of the stretch in discovery's flight

4
00:00:16,390 --> 00:00:14,960
to the international space station and

5
00:00:18,470 --> 00:00:16,400
our mission status briefing for this

6
00:00:19,750 --> 00:00:18,480
evening to wrap things up with us to

7
00:00:21,189 --> 00:00:19,760
talk about entry and landing

8
00:00:23,349 --> 00:00:21,199
preparations as the entry flight

9
00:00:24,870 --> 00:00:23,359
director richard jones richard

10
00:00:26,550 --> 00:00:24,880
rob thank you very much well it's a

11
00:00:29,150 --> 00:00:26,560
pleasure to be here and thank you very

12
00:00:32,229 --> 00:00:29,160
much for having me as you all know the

13
00:00:35,110 --> 00:00:32,239

sts-128 mission is coming here to a

14

00:00:37,110 --> 00:00:35,120

close very shortly and the ground team

15

00:00:38,709 --> 00:00:37,120

and the on-orbit crew is preparing to

16

00:00:41,270 --> 00:00:38,719

bring discovery home

17

00:00:42,310 --> 00:00:41,280

tomorrow and as you've been hearing each

18

00:00:44,310 --> 00:00:42,320

day

19

00:00:46,549 --> 00:00:44,320

from the flight directors and the

20

00:00:48,709 --> 00:00:46,559

mission uh management team members who

21

00:00:50,630 --> 00:00:48,719

have been briefing you here each day

22

00:00:52,790 --> 00:00:50,640

there's been nothing but superlatives

23

00:00:53,830 --> 00:00:52,800

that you can attribute to this to this

24

00:00:56,150 --> 00:00:53,840

mission

25

00:00:57,750 --> 00:00:56,160

and i'm here to really tell you more of

26

00:01:00,310 --> 00:00:57,760

the same

27

00:01:01,910 --> 00:01:00,320

all we've had is is really

28

00:01:04,390 --> 00:01:01,920

really good news

29

00:01:06,149 --> 00:01:04,400

the crew is doing great and the ground

30

00:01:07,750 --> 00:01:06,159

team's ready so

31

00:01:10,310 --> 00:01:07,760

just want to kind of go through some

32

00:01:11,910 --> 00:01:10,320

things to help set up the entry strategy

33

00:01:13,750 --> 00:01:11,920

for tomorrow

34

00:01:15,270 --> 00:01:13,760

but first i want to kind of start off

35

00:01:17,109 --> 00:01:15,280

with some of the things that happened

36

00:01:19,030 --> 00:01:17,119

today we had a really good

37

00:01:21,749 --> 00:01:19,040

fcs checkout flight control system

38

00:01:23,830 --> 00:01:21,759

checkout and hot fire we hot fired all

39

00:01:26,789 --> 00:01:23,840
of the primary jets that we could

40

00:01:28,469 --> 00:01:26,799
possibly use tomorrow and everything

41

00:01:31,510 --> 00:01:28,479
checked out very clean

42

00:01:33,109 --> 00:01:31,520
during the fcs checkout during the first

43

00:01:35,350 --> 00:01:33,119
portion of that when we're running the

44

00:01:37,670 --> 00:01:35,360
auxiliary power unit and we do some

45

00:01:40,149 --> 00:01:37,680
secondary actuator checks that really

46

00:01:41,109 --> 00:01:40,159
shake the vehicle up we we did lose a

47

00:01:41,830 --> 00:01:41,119
piece

48

00:01:44,469 --> 00:01:41,840
of

49

00:01:45,350 --> 00:01:44,479
debris the crew did capture that in a

50

00:01:49,030 --> 00:01:45,360
still

51
00:01:51,109 --> 00:01:49,040
and they sent that down to the ground we

52
00:01:52,870 --> 00:01:51,119
were able to take a look at those shots

53
00:01:55,270 --> 00:01:52,880
and we weren't able to come to a

54
00:01:57,190 --> 00:01:55,280
definitive conclusion as far as what

55
00:01:59,030 --> 00:01:57,200
that object was

56
00:02:01,190 --> 00:01:59,040
but we definitively came to the

57
00:02:03,190 --> 00:02:01,200
conclusion that it is not a thermal

58
00:02:04,950 --> 00:02:03,200
protection system

59
00:02:06,950 --> 00:02:04,960
or a piece of the thermal protection

60
00:02:10,070 --> 00:02:06,960
system so really from that perspective

61
00:02:12,229 --> 00:02:10,080
we're in a very good configuration

62
00:02:14,550 --> 00:02:12,239
we got more good news as the day

63
00:02:16,869 --> 00:02:14,560

progressed today the the damage

64

00:02:18,470 --> 00:02:16,879

assessment team or the dat team they

65

00:02:20,070 --> 00:02:18,480

were able to give us

66

00:02:22,790 --> 00:02:20,080

great news from the standpoint that

67

00:02:24,470 --> 00:02:22,800

their late inspection results

68

00:02:26,470 --> 00:02:24,480

they had finished those up today they

69

00:02:29,510 --> 00:02:26,480

had done a very thorough job of

70

00:02:31,670 --> 00:02:29,520

analyzing the data as they always do

71

00:02:33,830 --> 00:02:31,680

and they looked at the wing leading edge

72

00:02:34,710 --> 00:02:33,840

and the nose cap systems

73

00:02:36,869 --> 00:02:34,720

and

74

00:02:38,070 --> 00:02:36,879

all of that is is clean there are no

75

00:02:40,710 --> 00:02:38,080

liens against

76

00:02:42,630 --> 00:02:40,720

the tps so the vehicle is is ready to

77

00:02:45,589 --> 00:02:42,640

come home

78

00:02:47,910 --> 00:02:45,599

from a consumables perspective we have a

79

00:02:49,589 --> 00:02:47,920

lot of consumables on board in fact we

80

00:02:52,070 --> 00:02:49,599

have the amount of consumables that can

81

00:02:53,910 --> 00:02:52,080

take us out through sunday and the

82

00:02:56,470 --> 00:02:53,920

mission plus three

83

00:02:57,990 --> 00:02:56,480

and so hopefully we won't have to use

84

00:03:00,070 --> 00:02:58,000

all of those but

85

00:03:02,229 --> 00:03:00,080

we will be

86

00:03:04,229 --> 00:03:02,239

i guess benefiting from that capability

87

00:03:06,070 --> 00:03:04,239

from the standpoint that if we need to

88

00:03:07,990 --> 00:03:06,080

use them we can

89

00:03:11,110 --> 00:03:08,000

so let me kind of talk through the

90

00:03:12,229 --> 00:03:11,120

weather scenario that we've got lined up

91

00:03:13,670 --> 00:03:12,239

the weather

92

00:03:15,750 --> 00:03:13,680

tomorrow as

93

00:03:18,149 --> 00:03:15,760

the following few days at Kennedy space

94

00:03:19,670 --> 00:03:18,159

center is going to be challenging

95

