1
00:00:07,749 --> 00:00:04,789
good afternoon everyone and welcome to

2
00:00:09,430 --> 00:00:07,759
the sts-132 post-launch news conference

3
00:00:11,669 --> 00:00:09,440
we're very pleased to be here today and

4
00:00:13,110 --> 00:00:11,679
to be joined by our panel uh we'll begin

5
00:00:14,870 --> 00:00:13,120
with opening comments and then we'll be

6
00:00:16,790 --> 00:00:14,880
happy to take your questions

7
00:00:18,950 --> 00:00:16,800
like to introduce mr bill gerstenmaier

8
00:00:22,070 --> 00:00:18,960
nasa's associate administrator for space

9
00:00:24,710 --> 00:00:22,080
operations good afternoon

10
00:00:28,870 --> 00:00:24,720
alexi krasnoff chief of piloted programs

11
00:00:33,750 --> 00:00:30,950
mike moses chairman of the pre-launch

12
00:00:35,750 --> 00:00:33,760
mission management team good afternoon

13
00:00:38,069 --> 00:00:35,760

and mike leinbach shuttle launch

14
00:00:41,270 --> 00:00:38,079
director good afternoon and we'll begin

15
00:00:43,270 --> 00:00:41,280
with mr gerstenmaier thanks mike

16
00:00:45,670 --> 00:00:43,280
again i'd like to really thank the team

17
00:00:47,830 --> 00:00:45,680
here at kennedy that just gave us a

18
00:00:49,430 --> 00:00:47,840
great launch today

19
00:00:51,430 --> 00:00:49,440
all the work that led up to this launch

20
00:00:53,990 --> 00:00:51,440
was just phenomenal the the atlantis

21
00:00:55,670 --> 00:00:54,000
team just did a great job of

22
00:00:57,430 --> 00:00:55,680
processing the vehicle out of the launch

23
00:00:59,029 --> 00:00:57,440
pad if you remember it was a little hard

24
00:01:00,470 --> 00:00:59,039
to get out to the launch pad and it took

25
00:01:02,470 --> 00:01:00,480
several days to get out there and then

26
00:01:03,990 --> 00:01:02,480
they had a pretty compressed flow once

27
00:01:05,590 --> 00:01:04,000
they got out on the launch pad and you

28
00:01:07,990 --> 00:01:05,600
know we held one contingency day for

29
00:01:10,070 --> 00:01:08,000
multiple weeks and it just worked out

30
00:01:11,670 --> 00:01:10,080
great the team stayed focused they just

31
00:01:13,910 --> 00:01:11,680
kept moving forward and they just did a

32
00:01:16,149 --> 00:01:13,920
great job and i'd also like to thank the

33
00:01:17,590 --> 00:01:16,159
external tank team that gave us a great

34
00:01:19,190 --> 00:01:17,600
external tank

35
00:01:21,190 --> 00:01:19,200
we had a couple little foam losses

36
00:01:22,149 --> 00:01:21,200
pretty typical to what we've seen before

37
00:01:24,149 --> 00:01:22,159
nothing

38
00:01:26,469 --> 00:01:24,159

real significant we had maybe one little

39
00:01:28,550 --> 00:01:26,479
piece before the aerodynamic sensitive

40
00:01:31,350 --> 00:01:28,560
time but it looked really good but again

41
00:01:33,190 --> 00:01:31,360
the tank team many months ago and many

42
00:01:34,789 --> 00:01:33,200
you know a long time ago gave us a great

43
00:01:36,710 --> 00:01:34,799
tank to do this and so did the solid

44
00:01:38,630 --> 00:01:36,720
rocket booster team so the folks have

45
00:01:40,550 --> 00:01:38,640
given it given us a great launch the

46
00:01:42,630 --> 00:01:40,560
vehicle looks like it's in really clean

47
00:01:44,149 --> 00:01:42,640
shape we're ready to go do a pretty

48
00:01:46,149 --> 00:01:44,159
challenging mission in front of us the

49
00:01:48,230 --> 00:01:46,159
evas will be tough the installation of

50
00:01:49,670 --> 00:01:48,240
the russian module will be challenging

51
00:01:51,510 --> 00:01:49,680
so we need to stay focused on the

52
00:01:52,870 --> 00:01:51,520
mission in front of us but getting to

53
00:01:54,310 --> 00:01:52,880
this point i can't thank the teams

54
00:01:56,709 --> 00:01:54,320
enough for all the great work they've

55
00:01:58,310 --> 00:01:56,719
done and it was just a real pleasure to

56
00:01:59,830 --> 00:01:58,320
watch the launch today and to have the

57
00:02:01,109 --> 00:01:59,840
wonderful weather we had for the launch

58
00:02:02,389 --> 00:02:01,119
so thank you

59
00:02:05,350 --> 00:02:02,399
alexi

60
00:02:08,070 --> 00:02:05,360
oh thank you bill i would like to join

61
00:02:13,990 --> 00:02:08,080
uh

62
00:02:18,949 --> 00:02:14,000
launch

63
00:02:21,190 --> 00:02:18,959

a first first time it's

64
00:02:23,589 --> 00:02:21,200
every time is uh as a

65
00:02:26,790 --> 00:02:23,599
as a new experience and we

66
00:02:28,070 --> 00:02:26,800
planned for this launch on the may 14

67
00:02:30,550 --> 00:02:28,080
uh

68
00:02:32,470 --> 00:02:30,560
thinking about as we'll said like a

69
00:02:33,270 --> 00:02:32,480
miracle that it will go

70
00:02:36,229 --> 00:02:33,280
uh

71
00:02:38,869 --> 00:02:36,239
exactly this day because we pre-planned

72
00:02:41,910 --> 00:02:38,879
uh two months ago a deputy prime

73
00:02:43,910 --> 00:02:41,920
minister visited to for kennedy and to

74
00:02:45,910 --> 00:02:43,920
jsc as well

75
00:02:48,470 --> 00:02:45,920
and it worked

76
00:02:49,270 --> 00:02:48,480
and it looks like that

77
00:02:53,350 --> 00:02:49,280
that

78
00:02:55,830 --> 00:02:53,360
me again

79
00:02:57,670 --> 00:02:55,840
i i am capable because the two

80
00:03:00,070 --> 00:02:57,680
maybe two thirds of the launches were

81
00:03:01,589 --> 00:03:00,080
postponed by the weather or hardware but

82
00:03:04,309 --> 00:03:01,599
the monster worked

83
00:03:06,949 --> 00:03:04,319
exactly as planned and today it worked

84
00:03:08,470 --> 00:03:06,959
exactly as planned and it's really great

85
00:03:10,630 --> 00:03:08,480
thank you

86
00:03:12,229 --> 00:03:10,640
well good afternoon everyone we had a

87
00:03:13,430 --> 00:03:12,239
beautiful launch countdown

88
00:03:15,509 --> 00:03:13,440

really clean

89
00:03:16,790 --> 00:03:15,519
flow not a whole lot to talk about at

90
00:03:18,790 --> 00:03:16,800
all

91
00:03:20,470 --> 00:03:18,800
it uh and ended up with that with that

92
00:03:22,070 --> 00:03:20,480
beautiful picture-perfect launch and

93
00:03:24,070 --> 00:03:22,080
nice blue sky out there you know we

94
00:03:26,550 --> 00:03:24,080
talked a lot about the weather uh our

95
00:03:28,470 --> 00:03:26,560
rtls and our local launch weather here

96
00:03:30,550 --> 00:03:28,480
really wasn't an issue we had the the

97
00:03:31,910 --> 00:03:30,560
weather aircraft up flying around just

98
00:03:33,589 --> 00:03:31,920
to make sure there were some clouds that

99
00:03:34,949 --> 00:03:33,599
were forming out over the ocean and and

100
00:03:36,630 --> 00:03:34,959
just wanted to be sure they were staying

101
00:03:38,229 --> 00:03:36,640
up high and out of our way and and they

102
00:03:39,830 --> 00:03:38,239
were so we really didn't have to talk

103
00:03:41,270 --> 00:03:39,840
the local weather here much at all

104
00:03:43,270 --> 00:03:41,280
overseas we spent a little bit of time

105
00:03:44,309 --> 00:03:43,280
talking about our our transatlantic

106
00:03:46,710 --> 00:03:44,319
abort

107
00:03:47,910 --> 00:03:46,720
landing site weather um but at the end

108
00:03:49,670 --> 00:03:47,920
you know we kind of knew we would be in

109
00:03:51,430 --> 00:03:49,680
this situation where the forecasts were

110
00:03:53,030 --> 00:03:51,440
showing some low ceilings and some

111
00:03:55,350 --> 00:03:53,040
chances of showers but as we got closer

112
00:03:56,550 --> 00:03:55,360
to launch time uh the observations and

113
00:03:58,710 --> 00:03:56,560

the forecasters were able to update

114
00:04:00,390 --> 00:03:58,720
those forecasts to show that that for a

115
00:04:02,309 --> 00:04:00,400
towel landing an hour later we wouldn't

116
00:04:03,830 --> 00:04:02,319
have a problem and so those forecasts

117
00:04:05,589 --> 00:04:03,840
amended to be go and we ended up i think

118
00:04:07,670 --> 00:04:05,599
having two of our three tow sites

119
00:04:09,030 --> 00:04:07,680
supporting today with a go forecast so

120
00:04:10,470 --> 00:04:09,040
we again we didn't have to talk a lot

121
00:04:12,070 --> 00:04:10,480
about the tel weather but it was at

122
00:04:13,110 --> 00:04:12,080
least a tiny little bit of weather

123
00:04:14,789 --> 00:04:13,120
discussion

124
00:04:18,390 --> 00:04:14,799
technically the vehicle was in was in

125
00:04:20,150 --> 00:04:18,400
perfect shape um i think we had maybe a

126
00:04:22,469 --> 00:04:20,160
grand total going all the way back to

127
00:04:24,070 --> 00:04:22,479
sue seven start maybe five things total

128
00:04:25,030 --> 00:04:24,080
in the problem count hardly anything at

129
00:04:27,270 --> 00:04:25,040
all

130
00:04:29,189 --> 00:04:27,280
we had a little bit of a discussion

131
00:04:30,629 --> 00:04:29,199
after the uh the final inspection team

132
00:04:32,629 --> 00:04:30,639
that's out there after we load up the

133
00:04:34,710 --> 00:04:32,639
external tank we send a team out to go

134
00:04:36,870 --> 00:04:34,720
inspect the external tank look for uh

135
00:04:38,469 --> 00:04:36,880
off nominal conditions frost ice

136
00:04:40,310 --> 00:04:38,479
anything that's that's funny

137
00:04:42,469 --> 00:04:40,320
and they did find a stress relief crack

138
00:04:43,670 --> 00:04:42,479

on one of the umbilical struts there's a

139
00:04:44,950 --> 00:04:43,680
there's a horizontal strut and a

140
00:04:45,909 --> 00:04:44,960
vertical right that's right other

141
00:04:47,670 --> 00:04:45,919
diagonal

142
00:04:48,870 --> 00:04:47,680
um and on this time we saw a crack a

143
00:04:50,790 --> 00:04:48,880
stretch release crack on one of those

144
00:04:52,070 --> 00:04:50,800
struts and and that's that's kind of an

145
00:04:54,150 --> 00:04:52,080
expected condition those struts are

146
00:04:56,070 --> 00:04:54,160
meant to pivot and rotate and the foam

147
00:04:58,150 --> 00:04:56,080
that's sprayed on the outside of them

148
00:05:00,310 --> 00:04:58,160
has a has a strain relief basically that

149
00:05:01,830 --> 00:05:00,320
when that that strut underneath pivots

150
00:05:03,350 --> 00:05:01,840
the foam kind of can't quite handle it

151
00:05:04,469 --> 00:05:03,360
and it is a little stress fracture and

152
00:05:06,150 --> 00:05:04,479
so it just cracked it i think it was

153
00:05:07,909 --> 00:05:06,160
about a seven inch long crack we've seen

154
00:05:09,350 --> 00:05:07,919
that before in different locations

155
00:05:11,029 --> 00:05:09,360
hadn't seen it in this location but so

156
00:05:12,870 --> 00:05:11,039
the teams had a little bit to talk about

157
00:05:14,629 --> 00:05:12,880
but it was no issue there was no worry

158
00:05:16,870 --> 00:05:14,639
of liberation or any kind of ice

159
00:05:18,310 --> 00:05:16,880
formation there so it was a pretty easy

160
00:05:20,870 --> 00:05:18,320
clear from the team to document that

161
00:05:22,230 --> 00:05:20,880
scenario and move on um and then at the

162
00:05:24,150 --> 00:05:22,240
at the end we had a

163
00:05:25,350 --> 00:05:24,160

little discussion about a pip pin which

164
00:05:27,350 --> 00:05:25,360
is a

165
00:05:29,590 --> 00:05:27,360
basically a big fancy

166
00:05:31,749 --> 00:05:29,600
retainer pin um if you think of it it's

167
00:05:33,029 --> 00:05:31,759
a it's a little piston with a thumb to

168
00:05:35,350 --> 00:05:33,039
pressure you push the little button and

169
00:05:36,710 --> 00:05:35,360
two little ball bearings roll back in

170
00:05:38,230 --> 00:05:36,720
you can stick that in and you let go of

171
00:05:40,310 --> 00:05:38,240
the thumb and the ball bearings move

172
00:05:41,590 --> 00:05:40,320
into a socket and hold that pin in place

173
00:05:43,270 --> 00:05:41,600
we use them to hold our payload bait

174
00:05:45,670 --> 00:05:43,280
cameras in place to be honest we use

175
00:05:47,350 --> 00:05:45,680
them in thousands of locations around

176
00:05:49,029 --> 00:05:47,360
both the the payload bay the vehicle the

177
00:05:50,550 --> 00:05:49,039
ground servicing equipment it's a quick

178
00:05:52,390 --> 00:05:50,560
release weight up to pin hardware in

179
00:05:55,029 --> 00:05:52,400
without having to put a wrench in a nut

180
00:05:56,469 --> 00:05:55,039
and turn turn bolts um when we were

181
00:05:58,390 --> 00:05:56,479
closing out the payload bay's last play

182
00:06:00,870 --> 00:05:58,400
bay last week we found a little ball

183
00:06:01,990 --> 00:06:00,880
bearing uh in the palo bay and the teams

184
00:06:04,150 --> 00:06:02,000
went through their normal lost and found

185
00:06:06,070 --> 00:06:04,160
process and could not find uh where that

186
00:06:07,590 --> 00:06:06,080
part came from and we dispositioned it

187
00:06:09,270 --> 00:06:07,600
as probably having come from ground

188
00:06:10,790 --> 00:06:09,280

equipment um

189
00:06:12,550 --> 00:06:10,800
the the teams did the right thing they

190
00:06:13,670 --> 00:06:12,560
