1
00:00:07,110 --> 00:00:04,789
good evening and welcome to our

2
00:00:09,350 --> 00:00:07,120
pre-launch news conference for the

3
00:00:10,950 --> 00:00:09,360
spacex crs-1

4
00:00:12,709 --> 00:00:10,960
mission set to launch from cape

5
00:00:14,310 --> 00:00:12,719
canaveral air force station tomorrow at

6
00:00:16,390 --> 00:00:14,320
8 35 p.m

7
00:00:18,550 --> 00:00:16,400
it's going to be an exciting start to

8
00:00:20,630 --> 00:00:18,560
commercial space flight it's the first

9
00:00:22,950 --> 00:00:20,640
of 12 missions that spacex will be

10
00:00:25,509 --> 00:00:22,960
delivering cargo to the international

11
00:00:28,390 --> 00:00:25,519
space station and returning it and it's

12
00:00:30,470 --> 00:00:28,400
very exciting for spacex for nasa for

13
00:00:32,150 --> 00:00:30,480

the kennedy space center and for the

14
00:00:34,790 --> 00:00:32,160
entire space coast

15
00:00:36,470 --> 00:00:34,800
and we have a panel ready to talk all

16
00:00:39,350 --> 00:00:36,480
about the mission i'd like to introduce

17
00:00:41,270 --> 00:00:39,360
them as we uh begin to my left is

18
00:00:43,910 --> 00:00:41,280
kennedy space center director

19
00:00:45,750 --> 00:00:43,920
bob cabana bob commanded space shuttle

20
00:00:48,950 --> 00:00:45,760
endeavour on the first space station

21
00:00:51,270 --> 00:00:48,960
assembly mission in 1998 he and his crew

22
00:00:53,590 --> 00:00:51,280
delivered the first american module

23
00:00:54,950 --> 00:00:53,600
unity and docked it with the russian

24
00:00:56,869 --> 00:00:54,960
zarya module

25
00:00:59,270 --> 00:00:56,879
and now he has a new role he is

26
00:01:01,590 --> 00:00:59,280
commanding the kennedy space center and

27
00:01:03,830 --> 00:01:01,600
in charge as we transform to support

28
00:01:05,990 --> 00:01:03,840
commercial space business and create a

29
00:01:07,910 --> 00:01:06,000
multi-user spaceport for both government

30
00:01:10,070 --> 00:01:07,920
and commercial customers

31
00:01:12,950 --> 00:01:10,080
to bob's left

32
00:01:14,710 --> 00:01:12,960
sam shimimi director international space

33
00:01:15,990 --> 00:01:14,720
station program from nasa headquarters

34
00:01:17,270 --> 00:01:16,000
in washington

35
00:01:18,789 --> 00:01:17,280
sam is going to talk about the

36
00:01:21,109 --> 00:01:18,799
importance of this mission to the space

37
00:01:22,310 --> 00:01:21,119
station it's a very important mission

38
00:01:23,270 --> 00:01:22,320

and we look forward to getting it

39
00:01:25,109 --> 00:01:23,280
underway

40
00:01:26,789 --> 00:01:25,119
to sam's left

41
00:01:28,390 --> 00:01:26,799
mike sufferdini

42
00:01:30,149 --> 00:01:28,400
nasa's program manager for the

43
00:01:32,550 --> 00:01:30,159
international space station and he'll

44
00:01:34,950 --> 00:01:32,560
give us a status of the space station

45
00:01:36,069 --> 00:01:34,960
and an overview of the spacex crs-1

46
00:01:38,230 --> 00:01:36,079
mission

47
00:01:40,390 --> 00:01:38,240
to mike's left

48
00:01:43,109 --> 00:01:40,400
gwen shotwell she oversees day-to-day

49
00:01:44,550 --> 00:01:43,119
operations for the spacex company and

50
00:01:46,870 --> 00:01:44,560
she can't wait to tell us all about

51
00:01:50,310 --> 00:01:46,880
falcon 9 and dragon

52
00:01:53,510 --> 00:01:50,320
and to her left is mike mcaleenan

53
00:01:55,270 --> 00:01:53,520
launch weather officer for the 45th

54
00:01:57,030 --> 00:01:55,280
weather squadron at cape canaveral air

55
00:01:59,030 --> 00:01:57,040
force station he'll give us an update on

56
00:02:00,789 --> 00:01:59,040
tomorrow's weather forecast

57
00:02:02,630 --> 00:02:00,799
and we'll begin with opening comments

58
00:02:04,310 --> 00:02:02,640
and then we'll take your questions

59
00:02:06,230 --> 00:02:04,320
bob thanks mike

60
00:02:07,910 --> 00:02:06,240
well it's great to be here for uh the

61
00:02:09,510 --> 00:02:07,920
first commercial launch to the

62
00:02:11,670 --> 00:02:09,520
international space station we've made

63
00:02:13,670 --> 00:02:11,680

great progress this last year uh

64
00:02:15,670 --> 00:02:13,680
transforming the kennedy space center

65
00:02:17,030 --> 00:02:15,680
into a multi-user spaceport of the

66
00:02:19,190 --> 00:02:17,040
future and it's key to have both

67
00:02:20,550 --> 00:02:19,200
commercial and government launches from

68
00:02:22,550 --> 00:02:20,560
the cape

69
00:02:24,309 --> 00:02:22,560
our part with this mission is a little

70
00:02:26,710 --> 00:02:24,319
smaller than what we hope to have in the

71
00:02:29,510 --> 00:02:26,720
future uh processing the payloads for it

72
00:02:32,229 --> 00:02:29,520
and late delivery of some of them but uh

73
00:02:34,150 --> 00:02:32,239
it's a beginning and if i look at where

74
00:02:36,309 --> 00:02:34,160
we were a year ago and the progress

75
00:02:37,830 --> 00:02:36,319
we've made now it's just tremendous from

76
00:02:39,430 --> 00:02:37,840
the end of the shuttle

77
00:02:42,229 --> 00:02:39,440
we've moved forward

78
00:02:44,470 --> 00:02:42,239
we are building the very first

79
00:02:47,110 --> 00:02:44,480
orion multipurpose crew vehicle right

80
00:02:49,750 --> 00:02:47,120
now for a test flight in 2014 over in

81
00:02:51,990 --> 00:02:49,760
the onc high bay a state-of-the-art

82
00:02:54,309 --> 00:02:52,000
processing facility over there

83
00:02:55,910 --> 00:02:54,319
preparing for a launch on a delta iv in

84
00:02:57,910 --> 00:02:55,920
2014.