00:03:21,350 --> 00:03:19,680

the just like

96

00:03:23,030 --> 00:03:21,360

any time period

97

00:03:25,589 --> 00:03:23,040

here in the late summer

98

00:03:27,430 --> 00:03:25,599

when the sun's out and the the daytime

99

00:03:29,670 --> 00:03:27,440

heating effects are kind of boiling up

100

00:03:31,430 --> 00:03:29,680

the atmosphere a little bit

101
00:03:34,309 --> 00:03:31,440
we can expect some rain or some

102
00:03:35,670 --> 00:03:34,319
thunderstorms within the area hopefully

103
00:03:38,309 --> 00:03:35,680
those thunderstorms are going to be

104
00:03:40,309 --> 00:03:38,319
staying away outside of a 30 nautical

105
00:03:41,589 --> 00:03:40,319
mile flight rule circle that we have to

106
00:03:43,190 --> 00:03:41,599
keep them out of

107
00:03:45,670 --> 00:03:43,200
we had a great chance to look at the

108
00:03:48,070 --> 00:03:45,680
weather today as it was streaming in the

109
00:03:50,229 --> 00:03:48,080
kenneth kennedy space center area

110
00:03:53,190 --> 00:03:50,239
and you can kind of see some lines of

111
00:03:54,470 --> 00:03:53,200
convergence or streams of of

112
00:03:56,070 --> 00:03:54,480
thunderstorms as they were kind of

113
00:03:57,350 --> 00:03:56,080

coming into the area but as they were

114

00:03:59,110 --> 00:03:57,360

coming in

115

00:04:02,149 --> 00:03:59,120

you could definitely see some areas of

116

00:04:03,990 --> 00:04:02,159

of dryness or some clearing hopefully

117

00:04:05,509 --> 00:04:04,000

that same condition will be there

118

00:04:07,429 --> 00:04:05,519

tomorrow now

119

00:04:09,190 --> 00:04:07,439

it's going to be a little bit iffy in

120

00:04:11,110 --> 00:04:09,200

terms of whether that dryness will be

121

00:04:14,149 --> 00:04:11,120

there or not but if it is

122

00:04:16,229 --> 00:04:14,159

that could work in our favor

123

00:04:18,469 --> 00:04:16,239

on the other side of the the continental

124

00:04:21,189 --> 00:04:18,479

united states edwards uh is going to

125

00:04:23,030 --> 00:04:21,199

have great weather from basically from

126

00:04:25,590 --> 00:04:23,040

here on out through into mission plus

127

00:04:27,830 --> 00:04:25,600

three that's not a good that is likely

128

00:04:29,670 --> 00:04:27,840

not to be a concern for us

129

00:04:31,590 --> 00:04:29,680

but weather is weather you have to look

130

00:04:33,590 --> 00:04:31,600

at it every day and you have to study it

131

00:04:35,430 --> 00:04:33,600

and make sure that your assumptions are

132

00:04:36,550 --> 00:04:35,440

still the same that's what we're going

133

00:04:38,230 --> 00:04:36,560

to do

134

00:04:40,070 --> 00:04:38,240

and we're going to kind of factor

135

00:04:42,230 --> 00:04:40,080

everything together

136

00:04:45,510 --> 00:04:42,240

but with the end of mission plus three

137

00:04:48,790 --> 00:04:45,520

consumables that uh at our disposal

138

00:04:51,030 --> 00:04:48,800

and uh the fact that uh we've got two

139

00:04:53,030 --> 00:04:51,040

ksc opportunities tomorrow and the great

140

00:04:54,629 --> 00:04:53,040

edwards weather uh that's all we're

141

00:04:57,350 --> 00:04:54,639

gonna look at tomorrow is we're only

142

00:04:59,030 --> 00:04:57,360

gonna look at ksc for our end of mission

143

00:05:00,390 --> 00:04:59,040

and maybe it's a good time that we can

144

00:05:02,390 --> 00:05:00,400

go ahead and show you those ground

145

00:05:04,150 --> 00:05:02,400

tracks

146

00:05:08,230 --> 00:05:04,160

here's our first opportunity it's on

147

00:05:09,670 --> 00:05:08,240

orbit 202 the burn is at 459 central

148

00:05:12,950 --> 00:05:09,680

landing

149

00:05:15,909 --> 00:05:12,960

approximately at 6 05 pm central this

150

00:05:18,390 --> 00:05:15,919

first opportunity is uh is in daylight

151
00:05:20,870 --> 00:05:18,400
the crew will actually

152
00:05:22,550 --> 00:05:20,880
have good daylight conditions and

153
00:05:25,430 --> 00:05:22,560
they will beat sunset for this

154
00:05:27,189 --> 00:05:25,440
particular opportunity by 30 minutes so

155
00:05:29,189 --> 00:05:27,199
we won't have to rely on the xenon

156
00:05:32,150 --> 00:05:29,199
lights to provide a good

157
00:05:33,430 --> 00:05:32,160
a good environmental view out the out

158
00:05:34,870 --> 00:05:33,440
the window for the crew for this

159
00:05:36,629 --> 00:05:34,880
particular landing and if we can go to

160
00:05:38,469 --> 00:05:36,639
the next opportunity

161
00:05:40,790 --> 00:05:38,479
this is rev 203

162
00:05:43,749 --> 00:05:40,800
uh it's uh it's the orbit burn is

163
00:05:46,629 --> 00:05:43,759

occurring at 6 36 pm central with a

164

00:05:48,790 --> 00:05:46,639

landing approximately at 7 42 pm central

165

00:05:51,590 --> 00:05:48,800

and as you can see it's traversing

166

00:05:53,909 --> 00:05:51,600

right over the the houston area here and

167

00:05:56,150 --> 00:05:53,919

coming across the united states heading

168

00:05:56,950 --> 00:05:56,160

into kennedy space center so those are

169

00:06:01,670 --> 00:05:56,960

some

170

00:06:04,150 --> 00:06:01,680

have to use that particular landing

171

00:06:06,950 --> 00:06:04,160

opportunity that last opportunity on

172

00:06:09,430 --> 00:06:06,960

orbit 203 is a dark landing

173

00:06:11,510 --> 00:06:09,440

it's approximately one hour past sunset

174

00:06:13,670 --> 00:06:11,520

so that's something that we will have to

175

00:06:16,469 --> 00:06:13,680

factor in

176

00:06:18,390 --> 00:06:16,479

normally weather is such that you know

177

00:06:20,150 --> 00:06:18,400

when the sun goes down

178

00:06:23,270 --> 00:06:20,160

things start to calm down from a weather

179

00:06:25,909 --> 00:06:23,280

perspective that may not happen tomorrow

180

00:06:27,909 --> 00:06:25,919

we'll we'll see if that is the case

181

00:06:29,830 --> 00:06:27,919

but that may be something that could

182

00:06:32,790 --> 00:06:29,840