stayed hungry and sharp all week long

191
00:06:14,710 --> 00:06:13,680
they didn't just let to go with that and

192
00:06:16,870 --> 00:06:14,720
they went back and dug into their

193
00:06:18,790 --> 00:06:16,880
drawings and and discovered that the

194
00:06:20,790 --> 00:06:18,800
pins we used to hold the payload bay

195
00:06:22,629 --> 00:06:20,800
cameras in place actually have similar

196
00:06:24,550 --> 00:06:22,639
ball bearings to the one we found and so

197
00:06:25,909 --> 00:06:24,560
we just wanted to be sure that uh that

198
00:06:27,830 --> 00:06:25,919
this wasn't a problem and the teams were

199
00:06:29,670 --> 00:06:27,840
doing really good at clearing it we got

200
00:06:31,110 --> 00:06:29,680
right up on top of the launch countdown

201
00:06:32,469 --> 00:06:31,120
and they hadn't quite been able to dot

202
00:06:33,909 --> 00:06:32,479
all the eyes and cross all the t so they

203
00:06:35,029 --> 00:06:33,919
brought it up to the team's attention

204
00:06:36,950 --> 00:06:35,039
which was definitely the right thing to

205
00:06:39,189 --> 00:06:36,960
do we talked about it uh pretty quick

206
00:06:40,469 --> 00:06:39,199
and and realized that uh the uh the

207
00:06:42,309 --> 00:06:40,479
chances that this came from that

208
00:06:44,070 --> 00:06:42,319
location were pretty small and the teams

209
00:06:45,909 --> 00:06:44,080
did some analysis show that even if one

210
00:06:47,430 --> 00:06:45,919
of the balls came out of this little pit

211
00:06:49,189 --> 00:06:47,440
pin the the other ball would hold the

212
00:06:51,110 --> 00:06:49,199
thing in place and there was not a

213
00:06:52,950 --> 00:06:51,120

problem so that was really a non-issue

214
00:06:54,469 --> 00:06:52,960
but we had to talk late about it which

215
00:06:56,230 --> 00:06:54,479
made it seem a little bit more exciting

216
00:06:57,749 --> 00:06:56,240
than it probably really was

217
00:06:59,670 --> 00:06:57,759
and and again it's a good example of the

218
00:07:01,990 --> 00:06:59,680
teams recognizing that they haven't

219
00:07:03,589 --> 00:07:02,000
quite closed all their paper and being

220
00:07:04,790 --> 00:07:03,599
willing to bring that up to us and let

221
00:07:06,790 --> 00:07:04,800
us talk about it and make sure we're all

222
00:07:08,309 --> 00:07:06,800
comfortable with the the rationale we

223
00:07:10,150 --> 00:07:08,319
have to fly and that that worked out

224
00:07:12,230 --> 00:07:10,160
really good today too the way uphill

225
00:07:14,070 --> 00:07:12,240
there were no problems whatsoever uh the

226
00:07:15,990 --> 00:07:14,080
vehicle got on orbit almost two was good

227
00:07:17,189 --> 00:07:16,000
and uh and the crews up there right now

228
00:07:19,749 --> 00:07:17,199
walking through their post insertion

229
00:07:21,029 --> 00:07:19,759
checklist configuring over from the uh

230
00:07:22,710 --> 00:07:21,039
from the ascent rocket over to the

231
00:07:24,230 --> 00:07:22,720
spaceship to go start docking with the

232
00:07:26,550 --> 00:07:24,240
space station so the mission gets

233
00:07:28,070 --> 00:07:26,560
underway now uh tomorrow will be the the

234
00:07:29,430 --> 00:07:28,080
inspections of the heat shield the

235
00:07:31,510 --> 00:07:29,440
thermal protection system to make sure

236
00:07:34,230 --> 00:07:31,520
we didn't do any damage uh on the way

237
00:07:35,909 --> 00:07:34,240
uphill uh during launch assuming that's

238
00:07:37,430 --> 00:07:35,919

all cleared on flight day three we'll

239
00:07:39,830 --> 00:07:37,440
dock with the space station and

240
00:07:41,510 --> 00:07:39,840
immediately begin the tasks of uh of

241
00:07:43,029 --> 00:07:41,520
getting uh all the the payload bay

242
00:07:44,390 --> 00:07:43,039
hardware transferred over to the station

243
00:07:46,469 --> 00:07:44,400
3 evas

244
00:07:48,790 --> 00:07:46,479
the mrm module going over and then the

245
00:07:50,230 --> 00:07:48,800
icc which is a cargo carrier that's

246
00:07:52,950 --> 00:07:50,240
carrying up batteries

247
00:07:55,430 --> 00:07:52,960
ku band antenna and a transfer platform

248
00:07:57,670 --> 00:07:55,440
for the dexter robot up on station is

249
00:07:59,510 --> 00:07:57,680
pretty much a full plate for the crew uh

250
00:08:02,869 --> 00:07:59,520
and then i think we're coming home

251
00:08:04,710 --> 00:08:02,879
on the 26th is our as our landing day so

252
00:08:06,309 --> 00:08:04,720
congratulations to the kennedy teams to

253
00:08:07,749 --> 00:08:06,319
angie brewer and her flow team to get

254
00:08:09,350 --> 00:08:07,759
the vehicle ready and to mike leinbach

255
00:08:11,830 --> 00:08:09,360
and his launch team for getting us in

256
00:08:13,670 --> 00:08:11,840
orbit a fantastic fantastic mission good

257
00:08:15,510 --> 00:08:13,680
thanks mike first of all i would like to

258
00:08:17,350 --> 00:08:15,520
congratulate team atlantis they did an

259
00:08:19,830 --> 00:08:17,360
outstanding job of preparing the vehicle

260
00:08:21,909 --> 00:08:19,840
for today and you saw how well a vehicle

261
00:08:23,110 --> 00:08:21,919
can perform when the work on it is done

262
00:08:24,550 --> 00:08:23,120
properly

263
00:08:25,670 --> 00:08:24,560

the two issues that mike talked about

264
00:08:27,670 --> 00:08:25,680
really were the only two things we

265
00:08:29,670 --> 00:08:27,680
talked about today the crack on the e.t

266
00:08:31,029 --> 00:08:29,680
foam and then the pit pin other than

267
00:08:33,589 --> 00:08:31,039
that i would characterize it as an

268
00:08:35,110 --> 00:08:33,599
extremely clean launch countdown uh it's

269
00:08:36,310 --> 00:08:35,120
really a testament to the to the folks

270
00:08:38,310 --> 00:08:36,320
who prepare the vehicle and the ground

271
00:08:39,909 --> 00:08:38,320
support equipment to get us to this

272
00:08:41,670 --> 00:08:39,919
point

273
00:08:43,029 --> 00:08:41,680
i'd like to take you back a year or 15

274
00:08:44,470 --> 00:08:43,039
months maybe 18 months and we were

275
00:08:45,829 --> 00:08:44,480
talking a lot about the manifest and

276
00:08:47,590 --> 00:08:45,839
could we pull off all these launches we

277
00:08:49,670 --> 00:08:47,600
had in front of us you just saw that we

278
00:08:51,670 --> 00:08:49,680
did and so we're very very proud of all

279
00:08:53,350 --> 00:08:51,680
three orbiter teams and all the flight

280
00:08:55,190 --> 00:08:53,360
teams in houston and marshall space

281
00:08:56,630 --> 00:08:55,200
flight center and stennis space center

282
00:08:58,310 --> 00:08:56,640
and all the work that's done by everyone

283
00:09:00,070 --> 00:08:58,320
around the country to in support of the

284
00:09:02,070 --> 00:09:00,080
space shuttle program and the iss

285
00:09:04,150 --> 00:09:02,080
program we proved we could do it and

286
00:09:05,430 --> 00:09:04,160
very very proud of everybody the other

287
00:09:06,949 --> 00:09:05,440
good thing about a launch is we don't

288
00:09:09,350 --> 00:09:06,959

have to talk about launch scrub

289
00:09:11,509 --> 00:09:09,360
turnaround options anymore so don't ask

290
00:09:14,150 --> 00:09:11,519
anymore about those

291
00:09:16,790 --> 00:09:14,160
but really it's great great launch today

292
00:09:20,150 --> 00:09:16,800
very very proud of the team and

293
00:09:21,750 --> 00:09:20,160
start of a good mission thanks

294
00:09:23,509 --> 00:09:21,760
all right gentlemen thank you uh we'll

295
00:09:24,310 --> 00:09:23,519
begin with questions here at kennedy and

296
00:09:25,990 --> 00:09:24,320
uh

297
00:09:27,750 --> 00:09:26,000
we have a pretty full house so i'd like

298
00:09:30,230 --> 00:09:27,760
to ask you to limit it to one question

299
00:09:31,910 --> 00:09:30,240
and one follow-up please and state your

300
00:09:33,190 --> 00:09:31,920
name affiliation

301
00:09:35,030 --> 00:09:33,200
uh and to whom your question is

302
00:09:36,630 --> 00:09:35,040
addressed why don't we uh start over

303
00:09:40,630 --> 00:09:36,640
here with jay barbary

304
00:09:42,150 --> 00:09:40,640
uh jay barbary with nbc uh mike

305
00:09:44,710 --> 00:09:42,160
the other day before the commerce

306
00:09:47,750 --> 00:09:44,720
committee your administrator said that

307
00:09:49,590 --> 00:09:47,760
he had not ruled out flying atlantis

308
00:09:51,670 --> 00:09:49,600
again for another mission

309
00:09:54,310 --> 00:09:51,680
he was still considering it the problem

310
00:09:57,030 --> 00:09:54,320
with safety between liftoff and getting

311
00:09:58,630 --> 00:09:57,040
into orbit you'd have no vehicle to go

312
00:10:00,389 --> 00:09:58,640
get them before they get to the space

313
00:10:02,790 --> 00:10:00,399

station

314
00:10:04,550 --> 00:10:02,800
what would it take for you guys to get

315
00:10:07,110 --> 00:10:04,560
atlantis ready to go

316
00:10:10,310 --> 00:10:07,120
to follow endeavor into space you'll

317
00:10:12,150 --> 00:10:10,320
have it ready for of course the rescue

318
00:10:13,750 --> 00:10:12,160
but what would you have to do to have it

319
00:10:15,350 --> 00:10:13,760
ready what more would you have to do to

320
00:10:16,470 --> 00:10:15,360
have it ready to go and would you be

321
00:10:21,829 --> 00:10:16,480
confident

322
00:10:24,630 --> 00:10:21,839
after today in sending up a crew on

323
00:10:27,350 --> 00:10:24,640
atlantis again without a backup

324
00:10:28,710 --> 00:10:27,360
shuttle to pick it up

325
00:10:29,829 --> 00:10:28,720
let's see yeah see you want to talk

326
00:10:31,670 --> 00:10:29,839
about the processing part well i'll see

327
00:10:32,630 --> 00:10:31,680
a lot of questions there and

328
00:10:35,509 --> 00:10:32,640
yeah

329
00:10:37,269 --> 00:10:35,519
that's typical from mr barbour

330
00:10:38,949 --> 00:10:37,279
but from the processing perspective you

331
00:10:40,710 --> 00:10:38,959
know we're going to process atlantis

332
00:10:41,910 --> 00:10:40,720
like we always do because it does have

333
00:10:43,350 --> 00:10:41,920
to be ready for the launch on need

334
00:10:45,430 --> 00:10:43,360
mission so it has to be ready to go with

335
00:10:47,350 --> 00:10:45,440
the crew of four and then if it if it

336
00:10:49,990 --> 00:10:47,360
happens to turn into a to a mission to

337
00:10:52,069 --> 00:10:50,000
the space station by itself so be it we

338
00:10:53,910 --> 00:10:52,079

would we would do what's necessary there

339
00:10:55,910 --> 00:10:53,920
uh we're not going to shortcut anything

340
00:10:57,910 --> 00:10:55,920
uh we're not going to we're not planning

341
00:10:59,509 --> 00:10:57,920
on adding anything to the turnaround

342
00:11:01,990 --> 00:10:59,519
we're going to process it for the long

343
00:11:04,550 --> 00:11:02,000
and if things change we'll we will react

344
00:11:06,389 --> 00:11:04,560
to that it's it's a it's it's no big

345
00:11:08,389 --> 00:11:06,399
deal to us right now early in the

346
00:11:09,990 --> 00:11:08,399
processing after she gets home whether

347
00:11:11,110 --> 00:11:10,000
it's whether it's an lon mission or

348
00:11:12,470 --> 00:11:11,120
whether it's a mission of the space

349
00:11:14,949 --> 00:11:12,480
station

350
00:11:17,190 --> 00:11:14,959
so in other words it'll be ready to go

351
00:11:19,269 --> 00:11:17,200
after you fly endeavor pretty much

352
00:11:21,190 --> 00:11:19,279
standing there as the rescue vehicle

353
00:11:23,750 --> 00:11:21,200
yeah the way the timeline would work is

354
00:11:26,550 --> 00:11:23,760
um like you see on all of our safe haven

355
00:11:27,910 --> 00:11:26,560
uh rescue missions uh the time the exact

356
00:11:30,310 --> 00:11:27,920
time depends on the station consumables

357
00:11:32,630 --> 00:11:30,320
but it'd be somewhere in the 90 to 120

358
00:11:34,230 --> 00:11:32,640
day range that we'd have protection to

359
00:11:35,430 --> 00:11:34,240
be able to keep the crew up on station

360
00:11:37,269 --> 00:11:35,440
for the last flight we actually probably

361
00:11:38,470 --> 00:11:37,279
can go even longer than that so atlantis

362
00:11:40,310 --> 00:11:38,480
would be processed to the point where

363
00:11:41,590 --> 00:11:40,320

it's at least that close to launch so

364
00:11:43,350 --> 00:11:41,600
that you know you can can launch and

365
00:11:45,110 --> 00:11:43,360
then successfully rescue and if we were

366
00:11:46,870 --> 00:11:45,120
going to make it a real mission we would

367
00:11:48,230 --> 00:11:46,880
probably want to know in june so we

368
00:11:49,910 --> 00:11:48,240
could actually start doing the right

369
00:11:51,910 --> 00:11:49,920
planning get things in place make sure

370
00:11:53,590 --> 00:11:51,920
we got the right cargo in place we've

371
00:11:55,509 --> 00:11:53,600
got a good set of cargo we got a good

372
00:11:57,030 --> 00:11:55,519
