
NAS

1
00:00:07,190 --> 00:00:05,269
good morning thank you for joining us

2
00:00:09,870 --> 00:00:07,200
here at nasa's kennedy space center in

3
00:00:12,390 --> 00:00:09,880
florida for the space shuttle atlantis

4
00:00:14,070 --> 00:00:12,400
sts-132 pre-launch news conference

5
00:00:16,070 --> 00:00:14,080
joining me today is the chair of the

6
00:00:17,830 --> 00:00:16,080
mission management team mike moses good

7
00:00:19,830 --> 00:00:17,840
morning

8
00:00:21,990 --> 00:00:19,840
shuttle launch director mike leinbach

9
00:00:24,470 --> 00:00:22,000
good morning

10
00:00:26,950 --> 00:00:24,480
and sts-132 weather officer todd

11
00:00:28,150 --> 00:00:26,960
mcnamara good morning

12
00:00:30,230 --> 00:00:28,160
we'll hear from our panelists and then

13
00:00:31,189 --> 00:00:30,240

we'll take questions mr moses thanks

14
00:00:33,030 --> 00:00:31,199
kendrick

15
00:00:34,549 --> 00:00:33,040
well welcome everybody

16
00:00:37,030 --> 00:00:34,559
here to report uh

17
00:00:38,790 --> 00:00:37,040
the results of our l minus 2 mmt that's

18
00:00:40,869 --> 00:00:38,800
our mission management team meeting here

19
00:00:42,150 --> 00:00:40,879
on launch minus two days it's kind of

20
00:00:43,350 --> 00:00:42,160
the kickoff of the official mission

21
00:00:44,950 --> 00:00:43,360
management team

22
00:00:46,310 --> 00:00:44,960
as we get ready to go into the countdown

23
00:00:48,709 --> 00:00:46,320
and launch

24
00:00:49,590 --> 00:00:48,719
we really had nothing to talk about in

25
00:00:51,350 --> 00:00:49,600
fact

26
00:00:53,430 --> 00:00:51,360
i stretched the meeting out to 18

27
00:00:55,110 --> 00:00:53,440
minutes long today it was a it was a

28
00:00:55,910 --> 00:00:55,120
challenge but we managed to pull that

29
00:00:57,029 --> 00:00:55,920
off

30
00:00:59,189 --> 00:00:57,039
talked a little bit about the weather

31
00:01:00,869 --> 00:00:59,199
todd will cover that here today

32
00:01:01,990 --> 00:01:00,879
we talked about the systems mike gave us

33
00:01:03,189 --> 00:01:02,000
the status on the countdown he'll give

34
00:01:04,630 --> 00:01:03,199
you that update as well everything's

35
00:01:05,990 --> 00:01:04,640
looking great

36
00:01:07,670 --> 00:01:06,000
the vehicle is in great shape out on the

37
00:01:09,350 --> 00:01:07,680
pad we talked to the station team you

38
00:01:10,830 --> 00:01:09,360

know they just finished the relocation

39
00:01:13,990 --> 00:01:10,840
of the soyuz the

40
00:01:15,749 --> 00:01:14,000
21st over from the the fgb nader port

41
00:01:17,190 --> 00:01:15,759
which is where the the mrm module that

42
00:01:19,990 --> 00:01:17,200
we're bringing up is going to go and

43
00:01:22,710 --> 00:01:20,000
it's now back at the sm aft uh position

44
00:01:23,990 --> 00:01:22,720
so the iss is in good shape um all their

45
00:01:25,350 --> 00:01:24,000
criteria that they need to have

46
00:01:27,030 --> 00:01:25,360
satisfied before we're ready to launch

47
00:01:28,789 --> 00:01:27,040
have been met and so they're ready for

48
00:01:29,990 --> 00:01:28,799
our mission uh the crew's been doing

49
00:01:31,590 --> 00:01:30,000
good they're in good shape they've been

50
00:01:33,749 --> 00:01:31,600
flying the sta they're gonna have one

51
00:01:34,789 --> 00:01:33,759
more run tomorrow and they'll be ready

52
00:01:36,710 --> 00:01:34,799
to go

53
00:01:38,710 --> 00:01:36,720
and so from uh from a space shuttle

54
00:01:40,230 --> 00:01:38,720
program iss program standpoint we're

55
00:01:41,590 --> 00:01:40,240
ready to launch atlantis and get this

56
00:01:43,590 --> 00:01:41,600
mission underway

57
00:01:45,429 --> 00:01:43,600
um just to recap you know you've heard

58
00:01:47,590 --> 00:01:45,439
all the pre-mission briefings uh three

59
00:01:49,990 --> 00:01:47,600
evas on this flight the first one is

60
00:01:51,590 --> 00:01:50,000
basically getting uh some of the orus

61
00:01:52,630 --> 00:01:51,600
which are the orbital replacement units

62
00:01:54,789 --> 00:01:52,640
the spares

63
00:01:55,910 --> 00:01:54,799

off of one of the the payload

64
00:01:58,709 --> 00:01:55,920
racks that we're carrying up it's called

65
00:02:00,230 --> 00:01:58,719
an icc vld it's a deployable carrier

66
00:02:02,630 --> 00:02:00,240
it's going to go over to the station on

67
00:02:03,910 --> 00:02:02,640
flight day three after we dock

68
00:02:06,230 --> 00:02:03,920
the first dva they'll go out and they'll

69
00:02:07,590 --> 00:02:06,240
take off a ku band antenna that'll be

70
00:02:10,469 --> 00:02:07,600
used as a spare antenna to put that on

71
00:02:12,150 --> 00:02:10,479
the station and a transfer platform an

72
00:02:14,710 --> 00:02:12,160
enhanced transfer platform that goes on

73
00:02:16,869 --> 00:02:14,720
the spdm which is the special purpose

74
00:02:18,150 --> 00:02:16,879
dexterous manipulator the dexter

75
00:02:20,390 --> 00:02:18,160
robot arm that

76
00:02:21,750 --> 00:02:20,400
was launched back on sts-123

77
00:02:23,589 --> 00:02:21,760
built by canada

78
00:02:25,430 --> 00:02:23,599
to be the the station

79
00:02:27,589 --> 00:02:25,440
extra robotic hands and so we're going

80
00:02:29,350 --> 00:02:27,599
to give it a a new trench or a new

81
00:02:30,790 --> 00:02:29,360
stowage platform that's powered and and

82
00:02:32,630 --> 00:02:30,800
has a lot more capability than the one

83
00:02:34,949 --> 00:02:32,640
that's up there right now

84
00:02:36,630 --> 00:02:34,959
uh and then we start two evas so evas

85
00:02:39,430 --> 00:02:36,640
two and three will be battery

86
00:02:42,470 --> 00:02:39,440
replacements rnr's re remove and replace

87
00:02:45,110 --> 00:02:42,480
uh basically on sts-127 we removed six

88
00:02:47,110 --> 00:02:45,120

of the batteries from the p6 trust the

89
00:02:48,390 --> 00:02:47,120
port uh number six truss that was the

90
00:02:49,110 --> 00:02:48,400
first one that was launched way back

91
00:02:51,350 --> 00:02:49,120
when

92
00:02:53,030 --> 00:02:51,360
and used as this initial solar

93
00:02:54,229 --> 00:02:53,040
platform for the station so their

94
00:02:56,470 --> 00:02:54,239
batteries are kind of at the end of

95
00:02:58,710 --> 00:02:56,480
their life we changed out six of them on

96
00:03:01,670 --> 00:02:58,720
sts-127 we'll change out the remaining

97
00:03:04,070 --> 00:03:01,680
six on this mission and bring those home

98
00:03:06,470 --> 00:03:04,080
and then the mrm which is the russian uh

99
00:03:08,630 --> 00:03:06,480
multi-purpose research module that's

100
00:03:11,190 --> 00:03:08,640
going uh over on flight day five that'll

101
00:03:12,470 --> 00:03:11,200
be installed on the fgb and i think

102
00:03:13,830 --> 00:03:12,480
about flight day seven they'll open the

103
00:03:15,990 --> 00:03:13,840
hatches and do ingress they're not gonna

104
00:03:18,470 --> 00:03:16,000
do a full ingress that thing is packed

105
00:03:19,830 --> 00:03:18,480
to the gills with cargo inside and until

106
00:03:21,509 --> 00:03:19,840
the shuttle crew leaves there's not

107
00:03:23,350 --> 00:03:21,519
enough room on station to completely

108
00:03:24,949 --> 00:03:23,360
unpack that module and start to stow it

109
00:03:26,229 --> 00:03:24,959
in the right place so they'll do a quick

110
00:03:27,589 --> 00:03:26,239
ingress environmental check but they're

111
00:03:29,430 --> 00:03:27,599
not going to do a whole lot of work

112
00:03:31,509 --> 00:03:29,440
inside that module

113
00:03:33,350 --> 00:03:31,519

the last thing to talk about is is the

114
00:03:35,589 --> 00:03:33,360
middeck science this mission's carrying

115
00:03:38,309 --> 00:03:35,599
up a whole lot of science in fact we we

116
00:03:39,990 --> 00:03:38,319
added a lot um we call it kind of sortie

117
00:03:41,350 --> 00:03:40,000
science that it's going to be done on

118
00:03:43,030 --> 00:03:41,360
the station but it's going to take

119
00:03:44,550 --> 00:03:43,040
advantage of the shuttle crew and the

120
00:03:46,390 --> 00:03:44,560
extra hands that are going to be around

121
00:03:48,390 --> 00:03:46,400
so we're flying a lot of science

122
00:03:49,910 --> 00:03:48,400
missions on the mid-deck they're going