85
00:02:59,350 --> 00:02:57,920
we've transformed the launch control

86
00:03:01,589 --> 00:02:59,360
center one of the firing rooms to

87
00:03:03,830 --> 00:03:01,599
support the future not just a single

88
00:03:04,790 --> 00:03:03,840

rocket but however we want to configure

89
00:03:07,750 --> 00:03:04,800
it

90
00:03:11,509 --> 00:03:07,760
we've taken pad b the northernmost pad

91
00:03:13,589 --> 00:03:11,519
out at 39 and completely remodeled it

92
00:03:15,110 --> 00:03:13,599
was continuing to work on the process

93
00:03:17,030 --> 00:03:15,120
out there finishing up with the

94
00:03:18,710 --> 00:03:17,040
propellant distribution systems

95
00:03:20,710 --> 00:03:18,720
state-of-the-art launch complex for the

96
00:03:22,869 --> 00:03:20,720
future handling more than just nasa's

97
00:03:24,630 --> 00:03:22,879
heavy lift rocket but capable of any

98
00:03:27,270 --> 00:03:24,640
rocket with a common interface to the

99
00:03:29,350 --> 00:03:27,280
pad to a mobile launcher

100
00:03:31,430 --> 00:03:29,360
we've made great progress lately in high

101
00:03:32,949 --> 00:03:31,440
bay 3 in the vehicle assembly building

102
00:03:35,990 --> 00:03:32,959
pulling the platforms out of it that are

103
00:03:37,990 --> 00:03:36,000
unique to the shuttle as we modify that

104
00:03:39,750 --> 00:03:38,000
to support nasa's heavy lift rocket

105
00:03:40,710 --> 00:03:39,760
that's going to allow us to explore once

106
00:03:42,710 --> 00:03:40,720
again

107
00:03:44,229 --> 00:03:42,720
beyond our home planet and from a

108
00:03:47,589 --> 00:03:44,239
commercial point of view

109
00:03:49,589 --> 00:03:47,599
the commercial crew program here at ksc

110
00:03:51,830 --> 00:03:49,599
in partnership with the johnson space

111
00:03:53,750 --> 00:03:51,840
center has moved forward we have three

112
00:03:55,589 --> 00:03:53,760
companies now under space act agreements

113
00:03:57,990 --> 00:03:55,599

under cci cap the commercial crew

114
00:04:01,190 --> 00:03:58,000
integrated capability contract

115
00:04:03,910 --> 00:04:01,200
boeing sierra nevada and spacex with the

116
00:04:05,750 --> 00:04:03,920
falcon 9 dragon rider and we are moving

117
00:04:08,070 --> 00:04:05,760
forward to help enable commercial

118
00:04:09,509 --> 00:04:08,080
operations for crew to the international

119
00:04:11,110 --> 00:04:09,519
space station

120
00:04:13,589 --> 00:04:11,120
in transforming the facilities that we

121
00:04:16,629 --> 00:04:13,599
have here we've got boeing with their

122
00:04:18,229 --> 00:04:16,639
cst 100 spacecraft uh moving into opf

123
00:04:21,110 --> 00:04:18,239
bay three

124
00:04:23,270 --> 00:04:21,120
we recently uh moved out of opf bay one

125
00:04:25,030 --> 00:04:23,280
and we'll soon be moving out of opf bay

126
00:04:26,870 --> 00:04:25,040
two hoping to bring more partners in

127
00:04:30,150 --> 00:04:26,880
there for the future

128
00:04:32,950 --> 00:04:30,160
so i think overall tremendous progress

129
00:04:34,950 --> 00:04:32,960
towards really becoming what was once

130
00:04:37,430 --> 00:04:34,960
science fiction but a true multi-user

131
00:04:38,550 --> 00:04:37,440
spaceport with horizontal

132
00:04:41,270 --> 00:04:38,560
vertical

133
00:04:43,909 --> 00:04:41,280
launch landing capabilities utilizing

134
00:04:45,670 --> 00:04:43,919
the slf as well as the

135
00:04:47,590 --> 00:04:45,680
facilities that we have available from

136
00:04:49,830 --> 00:04:47,600
shuttle along with this outstanding

137
00:04:51,990 --> 00:04:49,840
workforce that's available down here to

138
00:04:53,270 --> 00:04:52,000

help make that transition so it's it's a

139
00:04:54,710 --> 00:04:53,280
good time mike

140
00:04:55,749 --> 00:04:54,720
thank you bob

141
00:04:56,710 --> 00:04:55,759
sam

142
00:04:59,510 --> 00:04:56,720
thanks

143
00:05:02,070 --> 00:04:59,520
uh tomorrow's spacex launch

144
00:05:03,909 --> 00:05:02,080
begins a new era for space flight and

145
00:05:05,590 --> 00:05:03,919
international space station

146
00:05:07,990 --> 00:05:05,600
just over a year after the shuttle

147
00:05:10,469 --> 00:05:08,000
retirement we're poised to start

148
00:05:12,870 --> 00:05:10,479
commercial cargo supply and

149
00:05:15,029 --> 00:05:12,880
return services to the space station

150
00:05:18,310 --> 00:05:15,039
these flights are critical to the space

151
00:05:19,909 --> 00:05:18,320
station uh sustainment and to begin the

152
00:05:22,390 --> 00:05:19,919
full utilization

153
00:05:24,550 --> 00:05:22,400
and of space station for research and

154
00:05:26,950 --> 00:05:24,560
technology development

155
00:05:29,430 --> 00:05:26,960
spacex excuse me space flight is really

156
00:05:31,990 --> 00:05:29,440
hard and wanted to thank all the spacex

157
00:05:35,430 --> 00:05:32,000
teams and nasa teams that make this

158
00:05:36,550 --> 00:05:35,440
launch tomorrow possible thanks

159
00:05:38,230 --> 00:05:36,560
mike

160
00:05:39,670 --> 00:05:38,240
okay well good afternoon everyone it's

161
00:05:40,870 --> 00:05:39,680
good to be back

162
00:05:47,749 --> 00:05:40,880
uh

163
00:05:49,990 --> 00:05:47,759

is the first flight under the commercial

164
00:05:51,350 --> 00:05:50,000
contract for uh services

165
00:05:53,430 --> 00:05:51,360
as was mentioned

166
00:05:55,590 --> 00:05:53,440
and as you can imagine we're we're

167
00:05:58,150 --> 00:05:55,600
excited to have the vehicle uh

168
00:06:00,550 --> 00:05:58,160
coming up to visit iss and bring uh not

169
00:06:02,309 --> 00:06:00,560
only the cargo that it brings but also

170
00:06:04,790 --> 00:06:02,319
bring back the capability to turn a

171
00:06:06,870 --> 00:06:04,800
significant amount of cargo and research

172
00:06:08,550 --> 00:06:06,880
samples back home

173
00:06:09,990 --> 00:06:08,560
uh and so on this flight this first

174
00:06:12,950 --> 00:06:10,000
flight we carried about a thousand

175
00:06:14,469 --> 00:06:12,960
pounds about a thousand pounds up

176
00:06:17,749 --> 00:06:14,479
uh because of the

177
00:06:19,029 --> 00:06:17,759
other cargo flying up with us uh

178
00:06:20,710 --> 00:06:19,039
this one will be unique and that the

179
00:06:22,390 --> 00:06:20,720
amount of cargo we bring home is more

180
00:06:25,189 --> 00:06:22,400
than amount of cargo we bring up so we

181
00:06:27,670 --> 00:06:25,199
actually bring back almost 2 000 pounds

182
00:06:29,670 --> 00:06:27,680
of cargo much of that related to

183
00:06:32,309 --> 00:06:29,680
research although we will use it to

184
00:06:34,710 --> 00:06:32,319
bring home some of some failed oru's

185
00:06:35,909 --> 00:06:34,720
that we'd like to get to repaired

186
00:06:38,469 --> 00:06:35,919
and it's good to be able to have that

187
00:06:39,749 --> 00:06:38,479
capability back as well because

188
00:06:41,350 --> 00:06:39,759

not only do you

189
00:06:43,430 --> 00:06:41,360
save some money generally speaking when

190
00:06:44,550 --> 00:06:43,440
you're able to repair or use and return

191
00:06:45,830 --> 00:06:44,560
them to orbit

192
00:06:49,350 --> 00:06:45,840
but also you get to do the failure

193
00:06:51,189 --> 00:06:49,360
analysis that uh sometimes the failures

194
00:06:53,589 --> 00:06:51,199
will elude you if you are not able to

195
00:06:55,189 --> 00:06:53,599
get the hardware out back home to uh to

196
00:06:57,670 --> 00:06:55,199
check it out so

197
00:06:58,710 --> 00:06:57,680
we're uh we're utilizing this capability

198
00:07:01,029 --> 00:06:58,720
in full

199
00:07:04,150 --> 00:07:01,039
i'll also say it's it's nice to have a

200
00:07:06,150 --> 00:07:04,160
u.s indigenous capability and one of the

201
00:07:08,150 --> 00:07:06,160
main reasons is the flexibility to get

202
00:07:09,189 --> 00:07:08,160
hardware to iss

203
00:07:11,909 --> 00:07:09,199
we had a

204
00:07:13,510 --> 00:07:11,919
small pump on the urine processor fail

205
00:07:15,670 --> 00:07:13,520
not too long ago

206
00:07:17,990 --> 00:07:15,680
we installed our last spare on orbit

207
00:07:19,029 --> 00:07:18,000
into the into the urine processor

208
00:07:21,510 --> 00:07:19,039
assembly

209
00:07:24,230 --> 00:07:21,520
and and because of our desire we had it

210
00:07:26,710 --> 00:07:24,240
we had one plan to fly up on atv4 which

211
00:07:29,029 --> 00:07:26,720
doesn't fly till next spring

212
00:07:30,870 --> 00:07:29,039
and uh and so we contacted our spacex

213
00:07:33,589 --> 00:07:30,880

friends and said we've got this fairly

214
00:07:35,110 --> 00:07:33,599
large oru we'd like to fly and working

215
00:07:37,189 --> 00:07:35,120
together to adjust the manifest we were

216
00:07:39,189 --> 00:07:37,199
able to get that on this particular

217
00:07:42,629 --> 00:07:39,199
manifest and it's coming to orbit so

218
00:07:44,150 --> 00:07:42,639
when you have a launch vehicle that's

219
00:07:45,670 --> 00:07:44,160
in your country it just makes it a lot

220
00:07:47,670 --> 00:07:45,680
easier because

221
00:07:48,710 --> 00:07:47,680
literally shipping and customs can can

222
00:07:50,869 --> 00:07:48,720
kill you when you're trying to get

223
00:07:52,869 --> 00:07:50,879
overseas and this really makes the

224
00:07:55,029 --> 00:07:52,879
process faster allows us to react to

225
00:07:56,710 --> 00:07:55,039
anomalies in real time so this

226
00:07:58,390 --> 00:07:56,720
capability is very

227
00:08:01,029 --> 00:07:58,400
important to the international space

228
00:08:02,869 --> 00:08:01,039
station i expected us to utilize it to

229
00:08:04,070 --> 00:08:02,879
its fullest extent

230
00:08:05,990 --> 00:08:04,080
and we're looking forward to this first

231
00:08:08,390 --> 00:08:06,000
flight thank you very much

232
00:08:09,990 --> 00:08:08,400
thank you mike gwen

233
00:08:11,589 --> 00:08:10,000
well mike said it was good to be back

234
00:08:13,270 --> 00:08:11,599
i'll

235
00:08:15,830 --> 00:08:13,280
say that it's actually great to be back

236
00:08:19,110 --> 00:08:15,840
here uh at the cape flying again

237
00:08:21,909 --> 00:08:19,120
uh very very much excited uh about this

238
00:08:25,670 --> 00:08:21,919

first uh official uh commercial cargo

239
00:08:27,909 --> 00:08:25,680
resupply mission uh the 2000 plus men

240
00:08:30,230 --> 00:08:27,919
and women of spacex have been working

241
00:08:32,870 --> 00:08:30,240
very hard to make this mission uh go a

242
00:08:35,269 --> 00:08:32,880
little bit smoother uh than the than the

243
00:08:36,949 --> 00:08:35,279
prior i wanted to thank our nasa

244
00:08:38,230 --> 00:08:36,959
partners as well

245
00:08:39,829 --> 00:08:38,240
i think they would agree that this was

246
00:08:41,430 --> 00:08:39,839
smoother we've really developed a great

247
00:08:43,670 --> 00:08:41,440
relationship and this partners

248
00:08:45,269 --> 00:08:43,680
partnership has really been critical

249
00:08:47,910 --> 00:08:45,279
to the

250
00:08:49,990 --> 00:08:47,920
the success of these missions i also

251
00:08:52,550 --> 00:08:50,000
want to thank our air force partners of

252
00:08:53,910 --> 00:08:52,560
course faa who's licensing these

253
00:08:56,230 --> 00:08:53,920
missions

254
00:08:57,670 --> 00:08:56,240
and then fcc as well who's been helpful

255
00:08:59,269 --> 00:08:57,680
this go around

256
00:09:02,470 --> 00:08:59,279
so we are

257
00:09:05,829 --> 00:09:02,480
flying uh tomorrow evening eighth we're

258
00:09:08,470 --> 00:09:05,839
looking for an 8 35 pm lift off

259
00:09:09,430 --> 00:09:08,480
i can go through the timeline a bit as

260
00:09:13,430 --> 00:09:09,440
you guys

261
00:09:15,910 --> 00:09:13,440
but it's high level overview if we fly

262
00:09:17,509 --> 00:09:15,920
tomorrow night we've got about 53 hours

263
00:09:19,590 --> 00:09:17,519

before we rendezvous and birth with the