understanding of where we want to go but

373
00:11:58,629 --> 00:11:57,040
if we want to make it a real mission we

374
00:12:00,069 --> 00:11:58,639
need to get focused on the real mission

375
00:12:01,750 --> 00:12:00,079
we need to think about what unique

376
00:12:03,750 --> 00:12:01,760
aspects need to be there and be prepared

377
00:12:05,829 --> 00:12:03,760
so the june time frame is about the time

378
00:12:07,350 --> 00:12:05,839
that we kind of need to get an idea that

379
00:12:08,870 --> 00:12:07,360
that's somebody would like us to go do

380
00:12:10,470 --> 00:12:08,880
that and if they provide the funding

381
00:12:12,470 --> 00:12:10,480
we'd be glad to go do that so you're

382
00:12:13,990 --> 00:12:12,480
working that now and uh you're working

383
00:12:15,750 --> 00:12:14,000
that now in headquarters you're working

384
00:12:17,750 --> 00:12:15,760
the mission now and you're trying to

385
00:12:19,110 --> 00:12:17,760
we're really doing exactly what these

386
00:12:21,350 --> 00:12:19,120
guys said we're preparing it for a

387
00:12:22,870 --> 00:12:21,360
contingency flight but we're prepared

388
00:12:24,710 --> 00:12:22,880

that if somebody asks us to make it a

389
00:12:26,230 --> 00:12:24,720
real flight we can start that activity

390
00:12:30,629 --> 00:12:26,240
if they let us know by sometime in the

391
00:12:35,030 --> 00:12:32,710
uh gentlemen greg dobbs from hdnet

392
00:12:37,269 --> 00:12:35,040
television uh and don't forget it's mr

393
00:12:38,870 --> 00:12:37,279
grasnoff who brought this up not jay so

394
00:12:41,190 --> 00:12:38,880
a second question about the latest

395
00:12:42,550 --> 00:12:41,200
thinking on an additional flight what

396
00:12:43,910 --> 00:12:42,560
would be the nature what's the latest

397
00:12:46,550 --> 00:12:43,920
thinking at least about the nature of

398
00:12:48,550 --> 00:12:46,560
the cargo and the size of a crew on a

399
00:12:50,230 --> 00:12:48,560
fourth flight it would be a four person

400
00:12:51,350 --> 00:12:50,240
crew would have the mplm and be

401
00:12:52,870 --> 00:12:51,360
configured pretty much in the

402
00:12:54,790 --> 00:12:52,880
configuration we have for the launch on

403
00:12:56,949 --> 00:12:54,800
needfly

404
00:12:58,870 --> 00:12:56,959
what would it carry an mplm

405
00:13:00,710 --> 00:12:58,880
multi-purpose logistic module would

406
00:13:02,150 --> 00:13:00,720
carry sperry spare components for the

407
00:13:04,069 --> 00:13:02,160
space station we've already laid that

408
00:13:06,069 --> 00:13:04,079
manifest out for the contingency flight

409
00:13:07,910 --> 00:13:06,079
what consumables we need what spares

410
00:13:09,509 --> 00:13:07,920
what our us we would want also

411
00:13:11,350 --> 00:13:09,519
importantly you could bring back some

412
00:13:13,590 --> 00:13:11,360
items for us which we would like at the

413
00:13:16,310 --> 00:13:13,600

last moment to bring back we'd like to

414
00:13:18,550 --> 00:13:16,320
fly it in the june kind of time frame

415
00:13:20,550 --> 00:13:18,560
next year if possible the reason we want

416
00:13:22,470 --> 00:13:20,560
to do that we have an htv and an atv

417
00:13:24,949 --> 00:13:22,480
flight that are going to fly in december

418
00:13:26,550 --> 00:13:24,959
and january we have a lot of supplies on

419
00:13:28,710 --> 00:13:26,560
those flights we want to then put it in

420
00:13:30,870 --> 00:13:28,720
the right place to benefit station so so

421
00:13:33,190 --> 00:13:30,880
our motivation technically would be it

422
00:13:35,269 --> 00:13:33,200
gives us the best way to leave station

423
00:13:37,190 --> 00:13:35,279
in the best configuration we can as we

424
00:13:39,110 --> 00:13:37,200
move forward station would be fine

425
00:13:40,870 --> 00:13:39,120
without the flight but if we want to try

426
00:13:43,030 --> 00:13:40,880
to improve it and make things better

427
00:13:44,550 --> 00:13:43,040
then if somebody wants us to go do it we

428
00:13:45,670 --> 00:13:44,560
could go potentially accommodate the

429
00:13:47,189 --> 00:13:45,680
flight

430
00:13:48,870 --> 00:13:47,199
bobby bobby block with the orlando

431
00:13:50,949 --> 00:13:48,880
sentinel i wanted to ask you guys if you

432
00:13:52,870 --> 00:13:50,959
could talk about the motions that you

433
00:13:55,509 --> 00:13:52,880
had seeing seeing the launch knowing

434
00:13:56,870 --> 00:13:55,519
that this could be atlantis final launch

435
00:13:58,710 --> 00:13:56,880
but before i get to that i just wanted

436
00:14:01,110 --> 00:13:58,720
to follow on something with bill how

437
00:14:03,350 --> 00:14:01,120
much money you said you need money

438
00:14:04,629 --> 00:14:03,360

to do the launch do you have any idea of

439
00:14:07,110 --> 00:14:04,639
what because you have some additional

440
00:14:08,550 --> 00:14:07,120
funding i think to the end of the year

441
00:14:10,949 --> 00:14:08,560
do you have an idea of what you would

442
00:14:13,189 --> 00:14:10,959
need to be able to launch next atlantis

443
00:14:15,269 --> 00:14:13,199
next june if you were asked to we've

444
00:14:16,470 --> 00:14:15,279
we've done some estimates and and we

445
00:14:18,069 --> 00:14:16,480
we're covered through the end of the

446
00:14:20,629 --> 00:14:18,079
calendar year and then beyond that it

447
00:14:21,990 --> 00:14:20,639
depends exactly when the flight sits so

448
00:14:24,069 --> 00:14:22,000
i think i'd rather not give you a

449
00:14:25,590 --> 00:14:24,079
specific number but but you can you know

450
00:14:27,110 --> 00:14:25,600
roughly think we're on the order of

451
00:14:29,590 --> 00:14:27,120
about a hundred million dollars a month

452
00:14:31,509 --> 00:14:29,600
or so for each month we're beyond the

453
00:14:33,110 --> 00:14:31,519
beginning of the calendar year but but

454
00:14:35,829 --> 00:14:33,120
we're still working those those details

455
00:14:38,069 --> 00:14:35,839
so it's it's probably you know again 600

456
00:14:39,750 --> 00:14:38,079
to maybe a billion dollars to fly in the

457
00:14:41,350 --> 00:14:39,760
june kind of time frame and could you

458
00:14:43,430 --> 00:14:41,360
again the emotional you know your

459
00:14:46,949 --> 00:14:43,440
responses on seeing this is as we're

460
00:14:49,110 --> 00:14:46,959
really going into the home stretch now

461
00:14:51,110 --> 00:14:49,120
these guys

462
00:14:52,949 --> 00:14:51,120
well it's you know personally uh it

463
00:14:54,310 --> 00:14:52,959

hasn't hit me yet that this was atlantis

464
00:14:56,069 --> 00:14:54,320
and and uh

465
00:14:57,590 --> 00:14:56,079
and possibly the last flight it just was

466
00:14:59,030 --> 00:14:57,600
another launch and so

467
00:15:00,629 --> 00:14:59,040
i wrapped up in the focus and the

468
00:15:02,230 --> 00:15:00,639
attention on that so probably later

469
00:15:03,350 --> 00:15:02,240
tonight and heading into the week uh

470
00:15:05,590 --> 00:15:03,360
i'll probably start thinking about that

471
00:15:07,750 --> 00:15:05,600
but so for right now not a whole lot

472
00:15:09,430 --> 00:15:07,760
other than just normal post-launch uh

473
00:15:11,030 --> 00:15:09,440
emotion

474
00:15:12,949 --> 00:15:11,040
and i'm pretty focused on the orbit

475
00:15:15,590 --> 00:15:12,959
activities and in the mission in front

476
00:15:17,670 --> 00:15:15,600
of us that this is these evas are pretty

477
00:15:19,829 --> 00:15:17,680
tough especially the first eva is very

478
00:15:22,150 --> 00:15:19,839
demanding uh the installation of the

479
00:15:24,230 --> 00:15:22,160
russian module is is

480
00:15:26,790 --> 00:15:24,240
is unique for us it's using the docking

481
00:15:28,310 --> 00:15:26,800
mechanism and it's using the canadian

482
00:15:31,990 --> 00:15:28,320
arm to actually do a docking that's

483
00:15:33,829 --> 00:15:32,000
typically done by a proton or a

484
00:15:35,910 --> 00:15:33,839
docking kind of activity so that's some

485
00:15:37,269 --> 00:15:35,920
unique activities for us so

486
00:15:39,670 --> 00:15:37,279
at this point

487
00:15:41,509 --> 00:15:39,680
again i don't celebrate too much until

488
00:15:42,870 --> 00:15:41,519

we've really gotten through the mission

489
00:15:44,389 --> 00:15:42,880
and we got wheels stopped and then i can

490
00:15:45,829 --> 00:15:44,399
take a break and think about things so

491
00:15:47,110 --> 00:15:45,839
i'm pretty focused on the orbit

492
00:15:48,629 --> 00:15:47,120
activities in front of us and what we

493
00:15:49,829 --> 00:15:48,639
got to go do

494
00:15:52,470 --> 00:15:49,839
todd

495
00:15:55,590 --> 00:15:52,480
alverson of florida today for alexi

496
00:15:58,870 --> 00:15:55,600
krasnoff dobre dean

497
00:16:01,509 --> 00:15:58,880
i'm wondering if you could tell us

498
00:16:02,949 --> 00:16:01,519
what additional major components or

499
00:16:05,670 --> 00:16:02,959
segments

500
00:16:08,310 --> 00:16:05,680
the russian federal space agency

501
00:16:10,069 --> 00:16:08,320
intends to add on to the international

502
00:16:12,629 --> 00:16:10,079
space station

503
00:16:14,870 --> 00:16:12,639
after the u.s

504
00:16:17,030 --> 00:16:14,880
segment is complete i believe there's

505
00:16:21,030 --> 00:16:17,040
another major laboratory module and i

506
00:16:23,189 --> 00:16:21,040
was wondering if there was anything else

507
00:16:26,230 --> 00:16:23,199
yes indeed uh for

508
00:16:27,990 --> 00:16:26,240
since uh we made determination uh all

509
00:16:30,710 --> 00:16:28,000
together all partner

510
00:16:34,710 --> 00:16:30,720
agencies uh recently during the heads of

511
00:16:37,509 --> 00:16:34,720
agencies meeting in tokyo that we will

512
00:16:40,230 --> 00:16:37,519
continue on with the space station

513
00:16:42,629 --> 00:16:40,240

at least up to 2020 and that is a goal

514
00:16:45,590 --> 00:16:42,639
and we explore exploring all

515
00:16:47,749 --> 00:16:45,600
uh technical issues associated with the

516
00:16:51,430 --> 00:16:47,759
early modules and

517
00:16:53,910 --> 00:16:51,440
among those first of all for fgb and

518
00:16:55,749 --> 00:16:53,920
service module which russian-made

519
00:16:56,550 --> 00:16:55,759
and we are working on the extension of

520
00:16:59,350 --> 00:16:56,560
the

521
00:17:01,269 --> 00:16:59,360
service life on orbit for fgb and

522
00:17:04,069 --> 00:17:01,279
service model

523
00:17:06,870 --> 00:17:04,079
and in this context for we are planning

524
00:17:08,949 --> 00:17:06,880
to continue on with the for

525
00:17:10,630 --> 00:17:08,959
additional capabilities of russian

526
00:17:11,990 --> 00:17:10,640
segment

527
00:17:14,309 --> 00:17:12,000
which uh

528
00:17:16,470 --> 00:17:14,319
will be comprised of

529
00:17:21,350 --> 00:17:16,480
first of all launch of

530
00:17:24,710 --> 00:17:21,360
multi-purpose laboratory module in 2012

531
00:17:26,069 --> 00:17:24,720
the the target date is the end of uh

532
00:17:27,829 --> 00:17:26,079
second quarter

533
00:17:29,190 --> 00:17:27,839
of the year and

534
00:17:31,750 --> 00:17:29,200
then

535
00:17:33,590 --> 00:17:31,760
with appreciation that we do have a lack

536
00:17:35,430 --> 00:17:33,600
of power

537
00:17:36,870 --> 00:17:35,440
due to due to the evolution of the

538
00:17:38,549 --> 00:17:36,880

program

539
00:17:40,070 --> 00:17:38,559
and the changes within the shuttle

540
00:17:43,510 --> 00:17:40,080
program

541
00:17:46,070 --> 00:17:43,520
we scrubbed the the launch of the for

542
00:17:49,669 --> 00:17:46,080
science power module which used to be

543
00:17:52,470 --> 00:17:49,679
used to be in our configuration which

544
00:17:55,430 --> 00:17:52,480
was planned to provide us a sufficient

545
00:17:56,470 --> 00:17:55,440
amount of power for russian elements

546
00:17:59,590 --> 00:17:56,480
and we

547
00:18:04,870 --> 00:17:59,600
arranged with our colleagues at nasa

548
00:18:07,990 --> 00:18:06,870
comparable barter

549
00:18:10,230 --> 00:18:08,000
process

550
00:18:13,590 --> 00:18:10,240
to get some power

551
00:18:15,590 --> 00:18:13,600
until we will we will deliver of this

552
00:18:16,870 --> 00:18:15,600
additional capabilities to russian

553
00:18:18,549 --> 00:18:16,880
segment and

554
00:18:22,470 --> 00:18:18,559
i believe that's the

555
00:18:23,909 --> 00:18:22,480
in time frame of 2013 2014

556
00:18:26,390 --> 00:18:23,919
we will

557
00:18:29,270 --> 00:18:26,400
plan to deliver

558
00:18:31,590 --> 00:18:29,280
such a power and research capabilities

559
00:18:32,549 --> 00:18:31,600
to the russian segment

560
00:18:34,870 --> 00:18:32,559
which

561
00:18:38,549 --> 00:18:34,880
certainly will enhance the capability of

562
00:18:40,070 --> 00:18:38,559
the science and utilization thank you

563
00:18:43,830 --> 00:18:40,080

james

564
00:18:45,270 --> 00:18:43,840
gersomer um