123
00:03:51,670 --> 00:03:49,920
to go up be transferred over station be

124
00:03:53,509 --> 00:03:51,680
run and executed and then brought back

125
00:03:54,630 --> 00:03:53,519
down and returned on this mission so a

126
00:03:56,470 --> 00:03:54,640
couple of days worth of science

127
00:03:58,949 --> 00:03:56,480
operations in fact it's one of the

128
00:04:01,270 --> 00:03:58,959
reasons why if we find ourselves in a

129
00:04:03,350 --> 00:04:01,280
slip situation you'll see us talk about

130
00:04:04,789 --> 00:04:03,360
uh there's a sliver of window in june

131
00:04:06,470 --> 00:04:04,799
that we would probably not try to launch

132
00:04:07,990 --> 00:04:06,480
into and that's because there would only

133
00:04:09,830 --> 00:04:08,000
be a three person crew on station and

134
00:04:11,350 --> 00:04:09,840
and that would lose the ability to do

135
00:04:12,789 --> 00:04:11,360
that science that we're carrying up

136
00:04:15,350 --> 00:04:12,799
specifically on this mission for that

137
00:04:16,390 --> 00:04:15,360
purpose so so not to talk about the bad

138
00:04:17,590 --> 00:04:16,400

news of slipping because we're going to

139
00:04:19,509 --> 00:04:17,600
launch friday it's going to be perfect

140
00:04:20,629 --> 00:04:19,519
everything will be great but uh but it

141
00:04:21,749 --> 00:04:20,639
just wanted to highlight the science

142
00:04:23,749 --> 00:04:21,759
that we are taking up and the

143
00:04:25,670 --> 00:04:23,759
utilization we're doing on the station

144
00:04:27,990 --> 00:04:25,680
speaking of station i did want to to

145
00:04:29,830 --> 00:04:28,000
give a reminder to the fact that they're

146
00:04:31,749 --> 00:04:29,840
receiving a huge honor tomorrow night up

147
00:04:33,749 --> 00:04:31,759
in arlington uh they're they've received

148
00:04:35,590 --> 00:04:33,759
the 2009 collier trophy from the

149
00:04:36,629 --> 00:04:35,600
national aeronautics association as the

150
00:04:38,310 --> 00:04:36,639
uh

151
00:04:40,070 --> 00:04:38,320
as their their yearly winner being

152
00:04:42,230 --> 00:04:40,080
recognized for the accomplishment of

153
00:04:44,230 --> 00:04:42,240
building such a huge orbiting spacecraft

154
00:04:45,749 --> 00:04:44,240
with international cooperation and and

155
00:04:47,749 --> 00:04:45,759
promoting that national laboratory in

156
00:04:49,430 --> 00:04:47,759
space so a real honor for them and we're

157
00:04:50,790 --> 00:04:49,440
really proud of them to be uh be getting

158
00:04:52,550 --> 00:04:50,800
that award

159
00:04:53,749 --> 00:04:52,560
and then finally uh just to highlight

160
00:04:54,870 --> 00:04:53,759
you know you guys have been asking a lot

161
00:04:57,030 --> 00:04:54,880
of questions and everybody's been

162
00:04:59,830 --> 00:04:57,040
talking about it this is atlantis final

163
00:05:02,710 --> 00:04:59,840

planned mission um it's been a glorious

164
00:05:04,550 --> 00:05:02,720
career started back in 1985 actually

165
00:05:06,629 --> 00:05:04,560
construction started in the 80s

166
00:05:07,909 --> 00:05:06,639
and its first flight was in in 1985 so

167
00:05:10,230 --> 00:05:07,919
this will be the 32nd mission of

168
00:05:11,749 --> 00:05:10,240
atlantis and we're not taking a lot of

169
00:05:13,270 --> 00:05:11,759
time reflecting back here before launch

170
00:05:15,749 --> 00:05:13,280
but i'm sure once once she gets back

171
00:05:17,270 --> 00:05:15,759
we'll we'll have a few celebrations she

172
00:05:18,870 --> 00:05:17,280
is going to turn around and be processed

173
00:05:20,550 --> 00:05:18,880
for launch on need so it's not the end

174
00:05:22,150 --> 00:05:20,560
of the line atlantis is going to go back

175
00:05:23,909 --> 00:05:22,160
into the opf and start down mission

176
00:05:25,749 --> 00:05:23,919
processing and turn around in fact we

177
00:05:27,350 --> 00:05:25,759
have a full flow pulling rcc panels

178
00:05:28,629 --> 00:05:27,360
looking for corrosion doing all the

179
00:05:30,950 --> 00:05:28,639
things we would do as if we were truly

180
00:05:32,870 --> 00:05:30,960
going to launch sts 335 which is the

181
00:05:34,870 --> 00:05:32,880
rescue mission for our final shuttle

182
00:05:36,790 --> 00:05:34,880
flight sts-134

183
00:05:38,950 --> 00:05:36,800
and so it'll it'll go into the opf and

184
00:05:40,550 --> 00:05:38,960
be processed again but but uh probably

185
00:05:42,310 --> 00:05:40,560
won't see the pad again and so it's a

186
00:05:43,909 --> 00:05:42,320
bittersweet time but like i said we're

187
00:05:45,270 --> 00:05:43,919
the teams are focused on the launch here

188
00:05:47,270 --> 00:05:45,280

and we're not really looking back just

189
00:05:48,710 --> 00:05:47,280
yet we'll probably wait until we get uh

190
00:05:50,790 --> 00:05:48,720
get it safely home before we start doing

191
00:05:52,629 --> 00:05:50,800
that so that's all i had mike okay

192
00:05:54,230 --> 00:05:52,639
thanks mike well the countdown is going

193
00:05:55,430 --> 00:05:54,240
exceedingly well we're not tracking any

194
00:05:57,510 --> 00:05:55,440
issues right now at all that would

195
00:05:59,990 --> 00:05:57,520
prevent an on-time lift off friday

196
00:06:01,430 --> 00:06:00,000
morning as mike said team atlantis is

197
00:06:03,110 --> 00:06:01,440
really hitting hitting the stride right

198
00:06:04,390 --> 00:06:03,120
now we're clicking on all all night all

199
00:06:06,870 --> 00:06:04,400
eight cylinders

200
00:06:08,710 --> 00:06:06,880
no issues at the launch pad uh just

201
00:06:10,469 --> 00:06:08,720
quick reminder that we do have the delta

202
00:06:11,909 --> 00:06:10,479
on the range on the 20th and that says

203
00:06:13,670 --> 00:06:11,919
we only have through and including the

204
00:06:15,350 --> 00:06:13,680
18th to get off the pad should we scrub

205
00:06:17,350 --> 00:06:15,360
for whatever reason

206
00:06:19,909 --> 00:06:17,360
but expect we'll be able to launch

207
00:06:21,670 --> 00:06:19,919
friday morning friday afternoon on time

208
00:06:23,670 --> 00:06:21,680
a couple milestones in the countdown

209
00:06:25,270 --> 00:06:23,680
coming up we start the

210
00:06:27,270 --> 00:06:25,280
fuel cell cryogenic loading this

211
00:06:28,550 --> 00:06:27,280
afternoon about noontime and the weather

212
00:06:30,230 --> 00:06:28,560
should be good for that you'll hear from

213
00:06:31,590 --> 00:06:30,240

todd here momentarily

214
00:06:33,749 --> 00:06:31,600
the rotating service structure

215
00:06:35,830 --> 00:06:33,759
retraction it's tomorrow evening about 5

216
00:06:37,350 --> 00:06:35,840
30 and then we clear the pad and begin

217
00:06:39,350 --> 00:06:37,360
loading the external tank about 5

218
00:06:42,230 --> 00:06:39,360
o'clock friday morning in preparation

219
00:06:43,830 --> 00:06:42,240
for launch at 2 20 friday afternoon so

220
00:06:45,749 --> 00:06:43,840
again in summary everything is going

221
00:06:47,029 --> 00:06:45,759
really really well in atlantis and the

222
00:06:48,790 --> 00:06:47,039
boosters in the tank and the ground

223
00:06:50,629 --> 00:06:48,800
support equipment the team is in great

224
00:06:53,510 --> 00:06:50,639
spirits and we're ready to

225
00:06:55,430 --> 00:06:53,520
give it our best shot friday todd

226
00:06:57,270 --> 00:06:55,440
good morning overall the weather looks

227
00:06:59,430 --> 00:06:57,280
favorable favorable not only for

228
00:07:00,870 --> 00:06:59,440
pre-launch operations

229
00:07:02,950 --> 00:07:00,880
today and tomorrow but also for the

230
00:07:04,950 --> 00:07:02,960
launch on friday if we can take a look

231
00:07:06,710 --> 00:07:04,960
at the satellite imagery you can see

232
00:07:08,710 --> 00:07:06,720
basically not very many clouds over

233
00:07:10,710 --> 00:07:08,720
florida right now and that's due to a

234
00:07:12,309 --> 00:07:10,720
very strong high pressure center that

235
00:07:13,909 --> 00:07:12,319
high pressure center has been strong and

236
00:07:15,990 --> 00:07:13,919
dominant over us for at least three or

237
00:07:17,830 --> 00:07:16,000
four days now has been keeping all that

238
00:07:19,990 --> 00:07:17,840