264
00:09:21,509 --> 00:09:19,600
international space station

265
00:09:26,070 --> 00:09:21,519
if the flight is delayed for any

266
00:09:30,470 --> 00:09:28,310
the opportunity on monday is about the

267
00:09:32,790 --> 00:09:30,480
same uh to get to station the

268
00:09:34,550 --> 00:09:32,800
opportunity on tuesday is less it's

269
00:09:36,230 --> 00:09:34,560
about a 30-hour rendezvous with the

270
00:09:37,269 --> 00:09:36,240
station

271
00:09:41,590 --> 00:09:37,279
once we

272
00:09:45,350 --> 00:09:41,600
we will be birthed by a pair of

273
00:09:48,150 --> 00:09:45,360
astronauts akihiko hashida and sunny

274
00:09:50,710 --> 00:09:48,160
williams that the two of them will

275
00:09:53,269 --> 00:09:50,720
capture and birth us and we'll be on

276
00:09:55,030 --> 00:09:53,279
station for on the order of three weeks

277
00:09:57,269 --> 00:09:55,040
possibly a bit longer depending on

278
00:09:59,750 --> 00:09:57,279
station traffic and station needs

279
00:10:01,750 --> 00:09:59,760
so we are carrying a bit of science on

280
00:10:03,670 --> 00:10:01,760
this particular mission as mike mentions

281
00:10:06,069 --> 00:10:03,680
we're taking about a thousand

282
00:10:07,590 --> 00:10:06,079
pounds of cargo up we're very excited

283
00:10:09,110 --> 00:10:07,600
this is the first time that we're taking

284
00:10:10,870 --> 00:10:09,120
powered cargo up we're taking up a

285
00:10:14,069 --> 00:10:10,880
glacier freezer

286
00:10:15,750 --> 00:10:14,079
which has refrigerated science samples

287
00:10:17,750 --> 00:10:15,760
in it this is also the first time that

288
00:10:20,389 --> 00:10:17,760

we're going to bring brat bring back

289
00:10:22,710 --> 00:10:20,399
excuse me a glacier as well so we're

290
00:10:25,269 --> 00:10:22,720
quite excited about about the missions

291
00:10:27,829 --> 00:10:25,279
both up and back

292
00:10:29,670 --> 00:10:27,839
i wanted to talk very briefly about

293
00:10:31,829 --> 00:10:29,680
the differences between the last flight

294
00:10:34,870 --> 00:10:31,839
and this the insertion orbit is slightly

295
00:10:36,870 --> 00:10:34,880
different we went to a 325 circular 325

296
00:10:38,790 --> 00:10:36,880
kilometer circular orbit on the c2

297
00:10:41,590 --> 00:10:38,800
mission this one will be inserting

298
00:10:43,190 --> 00:10:41,600
dragon into a 200 by 325

299
00:10:45,269 --> 00:10:43,200
uh orbit

300
00:10:47,430 --> 00:10:45,279
the dragon is largely the same although

301
00:10:49,750 --> 00:10:47,440
we are carrying the full park cargo

302
00:10:50,790 --> 00:10:49,760
complement of cargo racks so if you saw

303
00:10:53,509 --> 00:10:50,800
the video

304
00:10:56,310 --> 00:10:53,519
uh when they opened uh the hatch on the

305
00:10:58,310 --> 00:10:56,320
iss before it that all the cargo was

306
00:11:00,630 --> 00:10:58,320
around the edges now in this one you're

307
00:11:03,030 --> 00:11:00,640
the the center stack is actually

308
00:11:06,230 --> 00:11:03,040
included in this mission and

309
00:11:09,990 --> 00:11:06,240
volume relatively full

310
00:11:12,310 --> 00:11:10,000
falcon 9 is largely the same as well

311
00:11:13,910 --> 00:11:12,320
we are we did improve our flight

312
00:11:15,829 --> 00:11:13,920
termination system so we're flying a

313
00:11:16,870 --> 00:11:15,839

slightly enhanced flight termination

314
00:11:18,630 --> 00:11:16,880
system

315
00:11:20,550 --> 00:11:18,640
other very minor differences this is the

316
00:11:22,069 --> 00:11:20,560
first time we're flying our own domes as

317
00:11:24,069 --> 00:11:22,079
well on the tanks

318
00:11:25,509 --> 00:11:24,079
so i do look forward to your questions

319
00:11:27,110 --> 00:11:25,519
and running through any details you'd

320
00:11:29,509 --> 00:11:27,120
like on the mission thanks very much and

321
00:11:30,630 --> 00:11:29,519
again it's great to be back

322
00:11:32,150 --> 00:11:30,640
mike

323
00:11:34,630 --> 00:11:32,160
all right well let me start out by

324
00:11:37,110 --> 00:11:34,640
saying that uh the weather outside would

325
00:11:37,990 --> 00:11:37,120
be best characterized as unfavorable for

326
00:11:39,590 --> 00:11:38,000
launch

327
00:11:42,470 --> 00:11:39,600
and that's been the case for the last

328
00:11:43,590 --> 00:11:42,480
several days here in central florida

329
00:11:45,829 --> 00:11:43,600
we're hoping that this boundary

330
00:11:48,150 --> 00:11:45,839
continues to move south and we're

331
00:11:49,750 --> 00:11:48,160
looking for opportunity we go to the

332
00:11:52,790 --> 00:11:49,760
satellite picture

333
00:11:54,710 --> 00:11:52,800
you can see that it's right on the edge

334
00:11:57,509 --> 00:11:54,720
of central florida maybe along the i-4

335
00:11:58,550 --> 00:11:57,519
corridor gradually pushing to the south

336
00:11:59,670 --> 00:11:58,560
and

337
00:12:01,269 --> 00:11:59,680
we are hopeful that it's going to

338
00:12:03,509 --> 00:12:01,279

continue moving south and looking good

339
00:12:04,710 --> 00:12:03,519
for for launch time

340
00:12:06,949 --> 00:12:04,720
speaking of launch time and go to the

341
00:12:09,350 --> 00:12:06,959
first slide

342
00:12:10,470 --> 00:12:09,360
looking for again that boundary to just

343
00:12:12,150 --> 00:12:10,480
be moving through the area will probably

344
00:12:13,509 --> 00:12:12,160
be dealing with some violations through

345
00:12:16,470 --> 00:12:13,519
the count

346
00:12:18,389 --> 00:12:16,480
but by uh late in the evening um for the

347
00:12:20,310 --> 00:12:18,399
window looking for the clouds to be

348
00:12:21,910 --> 00:12:20,320
breaking up a little bit 4000 foot

349
00:12:23,190 --> 00:12:21,920
scattered conditions and a 10 000 foot

350
00:12:24,949 --> 00:12:23,200
deck out there

351
00:12:26,870 --> 00:12:24,959
winds will be light out of the northeast

352
00:12:29,110 --> 00:12:26,880
and a 40 chance of violation mostly a

353
00:12:30,870 --> 00:12:29,120
thick cloud violation or a flight

354
00:12:32,470 --> 00:12:30,880
through precipitation and basically what

355
00:12:34,389 --> 00:12:32,480
that means is there's a 60 chance of

356
00:12:36,550 --> 00:12:34,399
that mass on the satellite picture being

357
00:12:38,790 --> 00:12:36,560
to our south for launch time

358
00:12:41,030 --> 00:12:38,800
if we were to move to a 24-hour delay

359
00:12:43,110 --> 00:12:41,040
for columbus day

360
00:12:44,629 --> 00:12:43,120
conditions do improve and we're looking

361
00:12:47,190 --> 00:12:44,639
for a much less in the way of cloud

362
00:12:49,990 --> 00:12:47,200
cover and chances of precipitation

363
00:12:51,750 --> 00:12:50,000

and still the light easterly winds but

364
00:12:53,670 --> 00:12:51,760
only a 20 chance of violation has a much

365
00:12:55,430 --> 00:12:53,680
better chance for that system to either

366
00:12:57,509 --> 00:12:55,440
continue moving to the south and a

367
00:12:58,389 --> 00:12:57,519
better chance of being southwest or just

368
00:13:00,470 --> 00:12:58,399
come

369
00:13:01,829 --> 00:13:00,480
and die and wash out as fronts do here

370
00:13:05,509 --> 00:13:01,839
in florida

371
00:13:07,910 --> 00:13:05,519
for a 48 hour delay on to tuesday again

372
00:13:09,829 --> 00:13:07,920
a decent chance uh only a 20 chance of

373
00:13:11,590 --> 00:13:09,839
violation and with the second day or

374
00:13:13,990 --> 00:13:11,600
third day of easterly flow we're looking

375
00:13:16,069 --> 00:13:14,000
for maybe a cumulus cloud uh violation

376
00:13:18,230 --> 00:13:16,079
versus a thick cloud same probability

377
00:13:20,389 --> 00:13:18,240
but a different scenario a lot of times

378
00:13:22,470 --> 00:13:20,399
with deep easterly flow we get a little

379
00:13:23,910 --> 00:13:22,480
shower or two form up over the water

380
00:13:25,190 --> 00:13:23,920
work its way in it's a little early for

381
00:13:27,430 --> 00:13:25,200
that in the in the evening generally

382
00:13:29,750 --> 00:13:27,440
it's a morning phenomena so only a 20

383
00:13:30,949 --> 00:13:29,760
chance of violation so overall we're

384
00:13:33,110 --> 00:13:30,959
hopeful this boundary will keep moving

385
00:13:35,030 --> 00:13:33,120
through and this will be our last day of

386
00:13:36,069 --> 00:13:35,040
unfavorable weather for launch time

387
00:13:37,910 --> 00:13:36,079
thanks

388
00:13:39,670 --> 00:13:37,920

okay mike thank you all right we'll take

389
00:13:41,430 --> 00:13:39,680
questions and here at the kennedy space

390
00:13:44,069 --> 00:13:41,440
center news center we

391
00:13:45,590 --> 00:13:44,079
are glad to welcome some of our nasa

392
00:13:47,829 --> 00:13:45,600
social friends who are going to be

393
00:13:50,470 --> 00:13:47,839
reporting through social media on the

394
00:13:51,750 --> 00:13:50,480
event joining our traditional news media

395
00:13:53,910 --> 00:13:51,760
we would ask for you to please state

396
00:13:55,189 --> 00:13:53,920
your name and your affiliation

397
00:13:56,870 --> 00:13:55,199
and to whom you're addressing your

398
00:13:57,910 --> 00:13:56,880
question and we'll start off with marcia

399
00:14:00,629 --> 00:13:57,920
dunn

400
00:14:03,189 --> 00:14:00,639
an associated press for miss shotwell um

401
00:14:04,710 --> 00:14:03,199
could you have put on more to go up um

402
00:14:06,310 --> 00:14:04,720
because you're bringing so much back and

403
00:14:08,389 --> 00:14:06,320
i'm not sure if it's just big volume

404
00:14:10,150 --> 00:14:08,399
lightweight stuff going up that you're

405
00:14:11,670 --> 00:14:10,160
you're at a thousand pounds why couldn't

406
00:14:14,069 --> 00:14:11,680
you put two thousand pounds on board

407
00:14:15,990 --> 00:14:14,079
more food or whatever and could you just

408
00:14:18,230 --> 00:14:16,000
sort of give a status if you're still

409
00:14:20,629 --> 00:14:18,240
hoping to go in december

410
00:14:22,150 --> 00:14:20,639
on yet the next one

411
00:14:24,629 --> 00:14:22,160
let me take the second one first before

412
00:14:27,670 --> 00:14:24,639
so i don't forget it the the second

413
00:14:28,870 --> 00:14:27,680

spacex crs mission is scheduled for

414
00:14:30,710 --> 00:14:28,880
january

415
00:14:32,949 --> 00:14:30,720
we're shooting for a two-week time frame

416
00:14:35,990 --> 00:14:32,959
starting around january 18th

417
00:14:37,910 --> 00:14:36,000
two-week window as far as cargo up i i

418
00:14:39,030 --> 00:14:37,920
do understand that the cargo up we're

419
00:14:40,710 --> 00:14:39,040
taking is

420
00:14:43,269 --> 00:14:40,720
voluminous not quite as dense as some of

421
00:14:44,949 --> 00:14:43,279
the cargo that we will be taking on

422
00:14:46,550 --> 00:14:44,959
successive missions

423
00:14:49,030 --> 00:14:46,560
we are required by the way under this

424
00:14:51,189 --> 00:14:49,040
contract to fly 20 metric tons up to the

425
00:14:52,470 --> 00:14:51,199
international space station and with the

426
00:14:57,110 --> 00:14:52,480
way

427
00:15:00,710 --> 00:14:57,120
we'll be taking up and back about 60

428
00:15:06,790 --> 00:15:02,870
james

429
00:15:09,350 --> 00:15:06,800
much talk last time about the the

430
00:15:10,389 --> 00:15:09,360
history making event of being the first

431
00:15:12,550 --> 00:15:10,399
private

432
00:15:14,389 --> 00:15:12,560
vehicle to visit the station but can you

433
00:15:16,870 --> 00:15:14,399
contrast that with with the moment we're

434
00:15:18,230 --> 00:15:16,880
at now where this is the first you know

435
00:15:19,189 --> 00:15:18,240
flight that counts if you will the first

436
00:15:21,829 --> 00:15:19,199
real

437
00:15:23,990 --> 00:15:21,839
uh operational contracted flight

438
00:15:25,910 --> 00:15:24,000

i'm not sure any of the engineering team

439
00:15:27,509 --> 00:15:25,920