565
00:18:47,029 --> 00:18:45,280
you're saying atlantis would be ready to

566
00:18:48,710 --> 00:18:47,039
go if you're asked to fly that

567
00:18:51,510 --> 00:18:48,720
additional flight i just wanted to

568
00:18:52,870 --> 00:18:51,520
understand where is that direction

569
00:18:55,029 --> 00:18:52,880
ultimately coming from within the next

570
00:18:56,950 --> 00:18:55,039
month is it an administrator call or

571
00:19:01,270 --> 00:18:56,960
congress or the president

572
00:19:05,590 --> 00:19:03,270
good and

573
00:19:07,909 --> 00:19:05,600
i know uh mr suffordini said he would

574
00:19:10,470 --> 00:19:07,919
like that flight in june are you only

575
00:19:12,870 --> 00:19:10,480
looking at june as kind of a

576
00:19:15,270 --> 00:19:12,880
the time you would fly and and that

577
00:19:18,150 --> 00:19:15,280
would be the last flight or

578
00:19:19,990 --> 00:19:18,160
and also if if it was as late as june

579
00:19:21,990 --> 00:19:20,000
would it definitely be atlantis that

580
00:19:23,350 --> 00:19:22,000
would fly it because it's process pretty

581
00:19:25,750 --> 00:19:23,360
much ready to go or could you possibly

582
00:19:28,070 --> 00:19:25,760
switch to a different vehicle

583
00:19:29,830 --> 00:19:28,080
again if we got requested we'd go

584
00:19:32,470 --> 00:19:29,840
optimize it i think it would probably be

585
00:19:34,310 --> 00:19:32,480
atlantis june is a technical right time

586
00:19:36,390 --> 00:19:34,320
from a station needs standpoint that is

587
00:19:38,789 --> 00:19:36,400
the most optimum time to get the right

588
00:19:40,710 --> 00:19:38,799

cargo to station to help us all from a

589
00:19:42,789 --> 00:19:40,720
partnership standpoint

590
00:19:44,630 --> 00:19:42,799
if somebody told me some other month we

591
00:19:46,310 --> 00:19:44,640
would go evaluate it we'd take a look at

592
00:19:48,950 --> 00:19:46,320
it and we'd see what benefits we are and

593
00:19:51,029 --> 00:19:48,960
then we would trade again the cost you

594
00:19:53,029 --> 00:19:51,039
know schedule time money those kind of

595
00:19:55,110 --> 00:19:53,039
things versus the gain we get on station

596
00:19:56,870 --> 00:19:55,120
and we work with all the folks we talked

597
00:19:58,310 --> 00:19:56,880
about before to make the right decision

598
00:20:00,230 --> 00:19:58,320
that we want to do to get the best out

599
00:20:01,510 --> 00:20:00,240
of station so as alexis said the

600
00:20:03,110 --> 00:20:01,520
important thing is we're really looking

601
00:20:04,710 --> 00:20:03,120
at how we can utilize station you know

602
00:20:07,510 --> 00:20:04,720
we're going to keep station active until

603
00:20:09,110 --> 00:20:07,520
2020 we want to make sure we take

604
00:20:10,950 --> 00:20:09,120
optimum advantage and get the most

605
00:20:12,789 --> 00:20:10,960
research we can and we're going to look

606
00:20:15,110 --> 00:20:12,799
at everything we do and how well it can

607
00:20:16,470 --> 00:20:15,120
justify in improving research or

608
00:20:18,470 --> 00:20:16,480
improving the science return from

609
00:20:19,909 --> 00:20:18,480
station and helping our partners so so

610
00:20:21,350 --> 00:20:19,919
we trade and factor all those things

611
00:20:23,029 --> 00:20:21,360
depending on what somebody would like us

612
00:20:24,830 --> 00:20:23,039
to go do

613
00:20:26,710 --> 00:20:24,840

chris um chris gabriel with

614
00:20:27,830 --> 00:20:26,720
nasaspaceflight.com um

615
00:20:29,669 --> 00:20:27,840
you know

616
00:20:32,310 --> 00:20:29,679
sitting here today watching watching the

617
00:20:34,470 --> 00:20:32,320
marvel that that was um

618
00:20:36,149 --> 00:20:34,480
i i keep going back to to the workforce

619
00:20:38,070 --> 00:20:36,159
and the dedication and everything that

620
00:20:39,990 --> 00:20:38,080
they do here and and the extremely clean

621
00:20:41,750 --> 00:20:40,000
nature of these vehicles and

622
00:20:44,470 --> 00:20:41,760
if i'm doing my math correctly i believe

623
00:20:46,070 --> 00:20:44,480
we have a new low ipr number

624
00:20:48,630 --> 00:20:46,080
for processing flow so just wondering

625
00:20:50,789 --> 00:20:48,640
what was atlantis total processing our

626
00:20:53,190 --> 00:20:50,799
interim problem report count

627
00:20:55,990 --> 00:20:53,200
from 129 to 132 and i've got to follow

628
00:20:58,310 --> 00:20:56,000
up yeah we had 46

629
00:20:59,590 --> 00:20:58,320
and angie brewer has a good healthy

630
00:21:01,590 --> 00:20:59,600
competition with her other flow

631
00:21:03,990 --> 00:21:01,600
directors and so she was lobbying late

632
00:21:06,789 --> 00:21:04,000
in account not to get any more ipr's

633
00:21:08,149 --> 00:21:06,799
um but uh no it was a it was another

634
00:21:09,830 --> 00:21:08,159
another good day for us another good

635
00:21:12,310 --> 00:21:09,840
flow

636
00:21:14,630 --> 00:21:12,320
i think so yeah um and uh the the

637
00:21:16,789 --> 00:21:14,640
follow-up to that is um

638
00:21:18,149 --> 00:21:16,799

there was one that i saw um

639
00:21:19,909 --> 00:21:18,159
that would that was a problem with some

640
00:21:22,710 --> 00:21:19,919
equipment out at edwards that got

641
00:21:24,070 --> 00:21:22,720
charged as an ipr to the 132 vehicle i

642
00:21:26,230 --> 00:21:24,080
the only question i've got there is how

643
00:21:29,430 --> 00:21:26,240
can something at edwards be

644
00:21:31,590 --> 00:21:29,440
an ipr for for the 132 vehicle here at

645
00:21:33,510 --> 00:21:31,600
kennedy well you're referring to an

646
00:21:35,270 --> 00:21:33,520
automatic transfer switch on the misplus

647
00:21:37,029 --> 00:21:35,280
system out there the microwave scanning

648
00:21:39,190 --> 00:21:37,039
beam landing system

649
00:21:41,270 --> 00:21:39,200
and uh that switch was not working and

650
00:21:42,710 --> 00:21:41,280
we understood why um the guys out of

651
00:21:45,110 --> 00:21:42,720
driving were going to go fix it today on

652
00:21:46,630 --> 00:21:45,120
first shift their time

653
00:21:48,950 --> 00:21:46,640
that was not fixed by the time we went

654
00:21:50,630 --> 00:21:48,960
into external tank loading and so to

655
00:21:52,230 --> 00:21:50,640
track it from a from a vehicle

656
00:21:53,590 --> 00:21:52,240
configuration not not from a vehicle

657
00:21:55,990 --> 00:21:53,600
configuration but from a flow

658
00:21:57,190 --> 00:21:56,000
perspective we gave we gave an ipr to

659
00:21:58,950 --> 00:21:57,200
the integration console just so they

660
00:22:00,470 --> 00:21:58,960
could tie all the loose ends together

661
00:22:02,390 --> 00:22:00,480
make sure they coordinate with the with

662
00:22:05,190 --> 00:22:02,400
the folks out of dryden and got that

663
00:22:06,470 --> 00:22:05,200

work done and they did and uh so it that

664
00:22:08,149 --> 00:22:06,480
was one that could have gone either way

665
00:22:11,190 --> 00:22:08,159
frankly uh we decided to air on the

666
00:22:12,470 --> 00:22:11,200
conservative side and give it an

667
00:22:13,990 --> 00:22:12,480
okay we'll come ipr to the other side of

668
00:22:15,510 --> 00:22:14,000
the room here as you can see just go

669
00:22:16,710 --> 00:22:15,520
ahead the ipr is an initial problem

670
00:22:18,630 --> 00:22:16,720
report so when a problem comes in they

671
00:22:19,909 --> 00:22:18,640
take an ipr and then if it turns out

672
00:22:21,190 --> 00:22:19,919
it's on ground equipment that has

673
00:22:23,270 --> 00:22:21,200
nothing to do with the vehicle it gets

674
00:22:24,710 --> 00:22:23,280
dispositioned away that way so ipr just

675
00:22:27,110 --> 00:22:24,720
is that initial hey we got something we

676
00:22:29,350 --> 00:22:27,120
want to track make sure we're working

677
00:22:31,990 --> 00:22:29,360
okay mike um mike schneider associated

678
00:22:33,669 --> 00:22:32,000
press um just to uh continue on the

679
00:22:35,909 --> 00:22:33,679
question of the mood in the firing room

680
00:22:37,990 --> 00:22:35,919
did you all do anything special to

681
00:22:41,190 --> 00:22:38,000
commemorate the fact that this was

682
00:22:43,190 --> 00:22:41,200
atlantis last launch um

683
00:22:45,590 --> 00:22:43,200
yeah a little bit we have a new a new uh

684
00:22:47,750 --> 00:22:45,600
display on the wall the firing room for

685
00:22:49,350 --> 00:22:47,760
atlantis we hung that last week very

686
00:22:51,110 --> 00:22:49,360
very beautiful mural

687
00:22:52,789 --> 00:22:51,120
of some of the the highlights of

688
00:22:54,470 --> 00:22:52,799

atlantis's career

689
00:22:55,990 --> 00:22:54,480
along with every mission patch and

690
00:22:57,430 --> 00:22:56,000
that's hanging up there now we're going

691
00:22:59,110 --> 00:22:57,440
to hang the other

692
00:23:01,110 --> 00:22:59,120
tributes to the other four orbiters this

693
00:23:02,630 --> 00:23:01,120
summer so i'd like to take you to the

694
00:23:04,630 --> 00:23:02,640
fire room and show you around it's very

695
00:23:06,149 --> 00:23:04,640
nice and atlantis was the first one to

696
00:23:08,630 --> 00:23:06,159
get that

697
00:23:10,870 --> 00:23:08,640
if i could ask mr gerstenmaier um the

698
00:23:12,390 --> 00:23:10,880
extra flight aside can you talk about

699
00:23:13,750 --> 00:23:12,400
how the launch schedule looks like for

700
00:23:16,070 --> 00:23:13,760
the rest of the year whether you have a

701
00:23:18,310 --> 00:23:16,080
date in november and just talk about the

702
00:23:21,029 --> 00:23:18,320
manifest for

703
00:23:23,510 --> 00:23:21,039
2010 yeah we're looking probably now

704
00:23:24,390 --> 00:23:23,520
still at september 16th for the next

705
00:23:29,029 --> 00:23:24,400
launch

706
00:23:30,630 --> 00:23:29,039
flight is november 27th is kind of the

707
00:23:32,630 --> 00:23:30,640
time frame we're looking at we still

708
00:23:34,390 --> 00:23:32,640
have some challenges on the payload side

709
00:23:35,830 --> 00:23:34,400
there's some large orbital replacement

710
00:23:37,350 --> 00:23:35,840
units that we would really like to fly

711
00:23:38,950 --> 00:23:37,360
into september flight

712
00:23:41,590 --> 00:23:38,960
we'll evaluate and see if they're going

713
00:23:43,430 --> 00:23:41,600

to be ready to make the mplm flight in

714
00:23:44,950 --> 00:23:43,440
september and that could push that data

715
00:23:46,710 --> 00:23:44,960
a little bit but there'll be a change

716
00:23:49,029 --> 00:23:46,720
request going out to the shuttle program

717
00:23:50,549 --> 00:23:49,039
here fairly soon probably this week or

718
00:23:52,390 --> 00:23:50,559
next week to go look at those dates that

719
00:23:53,830 --> 00:23:52,400
i just described and we'll pull all the

720
00:23:55,350 --> 00:23:53,840
elements to see where their hardware is

721
00:23:58,310 --> 00:23:55,360
see where they're sitting but that's our

722
00:23:59,909 --> 00:23:58,320
current plans for the next two flights

723
00:24:01,269 --> 00:23:59,919
jim siegel celebration independent

724
00:24:03,430 --> 00:24:01,279
newspaper

725
00:24:06,549 --> 00:24:03,440
let's say that atlantis does fly another

726
00:24:08,149 --> 00:24:06,559
mission sts-135

727
00:24:10,070 --> 00:24:08,159
when all of those missions then are

728
00:24:12,870 --> 00:24:10,080
complete is it the plan

729
00:24:15,990 --> 00:24:12,880
to keep one of the shuttles atlantis or

730
00:24:17,590 --> 00:24:16,000
one of the others around just in case in

731
00:24:18,950 --> 00:24:17,600
the future

732
00:24:21,909 --> 00:24:18,960
some flight

733
00:24:23,269 --> 00:24:21,919
uh might be needed or are they all going

734
00:24:27,110 --> 00:24:23,279
to be

735
00:24:29,909 --> 00:24:27,120
essentially retired dismantled whatever

736
00:24:32,789 --> 00:24:29,919
i think our plan will be to to retire

737
00:24:34,549 --> 00:24:32,799
them all and distribute them to where

738
00:24:36,789 --> 00:24:34,559

they can be displayed

739
00:24:38,870 --> 00:24:36,799
the problem again is it's not just the

740
00:24:41,269 --> 00:24:38,880
vehicle itself the orbiter it we have to

741
00:24:42,710 --> 00:24:41,279
have an external tank which we we have

742
00:24:43,830 --> 00:24:42,720
parts and pieces but we don't have

743
00:24:45,430 --> 00:24:43,840
enough to actually put together an

744
00:24:46,390 --> 00:24:45,440
external tank we need solid rocket

745
00:24:48,710 --> 00:24:46,400
motors

746
00:24:49,909 --> 00:24:48,720
we stopped fabricating those so so again

747
00:24:51,669 --> 00:24:49,919
it's all the pieces that would have to

748
00:24:53,029 --> 00:24:51,679
come together to make it a

749
00:24:54,710 --> 00:24:53,039
you know essentially a spacecraft that

750
00:24:56,950 --> 00:24:54,720
we could go launch

751
00:24:58,789 --> 00:24:56,960
okay let's go uh robert perlman hi

752