nasty weather all the way out around

239
00:07:21,990 --> 00:07:20,000
texas up through the ohio valley region

240
00:07:23,350 --> 00:07:22,000
well up to our north and west and that's

241
00:07:25,589 --> 00:07:23,360
going to continue for the next several

242
00:07:27,830 --> 00:07:25,599
days at least until monday so for the

243
00:07:29,830 --> 00:07:27,840
next 24 to 48 hours i'm looking for

244
00:07:31,670 --> 00:07:29,840
scattered skies with that high pressure

245
00:07:33,350 --> 00:07:31,680
center at the surface still dominating

246
00:07:35,670 --> 00:07:33,360
our weather pattern we'll see some

247
00:07:38,870 --> 00:07:35,680
clouds out over the water kind of moving

248
00:07:41,430 --> 00:07:38,880
onshore and for rss retract tomorrow

249
00:07:42,629 --> 00:07:41,440
afternoon and tanking friday morning

250
00:07:44,550 --> 00:07:42,639
looking for some of those scattered

251
00:07:46,790 --> 00:07:44,560
clouds in the low cloud low levels to

252
00:07:48,790 --> 00:07:46,800
kind of move onshore could be a spotty

253
00:07:51,029 --> 00:07:48,800
shower in the early morning hours

254
00:07:54,150 --> 00:07:51,039
along the coast very very brief as those

255
00:07:56,070 --> 00:07:54,160
low strata q clouds move in but overall

256
00:07:58,790 --> 00:07:56,080
very favorable conditions for tanking an

257
00:08:00,790 --> 00:07:58,800
rss retract for friday afternoon and

258
00:08:02,230 --> 00:08:00,800
launch still the same type of conditions

259
00:08:03,990 --> 00:08:02,240
high pressure is going to dominate our

260
00:08:05,270 --> 00:08:04,000
area the high pressure center is going

261
00:08:07,270 --> 00:08:05,280
to be just to our north so we're going

262
00:08:09,670 --> 00:08:07,280
to see easterly winds peaking up right

263
00:08:11,990 --> 00:08:09,680

around 18 knots or so well below or

264
00:08:13,830 --> 00:08:12,000
below any type of launch constraints and

265
00:08:15,589 --> 00:08:13,840
the only concern i do have is that we

266
00:08:17,589 --> 00:08:15,599
could see some enhanced convergence in

267
00:08:19,670 --> 00:08:17,599
the low levels which makes those clouds

268
00:08:21,749 --> 00:08:19,680
a little bit larger in extent and that

269
00:08:23,589 --> 00:08:21,759
could hamper or give us a problem with

270
00:08:25,029 --> 00:08:23,599
the low cloud ceiling rule

271
00:08:26,150 --> 00:08:25,039
if those ceilings kind of move in

272
00:08:27,749 --> 00:08:26,160
they're going to be very quick moving

273
00:08:29,990 --> 00:08:27,759
they're going to move in those easter

274
00:08:32,149 --> 00:08:30,000
strong easterly winds rather rapidly so

275
00:08:34,469 --> 00:08:32,159
be very brief but overall we're looking

276
00:08:35,990 --> 00:08:34,479
at the probability of ksc weather

277
00:08:38,709 --> 00:08:36,000
prohibiting launch

278
00:08:40,949 --> 00:08:38,719
of 30 percent at this time

279
00:08:43,110 --> 00:08:40,959
as far as a 24 and 48 hour slip if we

280
00:08:44,149 --> 00:08:43,120
would need that opportunity weather's

281
00:08:45,269 --> 00:08:44,159
still going to look good the high

282
00:08:46,870 --> 00:08:45,279
pressure is still going to dominate

283
00:08:48,389 --> 00:08:46,880
florida we're still going to see those

284
00:08:49,590 --> 00:08:48,399
easterly winds in the low levels and

285
00:08:51,509 --> 00:08:49,600
we're still going to see some of those

286
00:08:52,710 --> 00:08:51,519
clouds move from out over the water

287
00:08:53,990 --> 00:08:52,720
onshore

288
00:08:56,630 --> 00:08:54,000

we could see a little increase in the

289
00:09:00,310 --> 00:08:56,640
winds up to 20 knots on sunday and that

290
00:09:02,949 --> 00:09:00,320
could be an added increase in crosswind

291
00:09:04,310 --> 00:09:02,959
concerns so the probability of kc

292
00:09:05,829 --> 00:09:04,320
weather violating

293
00:09:07,350 --> 00:09:05,839
launch or prohibiting launch for

294
00:09:09,190 --> 00:09:07,360
saturday and sunday is also at 30

295
00:09:11,030 --> 00:09:09,200
percent due to those low cloud ceilings

296
00:09:12,230 --> 00:09:11,040
possibly moving in and on sunday the

297
00:09:14,070 --> 00:09:12,240
crosswinds

298
00:09:16,150 --> 00:09:14,080
as far as the abort landing sites here

299
00:09:19,030 --> 00:09:16,160
in the u.s the space flight meteorology

300
00:09:20,949 --> 00:09:19,040
group is forecasting great conditions

301
00:09:23,190 --> 00:09:20,959
friday saturday and sunday for both

302
00:09:25,670 --> 00:09:23,200
edwards and white sands and then as far

303
00:09:28,230 --> 00:09:25,680
as the overseas locations they are

304
00:09:30,710 --> 00:09:28,240
forecasting ceilings winds and showers

305
00:09:32,470 --> 00:09:30,720
within 20 to affect zaragoza and

306
00:09:35,110 --> 00:09:32,480
distress both monday tuesday and

307
00:09:37,030 --> 00:09:35,120
wednesday however morons looking very

308
00:09:38,870 --> 00:09:37,040
good all three days and that will be our

309
00:09:41,269 --> 00:09:38,880
one good towel site as far as weather is

310
00:09:43,509 --> 00:09:41,279
concerned for launch operations

311
00:09:45,030 --> 00:09:43,519
so overall right now we're sitting with

312
00:09:46,389 --> 00:09:45,040
high pressure over the top of us it's

313
00:09:48,470 --> 00:09:46,399

going to dominate us at least until

314
00:09:50,550 --> 00:09:48,480
monday we're going to see low clouds out

315
00:09:52,870 --> 00:09:50,560
over the water moving onshore we have a

316
00:09:54,870 --> 00:09:52,880
slight chance of some low clouds

317
00:09:55,829 --> 00:09:54,880
moving in and give us giving us a

318
00:09:58,070 --> 00:09:55,839
ceiling

319
00:10:00,949 --> 00:09:58,080
on friday saturday and sunday and

320
00:10:04,550 --> 00:10:00,959
because of that we have a 30 chance of

321
00:10:06,470 --> 00:10:04,560
ksc weather prohibiting launch kendriya

322
00:10:07,910 --> 00:10:06,480
thank you we'll now take questions when

323
00:10:09,750 --> 00:10:07,920
the microphone comes your way please

324
00:10:11,509 --> 00:10:09,760
state your name affiliation and to whom

325
00:10:13,750 --> 00:10:11,519
you're addressing your question uh start

326
00:10:15,110 --> 00:10:13,760
in the front with chris

327
00:10:17,430 --> 00:10:15,120
um chris gebhardt with nasa

328
00:10:20,069 --> 00:10:17,440
spaceflight.com uh with um

329
00:10:22,710 --> 00:10:20,079
i believe two for mike moses um the uh

330
00:10:24,790 --> 00:10:22,720
cscs timeline uh for station support for

331
00:10:26,389 --> 00:10:24,800
the 132 crew out through september how

332
00:10:28,310 --> 00:10:26,399
many day what's the limiting consumable

333
00:10:29,590 --> 00:10:28,320
and how many days do you have on that

334
00:10:32,150 --> 00:10:29,600
and to follow up

335
00:10:33,990 --> 00:10:32,160
see that for the contingencies uh safe

336
00:10:36,069 --> 00:10:34,000
haven uh consumables we have up on

337
00:10:38,389 --> 00:10:36,079
station they right now have uh food to

338
00:10:39,910 --> 00:10:38,399

support 125 days which is the duration

339
00:10:41,110 --> 00:10:39,920
that takes us to get to the the launch

340
00:10:42,949 --> 00:10:41,120
in september

341
00:10:44,870 --> 00:10:42,959
so we have that covered no problem

342
00:10:46,949 --> 00:10:44,880
the thing that that that does not assume

343
00:10:48,790 --> 00:10:46,959
is uh there are two progress resupply

344
00:10:51,110 --> 00:10:48,800
launches that occur between now and then

345
00:10:52,870 --> 00:10:51,120
and and for conservatism we as we don't

346
00:10:54,550 --> 00:10:52,880
assume that those are successful so we

347
00:10:56,710 --> 00:10:54,560
don't count those obviously we'd have

348
00:10:58,470 --> 00:10:56,720
two chances to send up uh progresses

349
00:11:00,710 --> 00:10:58,480
with with tons more supplies food

350
00:11:02,949 --> 00:11:00,720
whatever we needed so we'd have way more

351
00:11:05,590 --> 00:11:02,959
than that 125 days

352
00:11:07,750 --> 00:11:05,600
um and um in terms of the cryo load for

353
00:11:09,509 --> 00:11:07,760
atlantis fuel cells you know with with

354
00:11:11,590 --> 00:11:09,519
endeavor and discovery you get the added

355
00:11:12,949 --> 00:11:11,600