work in our favor if you remove the the

183

00:06:34,950 --> 00:06:32,800

daytime heating aspects of things

184

00:06:37,029 --> 00:06:34,960

the weather tends to settle down a

185

00:06:38,629 --> 00:06:37,039

little bit so we'll hopefully we'll be

186

00:06:40,469 --> 00:06:38,639

looking at a lot of things to go in our

187

00:06:42,230 --> 00:06:40,479

favor

188

00:06:44,950 --> 00:06:42,240

so with that

189

00:06:46,790 --> 00:06:44,960

you know with two ksc opportunities

190

00:06:48,790 --> 00:06:46,800

in front of us tomorrow we're going to

191

00:06:51,909 --> 00:06:48,800

be looking at the weather if we don't

192

00:06:54,390 --> 00:06:51,919

come in tomorrow and our pickum day

193

00:06:56,309 --> 00:06:54,400

will most likely be on endomission plus

194

00:06:58,230 --> 00:06:56,319

two or saturday

195

00:07:00,550 --> 00:06:58,240

that is the initial thought process that

196

00:07:03,029 --> 00:07:00,560

we're going to be going into

197

00:07:04,870 --> 00:07:03,039

tomorrow's landing with uh but we're

198

00:07:06,469 --> 00:07:04,880

gonna reassess that and see if there's

199

00:07:08,790 --> 00:07:06,479

any conditions that would possibly

200

00:07:11,029 --> 00:07:08,800

change that to move it up a day possibly

201

00:07:12,550 --> 00:07:11,039

to end the mission plus one

202

00:07:14,550 --> 00:07:12,560

again there's a lot of factors that we

203

00:07:15,670 --> 00:07:14,560

have to look at but that could be a

204

00:07:18,070 --> 00:07:15,680

scenario

205

00:07:20,309 --> 00:07:18,080

that could happen the folks the landing

206

00:07:22,469 --> 00:07:20,319

convoy support folks the facility folks

207

00:07:24,710 --> 00:07:22,479

out at edwards are ready to support that

208

00:07:27,350 --> 00:07:24,720

if if indeed we need to call them up

209

00:07:28,390 --> 00:07:27,360

but again i'd like to stress we would

210

00:07:30,469 --> 00:07:28,400

like to

211

00:07:32,309 --> 00:07:30,479

go out as far as possible

212

00:07:34,469 --> 00:07:32,319

looking at ksc if that is what is

213

00:07:35,670 --> 00:07:34,479

required and we could possibly go to

214

00:07:37,430 --> 00:07:35,680

saturday

215

00:07:38,550 --> 00:07:37,440

if that is the case before calling up

216

00:07:39,749 --> 00:07:38,560

edwards

217

00:07:42,309 --> 00:07:39,759

for those

218

00:07:43,749 --> 00:07:42,319

for a landing opportunity on end mission

219

00:07:45,270 --> 00:07:43,759

plus two

220

00:07:47,749 --> 00:07:45,280

you heard a great briefing from the

221

00:07:50,150 --> 00:07:47,759

boundary layer transition team members

222

00:07:53,270 --> 00:07:50,160

earlier right now i can't even do that

223

00:07:55,110 --> 00:07:53,280

justice they did a great job of getting

224

00:07:57,189 --> 00:07:55,120

you up to speed on that we are ready to

225

00:07:58,950 --> 00:07:57,199

support that dto

226

00:08:00,309 --> 00:07:58,960

and finally i just want to close with

227

00:08:03,270 --> 00:08:00,319

one other item

228

00:08:05,909 --> 00:08:03,280

as we're coming into our deorbit prep

229

00:08:07,830 --> 00:08:05,919

preparations tomorrow the entry team as

230

00:08:09,749 --> 00:08:07,840

as we're getting ready to get into the

231

00:08:11,589 --> 00:08:09,759

deorbit prep checklist

232

00:08:13,670 --> 00:08:11,599

excuse me the

233

00:08:16,550 --> 00:08:13,680

the htv

234

00:08:19,430 --> 00:08:16,560

launch is scheduled for 1201

235

00:08:21,909 --> 00:08:19,440

p.m central so we'll uh we'll know how

236

00:08:25,430 --> 00:08:21,919

that mission is coming along and i know

237

00:08:29,189 --> 00:08:25,440

the iss community is is very excited

238

00:08:31,270 --> 00:08:29,199

about that uh that new capability so

239

00:08:32,790 --> 00:08:31,280

from an entry perspective what we're

240

00:08:35,350 --> 00:08:32,800

worrying about is relative motion

241

00:08:37,509 --> 00:08:35,360

concerns making sure that we don't have

242

00:08:39,430 --> 00:08:37,519

any conjunction capabilities with

243

00:08:42,149 --> 00:08:39,440

respect to that htv we've taken a look

244

00:08:43,829 --> 00:08:42,159

at that and there are none at all

245

00:08:46,070 --> 00:08:43,839

obviously the sooner that we can get out

246

00:08:47,350 --> 00:08:46,080

of orbit and get back safely on the

247

00:08:49,829 --> 00:08:47,360

ground

248

00:08:53,670 --> 00:08:49,839

that just frees up more assets for the

249

00:08:56,150 --> 00:08:53,680

htv and the iss to use from a

250

00:08:58,389 --> 00:08:56,160

perspective so really that's my summary

251
00:09:00,310 --> 00:08:58,399
hopefully i've been able to answer most

252
00:09:01,910 --> 00:09:00,320
of your questions but i'd be happy to

253
00:09:03,350 --> 00:09:01,920
take them now

254
00:09:05,430 --> 00:09:03,360
if you have any

255
00:09:07,110 --> 00:09:05,440
thanks richard and the japanese flight

256
00:09:09,910 --> 00:09:07,120
control team gave the green light a few

257
00:09:11,910 --> 00:09:09,920
hours ago to fuel the h2b rocket and to

258
00:09:13,910 --> 00:09:11,920
roll it to the pad rollout is just a few

259
00:09:15,910 --> 00:09:13,920
hours from now in advance of the

260
00:09:18,389 --> 00:09:15,920
anticipated launch tomorrow we'll start

261
00:09:19,990 --> 00:09:18,399
off here with gina gina sincere abc news

262
00:09:22,870 --> 00:09:20,000
have you had the crew do any kind of

263
00:09:24,949 --> 00:09:22,880

power downs uh to to

264

00:09:27,430 --> 00:09:24,959

extend what they have or it's not

265

00:09:29,110 --> 00:09:27,440

necessary at all you know the uh

266

00:09:31,350 --> 00:09:29,120

the power downs that we would be putting

267

00:09:33,990 --> 00:09:31,360

in place we could

268

00:09:36,150 --> 00:09:34,000

do a more severe power down a a group c

269

00:09:37,990 --> 00:09:36,160

but we don't think we'd have to do that

270

00:09:40,070 --> 00:09:38,000