00:25:01,190 --> 00:24:58,799
robert perlman from collectspace.com

753
00:25:02,789 --> 00:25:01,200
with a follow-up on that for gerst

754
00:25:06,710 --> 00:25:02,799
um

755
00:25:07,510 --> 00:25:06,720
the earliest nasa might make a decision

756
00:25:09,350 --> 00:25:07,520
on

757
00:25:11,269 --> 00:25:09,360
uh where the orbiters were going was

758
00:25:13,430 --> 00:25:11,279
going to be this july

759
00:25:15,230 --> 00:25:13,440
with the extension out to at least

760
00:25:17,830 --> 00:25:15,240
november for

761
00:25:19,669 --> 00:25:17,840
sts-134 are you still planning on july

762
00:25:21,830 --> 00:25:19,679
or is there a new target for when

763
00:25:23,029 --> 00:25:21,840

museums might learn where the orbiters

764
00:25:25,510 --> 00:25:23,039
are going

765
00:25:27,190 --> 00:25:25,520
again i think that's probably a pretty

766
00:25:28,470 --> 00:25:27,200
good day we might slip it a little bit

767
00:25:30,630 --> 00:25:28,480
but i wouldn't think it would be much

768
00:25:32,070 --> 00:25:30,640
earlier than that kind of time frame so

769
00:25:33,430 --> 00:25:32,080
it'd be the summer time frames probably

770
00:25:35,190 --> 00:25:33,440
a better way of stating it than picking

771
00:25:36,950 --> 00:25:35,200
a particular mine

772
00:25:38,149 --> 00:25:36,960
okay let's uh take a question from clara

773
00:25:39,750 --> 00:25:38,159
and then we'll go back over to the other

774
00:25:41,909 --> 00:25:39,760
side of the room here

775
00:25:44,390 --> 00:25:41,919
clara moskowitz with space.com and this

776
00:25:46,230 --> 00:25:44,400
is for mr krasnov i'm wondering um if

777
00:25:48,710 --> 00:25:46,240
you have an estimate for the cost of the

778
00:25:50,950 --> 00:25:48,720
new mrm one and it also if you could

779
00:25:52,230 --> 00:25:50,960
just speak on the added capability that

780
00:25:55,990 --> 00:25:52,240
the space station is going to have with

781
00:25:56,710 --> 00:25:56,000
this new room on board

782
00:26:01,269 --> 00:25:56,720
the

783
00:26:03,510 --> 00:26:01,279
hardware itself

784
00:26:05,190 --> 00:26:03,520
is about 200

785
00:26:07,350 --> 00:26:05,200
million dollars

786
00:26:10,070 --> 00:26:07,360
and the

787
00:26:12,149 --> 00:26:10,080
of the additional capabilities first of

788
00:26:12,950 --> 00:26:12,159

all the the volume of the module is

789
00:26:14,950 --> 00:26:12,960
about

790
00:26:18,310 --> 00:26:14,960
18 cubic meters

791
00:26:20,710 --> 00:26:18,320
the total mass is 7.9 tons

792
00:26:23,029 --> 00:26:20,720
it will provide additional eight working

793
00:26:24,310 --> 00:26:23,039
places so to speak in russian

794
00:26:27,430 --> 00:26:24,320
terminologies

795
00:26:31,269 --> 00:26:27,440
it's the terminals where we can

796
00:26:33,110 --> 00:26:31,279
install the uh associated hardware

797
00:26:34,230 --> 00:26:33,120
part of this hardware is already in a

798
00:26:35,990 --> 00:26:34,240
module and

799
00:26:41,350 --> 00:26:36,000
partially it will be delivered later on

800
00:26:44,070 --> 00:26:41,360
later on it also has a for

801
00:26:46,470 --> 00:26:44,080
external payload capabilities

802
00:26:48,710 --> 00:26:46,480
which will enhance for the existing

803
00:26:51,350 --> 00:26:48,720
capabilities of the service module

804
00:26:54,789 --> 00:26:51,360
that we also deliver with this module

805
00:26:58,549 --> 00:26:54,799
the spare for european robotic arm

806
00:27:02,789 --> 00:26:58,559
which is to be uh launched with the mlm

807
00:27:07,909 --> 00:27:02,799
multi-purpose laboratory module in 2012.

808
00:27:12,470 --> 00:27:10,390
operations of uh

809
00:27:13,669 --> 00:27:12,480
european robotic arm further on because

810
00:27:16,950 --> 00:27:13,679
it's uh

811
00:27:19,590 --> 00:27:16,960
in absence of space shuttle it would be

812
00:27:20,950 --> 00:27:19,600
impossible to deliver such a spur due to

813
00:27:22,549 --> 00:27:20,960

the

814
00:27:27,029 --> 00:27:22,559
dimensions

815
00:27:30,789 --> 00:27:28,710
radiator for

816
00:27:35,269 --> 00:27:30,799
heat

817
00:27:36,149 --> 00:27:35,279
thermal control system

818
00:27:39,909 --> 00:27:36,159
for

819
00:27:42,630 --> 00:27:39,919
multi-purpose laboratory model

820
00:27:44,630 --> 00:27:42,640
uh therefore it's uh it's it's not big

821
00:27:46,630 --> 00:27:44,640
it's not big but it's a

822
00:27:48,710 --> 00:27:46,640
pretty interesting module which will add

823
00:27:52,389 --> 00:27:48,720
the new capabilities and we

824
00:27:53,909 --> 00:27:52,399
really excited to to see this uh

825
00:27:54,710 --> 00:27:53,919
today's launch

826
00:27:56,549 --> 00:27:54,720
very

827
00:27:58,950 --> 00:27:56,559
successful launch into the space station

828
00:28:02,549 --> 00:27:58,960
which will deliver

829
00:28:03,750 --> 00:28:02,559
the module to the orbit and on the 18th

830
00:28:05,590 --> 00:28:03,760
where

831
00:28:08,710 --> 00:28:05,600
part of our team has planned to be in

832
00:28:11,269 --> 00:28:08,720
the mcc houston to participate in the

833
00:28:12,230 --> 00:28:11,279
birthing uh process as bill mentioned

834
00:28:13,909 --> 00:28:12,240
it's not

835
00:28:16,950 --> 00:28:13,919
an easy

836
00:28:19,190 --> 00:28:16,960
operation it's pretty unique because the

837
00:28:21,990 --> 00:28:19,200
docking

838
00:28:24,230 --> 00:28:22,000

for the modules were made in the active

839
00:28:27,590 --> 00:28:24,240
mode so to speak and the

840
00:28:30,389 --> 00:28:27,600
bursting will be provided by a canadian

841
00:28:31,909 --> 00:28:30,399
robotic arm on a space station

842
00:28:32,789 --> 00:28:31,919
thank you okay

843
00:28:35,269 --> 00:28:32,799
okay

844
00:28:37,830 --> 00:28:35,279
hi thank you ken cramer for space flight

845
00:28:40,070 --> 00:28:37,840
magazine and planetary society for mr

846
00:28:42,070 --> 00:28:40,080
krasnov i'd like to expand a little bit

847
00:28:44,470 --> 00:28:42,080
more about russia's plans in the future

848
00:28:46,310 --> 00:28:44,480
for space exploration can you tell us

849
00:28:47,909 --> 00:28:46,320
about uh the upgrades you're doing to

850
00:28:49,669 --> 00:28:47,919
the soyuz capsule

851
00:28:51,190 --> 00:28:49,679
uh will you develop a replacement the

852
00:28:53,590 --> 00:28:51,200
clipper there's been a lot of discussion

853
00:28:54,950 --> 00:28:53,600
of that is there actually a plan and can

854
00:28:56,950 --> 00:28:54,960
you tell us a little bit about your

855
00:28:58,470 --> 00:28:56,960
planetary missions phobos grunt and

856
00:29:01,110 --> 00:28:58,480
other missions to mars it's a phobos

857
00:29:03,110 --> 00:29:01,120
grunt on time for uh i believe 2011

858
00:29:05,830 --> 00:29:03,120
launched thank you

859
00:29:10,310 --> 00:29:07,350
we uh

860
00:29:13,269 --> 00:29:10,320
we are planning to upgrade uh for

861
00:29:16,470 --> 00:29:13,279
even if are for hearing the the name of

862
00:29:18,789 --> 00:29:16,480
uh soyuz vehicle is not changing but the

863
00:29:20,310 --> 00:29:18,799

vehicle itself is changing a lot

864
00:29:23,750 --> 00:29:20,320
uh from

865
00:29:25,590 --> 00:29:23,760
each every vehicle further on and uh

866
00:29:26,389 --> 00:29:25,600
we are planning to launch new series so

867
00:29:29,190 --> 00:29:26,399
so

868
00:29:32,630 --> 00:29:29,200
it's in a manufacturing plant it's

869
00:29:34,310 --> 00:29:32,640
called 700 syria uh soyuz vehicle with

870
00:29:37,750 --> 00:29:34,320
the new for

871
00:29:39,190 --> 00:29:37,760
command control system upgraded

872
00:29:41,269 --> 00:29:39,200
and some

873
00:29:44,549 --> 00:29:41,279
other systems which are

874
00:29:47,190 --> 00:29:44,559
uh different what we used to for we

875
00:29:50,149 --> 00:29:47,200
what we used to

876
00:29:52,149 --> 00:29:50,159
apply to the to those vehicles

877
00:29:54,310 --> 00:29:52,159
some tests were made with the progress

878
00:29:56,310 --> 00:29:54,320
vehicles which we already started

879
00:29:59,590 --> 00:29:56,320
launching in last year

880
00:30:02,710 --> 00:29:59,600
it's a 400 series for vehicle

881
00:30:05,029 --> 00:30:02,720
which also for

882
00:30:06,149 --> 00:30:05,039
quite a change from the previous uh

883
00:30:08,789 --> 00:30:06,159
version

884
00:30:10,470 --> 00:30:08,799
of the cargo vehicle we we used in the

885
00:30:12,389 --> 00:30:10,480
program

886
00:30:13,590 --> 00:30:12,399
any uh

887
00:30:18,310 --> 00:30:13,600
uh

888
00:30:20,950 --> 00:30:18,320

what we ought to do

889
00:30:22,630 --> 00:30:20,960
with the low earth orbit uh

890
00:30:25,110 --> 00:30:22,640
human flight

891
00:30:27,029 --> 00:30:25,120
is there a human presence on low earth's

892
00:30:29,190 --> 00:30:27,039
orbit and what is the wisdom

893
00:30:31,909 --> 00:30:29,200
and definitely if the space station i

894
00:30:33,269 --> 00:30:31,919
believe uh has a great capacity to prove

895
00:30:35,110 --> 00:30:33,279
that if

896
00:30:36,870 --> 00:30:35,120
we we shall be on the

897
00:30:39,430 --> 00:30:36,880
of loss or

898
00:30:41,350 --> 00:30:39,440
low earth or orbit regardless

899
00:30:42,950 --> 00:30:41,360
our plans for

900
00:30:44,630 --> 00:30:42,960
exploration

901
00:30:45,909 --> 00:30:44,640
uh it shall be

902
00:30:50,310 --> 00:30:45,919
excuse me

903
00:30:53,029 --> 00:30:51,190
we

904
00:30:55,430 --> 00:30:53,039
are planning to

905
00:30:59,590 --> 00:30:55,440
explore

906
00:31:04,870 --> 00:31:02,470
on the capabilities to assemble

907
00:31:07,430 --> 00:31:04,880
a small spacecraft

908
00:31:10,789 --> 00:31:07,440
on a on the basis of

909
00:31:12,389 --> 00:31:10,799
iss which will be capable of departing

910
00:31:15,190 --> 00:31:12,399
from the iss

911
00:31:17,029 --> 00:31:15,200
to certain point of destination beyond

912
00:31:19,750 --> 00:31:17,039
low earth orbit which is pretty

913
00:31:20,950 --> 00:31:19,760

challenging and interesting idea

914
00:31:22,950 --> 00:31:20,960
but it

915
00:31:25,909 --> 00:31:22,960
it will take some time to

916
00:31:29,990 --> 00:31:28,149
define the technology and

917
00:31:32,870 --> 00:31:30,000
destination point certainly will will

918
00:31:34,870 --> 00:31:32,880
provide quite an influence

919
00:31:37,110 --> 00:31:34,880
therefore

920
00:31:40,310 --> 00:31:37,120
in in our perspective we are planning to

921
00:31:43,990 --> 00:31:40,320
use low earth orbit beyond the iss if

922
00:31:45,750 --> 00:31:44,000
iss for any reason will not be operable

923
00:31:48,549 --> 00:31:45,760
after 2020

924
00:31:51,110 --> 00:31:48,559
that is uh that's our uh

925
00:31:56,630 --> 00:31:51,120
vision for human space flight

926
00:32:03,830 --> 00:32:00,870
working on the new vehicle which is

927
00:32:07,110 --> 00:32:03,840
it's a little bit similar to what uh

928
00:32:13,190 --> 00:32:10,470
is or was what whatever you will use

929
00:32:15,750 --> 00:32:13,200
in this instance of

930
00:32:16,470 --> 00:32:15,760
that is a little bit similar in terms of

931
00:32:18,950 --> 00:32:16,480
the

932
00:32:20,630 --> 00:32:18,960
overall concept

933
00:32:24,549 --> 00:32:20,640
but we believe that

934
00:32:27,750 --> 00:32:26,230
warrant of this

935
00:32:30,149 --> 00:32:27,760
vehicle will be

936
00:32:32,950 --> 00:32:30,159
used for the low earth orbit to test it

937
00:32:33,909 --> 00:32:32,960
on the iss as a test ground

938
00:32:35,990 --> 00:32:33,919

and then

939
00:32:37,909 --> 00:32:36,000
we we are planning to upgrade it for the

940
00:32:38,870 --> 00:32:37,919
exploration goals

941
00:32:42,070 --> 00:32:38,880
which

942
00:32:44,950 --> 00:32:42,080
will likely to have a modular

943
00:32:46,789 --> 00:32:44,960
principle of assembly

944
00:32:47,590 --> 00:32:46,799
that's

945
00:32:52,230 --> 00:32:47,600
as

946
00:32:53,269 --> 00:32:52,240
whole vision for the human space flight

947
00:32:57,750 --> 00:32:53,279
what

948
00:32:59,669 --> 00:32:57,760
planning the planetary of only on a

949
00:33:01,750 --> 00:32:59,679
fabulous uh it is

950
00:33:03,430 --> 00:33:01,760
moving unfortunately to the right due to

951
00:33:05,430 --> 00:33:03,440
the payload

952
00:33:07,669 --> 00:33:05,440
problems

953
00:33:09,830 --> 00:33:07,679
yes

954
00:33:12,389 --> 00:33:09,840
randy siegel wstu radio that's for

955
00:33:14,950 --> 00:33:12,399
either bill or mr kresnov i understand

956
00:33:18,149 --> 00:33:14,960
that the kotev crew is going to be

957
00:33:20,630 --> 00:33:18,159
delayed a week in coming home

958
00:33:22,789 --> 00:33:20,640
is that been official or is it going to

959
00:33:24,870 --> 00:33:22,799
create any problems that are there

960
00:33:27,590 --> 00:33:24,880
and a follow-up rule would be

961
00:33:28,710 --> 00:33:27,600
the station was planned for 15 not for

962
00:33:30,470 --> 00:33:28,720
20.