benefit of spitz up on station to draw

356
00:11:13,990 --> 00:11:12,959
power from that and with atlantis you

357
00:11:15,190 --> 00:11:14,000
don't

358
00:11:17,509 --> 00:11:15,200
i know this mission is packed to the

359
00:11:19,990 --> 00:11:17,519
gills a 12 plus zero plus two day flight

360
00:11:22,550 --> 00:11:20,000
um if you get off the ground on time

361
00:11:24,230 --> 00:11:22,560
with a full consumable load on board

362
00:11:26,710 --> 00:11:24,240
do you know how much wiggle room you

363
00:11:28,870 --> 00:11:26,720

expect to have in the cryos over that 12

364
00:11:31,590 --> 00:11:28,880
plus zero plus two day limit yeah let's

365
00:11:32,790 --> 00:11:31,600
see so we typically have about 96 hours

366
00:11:34,710 --> 00:11:32,800
of pet hold mike i don't remember the

367
00:11:35,910 --> 00:11:34,720
exact number this time so that that's

368
00:11:37,190 --> 00:11:35,920
that's the amount of time we can sit on

369
00:11:39,190 --> 00:11:37,200
the pad before we have to top off the

370
00:11:41,269 --> 00:11:39,200
tanks if we launched on time that's then

371
00:11:42,949 --> 00:11:41,279
available to use as orbit margin and it

372
00:11:44,870 --> 00:11:42,959
converts over to be

373
00:11:46,870 --> 00:11:44,880
pretty close to an extra day so it

374
00:11:48,230 --> 00:11:46,880
wouldn't take much we might actually

375
00:11:50,069 --> 00:11:48,240
already be there by the time we lift off

376
00:11:51,030 --> 00:11:50,079
to have an extra consumables day if

377
00:11:52,550 --> 00:11:51,040
needed

378
00:11:54,150 --> 00:11:52,560
no plans to use it there's nothing

379
00:11:55,750 --> 00:11:54,160
station needs to do it

380
00:11:57,110 --> 00:11:55,760
it's just it would put that plus one

381
00:11:58,949 --> 00:11:57,120
back in the bank if for some reason we

382
00:12:00,069 --> 00:11:58,959
did want to use it

383
00:12:03,750 --> 00:12:00,079
robert

384
00:12:06,150 --> 00:12:03,760
collectspace.com uh with a question for

385
00:12:09,190 --> 00:12:06,160
mike moses and mike leinbach um i don't

386
00:12:11,430 --> 00:12:09,200
know if it's normal for you you and your

387
00:12:14,069 --> 00:12:11,440
respective uh team members or colleagues

388
00:12:17,030 --> 00:12:14,079

to go out to rss but given that it is

389
00:12:19,829 --> 00:12:17,040
probably the last time that atlantis may

390
00:12:21,670 --> 00:12:19,839
sit on the pad do you plan to have

391
00:12:24,150 --> 00:12:21,680
spend some time uh

392
00:12:25,990 --> 00:12:24,160
observing the the orbiter as it's uh

393
00:12:28,870 --> 00:12:26,000
revealed for flight

394
00:12:29,829 --> 00:12:28,880
so first i'll let you know okay uh we

395
00:12:31,190 --> 00:12:29,839
have

396
00:12:32,310 --> 00:12:31,200
a couple ways to answer that question

397
00:12:34,550 --> 00:12:32,320
first of all personally i've already

398
00:12:36,710 --> 00:12:34,560
been out to the pad so i don't uh i

399
00:12:37,590 --> 00:12:36,720
don't plan to go out again plus we have

400
00:13:01,030 --> 00:12:37,600
a

401
00:13:06,470 --> 00:13:03,030
bill

402
00:13:08,790 --> 00:13:06,480
i don't know if this is a weather

403
00:13:10,629 --> 00:13:08,800
question or a mike moses question is the

404
00:13:12,550 --> 00:13:10,639
volcanic ash any issue at all if you

405
00:13:13,910 --> 00:13:12,560
guys ended up in a towel uh just we were

406
00:13:15,670 --> 00:13:13,920
talking about abort sites just then was

407
00:13:17,350 --> 00:13:15,680
just wondering yeah we've been talking

408
00:13:18,629 --> 00:13:17,360
about it um you know it i think

409
00:13:21,030 --> 00:13:18,639
currently it's causing some closures

410
00:13:22,710 --> 00:13:21,040
over in europe the projections we did

411
00:13:24,470 --> 00:13:22,720
talk to our forecasters those would be

412
00:13:25,990 --> 00:13:24,480
the guys back in houston with the space

413
00:13:27,350 --> 00:13:26,000

flight meteorology group

414
00:13:29,910 --> 00:13:27,360
they have the tools they would need to

415
00:13:31,269 --> 00:13:29,920
forecast if if we did have problems

416
00:13:32,870 --> 00:13:31,279
from an orbiter perspective it's

417
00:13:34,550 --> 00:13:32,880
probably not an impact to us since we

418
00:13:36,150 --> 00:13:34,560
come in at such high altitude

419
00:13:38,230 --> 00:13:36,160
um and and currently the ashes are

420
00:13:39,750 --> 00:13:38,240
pretty low altitude we're looking at

421
00:13:41,110 --> 00:13:39,760
what it would do to to uh the weather

422
00:13:42,790 --> 00:13:41,120
recon aircraft the search and rescue

423
00:13:45,110 --> 00:13:42,800
forces that kind of thing but but

424
00:13:46,949 --> 00:13:45,120
basically um the predictions are by

425
00:13:48,470 --> 00:13:46,959
friday it's going to not be a big threat

426
00:13:50,389 --> 00:13:48,480
to us and but we'll keep an eye on it

427
00:13:52,470 --> 00:13:50,399
we've been talking about it so but don't

428
00:13:53,990 --> 00:13:52,480
expect it to be an ops impact to us okay

429
00:13:56,310 --> 00:13:54,000
and since you went out of your way to

430
00:13:57,509 --> 00:13:56,320
talk about atlantis last flight um you

431
00:13:59,910 --> 00:13:57,519
know if you're a reporter and everybody

432
00:14:01,910 --> 00:13:59,920
talks about the last flight um and yet

433
00:14:03,430 --> 00:14:01,920
there seems to be this lingering thought

434
00:14:05,030 --> 00:14:03,440
that maybe it would actually fly one

435
00:14:06,629 --> 00:14:05,040
more time has that been ruled out at

436
00:14:08,710 --> 00:14:06,639
this point or is that still a

437
00:14:10,150 --> 00:14:08,720
theoretical possibility that

438
00:14:11,670 --> 00:14:10,160

in other words if i got to keep saying

439
00:14:13,670 --> 00:14:11,680
last planned flight or can i say it's

440
00:14:14,949 --> 00:14:13,680
the last flight it is the last planned

441
00:14:16,629 --> 00:14:14,959
flight you know we could go theoretical

442
00:14:18,949 --> 00:14:16,639
possibilities that we could we could be

443
00:14:20,629 --> 00:14:18,959
doing we could be stopping everything

444
00:14:22,870 --> 00:14:20,639
after this flight we could be flying for

445
00:14:25,030 --> 00:14:22,880
another 30 years but right no i know

446
00:14:26,069 --> 00:14:25,040
what you mean but so so we are planning

447
00:14:27,710 --> 00:14:26,079
in our current direction our current

448
00:14:30,150 --> 00:14:27,720
budget guidance is that

449
00:14:31,590 --> 00:14:30,160
sts-335 is the rescue mission and we're

450
00:14:33,189 --> 00:14:31,600
not launching it

451
00:14:35,110 --> 00:14:33,199
the possibility exists to turn that into

452
00:14:37,189 --> 00:14:35,120
an actual launch the hardware's here all

453
00:14:39,110 --> 00:14:37,199
it exists we are currently not doing

454
00:14:41,189 --> 00:14:39,120
that and so but somebody could tell us

455
00:14:42,829 --> 00:14:41,199
to but so i can't answer the question

456
00:14:45,030 --> 00:14:42,839
for you because it's not up to

457
00:14:47,910 --> 00:14:45,040
me todd

458
00:14:50,790 --> 00:14:47,920
todd halverson of florida today i have a

459
00:14:52,870 --> 00:14:50,800
couple for mike while you're not in

460
00:14:55,509 --> 00:14:52,880
the reflection mode yet i'm wondering if

461
00:14:58,710 --> 00:14:55,519
you can tell me what the mood is among

462
00:14:59,990 --> 00:14:58,720
the people who follow that 104

463
00:15:02,310 --> 00:15:00,000

tail number

464
00:15:04,550 --> 00:15:02,320
as you're approaching what could be the

465
00:15:07,110 --> 00:15:04,560
last play of atlantis

466
00:15:08,629 --> 00:15:07,120
um well you know we've contacted the

467
00:15:09,990 --> 00:15:08,639
some of the earlier flow directors for

468
00:15:12,629 --> 00:15:10,000
atlantis and see if they wanted to come

469
00:15:14,949 --> 00:15:12,639
out for the final launch that type of

470
00:15:16,389 --> 00:15:14,959
thing flow flow directors flow managers

471
00:15:18,790 --> 00:15:16,399
some of the key people along the way

472
00:15:20,470 --> 00:15:18,800
over the last 25 years that atlantis has

473
00:15:22,470 --> 00:15:20,480
been here

474
00:15:24,150 --> 00:15:22,480
as mike mentioned she started production