frankly or myself feels like this is

440
00:15:29,189 --> 00:15:27,519
substantially different than the last

441
00:15:31,590 --> 00:15:29,199
one with the exception that we got there

442
00:15:33,590 --> 00:15:31,600
once we demonstrated we could do it so

443
00:15:35,110 --> 00:15:33,600
there might be a teeny teeny bit of

444
00:15:37,749 --> 00:15:35,120
relaxation

445
00:15:38,949 --> 00:15:37,759
um not a lot though uh

446
00:15:41,509 --> 00:15:38,959
it uh

447
00:15:43,670 --> 00:15:41,519
i we're a launch company i'm excited

448
00:15:45,670 --> 00:15:43,680
every time we get to launch um so this

449
00:15:47,829 --> 00:15:45,680
is obviously a very exciting time to be

450
00:15:49,670 --> 00:15:47,839
back um we were very much looking

451
00:15:52,069 --> 00:15:49,680
forward to moving from that development

452
00:15:55,030 --> 00:15:52,079
phase of the falcon 9 and the dragon

453
00:15:59,350 --> 00:15:55,040
into the official uh operational phase

454
00:16:02,949 --> 00:16:01,110
uh bill howard with cbs news with one

455
00:16:04,790 --> 00:16:02,959
for one and one for mike suffordini but

456
00:16:07,030 --> 00:16:04,800
for gwen you mentioned the 20 metric

457
00:16:08,550 --> 00:16:07,040
tons is required by the contract and

458
00:16:10,470 --> 00:16:08,560
this is a contract question it's not a

459
00:16:12,629 --> 00:16:10,480
bad karma question or anything like that

460
00:16:14,870 --> 00:16:12,639
but if one of the missions in that 12

461
00:16:17,430 --> 00:16:14,880
fails to get there for whatever reason

462
00:16:19,509 --> 00:16:17,440
is there a contractual what happens do

463
00:16:21,350 --> 00:16:19,519

you have to reply it at your cost or

464
00:16:22,870 --> 00:16:21,360
does the government eat that or i just

465
00:16:24,550 --> 00:16:22,880
don't understand how the

466
00:16:26,310 --> 00:16:24,560
contract works if there is a mission

467
00:16:28,310 --> 00:16:26,320
failure we actually don't get fully paid

468
00:16:29,990 --> 00:16:28,320
for that particular mission i don't

469
00:16:32,389 --> 00:16:30,000
necessarily want to go into the details

470
00:16:33,829 --> 00:16:32,399
on that and it depends on how what what

471
00:16:35,749 --> 00:16:33,839
kind of failure

472
00:16:37,910 --> 00:16:35,759
occurs

473
00:16:39,509 --> 00:16:37,920
given the amount of the capacity that we

474
00:16:41,910 --> 00:16:39,519
have on the falcon 9 and the dragon

475
00:16:43,509 --> 00:16:41,920
flights i i think i don't believe

476
00:16:46,069 --> 00:16:43,519
there's any chance that we won't hit our

477
00:16:47,509 --> 00:16:46,079
20 metric ton target

478
00:16:48,949 --> 00:16:47,519
and for mike can you give us a little

479
00:16:50,790 --> 00:16:48,959
update on

480
00:16:52,870 --> 00:16:50,800
iss systems i remember when you guys

481
00:16:54,389 --> 00:16:52,880
replaced the box here a couple of weeks

482
00:16:55,990 --> 00:16:54,399
back there was another box that had gone

483
00:16:58,230 --> 00:16:56,000
down that you guys were deferring to a

484
00:16:59,910 --> 00:16:58,240
later date uh where does that stand and

485
00:17:02,230 --> 00:16:59,920
i've seen some mention of some cool

486
00:17:03,590 --> 00:17:02,240
issues on p6 and i was wondering where

487
00:17:05,590 --> 00:17:03,600
does that stand and how do you what are

488
00:17:07,429 --> 00:17:05,600

you gonna do to resolve those thanks

489
00:17:09,189 --> 00:17:07,439
sure the the uh

490
00:17:11,590 --> 00:17:09,199
system you're referring to before was

491
00:17:15,029 --> 00:17:11,600
the power channel 3a

492
00:17:16,630 --> 00:17:15,039
and uh on the shortly after the spacex

493
00:17:18,069 --> 00:17:16,640
vehicle arrives we're going to go ahead

494
00:17:19,909 --> 00:17:18,079
and do the troubleshooting so we don't

495
00:17:22,630 --> 00:17:19,919
know what the cause of the

496
00:17:24,230 --> 00:17:22,640
what was apparently a very large short

497
00:17:27,350 --> 00:17:24,240
in the system that it reacted to it's

498
00:17:29,430 --> 00:17:27,360
either it's a number of of components a

499
00:17:31,270 --> 00:17:29,440
a distribution a component we call a

500
00:17:33,270 --> 00:17:31,280
dcsu

501
00:17:34,950 --> 00:17:33,280
the beta gimbal that the power goes

502
00:17:37,510 --> 00:17:34,960
through uh could could have had a

503
00:17:39,270 --> 00:17:37,520
problem although it's very unlikely

504
00:17:42,150 --> 00:17:39,280
or that what's called a sequential shunt

505
00:17:43,430 --> 00:17:42,160
unit this is where all of the 82

506
00:17:45,270 --> 00:17:43,440
channels of power that come through a

507
00:17:47,350 --> 00:17:45,280
solar array they go through a sequential

508
00:17:49,350 --> 00:17:47,360
shunt unit and then it's it's fed to the

509
00:17:52,070 --> 00:17:49,360
station as it needs it and so that's a

510
00:17:54,150 --> 00:17:52,080
potential source of this short circuit

511
00:17:55,750 --> 00:17:54,160
so what we're going to do is after

512
00:17:57,350 --> 00:17:55,760
spacex vehicle arrives we're going to

513
00:17:59,430 --> 00:17:57,360

configure ourselves

514
00:18:01,190 --> 00:17:59,440
to a lower power by taking some of the

515
00:18:02,549 --> 00:18:01,200
batteries out of the system so so if the

516
00:18:03,830 --> 00:18:02,559
short's still there we don't damage

517
00:18:05,270 --> 00:18:03,840
anything and then we'll slowly start

518
00:18:06,390 --> 00:18:05,280
bringing these systems back online to

519
00:18:08,310 --> 00:18:06,400
see if we can

520
00:18:09,270 --> 00:18:08,320
uh isolate the shorties and it's still

521
00:18:10,710 --> 00:18:09,280
there

522
00:18:12,070 --> 00:18:10,720
so that's forward work for us as soon as

523
00:18:13,590 --> 00:18:12,080
we figure out what the oru is then we'll

524
00:18:15,750 --> 00:18:13,600
know what to go do

525
00:18:19,190 --> 00:18:15,760
to repair it in in any in any of those

526
00:18:20,630 --> 00:18:19,200
cases that's an eva to go do that

527
00:18:22,230 --> 00:18:20,640
now p6

528
00:18:24,470 --> 00:18:22,240
p6 has had a

529
00:18:27,430 --> 00:18:24,480
ammonia leak since it was uh it came to

530
00:18:28,950 --> 00:18:27,440
iss it's been very very slow and in fact

531
00:18:31,110 --> 00:18:28,960
not too long ago one of the last shuttle

532
00:18:33,430 --> 00:18:31,120
flights we we filled

533
00:18:36,230 --> 00:18:33,440
the system back up with a capability

534
00:18:37,990 --> 00:18:36,240
that's designed into the station to feed

535
00:18:42,230 --> 00:18:38,000
ammonia from the ammonia tanks out to

536
00:18:45,830 --> 00:18:42,240
the any of the ias that may need ammonia

537
00:18:47,590 --> 00:18:45,840
but in the june mid-june time frame

538
00:18:49,190 --> 00:18:47,600

the leak rate started to change and

539
00:18:50,549 --> 00:18:49,200
remember you get thermal swings with

540
00:18:52,870 --> 00:18:50,559
these systems

541
00:18:55,750 --> 00:18:52,880
and it's obviously a very slow leak but

542
00:18:58,549 --> 00:18:55,760
over the last two or three months

543
00:19:00,150 --> 00:18:58,559
the the trend the leak trend has started

544
00:19:02,310 --> 00:19:00,160
to increase

545
00:19:05,430 --> 00:19:02,320
and so now it's at the point that we

546
00:19:06,549 --> 00:19:05,440
will potentially trip the limit

547
00:19:08,950 --> 00:19:06,559
on the

548
00:19:11,590 --> 00:19:08,960
cooling system where it will shut off

549
00:19:13,430 --> 00:19:11,600
somewhere around the 1st of january 2013

550
00:19:14,950 --> 00:19:13,440
so not far away

551
00:19:16,310 --> 00:19:14,960
so now that's also one of the things we

552
00:19:17,110 --> 00:19:16,320
have to go look at

553
00:19:19,350 --> 00:19:17,120
so

554
00:19:20,789 --> 00:19:19,360
potential

555
00:19:22,230 --> 00:19:20,799
sources of the leak or either the

556
00:19:24,470 --> 00:19:22,240
radiator itself

557
00:19:25,990 --> 00:19:24,480
the coolant pump or the lines within the

558
00:19:28,150 --> 00:19:26,000
within the system

559
00:19:29,909 --> 00:19:28,160
uh we're actually very fortunate that

560
00:19:31,590 --> 00:19:29,919
this is on the p6 side which has the

561
00:19:33,029 --> 00:19:31,600
early ammonia system and there are

562
00:19:35,430 --> 00:19:33,039
options to go use some of those

563
00:19:36,950 --> 00:19:35,440

components uh to recover that system but

564
00:19:38,549 --> 00:19:36,960
all of those it's just a matter of

565
00:19:40,549 --> 00:19:38,559
trying to isolate the problem and fix it

566
00:19:42,870 --> 00:19:40,559
and so we'll part of what we're talking

567
00:19:44,710 --> 00:19:42,880
about now is is uh

568
00:19:46,390 --> 00:19:44,720
when we might do an eva and what we

569
00:19:48,150 --> 00:19:46,400
would go after so we'll have to do some

570
00:19:50,150 --> 00:19:48,160
work on the 3 8

571
00:19:53,029 --> 00:19:50,160
power system and then and then decide

572
00:19:54,630 --> 00:19:53,039
what we would want to go do issues uh

573
00:19:56,950 --> 00:19:54,640
depending on how it plays out that's two

574
00:19:58,710 --> 00:19:56,960
evas i'm guessing and is that before the

575
00:20:00,710 --> 00:19:58,720
end of the year for both of them

576
00:20:02,710 --> 00:20:00,720
well uh we haven't made any decisions

577
00:20:04,070 --> 00:20:02,720
yet so we're talking amongst ourselves

578
00:20:06,070 --> 00:20:04,080
as we like to do

579
00:20:06,710 --> 00:20:06,080
and we we tend to spend a lot of time on

580
00:20:07,669 --> 00:20:06,720
it

581
00:20:10,630 --> 00:20:07,679
um

582
00:20:12,310 --> 00:20:10,640
but the uh most the the uh we won't have

583
00:20:13,990 --> 00:20:12,320
a crew to do an eva until the crew

584
00:20:16,230 --> 00:20:14,000
arrives in late december

585
00:20:18,149 --> 00:20:16,240
um and so we need to consider whether we

586
00:20:19,510 --> 00:20:18,159
need to do an eva sooner rather than

587
00:20:20,470 --> 00:20:19,520
later and if we decide we need to do it

588
00:20:21,590 --> 00:20:20,480

sooner

589
00:20:23,270 --> 00:20:21,600
then we'll have to do it with sunny and

590
00:20:24,630 --> 00:20:23,280
aki and

591
00:20:27,110 --> 00:20:24,640
with the departure date currently

592
00:20:28,789 --> 00:20:27,120
scheduled for the 12th of november

593
00:20:30,950 --> 00:20:28,799
we're going to have to get on with it so

594
00:20:33,190 --> 00:20:30,960
so we are talking about that if we think

595
00:20:34,870 --> 00:20:33,200
we can get along or if the data tells us

596
00:20:37,190 --> 00:20:34,880
we can go

597
00:20:38,950 --> 00:20:37,200
much beyond january

598
00:20:39,990 --> 00:20:38,960
then that would give us an option to to

599
00:20:40,950 --> 00:20:40,000
just wait

600
00:20:42,549 --> 00:20:40,960
um

601
00:20:44,390 --> 00:20:42,559
but

602
00:20:45,830 --> 00:20:44,400
we'll we'll talk about that thoroughly

603
00:20:47,029 --> 00:20:45,840
here in the near future and i think

604
00:20:48,789 --> 00:20:47,039
you'll see us kind of lean towards

605
00:20:50,870 --> 00:20:48,799
trying to get an eba done before sunny

606
00:20:53,590 --> 00:20:50,880
and hockey leave

607
00:20:54,950 --> 00:20:53,600
okay we'll take two more questions here

608
00:20:56,149 --> 00:20:54,960
one here and one on the other side of

609
00:20:57,510 --> 00:20:56,159
the room before we go to the phone

610
00:20:59,990 --> 00:20:57,520
bridge and then we'll come back for more

611
00:21:01,750 --> 00:21:00,000
questions go ahead hi i'm david bankston

612
00:21:03,830 --> 00:21:01,760
with dave travel's web series the social

613
00:21:05,510 --> 00:21:03,840

media team and this is for gwen

614
00:21:06,789 --> 00:21:05,520
what did you learn what was the most

615
00:21:07,750 --> 00:21:06,799
important thing you learned from the

616
00:21:12,789 --> 00:21:07,760
last

617
00:21:17,830 --> 00:21:15,270