963
00:33:33,269 --> 00:33:30,480

are we going to have all the correct

964
00:33:37,430 --> 00:33:33,279
parts up there as spares to take us the

965
00:33:43,269 --> 00:33:40,389
the uh cutoff screw

966
00:33:45,990 --> 00:33:43,279
is not actually delayed we we

967
00:33:47,590 --> 00:33:46,000
uh shifted the launch date from the 14

968
00:33:49,269 --> 00:33:47,600
which was the original date of the

969
00:33:51,269 --> 00:33:49,279
service launch in june

970
00:33:53,990 --> 00:33:51,279
to the 16th of june

971
00:33:56,549 --> 00:33:54,000
and we apparently move

972
00:33:57,669 --> 00:33:56,559
for the same two days to the right of

973
00:33:59,830 --> 00:33:57,679
the landing

974
00:34:01,990 --> 00:33:59,840
to provide for the same window

975
00:34:03,990 --> 00:34:02,000
therefore it's known for

976
00:34:07,029 --> 00:34:04,000
changes in the in the philosophy and the

977
00:34:10,230 --> 00:34:07,039
cut of crew is scheduled to

978
00:34:12,790 --> 00:34:10,240
get back to earth on the second of june

979
00:34:15,270 --> 00:34:12,800
and for

980
00:34:16,230 --> 00:34:15,280
for probability i believe bill will will

981
00:34:19,589 --> 00:34:16,240
add but

982
00:34:22,470 --> 00:34:19,599
for you see we planned for 15 years

983
00:34:24,310 --> 00:34:22,480
and it was on paper when we negotiated

984
00:34:26,230 --> 00:34:24,320
iga and mousse

985
00:34:28,470 --> 00:34:26,240
that was our desire to assemble space

986
00:34:30,790 --> 00:34:28,480
station within five years but many

987
00:34:32,310 --> 00:34:30,800
things provided a big impact on the

988
00:34:34,470 --> 00:34:32,320

development of the space station on

989
00:34:35,829 --> 00:34:34,480
orbit

990
00:34:37,589 --> 00:34:35,839
we do have

991
00:34:40,149 --> 00:34:37,599
there is a similarity what we used to

992
00:34:41,190 --> 00:34:40,159
have is mere space station well where we

993
00:34:43,829 --> 00:34:41,200
had

994
00:34:46,310 --> 00:34:43,839
old modules and pretty new ones spectre

995
00:34:48,869 --> 00:34:46,320
and piroda which were on orbit only for

996
00:34:52,790 --> 00:34:48,879
three years

997
00:34:53,990 --> 00:34:52,800
the same here we do have fresh modules

998
00:34:56,550 --> 00:34:54,000
european

999
00:34:58,390 --> 00:34:56,560
japanese

1000
00:35:00,470 --> 00:34:58,400
we do have old

1001
00:35:03,750 --> 00:35:00,480
and it's a challenge

1002
00:35:06,470 --> 00:35:03,760
to explore how we can stretch

1003
00:35:08,069 --> 00:35:06,480
but on a very solid ground of uh

1004
00:35:10,550 --> 00:35:08,079
justification

1005
00:35:12,550 --> 00:35:10,560
the service life on orbit and what is

1006
00:35:13,829 --> 00:35:12,560
necessary first of all the challenge is

1007
00:35:19,270 --> 00:35:13,839
structural

1008
00:35:21,990 --> 00:35:19,280
believe that the first modules could be

1009
00:35:25,829 --> 00:35:22,000
proved to be operable further on

1010
00:35:28,550 --> 00:35:25,839
2020 is very feasible feasible goal

1011
00:35:31,030 --> 00:35:28,560
for the amount of spares of course

1012
00:35:33,190 --> 00:35:31,040
that's a very right question to ask

1013
00:35:35,030 --> 00:35:33,200

and the we we will have a challenge in

1014
00:35:37,430 --> 00:35:35,040
absence of space shuttle

1015
00:35:39,270 --> 00:35:37,440
we do have the same opinion and so i

1016
00:35:42,630 --> 00:35:39,280
understand all of you

1017
00:35:44,630 --> 00:35:42,640
uh we wish space shuttle are flying and

1018
00:35:46,790 --> 00:35:44,640
flying on further on

1019
00:35:50,470 --> 00:35:46,800
let's see let's see

1020
00:35:52,950 --> 00:35:50,480
the same level of uh redundancy when we

1021
00:35:55,990 --> 00:35:52,960
all together decided that the

1022
00:35:58,790 --> 00:35:56,000
redundancy in the uh transportation mode

1023
00:36:00,710 --> 00:35:58,800
of the crew up to space station is

1024
00:36:03,750 --> 00:36:00,720
absolutely necessary

1025
00:36:06,550 --> 00:36:03,760
uh ground to achieve safety

1026
00:36:08,069 --> 00:36:06,560
and that that's why the for

1027
00:36:10,550 --> 00:36:08,079
the

1028
00:36:11,670 --> 00:36:10,560
it was a for space station freedom

1029
00:36:13,109 --> 00:36:11,680
redesigned redesign

1030
00:36:15,990 --> 00:36:13,119
launched for

1031
00:36:16,790 --> 00:36:16,000
one of the reasons that to rely on the

1032
00:36:20,390 --> 00:36:16,800
one

1033
00:36:21,589 --> 00:36:20,400
transportation system is really risky

1034
00:36:24,230 --> 00:36:21,599
and uh

1035
00:36:26,950 --> 00:36:24,240
colombia actually proved it

1036
00:36:28,550 --> 00:36:26,960
to be so and uh though we sustained

1037
00:36:29,910 --> 00:36:28,560
space station only because the

1038
00:36:31,829 --> 00:36:29,920

redundancy and the transportation

1039
00:36:34,710 --> 00:36:31,839
capabilities therefore it will be a

1040
00:36:35,910 --> 00:36:34,720
challenge for us first of all to uh to

1041
00:36:39,270 --> 00:36:35,920
provide these transportation

1042
00:36:42,470 --> 00:36:39,280
capabilities and logistics

1043
00:36:45,430 --> 00:36:42,480
is uh our european colleagues up uh they

1044
00:36:46,870 --> 00:36:45,440
do have their own limitations to provide

1045
00:36:48,870 --> 00:36:46,880
uh for

1046
00:36:49,670 --> 00:36:48,880
uh

1047
00:36:56,790 --> 00:36:49,680
the

1048
00:36:57,589 --> 00:36:56,800
htv is also pretty expensive vehicle as

1049
00:37:00,310 --> 00:36:57,599
well

1050
00:37:01,510 --> 00:37:00,320
and we will be eager to see commercial

1051
00:37:04,630 --> 00:37:01,520
success

1052
00:37:06,470 --> 00:37:04,640
on on u.s soil which which is being

1053
00:37:08,870 --> 00:37:06,480
launched that's

1054
00:37:10,630 --> 00:37:08,880
that's many many components which will

1055
00:37:13,589 --> 00:37:10,640
improve

1056
00:37:15,670 --> 00:37:13,599
could provide an impact on our success

1057
00:37:17,670 --> 00:37:15,680
thank you and we've done a very detailed

1058
00:37:19,670 --> 00:37:17,680
analysis in terms of logistics spares

1059
00:37:21,190 --> 00:37:19,680
and what equipment we need and and i

1060
00:37:23,829 --> 00:37:21,200
think we're good all the way through the

1061
00:37:25,829 --> 00:37:23,839
2020 time frame the big challenge will

1062
00:37:28,150 --> 00:37:25,839
be we really want to increase the

1063
00:37:30,310 --> 00:37:28,160

research and utilization so the the big

1064
00:37:31,829 --> 00:37:30,320
advantage of a longer planning horizon

1065
00:37:33,349 --> 00:37:31,839
is now we let researchers know that

1066
00:37:34,790 --> 00:37:33,359
we're going to be in operation for an

1067
00:37:36,550 --> 00:37:34,800
extended period of time what kind of

1068
00:37:38,310 --> 00:37:36,560
research could be done what should be

1069
00:37:39,829 --> 00:37:38,320
done with station can we start

1070
00:37:41,430 --> 00:37:39,839
developing some of that research so we

1071
00:37:43,589 --> 00:37:41,440
can get it up and actually get a good

1072
00:37:45,589 --> 00:37:43,599
return on investment some from research

1073
00:37:48,550 --> 00:37:45,599
so i think the basic

1074
00:37:50,870 --> 00:37:48,560
facility keeping things operational is

1075
00:37:52,550 --> 00:37:50,880
working well we're seeing fairly low

1076
00:37:53,910 --> 00:37:52,560
failure rates so far actually better

1077
00:37:55,829 --> 00:37:53,920
than some of our predictions so that's

1078
00:37:58,069 --> 00:37:55,839
very encouraging to us but the challenge

1079
00:37:59,829 --> 00:37:58,079
is going to be can we get a very robust

1080
00:38:01,349 --> 00:37:59,839
research plan in place that we can make

1081
00:38:02,310 --> 00:38:01,359
sure we get the right samples up to

1082
00:38:03,990 --> 00:38:02,320
station

1083
00:38:05,910 --> 00:38:04,000
return some things we have a little bit

1084
00:38:08,150 --> 00:38:05,920
of limited return for a while until

1085
00:38:09,270 --> 00:38:08,160
space spacex comes online but then once

1086
00:38:11,270 --> 00:38:09,280
they're online then we can return

1087
00:38:12,870 --> 00:38:11,280
samples but we need to really do some

1088
00:38:14,230 --> 00:38:12,880

thought and really get planning on the

1089
00:38:17,349 --> 00:38:14,240
research side and we're starting to make

1090
00:38:19,030 --> 00:38:17,359
real big strides in that area right now

1091
00:38:21,270 --> 00:38:19,040
stefano

1092
00:38:22,950 --> 00:38:21,280
uh stephanie coladan with italian state

1093
00:38:23,990 --> 00:38:22,960
radio and television news

1094
00:38:26,390 --> 00:38:24,000
um

1095
00:38:29,270 --> 00:38:26,400
you i have a question either for mike

1096
00:38:30,550 --> 00:38:29,280
moses or mike lambert

1097
00:38:32,790 --> 00:38:30,560
for the over the

1098
00:38:34,870 --> 00:38:32,800
past year year and a half you have been

1099
00:38:36,710 --> 00:38:34,880
launching shuttles with the punctuality

1100
00:38:38,310 --> 00:38:36,720
of swiss trains

1101
00:38:39,750 --> 00:38:38,320
i mean it's just

1102
00:38:42,230 --> 00:38:39,760
almost amazing

1103
00:38:43,270 --> 00:38:42,240
and i was wondering what you attribute

1104
00:38:44,470 --> 00:38:43,280
that to

1105
00:38:46,710 --> 00:38:44,480
and

1106
00:38:48,710 --> 00:38:46,720
talking of amazement aren't you a little

1107
00:38:51,430 --> 00:38:48,720
bit amazed of

1108
00:38:55,190 --> 00:38:51,440
your own accomplishment i mean

1109
00:38:58,390 --> 00:38:57,109
i mean it used to be

1110
00:39:00,790 --> 00:38:58,400
i'll go first it's very difficult to

1111
00:39:02,790 --> 00:39:00,800
launch shuttles uh some time ago and now

1112
00:39:05,750 --> 00:39:02,800
they go up like as i said go up like

1113
00:39:07,430 --> 00:39:05,760

clockwork doesn't it yeah now uh

1114
00:39:09,589 --> 00:39:07,440
i attribute it to two things one the

1115
00:39:11,910 --> 00:39:09,599
maturity of the hardware we understand

1116
00:39:13,589 --> 00:39:11,920
the hardware extremely well now we've

1117
00:39:15,910 --> 00:39:13,599
seen most problems before and we're able

1118
00:39:17,349 --> 00:39:15,920
to react to them if we get them

1119
00:39:18,870 --> 00:39:17,359
and then the maturity of the team

1120
00:39:20,710 --> 00:39:18,880
processing team and the launch team and

1121
00:39:23,109 --> 00:39:20,720
the flight teams who react to those

1122
00:39:25,430 --> 00:39:23,119
problems and get them resolved very very

1123
00:39:28,630 --> 00:39:25,440
quickly so it's a testament to uh to the

1124
00:39:30,150 --> 00:39:28,640
teams it's also you know indicative of a

1125
00:39:30,870 --> 00:39:30,160
program that's been around a while uh

1126
00:39:33,910 --> 00:39:30,880
you

1127
00:39:35,270 --> 00:39:33,920
to encounter problems for the first time

1128
00:39:37,670 --> 00:39:35,280
they're typically going to take longer

1129
00:39:39,270 --> 00:39:37,680
to solve i think any any new space

1130
00:39:40,710 --> 00:39:39,280
flight program will encounter those

1131
00:39:42,790 --> 00:39:40,720
types of problems

1132
00:39:45,510 --> 00:39:42,800
talk to the spacex launch director today

1133
00:39:46,630 --> 00:39:45,520
at length had lunch with him and uh we

1134
00:39:47,829 --> 00:39:46,640
we talked about a lot of different

1135
00:39:49,109 --> 00:39:47,839
things and that was one of the things we

1136
00:39:50,550 --> 00:39:49,119
talked about you

1137
00:39:52,390 --> 00:39:50,560
he's going to see problems for the first

1138
00:39:53,829 --> 00:39:52,400

time and they will react to him they'll

1139
00:39:55,190 --> 00:39:53,839
solve those problems and then and then

1140
00:39:56,470 --> 00:39:55,200
they'll have that in their goody book

1141
00:39:57,270 --> 00:39:56,480
they'll be able to solve that same

1142
00:39:59,670 --> 00:39:57,280
problem

1143
00:40:02,069 --> 00:39:59,680
easier the second time if they get it

1144
00:40:03,910 --> 00:40:02,079
it's it's a nature of the business and

1145
00:40:06,150 --> 00:40:03,920
a mature vehicle mature team are going

1146
00:40:07,670 --> 00:40:06,160
to perform better than better than a

1147
00:40:09,349 --> 00:40:07,680
first-time team i mean it's just as

1148
00:40:11,750 --> 00:40:09,359
simple as that

1149
00:40:13,510 --> 00:40:11,760
does it amaze me it amazes me every time

1150
00:40:16,790 --> 00:40:13,520
we launch the space shuttle

1151
00:40:19,109 --> 00:40:16,800
it is it is an engineering marvel

1152
00:40:21,829 --> 00:40:19,119
and people that work on it are are the

1153
00:40:25,589 --> 00:40:21,839
best in the world so yes it amazes me

1154
00:40:29,589 --> 00:40:27,910
always caution the team is that

1155
00:40:31,589 --> 00:40:29,599
you know we're like a

1156
00:40:33,270 --> 00:40:31,599
pro athlete that's performing at the top

1157
00:40:35,430 --> 00:40:33,280
of their game and it's not easy to stay

1158
00:40:37,109 --> 00:40:35,440
at the top of your game so i keep

1159
00:40:39,430 --> 00:40:37,119
challenging the team to keep looking for

1160
