
SPACEX

1
00:00:04,390 --> 00:00:02,869
well good afternoon everybody i'm josh

2
00:00:06,389 --> 00:00:04,400
barley at the johnson space center here

3
00:00:09,110 --> 00:00:06,399
in houston texas it has been a historic

4
00:00:11,030 --> 00:00:09,120
day for both spacex and nasa as this

5
00:00:13,430 --> 00:00:11,040
dragon test flight came to a close

6
00:00:15,030 --> 00:00:13,440
earlier today we're going to go live now

7
00:00:17,029 --> 00:00:15,040
to spacex headquarters in hawthorne

8
00:00:19,189 --> 00:00:17,039
california where we are joined by elon

9
00:00:21,429 --> 00:00:19,199
musk the chief executive officer and

10
00:00:23,509 --> 00:00:21,439
chief designer for spacex as well as

11
00:00:24,870 --> 00:00:23,519
alan lindemoyer nasa's head of the

12
00:00:26,550 --> 00:00:24,880
commercial orbital transportation

13
00:00:31,990 --> 00:00:26,560

services program

14
00:00:35,910 --> 00:00:34,790
all right thank you

15
00:00:36,630 --> 00:00:35,920
um

16
00:00:41,270 --> 00:00:36,640
so

17
00:00:42,310 --> 00:00:41,280
i i this has been a fantastic day

18
00:00:45,430 --> 00:00:42,320
i'd like to

19
00:00:47,270 --> 00:00:45,440
again thank nasa and the whole spacex

20
00:00:49,590 --> 00:00:47,280
team for an amazing job

21
00:00:50,709 --> 00:00:49,600
um i'm really proud of everyone

22
00:00:52,150 --> 00:00:50,719
and um

23
00:00:55,270 --> 00:00:52,160
this really couldn't have could have

24
00:00:57,590 --> 00:00:55,280
gone better so um i'm uh

25
00:00:59,430 --> 00:00:57,600
yeah i'm just i'm just

26
00:01:00,389 --> 00:00:59,440
overwhelmed with joy

27
00:01:04,149 --> 00:01:00,399
for

28
00:01:06,469 --> 00:01:04,159
10 years and to have done this and have

29
00:01:08,550 --> 00:01:06,479
it go so well is is

30
00:01:10,870 --> 00:01:08,560
incredibly satisfying

31
00:01:12,070 --> 00:01:10,880
we look forward to doing lots of lots

32
00:01:14,789 --> 00:01:12,080
more missions in the future and

33
00:01:16,710 --> 00:01:14,799
continuing to upgrade the technology and

34
00:01:20,870 --> 00:01:16,720
push the the frontier of space

35
00:01:20,880 --> 00:01:25,590
okay now to alan

36
00:01:30,310 --> 00:01:27,830
right yeah elon it's just a

37
00:01:32,310 --> 00:01:30,320
super great day for space flight

38
00:01:34,149 --> 00:01:32,320

and uh i can't help but think back when

39
00:01:36,630 --> 00:01:34,159
we started the program

40
00:01:39,510 --> 00:01:36,640
we we set these three

41
00:01:41,510 --> 00:01:39,520
three objectives and i need to

42
00:01:43,590 --> 00:01:41,520
look back and see how well we did to

43
00:01:46,389 --> 00:01:43,600
meet those objectives the first was to

44
00:01:48,149 --> 00:01:46,399
place very strategic investments

45
00:01:50,870 --> 00:01:48,159
to stimulate the commercial space

46
00:01:52,630 --> 00:01:50,880
transportation industry

47
00:01:55,830 --> 00:01:52,640
so that

48
00:01:56,950 --> 00:01:55,840
a new vibrant and thriving economy can

49
00:01:59,510 --> 00:01:56,960
grow

50
00:02:01,910 --> 00:01:59,520
in space

51
00:02:03,910 --> 00:02:01,920
the second objective was to

52
00:02:06,709 --> 00:02:03,920
facilitate the demonstration of the

53
00:02:08,949 --> 00:02:06,719
missions we saw today

54
00:02:11,670 --> 00:02:08,959
by making available

55
00:02:13,990 --> 00:02:11,680
vast resources of nasa the facilities

56
00:02:15,430 --> 00:02:14,000
the equipment the lessons learned our

57
00:02:18,150 --> 00:02:15,440
history

58
00:02:20,550 --> 00:02:18,160
access to our engineers and technical

59
00:02:22,710 --> 00:02:20,560