this isn't really a learning but it was

618
00:21:20,310 --> 00:21:17,840
a critical element that uh

619
00:21:21,430 --> 00:21:20,320
space flight continues to be very very

620
00:21:23,590 --> 00:21:21,440
difficult

621
00:21:25,590 --> 00:21:23,600
and uh even though we were we did make

622
00:21:27,190 --> 00:21:25,600
it successfully there was a lot of hard

623
00:21:28,230 --> 00:21:27,200
work that went into that particular

624
00:21:29,750 --> 00:21:28,240
mission

625
00:21:31,830 --> 00:21:29,760
especially if you were watching the

626
00:21:33,270 --> 00:21:31,840
proximity operations and actually

627
00:21:34,549 --> 00:21:33,280
getting to capture getting to the

628
00:21:36,789 --> 00:21:34,559
capture box

629
00:21:38,950 --> 00:21:36,799
so uh this is not easy it continues to

630
00:21:41,909 --> 00:21:38,960
not be easy um hopefully we get better

631
00:21:45,909 --> 00:21:41,919
and better at it as we go um but it it's

632
00:21:51,510 --> 00:21:49,669
okay art harmon uh savemanspace.com

633
00:21:53,830 --> 00:21:51,520
uh will you be the

634
00:21:56,149 --> 00:21:53,840
this dragon will be on uh on the space

635
00:21:57,750 --> 00:21:56,159
station for what 50 days or something

636
00:22:00,230 --> 00:21:57,760
and then returning it's about three

637
00:22:02,630 --> 00:22:00,240
weeks three weeks okay will you be doing

638
00:22:05,029 --> 00:22:02,640

a parking one at the space station for

639
00:22:09,190 --> 00:22:05,039
like uh six months to validate its use

640
00:22:13,510 --> 00:22:11,350
we would have to talk to the uh to

641
00:22:16,149 --> 00:22:13,520
mike's team currently there is no plan

642
00:22:17,990 --> 00:22:16,159
to have dragon on station for six months

643
00:22:19,350 --> 00:22:18,000
um there are other ways to demonstrate

644
00:22:20,950 --> 00:22:19,360
life for dragon we could fly it

645
00:22:23,669 --> 00:22:20,960
independent of the international space

646
00:22:24,710 --> 00:22:23,679
station to demonstrate its life

647
00:22:25,750 --> 00:22:24,720
thank you

648
00:22:27,510 --> 00:22:25,760
okay we're going to go to the phone

649
00:22:29,350 --> 00:22:27,520
bridge and take a question from tariq

650
00:22:30,710 --> 00:22:29,360
malik and then come back here tarek are

651
00:22:32,710 --> 00:22:30,720
you there

652
00:22:35,430 --> 00:22:32,720
yes thank you uh it's uh tarik malek

653
00:22:37,669 --> 00:22:35,440
from space.com and i i had i think uh

654
00:22:39,590 --> 00:22:37,679
one question and a follow-up uh my first

655
00:22:43,029 --> 00:22:39,600
question is for mike i know that this is

656
00:22:44,549 --> 00:22:43,039
a fairly full uh uh cargo uh trip to the

657
00:22:45,669 --> 00:22:44,559
station i'm i'm just wondering if

658
00:22:47,669 --> 00:22:45,679
there's anything

659
00:22:48,870 --> 00:22:47,679
uh special that you might have stored

660
00:22:51,190 --> 00:22:48,880
aboard for the

661
00:22:53,590 --> 00:22:51,200
uh for the crew uh when they uh when

662
00:22:57,990 --> 00:22:53,600
they open something as a surprise and i

663
00:23:02,230 --> 00:22:59,909

um

664
00:23:04,710 --> 00:23:02,240
special for the crew well we're we are

665
00:23:06,310 --> 00:23:04,720
flying things up for for the entire team

666
00:23:07,270 --> 00:23:06,320
and we talked about flying ice cream

667
00:23:08,870 --> 00:23:07,280
although i don't know if we ever got

668
00:23:09,990 --> 00:23:08,880
that on board did we ever get ice cream

669
00:23:11,270 --> 00:23:10,000
i don't know we should get ice cream on

670
00:23:13,110 --> 00:23:11,280
board

671
00:23:15,669 --> 00:23:13,120
so i don't know the answer that i uh

672
00:23:16,789 --> 00:23:15,679
when i i just got back from a conference

673
00:23:18,630 --> 00:23:16,799
and uh

674
00:23:20,470 --> 00:23:18,640
um i haven't been able to check up to

675
00:23:23,430 --> 00:23:20,480
see but we did we did talk about flying

676
00:23:24,789 --> 00:23:23,440
ice cream up because we had the freezers

677
00:23:26,630 --> 00:23:24,799
installed but i don't know we ended up

678
00:23:27,590 --> 00:23:26,640
doing that but you know every flight we

679
00:23:28,470 --> 00:23:27,600
bring up

680
00:23:33,350 --> 00:23:28,480
um

681
00:23:35,110 --> 00:23:33,360
research and we we try to generally

682
00:23:36,950 --> 00:23:35,120
bring up what we call bonus food for the

683
00:23:38,710 --> 00:23:36,960
crew and this is this is one of those

684
00:23:40,149 --> 00:23:38,720
flights will have that and so that in

685
00:23:42,310 --> 00:23:40,159
and of itself usually are things that

686
00:23:44,230 --> 00:23:42,320
the crew prefers to have

687
00:23:45,750 --> 00:23:44,240
so that that will fly up and i'll have

688
00:23:48,390 --> 00:23:45,760

to check on the whether we got the ice

689
00:23:50,549 --> 00:23:48,400
cream on or not

690
00:23:53,029 --> 00:23:50,559
thank you and just as a follow-up for

691
00:23:54,950 --> 00:23:53,039
for glenn i'm curious about the falcon 9

692
00:23:57,269 --> 00:23:54,960
for this mission if there there is an

693
00:23:59,590 --> 00:23:57,279
opportunity that you've taken uh for a

694
00:24:02,149 --> 00:23:59,600
secondary payload either with a private

695
00:24:04,070 --> 00:24:02,159
partner or someone else um just just to

696
00:24:07,269 --> 00:24:04,080
take advantage of any additional up mesh

697
00:24:08,789 --> 00:24:07,279
you might have uh for this flight thanks

698
00:24:10,390 --> 00:24:08,799
we are flying a secondary on this

699
00:24:13,830 --> 00:24:10,400
mission we're flying a prototype

700
00:24:16,070 --> 00:24:13,840
satellite for the orbcom uh og2

701
00:24:18,470 --> 00:24:16,080
upgrade to their constellation it's a

702
00:24:19,750 --> 00:24:18,480
165 kilo

703
00:24:21,830 --> 00:24:19,760
satellite

704
00:24:23,990 --> 00:24:21,840
this prototype needs to operate on orbit

705
00:24:25,909 --> 00:24:24,000
before we go ahead and launch

706
00:24:27,830 --> 00:24:25,919
eight to 12 of them on a dedicated

707
00:24:30,470 --> 00:24:27,840
falcon 9 mission that's the only

708
00:24:33,830 --> 00:24:30,480
secondary though

709
00:24:36,230 --> 00:24:33,840
all right we're back here at kennedy

710
00:24:39,110 --> 00:24:36,240
hi this is emily carney with the space

711
00:24:42,230 --> 00:24:39,120
available blog with social media

712
00:24:44,630 --> 00:24:42,240
my question is from his shot well um

713
00:24:47,830 --> 00:24:44,640

why is there only an ins why for spacex

714
00:24:49,750 --> 00:24:47,840
is there an instantaneous launch window

715
00:24:53,590 --> 00:24:49,760
it's not exactly an instantaneous launch

716
00:24:55,909 --> 00:24:53,600
window um but it's pretty darn close um

717
00:24:58,070 --> 00:24:55,919
if we were to have to recycle basically

718
00:24:59,909 --> 00:24:58,080
you you have to launch into an orbit

719
00:25:01,350 --> 00:24:59,919
plane where you're going to have a

720
00:25:03,029 --> 00:25:01,360
conjunction with the iss you want to

721
00:25:04,230 --> 00:25:03,039
obviously you want to rendezvous with

722
00:25:07,590 --> 00:25:04,240
the iss

723
00:25:09,669 --> 00:25:07,600
and those windows tend to not be long

724
00:25:11,750 --> 00:25:09,679
however if we were to recycle we could

725
00:25:14,310 --> 00:25:11,760
not recycle in time to get another

726
00:25:16,149 --> 00:25:14,320
mission off in that in that period of

727
00:25:17,669 --> 00:25:16,159
time so that's why it's fundamentally it

728
00:25:18,950 --> 00:25:17,679
ends up being an instantaneous launch

729
00:25:19,830 --> 00:25:18,960
window

730
00:25:21,750 --> 00:25:19,840
just

731
00:25:23,350 --> 00:25:21,760
yeah and i'll add to that

732
00:25:25,350 --> 00:25:23,360
every time you try to rendezvous with

733
00:25:26,950 --> 00:25:25,360
with station there's a there's a precise

734
00:25:28,630 --> 00:25:26,960
point where you launch it's the most

735
00:25:30,549 --> 00:25:28,640
efficient because you're launching right

736
00:25:32,390 --> 00:25:30,559
into the plane with the vehicle so in

737
00:25:34,310 --> 00:25:32,400
the shuttle you had we had additional

738
00:25:36,950 --> 00:25:34,320

performance and so we got a whole 10

739
00:25:37,830 --> 00:25:36,960
minutes worth of a window

740
00:25:39,590 --> 00:25:37,840
but

741
00:25:41,190 --> 00:25:39,600
many of the vehicles including the soyuz

742
00:25:42,870 --> 00:25:41,200
that launched the progress and the and

743
00:25:44,950 --> 00:25:42,880
the crude vehicles have very very small

744
00:25:46,630 --> 00:25:44,960
windows in order to conserve the

745
00:25:48,549 --> 00:25:46,640
performance and be able to send more to

746
00:25:51,110 --> 00:25:48,559
the station so that's true in all

747
00:25:53,750 --> 00:25:51,120
vehicles including this one

748
00:25:55,750 --> 00:25:53,760
on our static fire we did hit t0 on the

749
00:25:57,430 --> 00:25:55,760
money so

750
00:25:59,750 --> 00:25:57,440
looks good

751
00:26:01,430 --> 00:25:59,760
i'm uh jim howard social media from

752
00:26:02,549 --> 00:26:01,440
texas i have just two quick questions

753
00:26:04,310 --> 00:26:02,559
are there any possible weather

754
00:26:06,310 --> 00:26:04,320
constraints associated with rolling your

755
00:26:08,310 --> 00:26:06,320
vehicle out and erecting it that could

756
00:26:09,669 --> 00:26:08,320
delay the launch and the second one is

757
00:26:12,390 --> 00:26:09,679
this detection i have to ask can you

758
00:26:14,070 --> 00:26:12,400
comment on the possible spacex facility

759
00:26:16,470 --> 00:26:14,080
in deep south texas possibly around

760
00:26:19,750 --> 00:26:16,480
brownsville

761
00:26:22,310 --> 00:26:19,760
okay so um we could have the vehicle

762
00:26:23,590 --> 00:26:22,320
out on the pad during the rain

763
00:26:25,350 --> 00:26:23,600

but

764
00:26:27,029 --> 00:26:25,360
we don't have to do that so we're going

765
00:26:30,310 --> 00:26:27,039
to roll out we're attempting to roll out

766
00:26:32,549 --> 00:26:30,320
are we going to at 6 00 p.m this evening

767
00:26:34,630 --> 00:26:32,559
depending on whether we can roll out any

768
00:26:37,190 --> 00:26:34,640
time till well we have to be vertical by

769
00:26:39,350 --> 00:26:37,200
about 1 pm tomorrow we've got late load

770
00:26:42,070 --> 00:26:39,360
cargo hopefully the ice cream

771
00:26:44,549 --> 00:26:42,080
that mike was referring to

772
00:26:46,230 --> 00:26:44,559
uh that that will load that operation

773
00:26:48,470 --> 00:26:46,240
starts at 6 a.m tomorrow so we want to

774
00:26:49,830 --> 00:26:48,480
be horizontal and out of the hangar by 6

775
00:26:51,510 --> 00:26:49,840
a.m tomorrow but we do have some

776
00:26:53,590 --> 00:26:51,520
flexibility

777
00:26:55,350 --> 00:26:53,600
and as far as the launch site goes we

778
00:26:57,750 --> 00:26:55,360
continue to look at a number of launch

779
00:27:00,230 --> 00:26:57,760
sites we happen to be further ahead in

780
00:27:01,669 --> 00:27:00,240
south texas than any other location

781
00:27:03,590 --> 00:27:01,679
so we're looking at a commercial site

782
00:27:05,750 --> 00:27:03,600
there in brownsville area

783
00:27:09,510 --> 00:27:05,760
we are looking at

784
00:27:12,230 --> 00:27:09,520
capability here just north of the cape

785
00:27:14,390 --> 00:27:12,240
puerto rico has some very nice

786
00:27:16,789 --> 00:27:14,400
land as well

787
00:27:18,830 --> 00:27:16,799
georgia potentially i'd personally love

788
00:27:20,710 --> 00:27:18,840

to fly from the south point of hawaii

789
00:27:22,470 --> 00:27:20,720
but uh

790
00:27:24,470 --> 00:27:22,480
i'm not sure i'm not sure we're gonna

791
00:27:25,830 --> 00:27:24,480
i'm not sure we'll go there but there's

792
00:27:29,190 --> 00:27:25,840
there's a number in play at this point

793