00:40:41,030 --> 00:40:39,440
other ways to to not take for granted

1161
00:40:42,710 --> 00:40:41,040
what's happening because it really does

1162
00:40:44,150 --> 00:40:42,720
take work it takes this tremendous team

1163
00:40:46,150 --> 00:40:44,160

that mike talked about i mean without

1164
00:40:47,670 --> 00:40:46,160
these guys really looking and

1165
00:40:49,270 --> 00:40:47,680
questioning things as their dissemble

1166
00:40:51,670 --> 00:40:49,280
and hardware even though they've done it

1167
00:40:53,829 --> 00:40:51,680
several times they still got to be keep

1168
00:40:55,190 --> 00:40:53,839
looking is this exactly the same way is

1169
00:40:57,430 --> 00:40:55,200
there something else we ought to ask so

1170
00:40:59,589 --> 00:40:57,440
i keep asking the teams to just really

1171
00:41:00,950 --> 00:40:59,599
stay focused and don't get complacent in

1172
00:41:02,950 --> 00:41:00,960
what we're doing because this is not

1173
00:41:05,270 --> 00:41:02,960
easy in any stretch of the imagination

1174
00:41:06,950 --> 00:41:05,280
and we can get in trouble when we start

1175
00:41:08,790 --> 00:41:06,960
taking for granted what we're doing and

1176
00:41:10,550 --> 00:41:08,800
it is not easy it's a it's a true

1177
00:41:12,790 --> 00:41:10,560
tribute to the team and i want this team

1178
00:41:14,069 --> 00:41:12,800
to stay encouraged to stay focused and

1179
00:41:16,230 --> 00:41:14,079
keep doing all the awesome work that

1180
00:41:18,550 --> 00:41:16,240
they've been doing

1181
00:41:19,670 --> 00:41:18,560
uh pete tribuco and astra magazine sorry

1182
00:41:21,990 --> 00:41:19,680
about that

1183
00:41:23,990 --> 00:41:22,000
real quick question with the addition of

1184
00:41:25,030 --> 00:41:24,000
this this last flight or next flight in

1185
00:41:26,710 --> 00:41:25,040
june

1186
00:41:28,550 --> 00:41:26,720
i'm sure there are four additional

1187
00:41:30,630 --> 00:41:28,560
astronauts and crew members who are very

1188
00:41:32,390 --> 00:41:30,640

happy about that is this in any way

1189
00:41:34,550 --> 00:41:32,400
shape or form going to affect the crew

1190
00:41:36,390 --> 00:41:34,560
rotation that might be set up or might

1191
00:41:37,750 --> 00:41:36,400
not be set up obviously you're going to

1192
00:41:39,349 --> 00:41:37,760
need different people doing different

1193
00:41:41,030 --> 00:41:39,359
things and obviously you want to have

1194
00:41:42,710 --> 00:41:41,040
the most experienced eva people out

1195
00:41:45,670 --> 00:41:42,720
there and is this going to in any way

1196
00:41:47,670 --> 00:41:45,680
affect that rotation if that's already

1197
00:41:49,589 --> 00:41:47,680
been taken care of i think it's too

1198
00:41:51,430 --> 00:41:49,599
early to tell you know we haven't even

1199
00:41:53,750 --> 00:41:51,440
been told to go do this flight so we're

1200
00:41:55,430 --> 00:41:53,760
all sitting here speculating right so we

1201
00:41:57,750 --> 00:41:55,440
could very well only do the two

1202
00:41:59,270 --> 00:41:57,760
remaining flights and then the plans

1203
00:42:01,109 --> 00:41:59,280
that we've got in place are pretty solid

1204
00:42:03,190 --> 00:42:01,119
i don't think there'll be a big change

1205
00:42:04,550 --> 00:42:03,200
but if we get asked we'll take a look at

1206
00:42:06,230 --> 00:42:04,560
it we'll make sure we do the right thing

1207
00:42:07,190 --> 00:42:06,240
overall

1208
00:42:09,910 --> 00:42:07,200
jay

1209
00:42:12,309 --> 00:42:09,920
bill a quick follow-up

1210
00:42:14,710 --> 00:42:12,319
you're using a term june are you using

1211
00:42:17,109 --> 00:42:14,720
june coming up to know if you're going

1212
00:42:19,510 --> 00:42:17,119
to fly the extra mission or are you

1213
00:42:22,790 --> 00:42:19,520

talking about flying the extra mission

1214
00:42:26,630 --> 00:42:22,800
in next june june of 2011. and also for

1215
00:42:28,870 --> 00:42:26,640
mr krasnoff uh your agency reported this

1216
00:42:30,790 --> 00:42:28,880
morning that in an elliptical orbit you

1217
00:42:32,630 --> 00:42:30,800
have a piece of debris that's headed

1218
00:42:34,470 --> 00:42:32,640
toward the space station

1219
00:42:37,670 --> 00:42:34,480
and arrive about

1220
00:42:40,470 --> 00:42:37,680
11 30 sunday morning can you tell us any

1221
00:42:42,230 --> 00:42:40,480
more about that if it's a real threat

1222
00:42:43,030 --> 00:42:42,240
or what's the latest that we know about

1223
00:42:49,430 --> 00:42:43,040
it

1224
00:42:51,510 --> 00:42:49,440
to know whether we're going to do the

1225
00:42:54,230 --> 00:42:51,520
mission and then ideally we would like

1226
00:42:57,510 --> 00:42:54,240
to fly the mission in june 2011. so did

1227
00:42:59,670 --> 00:42:57,520
i say i said 2010 2010 we need to decide

1228
00:43:01,430 --> 00:42:59,680
2011 is when we would fly the mission so

1229
00:43:03,270 --> 00:43:01,440
about a year apart but it's june and

1230
00:43:05,990 --> 00:43:03,280
june and in terms of the other thing we

1231
00:43:07,910 --> 00:43:06,000
are tracking a piece of debris

1232
00:43:09,990 --> 00:43:07,920
we've alerted the teams to go do a

1233
00:43:12,150 --> 00:43:10,000
maneuver they've calculated three or

1234
00:43:13,750 --> 00:43:12,160
four different maneuvers we could go do

1235
00:43:15,510 --> 00:43:13,760
it's a little unique with the shuttle

1236
00:43:17,190 --> 00:43:15,520
going up to rendezvous we need to be

1237
00:43:18,470 --> 00:43:17,200
very careful what kind of maneuver we do

1238
00:43:20,069 --> 00:43:18,480

they've looked at it i think the

1239
00:43:21,510 --> 00:43:20,079
maneuver would be on sunday if we

1240
00:43:23,589 --> 00:43:21,520
determine we need to go do it but

1241
00:43:25,349 --> 00:43:23,599
they'll continue to track the object for

1242
00:43:26,950 --> 00:43:25,359
several days get a good understanding of

1243
00:43:28,870 --> 00:43:26,960
where the object is and if they need to

1244
00:43:32,710 --> 00:43:28,880
make an adjustment in the station they

1245
00:43:35,270 --> 00:43:34,309
bill here you're the joy fm radio in

1246
00:43:36,870 --> 00:43:35,280
florida

1247
00:43:39,430 --> 00:43:36,880
uh this week i've spent the last two

1248
00:43:41,750 --> 00:43:39,440
days with 150 participants here invited

1249
00:43:43,349 --> 00:43:41,760
by nasa for a nasa tweet up

1250
00:43:44,230 --> 00:43:43,359
and it seems like the attitude they have

1251
00:43:45,910 --> 00:43:44,240
is that they're they're kind of

1252
00:43:47,430 --> 00:43:45,920
discouraged that we're towards the end

1253
00:43:49,349 --> 00:43:47,440
of the manned space flight how can we

1254
00:43:50,630 --> 00:43:49,359
encourage those educators and mothers

1255
00:43:52,790 --> 00:43:50,640
and fathers that are there in the tweet

1256
00:43:54,309 --> 00:43:52,800
up this week that there is a future in

1257
00:43:55,910 --> 00:43:54,319
space

1258
00:43:57,829 --> 00:43:55,920
well again i think there's a there's a

1259
00:43:59,910 --> 00:43:57,839
big future in space and it's really the

1260
00:44:01,349 --> 00:43:59,920
space station and when you take a look

1261
00:44:02,790 --> 00:44:01,359
at the station and the international

1262
00:44:04,630 --> 00:44:02,800
partners and the involvement and the

1263
00:44:06,870 --> 00:44:04,640

activities we're going to be doing from

1264
00:44:08,309 --> 00:44:06,880
station that's a pretty bright future

1265
00:44:09,910 --> 00:44:08,319
for us so we need to look forward to

1266
00:44:11,270 --> 00:44:09,920
that we don't have some of the details

1267
00:44:13,349 --> 00:44:11,280
figured out yet but we'll get those

1268
00:44:14,870 --> 00:44:13,359
plans together it's definitely going to

1269
00:44:17,910 --> 00:44:14,880
the future will involve international

1270
00:44:20,390 --> 00:44:17,920
partnerships as alexi talked about if we

1271
00:44:22,230 --> 00:44:20,400
can use station to build some potential

1272
00:44:24,390 --> 00:44:22,240
spacecraft to go different places we can

1273
00:44:26,069 --> 00:44:24,400
look at that internationally there's a

1274
00:44:27,829 --> 00:44:26,079
pretty bright future for all that stuff

1275
00:44:29,349 --> 00:44:27,839
and if you go look at the research the

1276
00:44:31,990 --> 00:44:29,359
kind of activities we're doing on

1277
00:44:34,390 --> 00:44:32,000
station it's not as glamorous as a

1278
00:44:36,630 --> 00:44:34,400
launch but some of the research has real

1279
00:44:38,230 --> 00:44:36,640
applications to what's going on here at

1280
00:44:40,309 --> 00:44:38,240
earth we know we have a hyper

1281
00:44:42,710 --> 00:44:40,319
spectrometer on station that's actually

1282
00:44:44,950 --> 00:44:42,720
imaging some of the oil spill activities

1283
00:44:46,230 --> 00:44:44,960
that the crews are making some some big

1284
00:44:48,390 --> 00:44:46,240
strides and

1285
00:44:50,630 --> 00:44:48,400
some plant research looking at potential

1286
00:44:53,109 --> 00:44:50,640
jutropia to go look at new aviation

1287
00:44:55,430 --> 00:44:53,119
fuels to see if we can find maybe a

1288
00:44:57,190 --> 00:44:55,440

genetically modified or changed plant

1289
00:44:58,790 --> 00:44:57,200
from from the exposure to space that

1290
00:45:00,790 --> 00:44:58,800
might actually improve the production or

1291
00:45:02,230 --> 00:45:00,800
the amount of biofuel we get so if you

1292
00:45:03,910 --> 00:45:02,240
take a look at all the things we're

1293
00:45:05,670 --> 00:45:03,920
doing on station the things we're doing

1294
00:45:08,390 --> 00:45:05,680
internationally the way we're looking to

1295
00:45:10,790 --> 00:45:08,400
go forward to get beyond low earth orbit

1296
00:45:12,470 --> 00:45:10,800
this is a pretty promising time so so

1297
00:45:14,309 --> 00:45:12,480
these missions are special the launches

1298
00:45:16,150 --> 00:45:14,319
are there we're in a transition phase

1299
00:45:18,150 --> 00:45:16,160
it's our job now to catch that next

1300
00:45:19,990 --> 00:45:18,160
vision to get excited about it to push

1301
00:45:21,670 --> 00:45:20,000
forward and to go do those exciting and

1302
00:45:23,109 --> 00:45:21,680
bold things in exploration that we

1303
00:45:24,710 --> 00:45:23,119
really want to go do so that's the

1304
00:45:26,630 --> 00:45:24,720
message that we've got to carry out

1305
00:45:28,150 --> 00:45:26,640
don't focus on what we're losing but

1306
00:45:30,550 --> 00:45:28,160
focus on what we're going to be gaining

1307
00:45:32,069 --> 00:45:30,560
and the way we're moving forward

1308
00:45:33,510 --> 00:45:32,079
all right we'll take four more questions

1309
00:45:34,710 --> 00:45:33,520
we have two on this side of the room and

1310
00:45:37,030 --> 00:45:34,720
two on this side of the room and then

1311
00:45:40,150 --> 00:45:37,040
we'll call it a day go ahead

1312
00:45:41,990 --> 00:45:40,160
brent houston with the tacoma boyce in

1313
00:45:44,550 --> 00:45:42,000

takoma park maryland

1314
00:45:47,109 --> 00:45:44,560
i as i recall that the mir space station

1315
00:45:49,349 --> 00:45:47,119
was up in orbit for quite a long time

1316
00:45:52,950 --> 00:45:49,359
doing research and it's been quite a

1317
00:45:55,589 --> 00:45:52,960
long venture here in getting the iss

1318
00:45:57,510 --> 00:45:55,599
and now as it's almost completed and

1319
00:45:58,470 --> 00:45:57,520
then to go just 10 more years and it's

1320
00:45:59,589 --> 00:45:58,480
done

1321
00:46:02,950 --> 00:45:59,599
then you're not going to have any

1322
00:46:04,309 --> 00:46:02,960
on-orbit uh space station it's a lot of

1323
00:46:06,870 --> 00:46:04,319
work and the mirror was up there for

1324
00:46:08,230 --> 00:46:06,880
such a long time why is it that it's

1325
00:46:09,190 --> 00:46:08,240
just going to be 10 years and that's all

1326
00:46:11,750 --> 00:46:09,200
you can

1327
00:46:13,589 --> 00:46:11,760
manage return on investment so to speak

1328
00:46:16,230 --> 00:46:13,599
and and kind of the way we've laid it

1329
00:46:18,230 --> 00:46:16,240
out is we've we've looked at it planning

1330
00:46:20,230 --> 00:46:18,240
to go to 2020 but then we're looking to

1331
00:46:23,430 --> 00:46:20,240
see if we can go structurally eight

1332
00:46:24,950 --> 00:46:23,440
years more beyond that to 2028. so what

1333
00:46:27,030 --> 00:46:24,960
we're trying to do is we've got this

1334
00:46:29,190 --> 00:46:27,040
period of time to actually go prove that

1335
00:46:30,950 --> 00:46:29,200
we can get research use the laboratory

1336
00:46:32,390 --> 00:46:30,960
space we have on orbit use the new

1337
00:46:34,390 --> 00:46:32,400
facilities that like the russians have

1338
00:46:35,349 --> 00:46:34,400

brought up and the mrm module on this

1339
00:46:37,030 --> 00:46:35,359
flight

1340
00:46:38,550 --> 00:46:37,040
see what challenge our researchers and

1341
00:46:40,390 --> 00:46:38,560
technologists to see what we can

1342