we would have to put a standard group b

271

00:09:42,630 --> 00:09:40,080

power down in place to make sure that we

272

00:09:44,949 --> 00:09:42,640

have an emission plus three capability

273

00:09:47,750 --> 00:09:44,959

our limiting consumable is is lithium

274

00:09:49,829 --> 00:09:47,760

hydroxide and we've got quite a bit of

275

00:09:51,829 --> 00:09:49,839

cryogenic margin on top of that and

276

00:09:55,030 --> 00:09:51,839

really when you do that that power down

277

00:09:57,430 --> 00:09:55,040

it's to save the cryogenic margin uh and

278

00:09:59,750 --> 00:09:57,440

or make sure that it's still there so uh

279

00:10:02,470 --> 00:09:59,760

we would have to put in a a minor power

280

00:10:04,389 --> 00:10:02,480

down on subsequent uh deorbit days but

281

00:10:07,110 --> 00:10:04,399

uh it's

282

00:10:08,710 --> 00:10:07,120

it's really not our top concern

283

00:10:10,790 --> 00:10:08,720

robert robert parolin with

284

00:10:13,190 --> 00:10:10,800

collectspace.com um i think there was a

285

00:10:14,790 --> 00:10:13,200

call earlier when uh when

286

00:10:16,470 --> 00:10:14,800

rick stirkout was being briefed about

287

00:10:18,710 --> 00:10:16,480

the weather that there was a mention of

288

00:10:20,870 --> 00:10:18,720

a crosswinds dto and can you just remind

289

00:10:21,750 --> 00:10:20,880

us what that is sure

290

00:10:22,870 --> 00:10:21,760

the

291

00:10:24,790 --> 00:10:22,880

if

292

00:10:26,790 --> 00:10:24,800

we do get the opportunity to come home

293

00:10:29,829 --> 00:10:26,800

tomorrow to ksc the crosswinds are

294

00:10:32,710 --> 00:10:29,839

forecasted to be i believe 11 knots

295

00:10:35,110 --> 00:10:32,720

and we have a standard dto that's on the

296

00:10:37,110 --> 00:10:35,120

books that we've been carrying for years

297

00:10:38,710 --> 00:10:37,120

to try and characterize the handling

298

00:10:40,710 --> 00:10:38,720

qualities

299

00:10:42,230 --> 00:10:40,720

in the two-point stance when the vehicle

300

00:10:45,670 --> 00:10:42,240

first touches down

301
00:10:47,910 --> 00:10:45,680
and so as a result of that

302
00:10:50,870 --> 00:10:47,920
if those conditions are present and if

303
00:10:52,949 --> 00:10:50,880
the crosswinds are 10 knots or greater

304
00:10:55,590 --> 00:10:52,959
and when when i say 10 knots or greater

305
00:10:59,030 --> 00:10:55,600
obviously they're going to have to be

306
00:11:00,870 --> 00:10:59,040
inside of of 15 knots for end emissions

307
00:11:02,470 --> 00:11:00,880
so if they're inside of that range at

308
00:11:04,630 --> 00:11:02,480
least for the first opportunity under

309
00:11:06,870 --> 00:11:04,640
the daylight conditions

310
00:11:09,190 --> 00:11:06,880
we would delay the deployment of the

311
00:11:11,430 --> 00:11:09,200
drag chute until the nose gear is on the

312
00:11:13,670 --> 00:11:11,440
ground that way we can get a full up

313
00:11:15,750 --> 00:11:13,680

assessment of the handling qualities of

314

00:11:17,110 --> 00:11:15,760

the vehicle under those high cross wind

315

00:11:19,190 --> 00:11:17,120

conditions

316

00:11:21,509 --> 00:11:19,200

for the later opportunity

317

00:11:24,150 --> 00:11:21,519

that that window of opportunity kind of

318

00:11:26,710 --> 00:11:24,160

constricts for the dark opportunity we

319

00:11:28,630 --> 00:11:26,720

can only sustain a 12 knot crosswind

320

00:11:31,190 --> 00:11:28,640

which is still within limits but the

321

00:11:33,110 --> 00:11:31,200

chances of having something like that

322

00:11:34,790 --> 00:11:33,120

maybe diminish in a little diminish a

323

00:11:36,630 --> 00:11:34,800

little bit just from the standpoint as

324

00:11:39,269 --> 00:11:36,640

when the sun goes down the the winds

325

00:11:40,470 --> 00:11:39,279

tend to die down a little bit as well so

326

00:11:42,470 --> 00:11:40,480

that's really what we're looking at

327

00:11:44,069 --> 00:11:42,480

tomorrow

328

00:11:47,030 --> 00:11:44,079

okay we have reporters on the phone

329

00:11:48,949 --> 00:11:47,040

bridge let's start off with bill harwood

330

00:11:51,110 --> 00:11:48,959

yeah thanks uh richard too for me if i

331

00:11:52,470 --> 00:11:51,120

could did did christopher indicate any

332

00:11:54,230 --> 00:11:52,480

idea of

333

00:11:57,110 --> 00:11:54,240

the the rough vicinity of where that

334

00:11:59,990 --> 00:11:57,120

debris came from i mean upper orbiter or

335

00:12:02,710 --> 00:12:00,000

aft any ideas at all yeah you know

336

00:12:04,629 --> 00:12:02,720

bill he characterized becoming it coming

337

00:12:06,389 --> 00:12:04,639

from the uh he couldn't really

338

00:12:09,350 --> 00:12:06,399

characterize it if it was coming from

339

00:12:11,430 --> 00:12:09,360

the payload bay or the orbiter itself he

340

00:12:13,430 --> 00:12:11,440

was uh he was unsure of where the

341

00:12:15,670 --> 00:12:13,440

original destination but it was it was

342

00:12:18,389 --> 00:12:15,680

definitely aft and i believe it was on

343

00:12:22,230 --> 00:12:18,399

the port side of the vehicle so

344

00:12:24,790 --> 00:12:22,240

that was how he described that you know

345

00:12:26,710 --> 00:12:24,800

when a small object comes out like that

346

00:12:30,310 --> 00:12:26,720

it's first of all it's very difficult to

347

00:12:32,550 --> 00:12:30,320

even characterize the size of that

348

00:12:34,230 --> 00:12:32,560

debris and he gave us three to four

349

00:12:36,629 --> 00:12:34,240

inches in length

350

00:12:38,629 --> 00:12:36,639

i did take a look at the pictures and it

351

00:12:40,629 --> 00:12:38,639

it is looking about that size if you

352

00:12:43,110 --> 00:12:40,639

were to kind of uh stare at it for a

353

00:12:45,590 --> 00:12:43,120

little bit but uh you know from its

354

00:12:47,910 --> 00:12:45,600

origination point uh just aft and port

355

00:12:49,910 --> 00:12:47,920