00:27:32,070 --> 00:27:29,200
we're just further along with texas

794
00:27:34,070 --> 00:27:32,080
hi stacy severn nasa social media uh

795
00:27:35,669 --> 00:27:34,080
this question is from miss shot well uh

796
00:27:37,269 --> 00:27:35,679
two part question

797
00:27:38,950 --> 00:27:37,279
is there anything in particular you

798
00:27:41,110 --> 00:27:38,960
learned from cots2 that will change how

799
00:27:43,190 --> 00:27:41,120
you approach this flight and were there

800
00:27:44,630 --> 00:27:43,200
any test maneuvers performed during cuts

801
00:27:47,269 --> 00:27:44,640
too that will be skipped during this

802
00:27:48,470 --> 00:27:47,279
flights rendezvous and birthing process

803
00:27:50,630 --> 00:27:48,480
i'm going to answer your second one

804
00:27:53,029 --> 00:27:50,640
first and i meant to mention that in my

805
00:27:57,430 --> 00:27:53,039
opening remarks so if you recall the

806
00:28:00,389 --> 00:27:57,440
last flight was both the c2 and the c3

807
00:28:03,269 --> 00:28:00,399
are planned cots missions so the c2 was

808
00:28:05,350 --> 00:28:03,279
a fly under the station test the coms

809
00:28:08,789 --> 00:28:05,360
test the relative gps and the absolute

810
00:28:09,830 --> 00:28:08,799
gps systems we will not be doing

811
00:28:13,110 --> 00:28:09,840
those

812
00:28:14,870 --> 00:28:13,120
because we demonstrated we could do it

813
00:28:16,630 --> 00:28:14,880

so this time we'll be driving right to

814
00:28:18,630 --> 00:28:16,640
station so we'll be skipping that

815
00:28:20,149 --> 00:28:18,640
particular piece and as far as the

816
00:28:21,990 --> 00:28:20,159
learning goes there's no question every

817
00:28:23,669 --> 00:28:22,000
time we fly our hardware in our systems

818
00:28:25,750 --> 00:28:23,679
we learned something

819
00:28:27,269 --> 00:28:25,760
we learned we like to be able to crop

820
00:28:29,430 --> 00:28:27,279
our imaging

821
00:28:30,870 --> 00:28:29,440
we learned that on the on the last

822
00:28:33,029 --> 00:28:30,880
flight and that was one of the reasons

823
00:28:34,070 --> 00:28:33,039
why we were successful in actually

824
00:28:35,510 --> 00:28:34,080
approaching

825
00:28:37,830 --> 00:28:35,520
maintaining

826
00:28:39,350 --> 00:28:37,840
our position in the birthing box so i

827
00:28:41,750 --> 00:28:39,360
think we made that flexibility a little

828
00:28:43,590 --> 00:28:41,760
bit easier

829
00:28:45,350 --> 00:28:43,600
on that there are other few minor

830
00:28:49,590 --> 00:28:45,360
changes but in general these vehicles

831
00:28:54,549 --> 00:28:52,070
marsha martian and associated press uh

832
00:28:56,710 --> 00:28:54,559
this time from mike safradini

833
00:28:59,510 --> 00:28:56,720
what's the latest on the debris up there

834
00:29:00,470 --> 00:28:59,520
i think there's a conjunction

835
00:29:01,909 --> 00:29:00,480
alert

836
00:29:03,590 --> 00:29:01,919
what's the latest that you're hearing on

837
00:29:06,710 --> 00:29:03,600
that and if the station has to move is

838
00:29:08,710 --> 00:29:06,720

that going to upset the spacex launch

839
00:29:10,950 --> 00:29:08,720
and secondly um when do you think you

840
00:29:12,789 --> 00:29:10,960
might be making

841
00:29:16,310 --> 00:29:12,799
an announcement or a decision regarding

842
00:29:18,470 --> 00:29:16,320
the uh new one-year crew

843
00:29:20,549 --> 00:29:18,480
uh let's see yes there is a conjunction

844
00:29:24,389 --> 00:29:20,559
that has a time of closest approach for

845
00:29:26,070 --> 00:29:24,399
monday at 1202 gmt

846
00:29:27,990 --> 00:29:26,080
uh i think it's going to go green though

847
00:29:29,669 --> 00:29:28,000
last word i got before i came in here is

848
00:29:30,789 --> 00:29:29,679
it's looking promising that's going to

849
00:29:32,710 --> 00:29:30,799
clear

850
00:29:34,870 --> 00:29:32,720
so uh if we do have to do a maneuver

851
00:29:35,990 --> 00:29:34,880
then we do need to talk to our spacex

852
00:29:37,669 --> 00:29:36,000
friends because the station won't be

853
00:29:38,789 --> 00:29:37,679
where they're expecting it to be

854
00:29:40,149 --> 00:29:38,799
and so they would have to adjust

855
00:29:42,630 --> 00:29:40,159
themselves accordingly so that would be

856
00:29:45,510 --> 00:29:42,640
a conversation we'd have just together

857
00:29:46,630 --> 00:29:45,520
so we've started the the discussions um

858
00:29:48,549 --> 00:29:46,640
you know there's a number of burns you

859
00:29:50,549 --> 00:29:48,559
can do different sizes and so we would

860
00:29:52,630 --> 00:29:50,559
work that with them and then decide work

861
00:29:55,590 --> 00:29:52,640
best for both but but i think it'll turn

862
00:29:56,950 --> 00:29:55,600
green and we won't require maneuver

863
00:29:58,710 --> 00:29:56,960

let's see we've decided we're going to

864
00:30:01,110 --> 00:29:58,720
do the

865
00:30:02,149 --> 00:30:01,120
the one year increment and so we have

866
00:30:04,950 --> 00:30:02,159
let the

867
00:30:06,549 --> 00:30:04,960
multilateral crew operations panel go

868
00:30:09,190 --> 00:30:06,559
off and do their thing to select their

869
00:30:10,950 --> 00:30:09,200
crew we need to get that done relatively

870
00:30:12,549 --> 00:30:10,960
quickly and as you can imagine there has

871
00:30:14,230 --> 00:30:12,559
been some discussions before this

872
00:30:15,669 --> 00:30:14,240
decision was made

873
00:30:18,630 --> 00:30:15,679
i believe they're shooting for the

874
00:30:20,630 --> 00:30:18,640
middle of october to to late october to

875
00:30:24,389 --> 00:30:20,640
to give us a name so we'll hear it here

876
00:30:28,549 --> 00:30:25,590
have you picked somebody and you just

877
00:30:30,389 --> 00:30:28,559
don't want to say yet i don't uh

878
00:30:33,430 --> 00:30:30,399
you got a short list i can tell you the

879
00:30:35,110 --> 00:30:33,440
the uh the options the the list of names

880
00:30:37,029 --> 00:30:35,120
was very short yes that's the best way

881
00:30:40,230 --> 00:30:37,039
to say it so

882
00:30:44,870 --> 00:30:42,070
mark raderman with talking space a

883
00:30:48,070 --> 00:30:44,880
question for sam

884
00:30:50,870 --> 00:30:48,080
in the in the idea of public support for

885
00:30:53,430 --> 00:30:50,880
iss operations and considering how the

886
00:30:56,149 --> 00:30:53,440
shuttle program things became so routine

887
00:31:02,549 --> 00:30:58,389
not necessarily exciting during parts of

888
00:31:07,269 --> 00:31:05,430

do you see the space station cargo

889
00:31:09,830 --> 00:31:07,279
support that we're now starting to

890
00:31:12,950 --> 00:31:09,840
provide do you see that becoming

891
00:31:14,789 --> 00:31:12,960
seen as routine and

892
00:31:16,630 --> 00:31:14,799
how will that how will public opinion

893
00:31:18,230 --> 00:31:16,640
affect the future

894
00:31:20,230 --> 00:31:18,240
well i can tell you firsthand that

895
00:31:21,990 --> 00:31:20,240
anything we do in space is not

896
00:31:23,909 --> 00:31:22,000
routine or easy

897
00:31:24,950 --> 00:31:23,919
every one of those shuttle missions was

898
00:31:26,789 --> 00:31:24,960
hard

899
00:31:29,430 --> 00:31:26,799
many things went wrong

900
00:31:31,669 --> 00:31:29,440
big some big things some small things

901
00:31:32,950 --> 00:31:31,679
just recently on board station we had

902
00:31:37,190 --> 00:31:32,960
some

903
00:31:39,830 --> 00:31:37,200
partner vehicles that caught us by

904
00:31:42,149 --> 00:31:39,840
surprise and we had to work through them

905
00:31:44,549 --> 00:31:42,159
uh over the years many years that that

906
00:31:46,230 --> 00:31:44,559
spacex will be with us i hope there will

907
00:31:47,750 --> 00:31:46,240
probably be anomalies that show up that

908
00:31:49,190 --> 00:31:47,760
we didn't expect and we'll have to work

909
00:31:52,710 --> 00:31:49,200
through those so i don't believe any of

910
00:31:56,470 --> 00:31:54,710
bill uh bill harwood cbs what's another

911
00:31:58,070 --> 00:31:56,480
one from mike steferdini and i apologize

912
00:31:59,750 --> 00:31:58,080
again for this question because it's not

913
00:32:01,110 --> 00:31:59,760

it's not a spacex question it's a

914
00:32:03,029 --> 00:32:01,120
looking for an update on orbital and

915
00:32:05,430 --> 00:32:03,039
when you guys are going to be flying uh

916
00:32:06,789 --> 00:32:05,440
those guys for the for demo and then for

917
00:32:09,190 --> 00:32:06,799
if you look at the manifest we still

918
00:32:10,950 --> 00:32:09,200
have them in december but i would

919
00:32:12,470 --> 00:32:10,960
they have they have rolled out their

920
00:32:14,870 --> 00:32:12,480
first stage out to the pad as you

921
00:32:16,950 --> 00:32:14,880
probably know they have what they

922
00:32:19,909 --> 00:32:16,960
refer to as the five thousand and seven

923
00:32:21,590 --> 00:32:19,919
thousand tests which uh basically is you

924
00:32:23,029 --> 00:32:21,600
you know load it up first and then

925
00:32:25,750 --> 00:32:23,039
offload and see how everything goes and

926
00:32:26,630 --> 00:32:25,760
then they'll load it up into a hot fire

927
00:32:28,870 --> 00:32:26,640
that

928
00:32:31,669 --> 00:32:28,880
will probably occur before the end of

929
00:32:35,909 --> 00:32:33,909
and then they have a test flight that's

930
00:32:37,750 --> 00:32:35,919
i don't know it's probably

931
00:32:39,029 --> 00:32:37,760
i'm guessing now but probably into

932
00:32:40,950 --> 00:32:39,039
december

933
00:32:42,870 --> 00:32:40,960
which doesn't go to iss

934
00:32:44,389 --> 00:32:42,880
so i'm not expecting the demo flight

935
00:32:45,509 --> 00:32:44,399
until

936
00:32:46,789 --> 00:32:45,519
uh and

937
00:32:48,870 --> 00:32:46,799
and we haven't

938
00:32:50,630 --> 00:32:48,880

decided with orbital when we would fly

939
00:32:54,070 --> 00:32:50,640
but i'd be surprised before late

940
00:32:55,669 --> 00:32:54,080
february early march

941
00:32:58,070 --> 00:32:55,679
okay we're going to take one more here

942
00:33:00,149 --> 00:32:58,080
before we go back to the phone bridge

943
00:33:01,269 --> 00:33:00,159
go ahead my name is john rockwood jr and

944
00:33:04,230 --> 00:33:01,279
i'm with uh

945
00:33:06,389 --> 00:33:04,240
zlg news and countdown today my question

946
00:33:07,430 --> 00:33:06,399
is for mr cabana or anybody who's on the

947
00:33:10,149 --> 00:33:07,440
panel

948
00:33:13,669 --> 00:33:10,159
as spacex continues to have its success

949
00:33:17,110 --> 00:33:15,190
everything just seemed to go the way

950
00:33:19,669 --> 00:33:17,120
it's supposed to when do you think you

951
00:33:22,310 --> 00:33:19,679
may become human rated to fly american

952
00:33:24,389 --> 00:33:22,320
astronauts into orbit to the space

953
00:33:25,750 --> 00:33:24,399
station and the last question would be

954
00:33:28,470 --> 00:33:25,760
what kind of ice cream would you be

955
00:33:31,830 --> 00:33:30,070
well as far as human rating the vehicle

956
00:33:33,029 --> 00:33:31,840
goes the commercial crew program is

957
00:33:35,350 --> 00:33:33,039
working

958
00:33:37,509 --> 00:33:35,360
in defining what those requirements are

959
00:33:39,350 --> 00:33:37,519
and there's a document that lists what

960
00:33:41,669 --> 00:33:39,360
human rating is

961
00:33:43,830 --> 00:33:41,679
and we're working very closely with all

962
00:33:45,350 --> 00:33:43,840
three of the uh

963
00:33:49,029 --> 00:33:45,360

space act

964
00:33:51,750 --> 00:33:49,039
participants in helping them reach a set

965
00:33:54,310 --> 00:33:51,760
of requirements that will allow us to

966
00:33:57,029 --> 00:33:54,320
rate the vehicle our goal is to

967
00:34:00,389 --> 00:33:57,039
have a u.s capability to fly our crews

968
00:34:02,070 --> 00:34:00,399
to the space station no later than 2017.