475
00:15:27,829 --> 00:15:24,160
30 years ago so it's been a good long

476
00:15:29,350 --> 00:15:27,839
run for atlantis um but no you know it

477
00:15:30,870 --> 00:15:29,360
it's the type of thing where where when

478
00:15:32,550 --> 00:15:30,880
you're alone and thinking about it yeah

479
00:15:35,670 --> 00:15:32,560
it kind of hits you but when you're on

480
00:15:37,269 --> 00:15:35,680
console like like me and my launch team

481
00:15:39,350 --> 00:15:37,279
we have a job to do and we're going to

482
00:15:40,790 --> 00:15:39,360
do that job i i think after launch

483
00:15:42,550 --> 00:15:40,800
they'll probably be a little a little

484
00:15:44,470 --> 00:15:42,560
tear in some people's eyes i think after

485
00:15:45,990 --> 00:15:44,480
landing there will be

486
00:15:47,350 --> 00:15:46,000
but then there'll be some celebrations

487
00:15:49,030 --> 00:15:47,360
too and that'll take care of all that

488
00:15:52,790 --> 00:15:49,040

for us

489
00:15:55,590 --> 00:15:52,800
and uh mike could you tell me how far in

490
00:15:57,189 --> 00:15:55,600
terms of processing you will be taking

491
00:15:58,790 --> 00:15:57,199
atlantis

492
00:16:00,310 --> 00:15:58,800
i know you have to prepare for that

493
00:16:01,430 --> 00:16:00,320
flight as if it's going to be a real

494
00:16:04,710 --> 00:16:01,440
flight

495
00:16:06,230 --> 00:16:04,720
but will it still be in the opf at the

496
00:16:09,430 --> 00:16:06,240
time of

497
00:16:11,749 --> 00:16:09,440
the last launch would it be in the vab

498
00:16:13,590 --> 00:16:11,759
if you slip till february would would

499
00:16:15,910 --> 00:16:13,600
you take it to the pad

500
00:16:18,150 --> 00:16:15,920
um i'm going to try to be as slippery on

501
00:16:19,189 --> 00:16:18,160
that answer as mike was on on his answer

502
00:16:20,389 --> 00:16:19,199
to bill

503
00:16:21,910 --> 00:16:20,399
if you could tell me one of the last

504
00:16:23,030 --> 00:16:21,920
launches i could tell you where atlantis

505
00:16:24,790 --> 00:16:23,040
is going to be

506
00:16:27,509 --> 00:16:24,800
right i'm not i'm not sure we're going

507
00:16:29,509 --> 00:16:27,519
to take it well into the processing flow

508
00:16:31,590 --> 00:16:29,519
because we have to and

509
00:16:33,990 --> 00:16:31,600
where it actually ends up when discovery

510
00:16:35,590 --> 00:16:34,000
launches and when endeavour launches

511
00:16:37,430 --> 00:16:35,600
you know we'll just have to see the the

512
00:16:39,910 --> 00:16:37,440
manifest is really kind of fluid right

513
00:16:41,910 --> 00:16:39,920

now based on uh based on a lot of

514
00:16:43,350 --> 00:16:41,920
different constraints coming our way so

515
00:16:44,790 --> 00:16:43,360
we're gonna we're gonna process it we're

516
00:16:46,870 --> 00:16:44,800
gonna hit it hard and heavy when she

517
00:16:49,749 --> 00:16:46,880
comes home and and be ready for whatever

518
00:16:51,590 --> 00:16:49,759
the program tells us to do but it i if i

519
00:16:53,590 --> 00:16:51,600
had if i if we had an answer for you

520
00:16:55,509 --> 00:16:53,600
we'd tell you honestly but we we just

521
00:16:56,949 --> 00:16:55,519
don't right now yeah but about the only

522
00:16:59,430 --> 00:16:56,959
thing i could offer is from a budget

523
00:17:01,269 --> 00:16:59,440
perspective we are budgeting that we uh

524
00:17:02,550 --> 00:17:01,279
we will ship all the srb segments here

525
00:17:03,749 --> 00:17:02,560
in fact the last set are coming at the

526
00:17:05,510 --> 00:17:03,759
end of this month

527
00:17:07,750 --> 00:17:05,520
the et will be here

528
00:17:08,870 --> 00:17:07,760
and that we are going to stack the srbs

529
00:17:10,949 --> 00:17:08,880
i don't know that we'll make it to et

530
00:17:12,789 --> 00:17:10,959
mate but we are planning to then have

531
00:17:14,949 --> 00:17:12,799
the ops budget to then de-stack those

532
00:17:16,710 --> 00:17:14,959
srbs so we're assuming that we're going

533
00:17:18,230 --> 00:17:16,720
to get that far but again it's like mike

534
00:17:19,429 --> 00:17:18,240
said it all depends on on where the

535
00:17:20,949 --> 00:17:19,439
vehicles happen to be in the flow with

536
00:17:23,110 --> 00:17:20,959
the launch dates as to what we actually

537
00:17:24,230 --> 00:17:23,120
end up doing

538
00:17:26,789 --> 00:17:24,240

marcia

539
00:17:28,630 --> 00:17:26,799
marshad associated press along that same

540
00:17:30,789 --> 00:17:28,640
theme um

541
00:17:32,789 --> 00:17:30,799
maybe both of the mikes how strong is

542
00:17:33,990 --> 00:17:32,799
the hope out there that there's going to

543
00:17:36,950 --> 00:17:34,000
be another

544
00:17:39,350 --> 00:17:36,960
flight of atlantis i mean is this

545
00:17:40,150 --> 00:17:39,360
talked about all the time on off hours

546
00:17:41,430 --> 00:17:40,160
or

547
00:17:43,669 --> 00:17:41,440
just

548
00:17:45,590 --> 00:17:43,679
how how much are the employees really

549
00:17:48,470 --> 00:17:45,600
hoping that that happens

550
00:17:50,950 --> 00:17:48,480
well my answer's cynical so you go first

551
00:17:53,190 --> 00:17:50,960
uh i'll talk about the the kfc workforce

552
00:17:55,750 --> 00:17:53,200
especially the 104 team i'm sure there's

553
00:17:57,669 --> 00:17:55,760
i know there's a lot of hope that we get

554
00:17:59,190 --> 00:17:57,679
another flight but there's also a lot of

555
00:18:01,669 --> 00:17:59,200
realism that that's not right now the

556
00:18:03,590 --> 00:18:01,679
plan and so while we can hope all we

557
00:18:05,990 --> 00:18:03,600
want we're in the processing mode for

558
00:18:07,990 --> 00:18:06,000
the for the lon only if that turns into

559
00:18:09,590 --> 00:18:08,000
real flight then so be it

560
00:18:11,669 --> 00:18:09,600
the atlantis team loves that ship and

561
00:18:13,830 --> 00:18:11,679
loves what they do so you bet they want

562
00:18:14,950 --> 00:18:13,840
to have another flight

563
00:18:15,909 --> 00:18:14,960

just don't know how it's going to turn

564
00:18:17,110 --> 00:18:15,919
out

565
00:18:18,390 --> 00:18:17,120
yeah that's all i was going to say too

566
00:18:20,549 --> 00:18:18,400
is you can't you can't blame anybody

567
00:18:21,669 --> 00:18:20,559
that works on it for hoping but from the

568
00:18:23,590 --> 00:18:21,679
just looking at all the different

569
00:18:25,830 --> 00:18:23,600
options and and how things go on the

570
00:18:27,909 --> 00:18:25,840
roller coaster just for the last year if

571
00:18:29,990 --> 00:18:27,919
not go back 30 years you just never know

572
00:18:31,590 --> 00:18:30,000
what's going to happen so so having hope

573
00:18:33,590 --> 00:18:31,600
is one thing but but

574
00:18:35,510 --> 00:18:33,600
holding on to it's a different thing so

575
00:18:37,110 --> 00:18:35,520
we just we're not really focused on that

576
00:18:38,950 --> 00:18:37,120
um and how many

577
00:18:40,789 --> 00:18:38,960
people have worked on atlanta's for this

578
00:18:43,190 --> 00:18:40,799
flow if you count everybody do you have

579
00:18:44,870 --> 00:18:43,200
any kind of estimate on numbers boy oh

580
00:18:46,390 --> 00:18:44,880
boy um

581
00:18:47,990 --> 00:18:46,400
i don't have that number off the top of

582
00:18:49,590 --> 00:18:48,000
my head um

583
00:18:50,950 --> 00:18:49,600
we can get that for you because it would

584
00:18:52,950 --> 00:18:50,960
include a heck of a lot of people it's

585
00:18:55,590 --> 00:18:52,960
not just the processing folks here

586
00:18:59,270 --> 00:18:56,950
we'd have to get that for him i'm sorry

587
00:19:01,270 --> 00:18:59,280
good to know and um i think last week

588
00:19:03,590 --> 00:19:01,280

bill gerstenmaier said that he'd like to

589
00:19:05,510 --> 00:19:03,600
know by the end of june what's going to

590
00:19:07,430 --> 00:19:05,520
happen regarding um

591
00:19:08,870 --> 00:19:07,440
atlantis and maybe an extra flight is

592
00:19:12,549 --> 00:19:08,880
that

593
00:19:14,549 --> 00:19:12,559
could you go from all sorts of point of

594
00:19:16,470 --> 00:19:14,559
views

595
00:19:18,870 --> 00:19:16,480
from a program perspective

596
00:19:21,110 --> 00:19:18,880