of the vehicle uh whether or not it was

356

00:12:52,150 --> 00:12:49,920

from the payload bay or not uh that that

357

00:12:54,150 --> 00:12:52,160

distinction wasn't made

358

00:12:56,069 --> 00:12:54,160

thanks and one more for me on the on how

359

00:12:57,829 --> 00:12:56,079

the pickum day works if

360

00:12:59,430 --> 00:12:57,839

you're only calling up ksc for tomorrow

361

00:13:00,949 --> 00:12:59,440

obviously and if the weather stays the

362

00:13:02,949 --> 00:13:00,959

same my presumption from what you said

363

00:13:04,870 --> 00:13:02,959

is you would only try ksc on friday and

364

00:13:06,629 --> 00:13:04,880

then saturday would be the day you got

365

00:13:08,150 --> 00:13:06,639

to land somewhere is that interpreting

366

00:13:09,990 --> 00:13:08,160

that correctly that is a correct

367

00:13:12,310 --> 00:13:10,000

interpretation if

368

00:13:14,230 --> 00:13:12,320

if the weather out at edwards continues

369

00:13:17,910 --> 00:13:14,240

to look as good as it does

370

00:13:19,509 --> 00:13:17,920

it continues to be our ace in the hole

371

00:13:21,269 --> 00:13:19,519

that it that would be the conditions

372

00:13:22,629 --> 00:13:21,279

where you'd continue to look at ksc as

373

00:13:24,710 --> 00:13:22,639

long as you could

374

00:13:29,590 --> 00:13:24,720

thank you very much that's it for me

375

00:13:33,509 --> 00:13:31,670

thank you very much uh tariq malik from

376

00:13:35,829 --> 00:13:33,519

baseball.com and space news i think i

377

00:13:37,350 --> 00:13:35,839

have two quick ones as well um which you

378

00:13:39,670 --> 00:13:37,360

mentioned earlier um

379

00:13:40,949 --> 00:13:39,680

that uh you are going to target saturday

380

00:13:42,150 --> 00:13:40,959

for your for your pick and day but

381

00:13:43,829 --> 00:13:42,160

depending on conditions you could move

382

00:13:45,509 --> 00:13:43,839

up for friday and i guess the following

383

00:13:49,030 --> 00:13:45,519

bill's question

384

00:13:51,350 --> 00:13:49,040

i guess independent of edward would

385

00:13:52,710 --> 00:13:51,360

would uh i guess a bleak forecast at

386

00:13:53,910 --> 00:13:52,720

kennedy also

387

00:13:55,590 --> 00:13:53,920

also on

388

00:13:58,790 --> 00:13:55,600

on um

389

00:14:00,310 --> 00:13:58,800

saturday affect anything or in terms of

390

00:14:02,310 --> 00:14:00,320

moving up to friday or would you just

391

00:14:05,189 --> 00:14:02,320

kind of stick to that could be a

392

00:14:07,110 --> 00:14:05,199

condition uh tarik that could possibly

393

00:14:08,230 --> 00:14:07,120

get us to think about intermission plus

394

00:14:10,870 --> 00:14:08,240

uh

395

00:14:12,629 --> 00:14:10,880

one as being our pick em day but

396

00:14:14,389 --> 00:14:12,639

again i would consider that a little bit

397

00:14:16,310 --> 00:14:14,399

remote but you're thinking along the

398

00:14:18,389 --> 00:14:16,320

right lines uh something like that could

399

00:14:20,069 --> 00:14:18,399

uh could enter the thought process for

400

00:14:21,430 --> 00:14:20,079

that

401
00:14:23,990 --> 00:14:21,440
thanks and if you can just i guess

402
00:14:25,910 --> 00:14:24,000
remind us um just the the desirability

403
00:14:28,150 --> 00:14:25,920
of returning an orbiter back to casey

404
00:14:29,430 --> 00:14:28,160
rather than uh landing in floor in

405
00:14:30,470 --> 00:14:29,440
california

406
00:14:31,910 --> 00:14:30,480
just kind of

407
00:14:33,910 --> 00:14:31,920
you know why that is always your your

408
00:14:35,110 --> 00:14:33,920
preference for the first couple goats

409
00:14:37,350 --> 00:14:35,120
thanks

410
00:14:39,189 --> 00:14:37,360
uh yeah obviously kennedy space center

411
00:14:40,710 --> 00:14:39,199
is the highest priority from a

412
00:14:42,790 --> 00:14:40,720
programmatic and a flight roll

413
00:14:45,350 --> 00:14:42,800

perspective any time that you want to

414

00:14:48,069 --> 00:14:45,360

get the vehicle back home to

415

00:14:49,750 --> 00:14:48,079

its uh it's it's home

416

00:14:51,910 --> 00:14:49,760

that's the best way that you can

417

00:14:55,750 --> 00:14:51,920

possibly get things obviously the next

418

00:14:58,230 --> 00:14:55,760

mission sts-131 uh is uh is eagerly

419

00:15:00,230 --> 00:14:58,240

awaiting discovery so that's another

420

00:15:02,069 --> 00:15:00,240

reason to help the turnaround obviously

421

00:15:04,069 --> 00:15:02,079

the turnaround manifest and suing from

422

00:15:05,829 --> 00:15:04,079

that so there's a lot of good reasons

423

00:15:07,590 --> 00:15:05,839

that you want to make sure that you get

424

00:15:08,389 --> 00:15:07,600

into ksc

425

00:15:09,910 --> 00:15:08,399

but

426

00:15:12,629 --> 00:15:09,920

you know if the weather doesn't

427

00:15:17,110 --> 00:15:12,639

cooperate we'll go for we'll go to the

428

00:15:21,829 --> 00:15:18,629

thank you

429

00:15:24,550 --> 00:15:21,839

okay on to irene clauds

430

00:15:26,949 --> 00:15:24,560

thanks rob um sorry if you already said

431

00:15:28,629 --> 00:15:26,959

this but do you have an idea of what the

432

00:15:31,350 --> 00:15:28,639

weather concerns for tomorrow

433

00:15:35,030 --> 00:15:31,360

specifically are going to be

434

00:15:38,550 --> 00:15:35,040

yes irene the the weather concerns

435

00:15:41,189 --> 00:15:38,560

all of the the ceilings and the the the

436

00:15:43,269 --> 00:15:41,199

winds the surface winds

437

00:15:45,670 --> 00:15:43,279

are within flight rule limits the the

438

00:15:47,749 --> 00:15:45,680

main concern is going to be the the

439

00:15:49,670 --> 00:15:47,759

chance of thunderstorms within a 30

440

00:15:51,670 --> 00:15:49,680

nautical mile boundary

441

00:15:53,670 --> 00:15:51,680

that surrounds the shuttle landing

442

00:15:55,430 --> 00:15:53,680

facility

443

00:15:57,430 --> 00:15:55,440

as you as i

444

00:15:59,670 --> 00:15:57,440