969
00:34:04,149 --> 00:34:02,080
some of them feel they can get there

970
00:34:05,509 --> 00:34:04,159
sooner than that so we'll have to see

971
00:34:07,750 --> 00:34:05,519
how it all works out but we're working

972
00:34:09,750 --> 00:34:07,760
very closely with them uh we're defining

973
00:34:11,990 --> 00:34:09,760
what the requirements are and when they

974
00:34:13,909 --> 00:34:12,000
prove they meet those requirements then

975
00:34:15,990 --> 00:34:13,919
we'll be able to certify and move

976
00:34:17,349 --> 00:34:16,000
forward

977
00:34:20,389 --> 00:34:17,359
okay let's go to the phone bridge i

978
00:34:22,629 --> 00:34:20,399
believe we have hans letts from the city

979
00:34:24,790 --> 00:34:22,639
news service in los angeles on the line

980
00:34:27,349 --> 00:34:24,800
yeah kind of a parochial question thanks

981
00:34:29,349 --> 00:34:27,359
how much of the the dragon and the the

982
00:34:34,069 --> 00:34:29,359
rocket itself was built here in southern

983
00:34:38,710 --> 00:34:36,149
the vast majority of the vehicle whether

984
00:34:40,790 --> 00:34:38,720
by price or by mass

985
00:34:43,109 --> 00:34:40,800
spacex is not an integrator of other

986
00:34:44,869 --> 00:34:43,119
people's hardware generally we build uh

987
00:34:48,149 --> 00:34:44,879
we build the vast majority of that

988
00:34:49,430 --> 00:34:48,159

vehicle uh in at spacex and our head in

989
00:34:51,270 --> 00:34:49,440
our head at our headquarters in

990
00:34:53,669 --> 00:34:51,280
hawthorne california so we build our

991
00:34:56,389 --> 00:34:53,679
tanks we now building our domes we build

992
00:34:59,589 --> 00:34:56,399
our engines uh we build our many of the

993
00:35:01,910 --> 00:34:59,599
avionics are ours um

994
00:35:04,630 --> 00:35:01,920
we build the the dragon capsule the

995
00:35:06,150 --> 00:35:04,640
draco engines the merlin engines so

996
00:35:07,589 --> 00:35:06,160
almost everything

997
00:35:11,430 --> 00:35:07,599
probably easier to tell you what i don't

998
00:35:15,270 --> 00:35:12,870
anything else hans

999
00:35:17,670 --> 00:35:15,280
no thank you very much thank you go

1000
00:35:18,470 --> 00:35:17,680
ahead parker brevard times

1001
00:35:19,910 --> 00:35:18,480
um

1002
00:35:22,870 --> 00:35:19,920
could you give me a little more specific

1003
00:35:24,870 --> 00:35:22,880
about the debris question and uh

1004
00:35:27,190 --> 00:35:24,880
obviously at two scenarios dragon is on

1005
00:35:29,750 --> 00:35:27,200
its way tomorrow night and you may have

1006
00:35:31,750 --> 00:35:29,760
to move while it's in route or

1007
00:35:33,990 --> 00:35:31,760
launch on monday after you've moved

1008
00:35:36,230 --> 00:35:34,000
potentially

1009
00:35:38,710 --> 00:35:36,240
which is the better of the two scenarios

1010
00:35:40,550 --> 00:35:38,720
and would launch time change monday

1011
00:35:42,150 --> 00:35:40,560
night if you had to move

1012
00:35:44,069 --> 00:35:42,160
monday during the day

1013
00:35:47,670 --> 00:35:44,079

no i i would suspect that we'll just

1014
00:35:49,349 --> 00:35:47,680
adjust our orbit and uh and it may take

1015
00:35:51,510 --> 00:35:49,359
spacex a little longer to get there we

1016
00:35:53,109 --> 00:35:51,520
also can adjust orbis one way and adjust

1017
00:35:55,109 --> 00:35:53,119
back i mean there's a number of things

1018
00:35:56,550 --> 00:35:55,119
we do we're not gonna i couldn't imagine

1019
00:35:59,030 --> 00:35:56,560
a a

1020
00:36:00,950 --> 00:35:59,040
scenario where we ask them not to launch

1021
00:36:02,870 --> 00:36:00,960
so this is not going to be a major move

1022
00:36:04,790 --> 00:36:02,880
of the station it'll move a bit so

1023
00:36:06,710 --> 00:36:04,800
they'll have to face a little bit to to

1024
00:36:08,069 --> 00:36:06,720
catch us if we don't don't come back i

1025
00:36:10,150 --> 00:36:08,079
don't like to do

1026
00:36:11,750 --> 00:36:10,160
retrograde burns though so

1027
00:36:13,270 --> 00:36:11,760
we'll probably ask him to catch us but

1028
00:36:16,630 --> 00:36:13,280
that's what we'll work together monday

1029
00:36:20,950 --> 00:36:16,640
night wants to stay at the same time

1030
00:36:24,710 --> 00:36:22,710
that's my intention i don't know what

1031
00:36:27,589 --> 00:36:24,720
their plan is but my plan is for them to

1032
00:36:29,349 --> 00:36:27,599
launch on sunday um be the good lord

1033
00:36:30,550 --> 00:36:29,359
willing and and then they'll just adjust

1034
00:36:32,630 --> 00:36:30,560
while they're flying if we have to do

1035
00:36:34,310 --> 00:36:32,640
the mover but we can do very very small

1036
00:36:36,470 --> 00:36:34,320
maneuvers of iss and generally that's

1037
00:36:37,910 --> 00:36:36,480
enough to clear conjunction so

1038
00:36:40,150 --> 00:36:37,920

i don't i don't see this being a big

1039
00:36:41,030 --> 00:36:40,160
problem

1040
00:36:44,790 --> 00:36:41,040
mark

1041
00:36:46,790 --> 00:36:44,800
question for bob cabana how are things

1042
00:36:49,349 --> 00:36:46,800
working out budget wise for the changes

1043
00:36:51,270 --> 00:36:49,359
that are in work here at kennedy with

1044
00:36:53,589 --> 00:36:51,280
the changes the infrastructure how is

1045
00:36:56,069 --> 00:36:53,599
the support going for that versus what

1046
00:36:58,470 --> 00:36:56,079
you expected when this started

1047
00:37:00,310 --> 00:36:58,480
well the budget's working out uh very

1048
00:37:02,310 --> 00:37:00,320
well for what we got uh we're moving

1049
00:37:04,230 --> 00:37:02,320
forward and we have to see of course

1050
00:37:06,470 --> 00:37:04,240
we're in a continuing resolution right

1051
00:37:08,790 --> 00:37:06,480
now so we're spending it what we were

1052
00:37:11,510 --> 00:37:08,800
spending before the end of the fiscal

1053
00:37:13,829 --> 00:37:11,520
year uh i hope that as we move forward

1054
00:37:14,870 --> 00:37:13,839
we'll get a budget that is close to what

1055
00:37:17,589 --> 00:37:14,880
was uh

1056
00:37:19,349 --> 00:37:17,599
promised and uh will continue on but as

1057
00:37:21,349 --> 00:37:19,359
far as the work that's getting done

1058
00:37:22,790 --> 00:37:21,359
we're getting it all done with the with

1059
00:37:24,310 --> 00:37:22,800
what we've been given so far and i'm

1060
00:37:25,670 --> 00:37:24,320
confident we'll continue with that

1061
00:37:26,950 --> 00:37:25,680
that's not to say there aren't budget

1062
00:37:29,270 --> 00:37:26,960
challenges

1063
00:37:30,630 --> 00:37:29,280

these are very tough fiscal times and we

1064
00:37:33,190 --> 00:37:30,640
have to ensure that

1065
00:37:35,030 --> 00:37:33,200
the money that we are given we use very

1066
00:37:37,190 --> 00:37:35,040
wisely that we deliver on what we said

1067
00:37:39,349 --> 00:37:37,200
we're going to do on time within budget

1068
00:37:41,190 --> 00:37:39,359
with a quality product and so far we've

1069
00:37:43,190 --> 00:37:41,200
been able to do that but

1070
00:37:45,109 --> 00:37:43,200
just running the center from a point of

1071
00:37:46,150 --> 00:37:45,119
view of things that

1072
00:37:48,390 --> 00:37:46,160
have to

1073
00:37:49,190 --> 00:37:48,400
happen you know to maintain facilities

1074
00:37:52,950 --> 00:37:49,200
and

1075
00:37:55,109 --> 00:37:52,960
we're essentially flat which means our

1076
00:37:56,790 --> 00:37:55,119
budget's decreasing because you know

1077
00:37:59,510 --> 00:37:56,800
there's still inflation salaries still

1078
00:38:02,069 --> 00:37:59,520
go up there's escalation in contracts so

1079
00:38:03,990 --> 00:38:02,079
it means that we can't do everything

1080
00:38:05,270 --> 00:38:04,000
that we've done in the past and we're

1081
00:38:09,430 --> 00:38:05,280
tightening our belts to make sure that

1082
00:38:11,510 --> 00:38:09,440
we can still do what needs to get done

1083
00:38:12,950 --> 00:38:11,520
stuartmoney interspace.net and my

1084
00:38:15,910 --> 00:38:12,960
question is for mike

1085
00:38:18,390 --> 00:38:15,920
will nasa be returning on this mission

1086
00:38:20,550 --> 00:38:18,400
or any future ones components or

1087
00:38:23,270 --> 00:38:20,560
experiments from the russian segment of

1088
00:38:28,230 --> 00:38:25,349

uh in fact on this flight we're bringing

1089
00:38:30,150 --> 00:38:28,240
home what they refer to as an snt it's a

1090
00:38:32,710 --> 00:38:30,160
power converter so that the us can

1091
00:38:34,710 --> 00:38:32,720
provide power to the russian segment

1092
00:38:36,950 --> 00:38:34,720
it recently failed on orbit and so we're

1093
00:38:38,550 --> 00:38:36,960
going to bring that home

1094
00:38:41,430 --> 00:38:38,560
and so we have an arrangement with our

1095
00:38:43,030 --> 00:38:41,440
with all of the partners that if they uh

1096
00:38:45,030 --> 00:38:43,040
if they would like to return something

1097
00:38:47,190 --> 00:38:45,040
that there's a value that we have for it

1098
00:38:50,390 --> 00:38:47,200
and we we bartered appropriately but yes