you know at some point the planning you

597
00:19:23,350 --> 00:19:21,120
know we need to start uh

598
00:19:24,950 --> 00:19:23,360
having a crew assigned for training to

599
00:19:27,350 --> 00:19:24,960
to switch the mission from a rescue

600
00:19:29,029 --> 00:19:27,360
mission to an actual execution so june

601
00:19:31,510 --> 00:19:29,039
is kind of where we're drawing our line

602
00:19:32,950 --> 00:19:31,520
it's it's a fairly soft line we could we

603
00:19:34,070 --> 00:19:32,960
could do some things to work around it

604
00:19:35,350 --> 00:19:34,080
depending on what content you put on

605
00:19:37,669 --> 00:19:35,360
that mission

606
00:19:39,110 --> 00:19:37,679
from a station perspective you'd need a

607
00:19:40,390 --> 00:19:39,120
fairly good amount of lead time to

608
00:19:41,909 --> 00:19:40,400
decide what hardware you were going to

609
00:19:43,750 --> 00:19:41,919
fly so that you make sure you procure it

610
00:19:46,230 --> 00:19:43,760
in time and it's it's here and processed

611
00:19:47,990 --> 00:19:46,240
and ready to go so june is about the

612
00:19:49,350 --> 00:19:48,000
time where we kind of say

613
00:19:51,110 --> 00:19:49,360

if we're really going to do it it's time

614
00:19:52,870 --> 00:19:51,120
to go get serious we could probably go a

615
00:19:54,390 --> 00:19:52,880
little longer than that but it would be

616
00:19:55,990 --> 00:19:54,400
nice to know by then

617
00:19:57,029 --> 00:19:56,000
june also kind of lines up within about

618
00:19:57,990 --> 00:19:57,039
the same time we're going to try to

619
00:19:59,350 --> 00:19:58,000
decide

620
00:20:01,350 --> 00:19:59,360
what we're going to be doing with launch

621
00:20:03,350 --> 00:20:01,360
dates for the next two missions once we

622
00:20:05,830 --> 00:20:03,360
get the payload assessments for both the

623
00:20:08,549 --> 00:20:05,840
the pmm module that's flying on sts-133

624
00:20:10,310 --> 00:20:08,559
and the ams module flying on sts-134

625
00:20:11,669 --> 00:20:10,320
will have had a chance to get that input

626
00:20:13,430 --> 00:20:11,679
back from the payload teams and digest

627
00:20:14,630 --> 00:20:13,440
it so june also is about the same time

628
00:20:16,630 --> 00:20:14,640
we're going to try to nail down the rest

629
00:20:18,149 --> 00:20:16,640
of our manifest so i think that's why

630
00:20:19,510 --> 00:20:18,159
gerstumar was thrown out june i don't

631
00:20:21,510 --> 00:20:19,520
think there's anything magic about that

632
00:20:24,070 --> 00:20:21,520
date but uh yeah the sooner we know the

633
00:20:26,549 --> 00:20:24,080
better that's for sure

634
00:20:28,070 --> 00:20:26,559
ken hi thank you ken kramer for space

635
00:20:30,710 --> 00:20:28,080
flight magazine and the planetary

636
00:20:32,149 --> 00:20:30,720
society first congratulations and uh to

637
00:20:33,350 --> 00:20:32,159
all of your team

638
00:20:35,350 --> 00:20:33,360

um

639
00:20:38,070 --> 00:20:35,360
what i have a few questions for you

640
00:20:40,230 --> 00:20:38,080
first um just to follow up again on the

641
00:20:42,710 --> 00:20:40,240
potential 135 have you stopped all

642
00:20:44,950 --> 00:20:42,720
planning for putting a hardware or what

643
00:20:47,110 --> 00:20:44,960
you would actually put on to that

644
00:20:49,110 --> 00:20:47,120
potential mission

645
00:20:50,789 --> 00:20:49,120
see we never we never took that much

646
00:20:51,510 --> 00:20:50,799
further than than what we would do from

647
00:20:57,350 --> 00:20:51,520
a

648
00:20:58,789 --> 00:20:57,360
design requirement document freeze point

649
00:21:00,870 --> 00:20:58,799
where we identify what goes in the

650
00:21:03,270 --> 00:21:00,880
payload bay that then kicks off a whole

651
00:21:05,270 --> 00:21:03,280
cycle of cargo drawings to lay out mass

652
00:21:07,430 --> 00:21:05,280
properties center gravities and all that

653
00:21:09,029 --> 00:21:07,440
stuff so we identified what that

654
00:21:11,590 --> 00:21:09,039
configuration would be but we haven't

655
00:21:13,990 --> 00:21:11,600
done anything to to procure purchase or

656
00:21:15,430 --> 00:21:14,000
load any of that hardware so so from

657
00:21:16,870 --> 00:21:15,440
that standpoint all we did was identify

658
00:21:18,950 --> 00:21:16,880
what potentially would fly on that

659
00:21:21,590 --> 00:21:18,960
mission and it was all driven not from a

660
00:21:23,669 --> 00:21:21,600
135 mission but a 335 you know if if we

661
00:21:25,110 --> 00:21:23,679
did do a crew rescue at the end of the

662
00:21:26,710 --> 00:21:25,120
station's lifetime

663
00:21:28,950 --> 00:21:26,720

it was deemed to be a good idea to make

664
00:21:30,710 --> 00:21:28,960
that an mplm flight so that we could

665
00:21:32,549 --> 00:21:30,720
resupply all the things we just

666
00:21:34,789 --> 00:21:32,559
scavenged off the station to keep our

667
00:21:36,310 --> 00:21:34,799
crew safe until the next uh until the

668
00:21:37,590 --> 00:21:36,320
rescue came so you'd like to be able to

669
00:21:39,350 --> 00:21:37,600
resupply it so they don't immediately

670
00:21:41,029 --> 00:21:39,360
have to then de-orbit or demand part of

671
00:21:43,110 --> 00:21:41,039
the space station not the orbit uh but

672
00:21:44,549 --> 00:21:43,120
deal with the crew and demand some of it

673
00:21:46,789 --> 00:21:44,559
if not all of it for a while while they

674
00:21:48,630 --> 00:21:46,799
went off and resupplied so that's where

675
00:21:50,310 --> 00:21:48,640
we went with that 335 mission planning

676
00:21:51,750 --> 00:21:50,320
so once you had an mplm identified in

677
00:21:53,510 --> 00:21:51,760
the cargo bay

678
00:21:56,470 --> 00:21:53,520
what you put in it whether it's food and

679
00:21:57,990 --> 00:21:56,480
clean socks or more food and clean socks

680
00:21:59,590 --> 00:21:58,000
it doesn't really matter and you buy

681
00:22:00,710 --> 00:21:59,600
some more time so

682
00:22:01,669 --> 00:22:00,720
i'm trying to answer the question

683
00:22:02,950 --> 00:22:01,679
without telling you that it makes it

684
00:22:05,350 --> 00:22:02,960
sound like we actually were planning to

685
00:22:07,430 --> 00:22:05,360
fly 135 if the planning was done as part

686
00:22:09,029 --> 00:22:07,440
of the rescue mission for 335 it just

687
00:22:10,830 --> 00:22:09,039
would would be kind of carried right

688
00:22:13,270 --> 00:22:10,840

over if you turn that into a real

689
00:22:14,710 --> 00:22:13,280
mission thank you now let me follow up

690
00:22:17,270 --> 00:22:14,720
on what you said at the beginning about

691
00:22:18,870 --> 00:22:17,280
uh mid deck science i think you said you

692
00:22:20,230 --> 00:22:18,880
put some things on at the last moment i

693
00:22:22,549 --> 00:22:20,240
wonder if you could describe a little

694
00:22:24,549 --> 00:22:22,559
bit what those science experiments were

695
00:22:26,710 --> 00:22:24,559
how much was the mass and the volume

696
00:22:28,310 --> 00:22:26,720
please yeah sure you know i i had i

697
00:22:30,310 --> 00:22:28,320
started to get ready for that but uh we

698
00:22:31,830 --> 00:22:30,320
normally have a press briefing for the

699
00:22:33,190 --> 00:22:31,840
with the science team that got ended up

700
00:22:34,630 --> 00:22:33,200
scheduled out so so what they're going

701
00:22:35,510 --> 00:22:34,640
to do is the pao folks are going to be

702
00:22:37,350 --> 00:22:35,520
able to talk to you over in the new

703
00:22:39,190 --> 00:22:37,360
press room about the exact science off

704
00:22:41,909 --> 00:22:39,200
the top of my head we're flying a lot of

705
00:22:43,750 --> 00:22:41,919
our our pathfinder national lab vaccines

706
00:22:46,549 --> 00:22:43,760
uh which are basically a batch of

707
00:22:48,549 --> 00:22:46,559
experiments that that you take up and uh

708
00:22:51,190 --> 00:22:48,559
and their various uh various cultures we

709
00:22:53,110 --> 00:22:51,200
had been working really hard on a

710
00:22:55,510 --> 00:22:53,120
salmonella vaccine lately i think this

711
00:22:58,630 --> 00:22:55,520
time we're flying up a variation of of a

712
00:22:59,350 --> 00:22:58,640
staff bacteria and you basically let it