was describing a little bit earlier the

445

00:16:01,829 --> 00:15:59,680

thunderstorms that were streaming into

446

00:16:03,990 --> 00:16:01,839

the area today

447

00:16:05,670 --> 00:16:04,000

they were behaving

448

00:16:08,470 --> 00:16:05,680

pretty much like you expect them as

449

00:16:10,949 --> 00:16:08,480

they're coming out off of off of the

450

00:16:13,030 --> 00:16:10,959

atlantic onto land

451
00:16:14,470 --> 00:16:13,040
that is that is probably going to be one

452
00:16:16,389 --> 00:16:14,480
of the the signatures or the

453
00:16:18,069 --> 00:16:16,399
characteristics or the mechanisms that

454
00:16:20,069 --> 00:16:18,079
is going to be affecting

455
00:16:21,829 --> 00:16:20,079
the weather tomorrow as well

456
00:16:24,310 --> 00:16:21,839
i failed to mention one thing i'll just

457
00:16:25,110 --> 00:16:24,320
add another thing a lot of the activity

458
00:16:26,550 --> 00:16:25,120
is

459
00:16:28,710 --> 00:16:26,560
if it's going to be there it's going to

460
00:16:31,030 --> 00:16:28,720
be coming up from the south

461
00:16:32,230 --> 00:16:31,040
that was the same

462
00:16:36,470 --> 00:16:32,240
activity

463
00:16:38,389 --> 00:16:36,480

we expect that same trend to be there

464

00:16:39,910 --> 00:16:38,399

tomorrow and hopefully it'll stay to the

465

00:16:41,829 --> 00:16:39,920

south

466

00:16:44,150 --> 00:16:41,839

thanks and uh would you just refresh my

467

00:16:45,189 --> 00:16:44,160

memory if there's some fight rules about

468

00:16:47,430 --> 00:16:45,199

um

469

00:16:49,430 --> 00:16:47,440

not having lightning within a certain

470

00:16:50,790 --> 00:16:49,440

period of time or for a certain period

471

00:16:52,949 --> 00:16:50,800

of time

472

00:16:56,389 --> 00:16:52,959

before you make a call for the orbit

473

00:16:58,870 --> 00:16:56,399

burn like there is for launching

474

00:17:01,269 --> 00:16:58,880

there's a it's a similar

475

00:17:03,990 --> 00:17:01,279

flight rule that that encompasses

476

00:17:07,990 --> 00:17:04,000

lightning obviously a thunderstorm

477

00:17:10,470 --> 00:17:08,000

any time that you have a thunderstorm

478

00:17:12,789 --> 00:17:10,480

it can have lightning it cannot

479

00:17:14,949 --> 00:17:12,799

there are definitions in terms of what a

480

00:17:16,549 --> 00:17:14,959

thunderstorm is the cloud top

481

00:17:19,029 --> 00:17:16,559

temperatures

482

00:17:20,630 --> 00:17:19,039

are the real uh i guess definition of

483

00:17:22,470 --> 00:17:20,640

what a thunderstorm is from a flight

484

00:17:25,909 --> 00:17:22,480

roll perspective if the cloud top

485

00:17:28,069 --> 00:17:25,919

temperatures at the at the at the top in

486

00:17:29,350 --> 00:17:28,079

terms of wherever that that thunderstorm

487

00:17:32,230 --> 00:17:29,360

bubbles up to

488

00:17:34,549 --> 00:17:32,240

if it is colder than minus 20 degrees

489

00:17:36,230 --> 00:17:34,559

celsius then it kind of meets the

490

00:17:37,830 --> 00:17:36,240

characteristics

491

00:17:39,909 --> 00:17:37,840

or it meets the conditions where you

492

00:17:41,669 --> 00:17:39,919

would call it a thunderstorm it may not

493

00:17:44,390 --> 00:17:41,679

have lightning in it it is likely to

494

00:17:46,870 --> 00:17:44,400

have thunder or precipitation in it but

495

00:17:49,510 --> 00:17:46,880

really that's the main discriminator

496

00:17:51,990 --> 00:17:49,520

that causes you to call something a

497

00:17:53,510 --> 00:17:52,000

thunderstorm if it does have lightning

498

00:17:56,630 --> 00:17:53,520

it's still a thunderstorm from our

499

00:17:58,870 --> 00:17:56,640

perspective so really

500

00:18:00,789 --> 00:17:58,880

it doesn't mean too much other than you

501
00:18:02,310 --> 00:18:00,799
know the presence of lightning is uh

502
00:18:04,150 --> 00:18:02,320
it's an active thunderstorm and you

503
00:18:05,430 --> 00:18:04,160
really don't want to get anywhere close

504
00:18:06,870 --> 00:18:05,440
to that

505
00:18:09,909 --> 00:18:06,880
thanks that's interesting thank you

506
00:18:12,549 --> 00:18:09,919
bye-bye okay and uh last but not least

507
00:18:15,909 --> 00:18:14,630
thank you rob um

508
00:18:17,830 --> 00:18:15,919
just regarding these thunderstorms

509
00:18:19,270 --> 00:18:17,840
obviously you're you're hoping

510
00:18:21,990 --> 00:18:19,280
to catch a break but i just wondered if

511
00:18:23,510 --> 00:18:22,000
you could any further characterize your

512
00:18:25,029 --> 00:18:23,520
confidence level at this point i mean

513
00:18:27,430 --> 00:18:25,039

does it look

514

00:18:29,909 --> 00:18:27,440

like it'll take a great stroke of luck

515

00:18:31,190 --> 00:18:29,919

or or is it kind of 50 50 or worse or

516

00:18:33,190 --> 00:18:31,200

better

517

00:18:35,430 --> 00:18:33,200

you know i think i wanted but

518

00:18:37,350 --> 00:18:35,440

uh james i hate to put a number on

519

00:18:40,230 --> 00:18:37,360

things uh i wouldn't characterize it as

520

00:18:41,909 --> 00:18:40,240

a stroke of luck um i i would like to

521

00:18:43,669 --> 00:18:41,919

just stick with the description of it

522

00:18:45,430 --> 00:18:43,679

being very challenging

523

00:18:46,549 --> 00:18:45,440

you know i've had a chance to to stare

524

00:18:48,549 --> 00:18:46,559

at weather

525

00:18:51,750 --> 00:18:48,559

working as a weather flight director and

526

00:18:54,230 --> 00:18:51,760

uh as a ascent and entry flight director

527

00:18:56,070 --> 00:18:54,240

on other missions and

528

00:18:58,230 --> 00:18:56,080

you know weather is weather and you have

529

00:18:59,830 --> 00:18:58,240

to kind of watch it and make sure that

530

00:19:01,590 --> 00:18:59,840

it's it's behaving in the manner that

531

00:19:03,909 --> 00:19:01,600

you you want it to

532

00:19:06,150 --> 00:19:03,919

uh and tomorrow

533

00:19:07,590 --> 00:19:06,160

uh you know since it is going to be a

534