00:46:41,910 --> 00:46:40,400
actually do in low earth orbit and then

1343
00:46:44,390 --> 00:46:41,920
kind of base our next decision to

1344
00:46:45,990 --> 00:46:44,400
continue beyond that 2020 time frame on

1345
00:46:48,069 --> 00:46:46,000
what kind of research and what kind of

1346
00:46:50,150 --> 00:46:48,079
results we can get back from station so

1347
00:46:51,829 --> 00:46:50,160
i look at this as a kind of a period for

1348
00:46:53,589 --> 00:46:51,839
us to to prove what we can actually do

1349
00:46:55,829 --> 00:46:53,599
in low earth orbit how can be beneficial

1350
00:46:58,470 --> 00:46:55,839
to us help us with engineering we've not

1351
00:47:00,470 --> 00:46:58,480
had a facility of this magnitude with

1352
00:47:02,150 --> 00:47:00,480
the power capability the data capability

1353
00:47:04,230 --> 00:47:02,160
the international involvement

1354
00:47:06,790 --> 00:47:04,240
so far that we can we can see so that's

1355
00:47:08,309 --> 00:47:06,800
that's kind of the overall plan

1356
00:47:10,390 --> 00:47:08,319
i will add that

1357
00:47:11,990 --> 00:47:10,400
the question is absolutely correct

1358
00:47:15,270 --> 00:47:12,000
the

1359
00:47:18,790 --> 00:47:15,280
example with uh space stations is

1360
00:47:20,150 --> 00:47:18,800
is very pictures of the mir spec station

1361
00:47:23,030 --> 00:47:20,160
was

1362
00:47:24,470 --> 00:47:23,040
developed for five year operational

1363
00:47:27,510 --> 00:47:24,480

lifespan

1364
00:47:29,750 --> 00:47:27,520
of orbit and it flew 15 years

1365
00:47:32,470 --> 00:47:29,760
three times more than

1366
00:47:35,910 --> 00:47:32,480
originally designed

1367
00:47:38,309 --> 00:47:35,920
and we designed space station iss

1368
00:47:41,990 --> 00:47:38,319
for 15-year well i spend

1369
00:47:46,069 --> 00:47:44,230
what we are thinking about is potential

1370
00:47:49,270 --> 00:47:46,079
continuation up to

1371
00:47:53,510 --> 00:47:49,280
20 or 30 even years

1372
00:47:56,470 --> 00:47:53,520
up to 2028 it will uh it will be 30-year

1373
00:47:57,910 --> 00:47:56,480
operational uh for a lifetime

1374
00:47:59,910 --> 00:47:57,920
whether we will

1375
00:48:01,510 --> 00:47:59,920
make it that's a challenge and that's

1376
00:48:03,829 --> 00:48:01,520
ritual investment which you are talking

1377
00:48:06,710 --> 00:48:03,839
about it's absolutely correct it's a

1378
00:48:09,750 --> 00:48:06,720
lengthy and difficult process

1379
00:48:10,790 --> 00:48:09,760
to assemble such a structure of touchier

1380
00:48:12,950 --> 00:48:10,800
for

1381
00:48:14,230 --> 00:48:12,960
size and capabilities it's very

1382
00:48:17,270 --> 00:48:14,240
expensive

1383
00:48:18,069 --> 00:48:17,280
and to use it up to the

1384
00:48:19,190 --> 00:48:18,079
uh

1385
00:48:21,270 --> 00:48:19,200
level

1386
00:48:24,710 --> 00:48:21,280
uh and capacity

1387
00:48:26,950 --> 00:48:24,720
until it is safe and proven to be uh

1388
00:48:29,190 --> 00:48:26,960

operable that that is a goal i believe

1389
00:48:32,309 --> 00:48:29,200
and we will pursue this goal and we have

1390
00:48:34,470 --> 00:48:32,319
a uh the unanimous understanding of all

1391
00:48:37,030 --> 00:48:34,480
partners on on this point

1392
00:48:41,910 --> 00:48:39,270
peter railwood southern fm in australia

1393
00:48:44,150 --> 00:48:41,920
a question for mr gerstenmaier given the

1394
00:48:45,670 --> 00:48:44,160
unclear nature of the types of vehicles

1395
00:48:47,510 --> 00:48:45,680
that may be coming up to the

1396
00:48:49,349 --> 00:48:47,520
international space station

1397
00:48:50,950 --> 00:48:49,359
up until the year 2020

1398
00:48:52,710 --> 00:48:50,960
and the fact that when the shuttle

1399
00:48:54,710 --> 00:48:52,720
finishes flying you'll lose that very

1400
00:48:57,670 --> 00:48:54,720
large payload capacity is it

1401
00:48:59,349 --> 00:48:57,680
consideration of leaving large

1402
00:49:01,670 --> 00:48:59,359
items that go up on the shuttle anyway

1403
00:49:04,069 --> 00:49:01,680
like the orbital blue sensor system

1404
00:49:06,470 --> 00:49:04,079
leaving that one of those up on the on

1405
00:49:08,710 --> 00:49:06,480
the space station for perhaps use for

1406
00:49:09,750 --> 00:49:08,720
access and inspection later on yep and

1407
00:49:11,589 --> 00:49:09,760
we're going to do that you're going to

1408
00:49:13,190 --> 00:49:11,599
see on one of the upcoming flights i

1409
00:49:15,270 --> 00:49:13,200
don't remember which one exactly but the

1410
00:49:17,430 --> 00:49:15,280
boom gets left on orbit we actually

1411
00:49:19,190 --> 00:49:17,440
modified some area out on the outside of

1412
00:49:21,510 --> 00:49:19,200
station to actually attach it to the

1413
00:49:23,589 --> 00:49:21,520

outside so the boom will get left we've

1414
00:49:24,870 --> 00:49:23,599
deployed control moment gyros all ready

1415
00:49:26,950 --> 00:49:24,880
to station they're sitting out on

1416
00:49:28,549 --> 00:49:26,960
pallets already stored

1417
00:49:30,309 --> 00:49:28,559
so we've done exactly what you said

1418
00:49:32,309 --> 00:49:30,319
we've taken all the unique items that

1419
00:49:35,510 --> 00:49:32,319
could truly fly on the shuttle even as

1420
00:49:37,829 --> 00:49:35,520
alexis said the european robotic arm it

1421
00:49:39,349 --> 00:49:37,839
it's attached to the mrm module

1422
00:49:41,270 --> 00:49:39,359
specifically because it can fit in the

1423
00:49:43,430 --> 00:49:41,280
shuttle bay and we use that so we are

1424
00:49:45,270 --> 00:49:43,440
truly using the unique capability of the

1425
00:49:46,950 --> 00:49:45,280
shuttle to position all those unique

1426
00:49:49,190 --> 00:49:46,960
items on station so we're prepared for a

1427
00:49:50,790 --> 00:49:49,200
long lifetime

1428
00:49:52,790 --> 00:49:50,800
chris uh chris gaberhardt again with

1429
00:49:55,349 --> 00:49:52,800
nasa spaceflight.com um

1430
00:49:56,790 --> 00:49:55,359
in question regarding the possible

1431
00:49:58,390 --> 00:49:56,800
debris avoidance maneuver the station

1432
00:49:59,589 --> 00:49:58,400
might have to do if you do find

1433
00:50:01,349 --> 00:49:59,599
yourselves in a situation where that has

1434
00:50:04,549 --> 00:50:01,359
to be done i assume it would be before

1435
00:50:06,549 --> 00:50:04,559
atlantis arrives on sunday and and if so

1436
00:50:07,910 --> 00:50:06,559
um is there a corresponding burn

1437
00:50:09,910 --> 00:50:07,920
atlantis would have to do to sort of

1438
00:50:13,030 --> 00:50:09,920

keep in plane with the station or a

1439
00:50:15,750 --> 00:50:13,040
tweak to the nc or ti burns or would she

1440
00:50:18,150 --> 00:50:15,760
or would the burn on the station just

1441
00:50:20,549 --> 00:50:18,160
keep atlantis on course no problem we'll

1442
00:50:22,069 --> 00:50:20,559
we'll do the burn on the station to

1443
00:50:23,990 --> 00:50:22,079
avoid the debris

1444
00:50:26,630 --> 00:50:24,000
and then we you know we calculate the

1445
00:50:28,710 --> 00:50:26,640
actual trajectory for the burns the the

1446
00:50:30,710 --> 00:50:28,720
burns on shuttle and those will get

1447
00:50:32,950 --> 00:50:30,720
calculated based on a new position of

1448
00:50:34,309 --> 00:50:32,960
where station got moved to so they will

1449
00:50:36,390 --> 00:50:34,319
change from where they are planned now

1450
00:50:38,230 --> 00:50:36,400
they typically change anyway as we get

1451
00:50:40,309 --> 00:50:38,240
tracking data we see where the station's

1452
00:50:41,990 --> 00:50:40,319
going we see how the shuttle's doing so

1453
00:50:43,589 --> 00:50:42,000
we'll tweak those up as we go in so

1454
00:50:45,510 --> 00:50:43,599
it'll be just kind of almost standard

1455
00:50:47,270 --> 00:50:45,520
ops but we'll make sure that where we

1456
00:50:49,430 --> 00:50:47,280
move station isn't so far that it can't

1457
00:50:52,069 --> 00:50:49,440
be compensated by the shuttle rendezvous

1458
00:50:54,230 --> 00:50:52,079
capability so we'll we'll maneuver just

1459
00:50:55,829 --> 00:50:54,240
enough to avoid the debris but still be

1460
00:50:58,470 --> 00:50:55,839
in a good posture that the burns can be

1461
00:50:59,349 --> 00:50:58,480
accommodated easily with the shuttle

1462
00:51:03,349 --> 00:50:59,359
jim

1463
00:51:05,990 --> 00:51:03,359

independent newspaper i was particularly

1464
00:51:08,790 --> 00:51:06,000
interested in the plans that alexi

1465
00:51:11,910 --> 00:51:08,800
described for some of the russian

1466
00:51:13,190 --> 00:51:11,920
activities through 2020 and beyond

1467
00:51:14,870 --> 00:51:13,200
going beyond

1468
00:51:16,309 --> 00:51:14,880
low earth orbit and so on and i wondered

1469
00:51:19,270 --> 00:51:16,319
to what extent

1470
00:51:21,510 --> 00:51:19,280
those plans are coordinated

1471
00:51:23,829 --> 00:51:21,520
with the united states or with nasa as

1472
00:51:25,589 --> 00:51:23,839
opposed to being

1473
00:51:30,069 --> 00:51:25,599
rushed pretty much russian plans and

1474
00:51:30,079 --> 00:51:34,470
it's an easy and difficult question

1475
00:51:40,150 --> 00:51:37,349
they're easy because uh for

1476
00:51:41,430 --> 00:51:40,160
certainly each each nation uh for which

1477
00:51:43,270 --> 00:51:41,440
he has uh

1478
00:51:44,390 --> 00:51:43,280
its own space program

1479
00:51:45,670 --> 00:51:44,400
uh

1480
00:51:47,990 --> 00:51:45,680
he is

1481
00:51:49,670 --> 00:51:48,000
determining the way to pursue space

1482
00:51:51,750 --> 00:51:49,680
exploration

1483
00:51:53,750 --> 00:51:51,760
how much international it could be

1484
00:51:57,750 --> 00:51:53,760
that's a good question and uh

1485
00:51:59,030 --> 00:51:57,760
what is this successor for iss

1486
00:52:00,710 --> 00:51:59,040
scale

1487
00:52:03,109 --> 00:52:00,720
project could be

1488
00:52:04,710 --> 00:52:03,119

uh we don't know and i believe it will

1489
00:52:05,910 --> 00:52:04,720
be an agenda for

1490
00:52:09,030 --> 00:52:05,920
for for

1491
00:52:11,190 --> 00:52:09,040
at least a partnership of the iss

1492
00:52:14,390 --> 00:52:11,200
to consider

1493
00:52:16,790 --> 00:52:14,400
because iss provided a very good lessons

1494
00:52:18,470 --> 00:52:16,800
learned uh for from the operational

1495
00:52:20,150 --> 00:52:18,480
standpoint from the

1496
00:52:22,069 --> 00:52:20,160
technical standpoint and technology

1497
00:52:23,190 --> 00:52:22,079
standpoint

1498
00:52:29,910 --> 00:52:23,200
we

1499
00:52:33,670 --> 00:52:29,920
right to

1500
00:52:35,990 --> 00:52:33,680
be in our plans for human space flight

1501
00:52:37,430 --> 00:52:36,000
i cannot speak for my colleagues who as

1502
00:52:51,430 --> 00:52:37,440
a

1503
00:52:55,589 --> 00:52:53,430
perspective

1504
00:52:58,150 --> 00:52:55,599
the budgetary

1505
00:52:59,990 --> 00:52:58,160
things which will influence such

1506
00:53:04,150 --> 00:53:00,000
initiatives

1507
00:53:05,109 --> 00:53:04,160
and how to combine those goals

1508
00:53:06,790 --> 00:53:05,119
let's see

1509
00:53:08,950 --> 00:53:06,800
it's a it's a very interesting question

1510
00:53:10,870 --> 00:53:08,960
which you raised and uh for

1511
00:53:13,030 --> 00:53:10,880
i do understand that some of those

1512
00:53:15,109 --> 00:53:13,040
issues will be discussed uh

1513
00:53:16,390 --> 00:53:15,119

within the

1514
00:53:18,309 --> 00:53:16,400
this year

1515
00:53:20,549 --> 00:53:18,319
space agency forum

1516
00:53:24,069 --> 00:53:20,559
which is being planned for

1517
00:53:27,109 --> 00:53:24,079
washington in in november

1518
00:53:32,309 --> 00:53:27,119
under the u.n umbrella

1519
00:53:38,150 --> 00:53:35,910
absorb what would be said from our

1520
00:53:40,829 --> 00:53:38,160
colleagues from different nations

1521
00:53:44,230 --> 00:53:40,839
on this on this point thank

1522
00:53:45,349 --> 00:53:44,240
you okay with that we're going to

1523
00:53:46,950 --> 00:53:45,359
wrap it up

1524
00:53:48,710 --> 00:53:46,960
i wanted to pass on to you that we have

1525
00:53:51,270 --> 00:53:48,720
a slight modification to the mission

1526
00:53:54,230 --> 00:53:51,280
landing time the sts-132

1527
00:53:57,270 --> 00:53:54,240
mission now will land at 8 46 a.m

1528
00:53:58,950 --> 00:53:57,280
eastern time on may 26th and that change

1529
00:54:00,870 --> 00:53:58,960
and any others will be reflected in the

1530
00:54:01,910 --> 00:54:00,880
nasa tv schedule which you can always

1531
00:54:05,349 --> 00:54:01,920
find

1532
00:54:08,309 --> 00:54:06,870
shuttle tv

1533
00:54:09,910 --> 00:54:08,319
and of course you can keep up with all

1534
00:54:12,230 --> 00:54:09,920
the activities on our website at

1535
00:54:13,190 --> 00:54:12,240
www.nasa.gov

1536
00:54:14,069 --> 00:54:13,200
shuttle

1537
00:54:15,910 --> 00:54:14,079
and

1538
00:54:18,230 --> 00:54:15,920

follow the whole mission live on nasa

1539
00:54:19,750 --> 00:54:18,240
television so we will exit now and head