713
00:23:00,950 --> 00:22:59,360

go

714
00:23:02,630 --> 00:23:00,960
you activate it in space you run it for

715
00:23:04,310 --> 00:23:02,640
so long and then you freeze it and you

716
00:23:06,310 --> 00:23:04,320
see how the how the cells and the

717
00:23:08,230 --> 00:23:06,320
different uh different

718
00:23:10,070 --> 00:23:08,240
treatments work and and acting and if

719
00:23:11,990 --> 00:23:10,080
zero gravity makes a difference for the

720
00:23:13,430 --> 00:23:12,000
salmonella vaccines we found great

721
00:23:15,029 --> 00:23:13,440
breakthroughs using that that technique

722
00:23:16,950 --> 00:23:15,039
so i know we're going to continue that

723
00:23:20,230 --> 00:23:16,960
with we call them the nlps the national

724
00:23:21,909 --> 00:23:20,240
lab pathfinders uh for vaccines

725
00:23:24,070 --> 00:23:21,919
there's a lot of other science that's

726
00:23:25,110 --> 00:23:24,080
going up a fair number of jaxa japanese

727
00:23:26,470 --> 00:23:25,120
payloads

728
00:23:27,990 --> 00:23:26,480
and i can't remember them off the top of

729
00:23:29,830 --> 00:23:28,000
my head and if i if i tried i'd be

730
00:23:31,510 --> 00:23:29,840
giving a disservice to the ones i forget

731
00:23:33,110 --> 00:23:31,520
so i'll let the pao folks give you a

732
00:23:34,950 --> 00:23:33,120
follow-up briefing to kind of fill in on

733
00:23:36,470 --> 00:23:34,960
the list it was about three pages long

734
00:23:38,070 --> 00:23:36,480
so it's a it's a healthy list of stuff

735
00:23:39,909 --> 00:23:38,080
we're flying

736
00:23:41,029 --> 00:23:39,919
and it wasn't so much last minute when i

737
00:23:43,110 --> 00:23:41,039
said last minute it was kind of like in

738
00:23:44,390 --> 00:23:43,120

the last three months that we decided to

739
00:23:46,070 --> 00:23:44,400
concentrate a little more on the science

740
00:23:48,950 --> 00:23:46,080
because we we had the performance to be

741
00:23:50,549 --> 00:23:48,960
able to do that on this mission

742
00:23:52,070 --> 00:23:50,559
chris you had a follow-up

743
00:23:55,110 --> 00:23:52,080
um yeah chris got part with nasa

744
00:23:56,390 --> 00:23:55,120
spaceflight.com again um

745
00:23:58,710 --> 00:23:56,400
in terms of the launch window for

746
00:23:59,990 --> 00:23:58,720
atlanta um i i understand you know the

747
00:24:01,909 --> 00:24:00,000
the cutouts that are involved from a

748
00:24:03,830 --> 00:24:01,919
beta angle from a dual docked ops and

749
00:24:06,549 --> 00:24:03,840
from the dell 10 maybe the spacex

750
00:24:08,230 --> 00:24:06,559
vehicle that's out there but um what is

751
00:24:09,830 --> 00:24:08,240
the current window and opportunities

752
00:24:11,669 --> 00:24:09,840
that you have and are you saying that

753
00:24:13,430 --> 00:24:11,679
you wouldn't would not

754
00:24:14,870 --> 00:24:13,440
take the opportunity this slide

755
00:24:17,190 --> 00:24:14,880
opportunity you have in june from the

756
00:24:19,350 --> 00:24:17,200
science standpoint

757
00:24:21,269 --> 00:24:19,360
yeah so in this current window we can go

758
00:24:23,110 --> 00:24:21,279
through the 22nd for beta angle the

759
00:24:25,430 --> 00:24:23,120
delta on the range uh limits us to the

760
00:24:26,710 --> 00:24:25,440
18th as our last launch attempt um and

761
00:24:28,230 --> 00:24:26,720
so we'd uh

762
00:24:29,909 --> 00:24:28,240
we had every every plan to respect that

763
00:24:30,950 --> 00:24:29,919

it all depends on when we get there and

764
00:24:32,549 --> 00:24:30,960
you know

765
00:24:34,789 --> 00:24:32,559
your mileage may vary when when we get

766
00:24:36,310 --> 00:24:34,799
to actual launches um we have a window

767
00:24:38,789 --> 00:24:36,320
that opens back up in june between a

768
00:24:39,909 --> 00:24:38,799
couple of dual dock ops operations um

769
00:24:41,990 --> 00:24:39,919
and and that's when we'd be at a

770
00:24:44,390 --> 00:24:42,000
three-man crew and for science so we we

771
00:24:46,470 --> 00:24:44,400
talked about it as a as an agency uh as

772
00:24:48,870 --> 00:24:46,480
a station program shuttle program uh

773
00:24:50,470 --> 00:24:48,880
rather as a somd

774
00:24:52,390 --> 00:24:50,480
and uh and decided that that's probably

775
00:24:53,990 --> 00:24:52,400
not worth taking due to the content we'd

776
00:24:56,230 --> 00:24:54,000
have to to give up on the mission that

777
00:24:57,909 --> 00:24:56,240
we added specifically to be able to do

778
00:24:59,909 --> 00:24:57,919
this flight and we just kind of decided

779
00:25:01,510 --> 00:24:59,919
that wasn't the right thing to do

780
00:25:03,510 --> 00:25:01,520
and so from that reason

781
00:25:04,789 --> 00:25:03,520
we probably skipped past that window now

782
00:25:06,549 --> 00:25:04,799
we're not there yet we don't know why we

783
00:25:08,390 --> 00:25:06,559
got there so you can't really say for

784
00:25:09,590 --> 00:25:08,400
sure but uh the plan would be that we

785
00:25:11,750 --> 00:25:09,600
wouldn't really talk about that window

786
00:25:13,430 --> 00:25:11,760
and that puts us into i think june 29th

787
00:25:14,710 --> 00:25:13,440
would be the first time back

788
00:25:17,029 --> 00:25:14,720

would be about the time we'd come back

789
00:25:18,470 --> 00:25:17,039
but again that's a beta angle dependent

790
00:25:19,990 --> 00:25:18,480
number and it all depends on what

791
00:25:21,909 --> 00:25:20,000
happens between now and then so rough

792
00:25:23,430 --> 00:25:21,919
ball park we're looking at july if we

793
00:25:25,110 --> 00:25:23,440
wanted to stand down

794
00:25:27,029 --> 00:25:25,120
my manifest guys coached me right before

795
00:25:28,470 --> 00:25:27,039
i came in here that that and not for the

796
00:25:29,990 --> 00:25:28,480
press conference but just for my own

797
00:25:31,590 --> 00:25:30,000
thinking on console that

798
00:25:33,029 --> 00:25:31,600
don't let yourself think that you know a

799
00:25:34,950 --> 00:25:33,039
slip out of these four or five days

800
00:25:36,870 --> 00:25:34,960
suddenly you're into july emotionally

801
00:25:38,310 --> 00:25:36,880
that seems like a really big deal and a

802
00:25:39,909 --> 00:25:38,320
really big hit that we we'd be talking

803
00:25:42,070 --> 00:25:39,919
about a launch date in july if we don't

804
00:25:43,430 --> 00:25:42,080
make this one in may but from a manifest

805
00:25:45,669 --> 00:25:43,440
perspective and impact to the next

806
00:25:46,950 --> 00:25:45,679
flights there is none and so the

807
00:25:48,950 --> 00:25:46,960
difference between launch and now and in

808
00:25:50,870 --> 00:25:48,960
july programmatically is not much

809
00:25:52,390 --> 00:25:50,880
different and so uh it's really just

810
00:25:53,430 --> 00:25:52,400
like we we had a couple weeks stand down

811
00:25:54,630 --> 00:25:53,440
and we came back it would be a little

812
00:25:56,710 --> 00:25:54,640
more than that for the vehicle sitting

813
00:25:59,350 --> 00:25:56,720

out at the pad but but other than that

814
00:26:00,149 --> 00:25:59,360
it's not a big deal to the programs

815
00:26:01,909 --> 00:26:00,159
bill

816
00:26:03,350 --> 00:26:01,919
well shoot not to talk about not making

817
00:26:05,029 --> 00:26:03,360
your window but if you don't make your

818
00:26:06,549 --> 00:26:05,039
window

819
00:26:08,549 --> 00:26:06,559
we were talking the other day about

820
00:26:10,149 --> 00:26:08,559
spacex and uh is there any issue with

821
00:26:11,909 --> 00:26:10,159
the shuttle being on the pad when a

822
00:26:13,669 --> 00:26:11,919
rocket that's never flown before takes

823
00:26:15,909 --> 00:26:13,679
off right beside it there any safety

824
00:26:17,510 --> 00:26:15,919
concerns or issues with your hardware

825
00:26:18,950 --> 00:26:17,520
let's see you know uh we had the same

826
00:26:20,549 --> 00:26:18,960
thing when one x launched and the

827
00:26:21,990 --> 00:26:20,559
shuttle was sitting on the pad or was

828
00:26:23,510 --> 00:26:22,000
going to be and we did all the right

829
00:26:26,149 --> 00:26:23,520
range safety assessments that those are

830
00:26:28,549 --> 00:26:26,159
being done again for for the falcon 9.