00:19:09,669 --> 00:19:07,600

challenging case

535

00:19:11,110 --> 00:19:09,679

what i really mean by that is

536

00:19:14,549 --> 00:19:11,120

it's going to

537

00:19:19,430 --> 00:19:14,559

somewhat

538

00:19:21,830 --> 00:19:19,440

go in the early portions of the orbit

539

00:19:24,230 --> 00:19:21,840

prep it we're going to be looking for

540

00:19:26,870 --> 00:19:24,240

maybe a trend where it's dissipating as

541

00:19:28,710 --> 00:19:26,880

we get closer to the deorbit burn

542

00:19:31,270 --> 00:19:28,720

looking for that area of dryness that i

543

00:19:32,230 --> 00:19:31,280

was trying to communicate earlier so

544

00:19:38,310 --> 00:19:32,240

i just want to stick with the

545

00:19:42,470 --> 00:19:40,470

i think we heard that the outlook was

546

00:19:44,150 --> 00:19:42,480

worse on friday

547

00:19:46,150 --> 00:19:44,160

and so i'm not sure if i

548

00:19:48,710 --> 00:19:46,160

uh understood how that impacts your

549

00:19:50,710 --> 00:19:48,720

decision to call up edwards friday or

550

00:19:52,710 --> 00:19:50,720

now are you would you be

551
00:19:53,990 --> 00:19:52,720
already looking towards saturday at that

552
00:19:56,630 --> 00:19:54,000
point and just

553
00:19:57,990 --> 00:19:56,640
just go through another day

554
00:20:00,070 --> 00:19:58,000
you know as uh

555
00:20:03,750 --> 00:20:00,080
i tend to think about

556
00:20:05,510 --> 00:20:03,760
a launch that we recently had i was

557
00:20:08,070 --> 00:20:05,520
working with my colleague norm knight i

558
00:20:10,549 --> 00:20:08,080
was his weather flight director for uh

559
00:20:11,909 --> 00:20:10,559
for a previous launch and we walked in

560
00:20:15,270 --> 00:20:11,919
that day

561
00:20:16,630 --> 00:20:15,280
and the weather forecast was 80 percent

562
00:20:19,029 --> 00:20:16,640
no go

563
00:20:20,149 --> 00:20:19,039

and we lifted off that day

564

00:20:23,590 --> 00:20:20,159

and

565

00:20:26,950 --> 00:20:23,600

that is the reasoning where why you have

566

00:20:29,110 --> 00:20:26,960

to kind of stare at things look at them

567

00:20:31,430 --> 00:20:29,120

and kind of take things with a grain of

568

00:20:34,070 --> 00:20:31,440

salt i'm not saying that

569

00:20:36,549 --> 00:20:34,080

the fork the forecast the forecasting

570

00:20:39,270 --> 00:20:36,559

job is is extremely

571

00:20:40,950 --> 00:20:39,280

difficult but when they're forecasting

572

00:20:44,149 --> 00:20:40,960

when the weather forecasts are looking

573

00:20:46,070 --> 00:20:44,159

at at a particular area

574

00:20:48,549 --> 00:20:46,080

it's very hard to drill down to the

575

00:20:51,029 --> 00:20:48,559

microscopic level and it isn't

576
00:20:53,430 --> 00:20:51,039
microscopic but a smaller scale level of

577
00:20:56,630 --> 00:20:53,440
a 30 nautical mile circle

578
00:20:57,590 --> 00:20:56,640
around a particular landing site

579
00:21:00,310 --> 00:20:57,600
and

580
00:21:02,710 --> 00:21:00,320
you know make a forecast for a specific

581
00:21:04,950 --> 00:21:02,720
time frame where weather is going to be

582
00:21:06,950 --> 00:21:04,960
there or not going to be there it may

583
00:21:09,750 --> 00:21:06,960
look terrible all around it but it might

584
00:21:10,630 --> 00:21:09,760
be perfect within that 30 nautical mile

585
00:21:13,430 --> 00:21:10,640
circle

586
00:21:15,909 --> 00:21:13,440
those are the circumstances where

587
00:21:17,590 --> 00:21:15,919
even though the forecaster is is

588
00:21:20,470 --> 00:21:17,600

forecasting that there's going to be a

589

00:21:23,029 --> 00:21:20,480

lot of moisture a lot of

590

00:21:26,310 --> 00:21:23,039

their term precipitable water in the

591

00:21:28,710 --> 00:21:26,320

atmosphere that uh could migrate from

592

00:21:31,270 --> 00:21:28,720

the south up to the north uh yes from

593

00:21:34,070 --> 00:21:31,280

that perspective the outlook for the

594

00:21:37,110 --> 00:21:34,080

further the further days outside of of

595

00:21:39,110 --> 00:21:37,120

uh of thursday for friday and saturday

596

00:21:41,510 --> 00:21:39,120

do have that propensity for a little bit

597

00:21:43,750 --> 00:21:41,520

more precipitable water in them

598

00:21:45,350 --> 00:21:43,760

uh but again it you got to look at it

599

00:21:46,230 --> 00:21:45,360

and make sure that

600

00:21:50,390 --> 00:21:46,240

it

601
00:21:52,390 --> 00:21:50,400
so

602
00:21:54,710 --> 00:21:52,400
again i'd i take things with a grain of

603
00:21:57,350 --> 00:21:54,720
salt any any time that

604
00:22:00,149 --> 00:21:57,360
i see some numbers or some probabilities

605
00:22:01,909 --> 00:22:00,159
associated with weather

606
00:22:02,950 --> 00:22:01,919
okay thanks uh just a couple more

607
00:22:04,149 --> 00:22:02,960
questions

608
00:22:05,270 --> 00:22:04,159
do you have

609
00:22:09,430 --> 00:22:05,280
is it two

610
00:22:10,950 --> 00:22:09,440
landing opportunities each day and

611
00:22:12,549 --> 00:22:10,960
if you've called up

612
00:22:14,310 --> 00:22:12,559
edwards did you have

613
00:22:16,149 --> 00:22:14,320

do you generally have to just pick one

614

00:22:18,549 --> 00:22:16,159

for those two one site for those two or

615

00:22:21,190 --> 00:22:18,559

can you try one first and then the other

616

00:22:23,590 --> 00:22:21,200

well uh the the orbit opportunities line

617

00:22:27,029 --> 00:22:23,600

up differently each day um

618

00:22:29,990 --> 00:22:27,039

in particular uh for end of mission

619

00:22:32,149 --> 00:22:30,000

there's two ksc opportunities followed

620

00:22:34,310 --> 00:22:32,159

separately by edwards opportunities

621

00:22:37,110 --> 00:22:34,320

after that that's really the typical

622

00:22:39,350 --> 00:22:37,120

setup sometimes there's an overlap

623

00:22:41,909 --> 00:22:39,360

between the second kennedy space center

624

00:22:43,909 --> 00:22:41,919

and the first edwards opportunity

625