1099
00:38:52,870 --> 00:38:50,400
i expect to be bringing

1100
00:38:55,109 --> 00:38:52,880
all of the partners stuff home as as

1101
00:38:58,069 --> 00:38:55,119
their need arises and we can afford to

1102
00:39:03,829 --> 00:39:01,109
my name is um right here ivan moreno

1103
00:39:05,750 --> 00:39:03,839
it's for you um spacex

1104
00:39:07,990 --> 00:39:05,760
if everything goes all right and you

1105
00:39:10,390 --> 00:39:08,000
have success and all your contracts with

1106
00:39:13,349 --> 00:39:10,400
nasa do you think you have a plans on

1107
00:39:15,829 --> 00:39:13,359
the future that you can do do your own

1108
00:39:17,910 --> 00:39:15,839
launches your own research

1109
00:39:20,069 --> 00:39:17,920
completely um you know being independent

1110
00:39:23,670 --> 00:39:20,079
out of finance like do it on your own

1111
00:39:27,750 --> 00:39:25,589
you know we'll we on our own do some

1112
00:39:29,750 --> 00:39:27,760
technology development i don't see us

1113
00:39:31,430 --> 00:39:29,760

doing any fundamental

1114
00:39:33,030 --> 00:39:31,440
scientific research

1115
00:39:35,349 --> 00:39:33,040
that that's something that's best done i

1116
00:39:37,190 --> 00:39:35,359
think in partnership

1117
00:39:39,430 --> 00:39:37,200
it's like uh you know probably get to

1118
00:39:41,270 --> 00:39:39,440
the moon or go to mars or

1119
00:39:42,950 --> 00:39:41,280
do your own

1120
00:39:45,270 --> 00:39:42,960
space work

1121
00:39:47,670 --> 00:39:45,280
out of nasa

1122
00:39:49,349 --> 00:39:47,680
those are very ambitious projects and we

1123
00:39:50,950 --> 00:39:49,359
really want to be a part of them

1124
00:39:52,310 --> 00:39:50,960
certainly going to mars we've been very

1125
00:39:54,870 --> 00:39:52,320
public about that

1126
00:39:56,630 --> 00:39:54,880
i i think it would be very difficult to

1127
00:39:58,870 --> 00:39:56,640
for any organization to do a mission

1128
00:40:00,390 --> 00:39:58,880
like that on their own so

1129
00:40:02,230 --> 00:40:00,400
we'll we hope to be part of the

1130
00:40:07,190 --> 00:40:02,240
partnership that does eventually go do

1131
00:40:12,630 --> 00:40:09,510
jonathan pearson

1132
00:40:15,270 --> 00:40:12,640
social media los angeles california

1133
00:40:17,670 --> 00:40:15,280
um i'm aware that spacex has initi

1134
00:40:20,230 --> 00:40:17,680
wasn't that the dragon was initially

1135
00:40:21,510 --> 00:40:20,240
designed to carry personnel

1136
00:40:22,790 --> 00:40:21,520
and

1137
00:40:24,950 --> 00:40:22,800
what do you see as

1138
00:40:27,270 --> 00:40:24,960

as far as

1139
00:40:29,430 --> 00:40:27,280
bringing personnel to the space station

1140
00:40:30,630 --> 00:40:29,440
it's also been rumored

1141
00:40:34,470 --> 00:40:30,640
that

1142
00:40:39,510 --> 00:40:34,480
celebrity opera singer sarah brightman

1143
00:40:40,550 --> 00:40:39,520
has paid for a spot on one of russian's

1144
00:40:43,109 --> 00:40:40,560
flights

1145
00:40:46,309 --> 00:40:43,119
now is that something that

1146
00:40:48,309 --> 00:40:46,319
nasa or spacex will be looking into as

1147
00:40:51,670 --> 00:40:48,319
far as

1148
00:40:53,990 --> 00:40:51,680
as space tourism

1149
00:40:56,710 --> 00:40:54,000
so we did design dragon from the

1150
00:40:59,349 --> 00:40:56,720
beginning to facilitate human access to

1151
00:41:01,030 --> 00:40:59,359
space uh in addition to cargo it doesn't

1152
00:41:02,710 --> 00:41:01,040
mean it's capable at this moment it's

1153
00:41:04,790 --> 00:41:02,720
mean that we've designed the hooks that

1154
00:41:07,030 --> 00:41:04,800
as we understood them and we're working

1155
00:41:09,270 --> 00:41:07,040
on the remaining pieces the largest

1156
00:41:12,150 --> 00:41:09,280
development that we have left on dragon

1157
00:41:14,069 --> 00:41:12,160
to make it crew raidable

1158
00:41:15,510 --> 00:41:14,079
as far as bringing folks up uh during

1159
00:41:17,430 --> 00:41:15,520
the ascent period is having a launch

1160
00:41:19,349 --> 00:41:17,440
escape system a safety system for the

1161
00:41:21,910 --> 00:41:19,359
astronauts in case you have a really bad

1162
00:41:23,430 --> 00:41:21,920
day with the launch vehicle um that's

1163
00:41:25,270 --> 00:41:23,440

the largest development there's still

1164
00:41:28,550 --> 00:41:25,280
some crew interface work we have to do

1165
00:41:30,309 --> 00:41:28,560
space suit work uh etc um

1166
00:41:33,109 --> 00:41:30,319
so there's there we are

1167
00:41:35,829 --> 00:41:33,119
we are working on uh enhancing dragon to

1168
00:41:37,190 --> 00:41:35,839
be able to carry crew um

1169
00:41:39,109 --> 00:41:37,200
right right there's

1170
00:41:40,710 --> 00:41:39,119
the market for crew outside of nasa is

1171
00:41:43,510 --> 00:41:40,720
very ill-defined i think there's lots of

1172
00:41:46,550 --> 00:41:43,520
folks that want to go bob bigelow um has

1173
00:41:49,190 --> 00:41:46,560
some very interesting ideas on uh on

1174
00:41:51,990 --> 00:41:49,200
uses of of crew in space

1175
00:41:53,109 --> 00:41:52,000
as far as um tourism it's not a focus

1176
00:41:55,349 --> 00:41:53,119
for us

1177
00:41:57,829 --> 00:41:55,359
um i'm thrilled to hear anybody actually

1178
00:41:59,670 --> 00:41:57,839
paying a ticket to go uh to go to space

1179
00:42:01,990 --> 00:41:59,680
i think that's uh i think it's good for

1180
00:42:04,150 --> 00:42:02,000
the industry um it's not a focus for

1181
00:42:06,870 --> 00:42:04,160
spacex right now

1182
00:42:08,550 --> 00:42:06,880
hi john walker with junior for the gog

1183
00:42:11,109 --> 00:42:08,560
news and uh

1184
00:42:12,870 --> 00:42:11,119
countdown today uh my question is again

1185
00:42:14,950 --> 00:42:12,880
about dragon

1186
00:42:16,870 --> 00:42:14,960
in regards to

1187
00:42:18,790 --> 00:42:16,880
people flying in space

1188
00:42:20,550 --> 00:42:18,800

when it becomes rated um how many

1189
00:42:23,030 --> 00:42:20,560
astronauts will be able to fly aboard

1190
00:42:25,109 --> 00:42:23,040
the spacecraft and my earlier question

1191
00:42:27,349 --> 00:42:25,119
in regards to

1192
00:42:29,109 --> 00:42:27,359
the future astronauts

1193
00:42:32,630 --> 00:42:29,119
we still want to know what type of ice

1194
00:42:35,910 --> 00:42:34,470
you want to take the ice cream one first

1195
00:42:38,230 --> 00:42:35,920
i don't even know if we're flying ice

1196
00:42:41,829 --> 00:42:39,510
you know this is one of those things

1197
00:42:43,510 --> 00:42:41,839
that i did that usually i remember to

1198
00:42:45,829 --> 00:42:43,520
make sure i check on before i walk in

1199
00:42:47,990 --> 00:42:45,839
here and i i mistakenly did not do that

1200
00:42:49,030 --> 00:42:48,000
so since i don't know for flying ice

1201
00:42:50,870 --> 00:42:49,040
cream i couldn't tell you what the

1202
00:42:52,470 --> 00:42:50,880
flavors are but having been on a flight

1203
00:42:54,470 --> 00:42:52,480
that had an empty freezer on it going up

1204
00:42:55,910 --> 00:42:54,480
into space we did fill it and it's

1205
00:43:02,230 --> 00:42:55,920
really nice so if you can do it you

1206
00:43:05,270 --> 00:43:03,670
i'll tell the guys you were rooting for

1207
00:43:07,910 --> 00:43:05,280
him

1208
00:43:11,190 --> 00:43:07,920
got to take care of sonny absolutely

1209
00:43:11,200 --> 00:43:15,270
one in the back there

1210
00:43:20,309 --> 00:43:17,589
um ronnie williams social media uh this

1211
00:43:23,349 --> 00:43:20,319
is for uh miss shotwell um

1212
00:43:24,230 --> 00:43:23,359
just a ballpark if you had to

1213
00:43:26,790 --> 00:43:24,240

say

1214
00:43:29,109 --> 00:43:26,800
give a approximate time when

1215
00:43:31,349 --> 00:43:29,119
your capsule would be crew rated you

1216
00:43:35,349 --> 00:43:31,359
know how far away do you think you are

1217
00:43:37,670 --> 00:43:35,359
in in terms of months years

1218
00:43:39,670 --> 00:43:37,680
we think we'd be we'll be flying crew in

1219
00:43:42,230 --> 00:43:39,680
about three years or we'll be ready to

1220
00:43:45,349 --> 00:43:42,240
fly crew let's be careful ready to fly

1221
00:43:49,670 --> 00:43:47,349
and by the way i didn't answer your

1222
00:43:51,950 --> 00:43:49,680
question because of the ice cream

1223
00:43:55,349 --> 00:43:51,960
seven dragon was designed for seven crew

1224
00:43:56,710 --> 00:43:55,359
members thank you

1225
00:43:58,870 --> 00:43:56,720
all right thank you all very much for

1226
00:44:00,390 --> 00:43:58,880
coming we're going to call us a uh

1227
00:44:03,030 --> 00:44:00,400
an evening and let everybody get out and

1228
00:44:05,349 --> 00:44:03,040
get some rest nasa television coverage

1229
00:44:07,829 --> 00:44:05,359
of the spacex commercial resupply

1230
00:44:11,349 --> 00:44:07,839
services one mission begins at 7 pm

1231
00:44:13,349 --> 00:44:11,359
tomorrow liftoff is 8 35 pm and in

1232
00:44:15,190 --> 00:44:13,359
between now and then you can keep up