831
00:26:30,870 --> 00:26:28,559
um it's a little less risk to pad a than

832
00:26:32,470 --> 00:26:30,880
the uh than than pad b was with one x

833
00:26:33,990 --> 00:26:32,480
because they're a little further down

834
00:26:37,750 --> 00:26:34,000
from us but uh we are in their three

835
00:26:39,269 --> 00:26:37,760
sigma uh ellipse of of limit lines so we

836
00:26:40,950 --> 00:26:39,279
are impacted it's a pretty small risk

837
00:26:42,549 --> 00:26:40,960
we've looked at the numbers currently we

838
00:26:43,909 --> 00:26:42,559

have no plans to to do anything

839
00:26:46,470 --> 00:26:43,919
different and we'd be happy with that

840
00:26:47,750 --> 00:26:46,480
risk um as that math gets refined we'll

841
00:26:50,230 --> 00:26:47,760
keep an eye on it and make sure nothing

842
00:26:53,029 --> 00:26:50,240
changes but but no we don't have any any

843
00:26:54,789 --> 00:26:53,039
worries there chris

844
00:26:57,190 --> 00:26:54,799
one one more quick one about the window

845
00:26:59,029 --> 00:26:57,200
um you mentioned um you mentioned july

846
00:27:00,710 --> 00:26:59,039
if you missed this window completely

847
00:27:02,630 --> 00:27:00,720
into june july would be the next one but

848
00:27:04,149 --> 00:27:02,640
some just clicked on my mind that

849
00:27:07,190 --> 00:27:04,159
aren't all the russian docking ports

850
00:27:08,630 --> 00:27:07,200
where you'd be birthing mrm one two full

851
00:27:10,149 --> 00:27:08,640
in july

852
00:27:11,669 --> 00:27:10,159
yeah we'd have to uh we'd have to

853
00:27:12,950 --> 00:27:11,679
shuffle a fair number of the russian

854
00:27:14,710 --> 00:27:12,960
things which is one of the other reasons

855
00:27:16,549 --> 00:27:14,720
why we didn't want to go in the june

856
00:27:17,990 --> 00:27:16,559
window the replan to make all that work

857
00:27:19,830 --> 00:27:18,000
needs a little bit of time to happen so

858
00:27:21,029 --> 00:27:19,840
yeah i don't know the specific replan

859
00:27:23,350 --> 00:27:21,039
that would happen on the station side it

860
00:27:25,190 --> 00:27:23,360
would cause a fair bit of rework but

861
00:27:27,269 --> 00:27:25,200
that would be the next opportunity if we

862
00:27:30,149 --> 00:27:27,279
could make it work from a docking

863
00:27:32,710 --> 00:27:30,159

standpoint i think we'll go with ken and

864
00:27:35,029 --> 00:27:32,720
have this be our last question for um

865
00:27:37,110 --> 00:27:35,039
society for uh either of the mics i

866
00:27:39,190 --> 00:27:37,120
guess the question is about the uh the

867
00:27:40,470 --> 00:27:39,200
ku band antenna failure that you had on

868
00:27:42,310 --> 00:27:40,480
the last mission i wonder if you could

869
00:27:44,710 --> 00:27:42,320
talk a little bit about you know why

870
00:27:46,549 --> 00:27:44,720
that happened um was something missed

871
00:27:49,750 --> 00:27:46,559
and are there any changes you made in

872
00:27:51,669 --> 00:27:49,760
the processing or in shuttle operations

873
00:27:53,110 --> 00:27:51,679
for for this flight if it if it were to

874
00:27:55,830 --> 00:27:53,120
happen again would the astronauts be

875
00:27:57,510 --> 00:27:55,840
able to more quickly download the uh

876
00:27:59,430 --> 00:27:57,520
the video from the

877
00:28:01,110 --> 00:27:59,440
tiles so we talked that a fair bit in

878
00:28:03,029 --> 00:28:01,120
our flight readiness reviews

879
00:28:04,870 --> 00:28:03,039
the teams down here at kennedy were

880
00:28:06,470 --> 00:28:04,880
very quick to get into discovery and get

881
00:28:08,789 --> 00:28:06,480
the ku deployed out and be able to do

882
00:28:11,110 --> 00:28:08,799
some checkouts and rapidly found that

883
00:28:13,029 --> 00:28:11,120
system has a couple of boxes

884
00:28:14,549 --> 00:28:13,039
somewhere inside the avionics bays

885
00:28:15,830 --> 00:28:14,559
inside the shuttle

886
00:28:17,590 --> 00:28:15,840
down on the mid deck and some are

887
00:28:18,950 --> 00:28:17,600
outside as part of the ku antenna

888
00:28:21,669 --> 00:28:18,960

assembly we call those the deployed

889
00:28:24,070 --> 00:28:21,679
assembly that is outside um

890
00:28:26,230 --> 00:28:24,080
while we were in orbit with sts-131 we

891
00:28:27,909 --> 00:28:26,240
were pretty sure this failure was in a

892
00:28:29,669 --> 00:28:27,919
component called the exciter which

893
00:28:32,389 --> 00:28:29,679
basically adds the the signal into the

894
00:28:33,990 --> 00:28:32,399
ku system um and uh and it was either

895
00:28:36,149 --> 00:28:34,000
not receiving a signal from the boxes

896
00:28:37,990 --> 00:28:36,159
inside the shuttle or it itself outside

897
00:28:39,269 --> 00:28:38,000
had failed we were pretty sure it was

898
00:28:41,350 --> 00:28:39,279
the the outside thing because we've

899
00:28:44,230 --> 00:28:41,360
never seen any of the boxes inside fail

900
00:28:46,070 --> 00:28:44,240
before and on sts 92 we had had a ku

901
00:28:47,909 --> 00:28:46,080
failure that was due to a an exciter

902
00:28:50,149 --> 00:28:47,919
failure in the deployed assembly so we

903
00:28:51,590 --> 00:28:50,159
kind of had a failure at least that said

904
00:28:52,630 --> 00:28:51,600
that maybe that's what we got going on

905
00:28:53,990 --> 00:28:52,640
again here

906
00:28:55,269 --> 00:28:54,000
long story to say that the kennedy guys

907
00:28:57,269 --> 00:28:55,279
got in there very quickly and were able

908
00:28:59,190 --> 00:28:57,279
to test right away that the the outputs

909
00:29:01,110 --> 00:28:59,200
of those boxes inside were fine and that

910
00:29:03,590 --> 00:29:01,120
the failure was in fact uh in that

911
00:29:07,350 --> 00:29:03,600
exciter in the deployed assembly so it

912
00:29:10,070 --> 00:29:07,360
was a transistor and uh and and they uh

913
00:29:11,750 --> 00:29:10,080

they sent me an 8 meg file complete with

914
00:29:13,590 --> 00:29:11,760
detailed scanning electron microscope

915
00:29:15,830 --> 00:29:13,600
images where they cut the transistor in

916
00:29:17,750 --> 00:29:15,840
into many pieces and found that that two

917
00:29:19,269 --> 00:29:17,760
of the legs uh had come off one of the

918
00:29:20,470 --> 00:29:19,279
solder joints broke and when it popped

919
00:29:22,070 --> 00:29:20,480
off it probably cracked one of the other

920
00:29:24,070 --> 00:29:22,080
ones and it was probably just an

921
00:29:25,830 --> 00:29:24,080
original manufacturer that just had at

922
00:29:27,750 --> 00:29:25,840
the minimum margin on that on that

923
00:29:29,269 --> 00:29:27,760
component and and over time it just

924
00:29:31,669 --> 00:29:29,279
broke um so it doesn't look like

925
00:29:33,029 --> 00:29:31,679
anything other than than a than a single

926
00:29:34,950 --> 00:29:33,039
point kind of a light bulb failure with

927
00:29:36,549 --> 00:29:34,960
that transistor

928
00:29:37,669 --> 00:29:36,559
that said that that pretty much means we

929
00:29:39,269 --> 00:29:37,679
don't really have a good screen for

930
00:29:40,789 --> 00:29:39,279
those kind of failures we talked a lot

931
00:29:42,070 --> 00:29:40,799
even before we knew what the failure was

932
00:29:43,110 --> 00:29:42,080
what we would do different on this

933
00:29:44,950 --> 00:29:43,120
mission

934
00:29:47,350 --> 00:29:44,960
we could fly some spare boxes for those

935
00:29:49,269 --> 00:29:47,360
inside boxes uh they're rather bulky and

936
00:29:50,870 --> 00:29:49,279
hard to change out but they could

937
00:29:52,630 --> 00:29:50,880
but given the fact that we've never seen

938
00:29:54,549 --> 00:29:52,640

failures in those boxes before and now

939
00:29:56,870 --> 00:29:54,559
have yet a second confirmation that it

940
00:29:58,389 --> 00:29:56,880
was an outside box we didn't decide that

941
00:30:00,870 --> 00:29:58,399
there was enough of a buy down in risk

942
00:30:02,230 --> 00:30:00,880
to to bother flying spare boxes

943
00:30:03,510 --> 00:30:02,240
we talked about

944
00:30:05,510 --> 00:30:03,520
what we would do differently from a

945
00:30:08,310 --> 00:30:05,520
procedure standpoint mostly with regards

946
00:30:09,830 --> 00:30:08,320
to the inspection data and decided that

947
00:30:11,830 --> 00:30:09,840
the team really did come up with the

948
00:30:13,669 --> 00:30:11,840
plan in fact you know that was always

949
00:30:21,029 --> 00:30:13,679
the plan all along was if we had a ku

950
00:30:24,870 --> 00:30:22,950
risk that download ku would fail which

951
00:30:26,710 --> 00:30:24,880
was pretty small and the work needed to

952
00:30:28,070 --> 00:30:26,720
be done which was pretty big that was

953
00:30:29,669 --> 00:30:28,080
one of those deferred things we put the

954
00:30:31,750 --> 00:30:29,679
skeleton plan in place and called that

955
00:30:33,110 --> 00:30:31,760
good enough until we needed it and so

956
00:30:35,269 --> 00:30:33,120
they pulled it off the shelf on 131 and

957
00:30:36,789 --> 00:30:35,279
got it running right away and and got us

958
00:30:39,110 --> 00:30:36,799
all the data we needed we had about a

959
00:30:41,029 --> 00:30:39,120
24-hour delay on that initial inspection

960
00:30:42,310 --> 00:30:41,039
data and so that's all been polished and

961
00:30:43,669 --> 00:30:42,320
we asked the teams fresh off of doing

962
00:30:45,029 --> 00:30:43,679
that hey did you learn any lessons is

963
00:30:46,149 --> 00:30:45,039

there anything better and they came up

964
00:30:48,230 --> 00:30:46,159
with a couple ideas there's some

965
00:30:50,549 --> 00:30:48,240
different software that if they had

966
00:30:51,909 --> 00:30:50,559
their choice they'd like to fly if you

967
00:30:55,669 --> 00:30:51,919
remember the process was the crew

968
00:30:57,350 --> 00:30:55,679
records the imagery uh on a high def

969
00:30:59,669 --> 00:30:57,360
tape and then we had to have them play

970
00:31:01,110 --> 00:30:59,679
that and convert it to an avi movie file

971
00:31:03,110 --> 00:31:01,120
transfer that file over the station and

972
00:31:05,830 --> 00:31:03,120
download it a lot of the 3d imagery is

973
00:31:07,669 --> 00:31:05,840
embedded in the uh the 3d signals

974
00:31:09,110 --> 00:31:07,679
embedded in that imagery and downlinking

975
00:31:11,029 --> 00:31:09,120
being the station assets it would get

976
00:31:13,190 --> 00:31:11,039
lost and compressed so we had to get it

977
00:31:14,230 --> 00:31:13,200
into an avi file so the new software

978
00:31:15,350 --> 00:31:14,240
we're not going to fly at this time but

979
00:31:16,789 --> 00:31:15,360
we'll have it for next time would

980
00:31:18,310 --> 00:31:16,799
basically make that avi file

981
00:31:19,830 --> 00:31:18,320
automatically as it's recording the

982
00:31:21,669 --> 00:31:19,840
other imagery so that's a pretty good

983
00:31:22,789 --> 00:31:21,679
get ahead would save the crew time if we

984
00:31:24,230 --> 00:31:22,799
ever got there

985
00:31:25,509 --> 00:31:24,240
it would save about five or six hours of

986
00:31:27,990 --> 00:31:25,519
the crew having to manually convert

987
00:31:29,990 --> 00:31:28,000
those files um other than that we didn't

988
00:31:31,350 --> 00:31:30,000

really find any efficiencies that were

989
00:31:33,110 --> 00:31:31,360
that were really worth pursuing there

990
00:31:34,710 --> 00:31:33,120
were some pretty big drastic wins to

991
00:31:36,710 --> 00:31:34,720
completely re-architecture the way the

992
00:31:38,310 --> 00:31:36,720
station downlinks imagery uh that really

993
00:31:39,830 --> 00:31:38,320
wasn't worth doing or you could do the

994
00:31:41,590 --> 00:31:39,840
same thing rewire the shuttle to match

995
00:31:43,909 --> 00:31:41,600
the station's architecture and again

996
00:31:45,430 --> 00:31:43,919
that wasn't worth doing so we basically

997
00:31:47,669 --> 00:31:45,440
just polished our procedures and we'll

998
00:31:49,909 --> 00:31:47,679
do it again if we have to um failure

999
00:31:51,110 --> 00:31:49,919
rates on the ku were something in the uh

1000
00:31:53,350 --> 00:31:51,120
i can't even remember them so i better

1001
00:31:54,230 --> 00:31:53,360
not quote them um but it was pretty low

1002
00:31:55,750 --> 00:31:54,240
probability that we're going to have

1003
00:31:57,750 --> 00:31:55,760
this problem again but if it if it does

1004
00:31:59,350 --> 00:31:57,760
show up again we're good i think the

1005
00:32:01,990 --> 00:31:59,360
last part you're catching quinn yeah

1006
00:32:03,350 --> 00:32:02,000
question ken and i'm bearing in data was

1007
00:32:04,789 --> 00:32:03,360
did we screen anything differently and

1008
00:32:05,990 --> 00:32:04,799
we ran all the standard pre-flight tests

1009
00:32:07,750 --> 00:32:06,000
like i said it was kind of a light bulb

1010
00:32:10,230 --> 00:32:07,760
failure so there really wasn't anything

1011
00:32:12,549 --> 00:32:10,240
else to check extra on on atlantis

1012
00:32:13,830 --> 00:32:12,559
before it flew

1013
00:32:18,070 --> 00:32:13,840

you could tell i had a several day

1014
00:32:22,630 --> 00:32:20,710
well that will conclude the sts-132

1015
00:32:24,789 --> 00:32:22,640
pre-launch news conference please join

1016
00:32:26,710 --> 00:32:24,799
us here on nasa television tomorrow at

1017
00:32:28,710 --> 00:32:26,720
10 a.m eastern for the l minus one

1018
00:32:31,029 --> 00:32:28,720
countdown status briefing for more