00:22:46,950 --> 00:22:43,919

i don't think that shows up until i

626

00:22:49,669 --> 00:22:46,960

believe end to mission plus two so

627

00:22:52,310 --> 00:22:49,679

uh under those circumstances uh we could

628

00:22:55,190 --> 00:22:52,320

look at foreign mission plus two if we

629

00:22:58,390 --> 00:22:55,200

get there on saturday we could possibly

630

00:23:01,029 --> 00:22:58,400

look at a at a kennedy space center

631

00:23:03,830 --> 00:23:01,039

a landing opportunity and if that isn't

632

00:23:05,750 --> 00:23:03,840

cooperating the next deorbit opportunity

633

00:23:09,350 --> 00:23:05,760

after that we could choose either

634

00:23:11,190 --> 00:23:09,360

between an edwards or a ksc opportunity

635

00:23:12,549 --> 00:23:11,200

but if we go that far we're obviously

636

00:23:14,710 --> 00:23:12,559

going to be looking at edwards a lot

637

00:23:16,470 --> 00:23:14,720

harder

638

00:23:18,789 --> 00:23:16,480

right okay and last i just wondered if

639

00:23:20,789 --> 00:23:18,799

you could describe a little bit when you

640

00:23:22,549 --> 00:23:20,799

talk about calling up edwards exactly

641

00:23:25,029 --> 00:23:22,559

what that actually entails in terms of

642

00:23:28,870 --> 00:23:25,039

as i understand a certain amount of

643

00:23:30,630 --> 00:23:28,880

manpower has to uh get positioned to

644

00:23:33,830 --> 00:23:30,640

be ready to receive the

645

00:23:36,149 --> 00:23:33,840

shuttle when it lands that's that's uh

646

00:23:37,990 --> 00:23:36,159

that's a part of it we do have a lot of

647

00:23:39,669 --> 00:23:38,000

people that deploy from the landing and

648

00:23:41,750 --> 00:23:39,679

recovery division out at the kennedy

649

00:23:43,669 --> 00:23:41,760

space center out to

650

00:23:45,669 --> 00:23:43,679

the different conus landing sites when

651
00:23:47,909 --> 00:23:45,679
they go out to edwards they're pretty

652
00:23:49,510 --> 00:23:47,919
much already there so they know how to

653
00:23:51,269 --> 00:23:49,520
handle the vehicle

654
00:23:53,350 --> 00:23:51,279
just like they do when it's back at home

655
00:23:54,470 --> 00:23:53,360
and they're the experts in on how to do

656
00:23:58,950 --> 00:23:54,480
that

657
00:24:01,269 --> 00:23:58,960
basically gets ready makes a check out

658
00:24:03,430 --> 00:24:01,279
of all the convoy

659
00:24:06,870 --> 00:24:03,440
instruments and vehicles that are used

660
00:24:09,110 --> 00:24:06,880
to process the vehicle after it touches

661
00:24:10,789 --> 00:24:09,120
touches down and hits wheel stop at the

662
00:24:12,870 --> 00:24:10,799
end of the runway

663
00:24:14,870 --> 00:24:12,880

towing it off the the vehicle getting it

664

00:24:17,510 --> 00:24:14,880

ready for the ferry flight obviously is

665

00:24:19,909 --> 00:24:17,520

the next part of that that convoy

666

00:24:21,909 --> 00:24:19,919

the second part of the equation is

667

00:24:25,110 --> 00:24:21,919

you know securing the runway itself

668

00:24:26,789 --> 00:24:25,120

obviously edwards is a runway that we

669

00:24:29,750 --> 00:24:26,799

share with

670

00:24:32,789 --> 00:24:29,760

the with the air force and so uh that is

671

00:24:34,470 --> 00:24:32,799

the second part of it when we actually

672

00:24:37,110 --> 00:24:34,480

say you know what we're going to be

673

00:24:38,950 --> 00:24:37,120

we're asking the air force to give the

674

00:24:41,350 --> 00:24:38,960

the runway to us and we secure the

675

00:24:44,630 --> 00:24:41,360

amount of time around that appropriately

676
00:24:46,789 --> 00:24:44,640
so that we can get the convoy staged and

677
00:24:49,190 --> 00:24:46,799
shut off the air force operations so

678
00:24:51,350 --> 00:24:49,200
that we could possibly use the uh

679
00:24:53,830 --> 00:24:51,360
the runway if necessary so really that's

680
00:24:55,750 --> 00:24:53,840
that's kind of a high level just of this

681
00:25:00,789 --> 00:24:55,760
high level description of what we do

682
00:25:03,830 --> 00:25:02,310
okay i believe that's it on the phone

683
00:25:06,630 --> 00:25:03,840
bridge i don't think we have any

684
00:25:08,149 --> 00:25:06,640
follow-ups here so we'll uh wrap up with

685
00:25:09,830 --> 00:25:08,159
a couple of programming notes uh

686
00:25:11,590 --> 00:25:09,840
discovery's crew will begin its

687
00:25:13,669 --> 00:25:11,600
eight-hour sleep period at two a.m

688
00:25:15,350 --> 00:25:13,679

central time on thursday

689

00:25:17,269 --> 00:25:15,360

that's the same time that we'll start

690

00:25:19,029 --> 00:25:17,279

our flight day highlights

691

00:25:20,789 --> 00:25:19,039

an hourly replay of the highlights of

692

00:25:22,950 --> 00:25:20,799

today's final full day in orbit we

693

00:25:25,990 --> 00:25:22,960

believe for discovery's crew

694

00:25:27,990 --> 00:25:26,000

the crew gets its wake-up call at 9 59

695

00:25:30,230 --> 00:25:28,000

a.m central time on thursday to begin

696

00:25:32,470 --> 00:25:30,240

deorbit landing preparations and as

697

00:25:35,190 --> 00:25:32,480

richard alluded to at the beginning the

698

00:25:36,390 --> 00:25:35,200

japanese htv launch the maiden launch of

699

00:25:38,149 --> 00:25:36,400

that new cargo ship for the

700

00:25:40,630 --> 00:25:38,159

international space station is on tap

701
00:25:43,430 --> 00:25:40,640
for thursday our launch coverage on nasa

702
00:25:47,110 --> 00:25:43,440
television begins at 11 45 am central

703
00:25:50,950 --> 00:25:47,120
time for expected liftoff at 1201 pm

704
00:25:53,510 --> 00:25:50,960
central time 201 am japan time on friday

705
00:25:55,510 --> 00:25:53,520
september 11th you can follow all the

706
00:25:57,430 --> 00:25:55,520
activities of the space shuttle and the

707
00:25:59,350 --> 00:25:57,440
space station and this mission in

708
00:26:02,230 --> 00:25:59,360
particular on our website at

709
00:26:03,510 --> 00:26:02,240
www.nasa.gov