experts across the agency

60
00:02:24,550 --> 00:02:22,720
to give us the best possible chance of

61
00:02:29,030 --> 00:02:24,560
succeeding

62
00:02:33,750 --> 00:02:31,030
developing a

63
00:02:36,070 --> 00:02:33,760

safe reliable and cost-effective space

64
00:02:37,509 --> 00:02:36,080
transportation system cost effective

65
00:02:39,670 --> 00:02:37,519
meaning

66
00:02:41,110 --> 00:02:39,680
something that can be affordable and at

67
00:02:42,949 --> 00:02:41,120
least globally

68
00:02:45,030 --> 00:02:42,959
competitive i mean to develop something

69
00:02:46,309 --> 00:02:45,040
that would be extremely expensive would

70
00:02:48,550 --> 00:02:46,319
not have met

71
00:02:50,710 --> 00:02:48,560
met that objective and then and then

72
00:02:52,470 --> 00:02:50,720
thirdly to have a market environment

73
00:02:54,309 --> 00:02:52,480
where this new capabilities are

74
00:02:57,030 --> 00:02:54,319
sustained and you can sell it to the

75
00:02:59,430 --> 00:02:57,040
government and other customers yeah well

76
00:03:01,509 --> 00:02:59,440
we became your customer today i i

77
00:03:03,350 --> 00:03:01,519
believe we're really close to

78
00:03:05,990 --> 00:03:03,360
to having you

79
00:03:10,229 --> 00:03:06,000
provide cargo resupply services to the

80
00:03:13,270 --> 00:03:10,239
station on a regular basis now

81
00:03:15,670 --> 00:03:13,280
you have turned those hopes into a

82
00:03:17,509 --> 00:03:15,680
reality

83
00:03:20,070 --> 00:03:17,519
i'm really glad we're able to do a good

84
00:03:22,790 --> 00:03:20,080
job for you and nasa and uh

85
00:03:25,350 --> 00:03:22,800
um yeah just uh thanks for having the

86
00:03:27,589 --> 00:03:25,360
faith uh to thanks for placing your

87
00:03:28,710 --> 00:03:27,599
faith in spacex and um

88
00:03:32,470 --> 00:03:28,720

and uh

89
00:03:34,710 --> 00:03:32,480
dreams come true thank you absolutely

90
00:03:37,190 --> 00:03:34,720
thank you to of course

91
00:03:39,509 --> 00:03:37,200
the entire team at nasa thank you to

92
00:03:41,350 --> 00:03:39,519
spacex what an amazing group

93
00:03:42,869 --> 00:03:41,360
the space station team the mission

94
00:03:44,630 --> 00:03:42,879
operations

95
00:03:46,390 --> 00:03:44,640
and even our partners with the faa and

96
00:03:47,910 --> 00:03:46,400
the air force and everybody who made

97
00:03:50,949 --> 00:03:47,920
this happen

98
00:03:54,070 --> 00:03:50,959
we've been waiting for this day and it

99
00:03:57,110 --> 00:03:54,080
certainly is a tremendous day

100
00:03:59,270 --> 00:03:57,120
so we're looking forward now to

101
00:04:01,429 --> 00:03:59,280
to routine

102
00:04:04,149 --> 00:04:01,439
regular cargo services from you yeah

103
00:04:06,309 --> 00:04:04,159
congratulations on just an amazing

104
00:04:08,149 --> 00:04:06,319
amazing mission well thank you

105
00:04:09,509 --> 00:04:08,159
all right

106
00:04:10,949 --> 00:04:09,519
okay okay we're going to take some

107
00:04:12,710 --> 00:04:10,959
questions now starting here in houston

108
00:04:14,470 --> 00:04:12,720
then we will go around to the phone

109
00:04:17,909 --> 00:04:14,480
lines and see who is there we'll start

110
00:04:22,390 --> 00:04:20,390
thanks mark for aviation week i had a

111
00:04:24,870 --> 00:04:22,400
couple questions first

112
00:04:26,950 --> 00:04:24,880
can you give any uh sort of time and

113
00:04:28,870 --> 00:04:26,960

first report from the divers if they've

114
00:04:29,590 --> 00:04:28,880
reached the capsule and when they did

115
00:04:31,350 --> 00:04:29,600
and

116
00:04:34,550 --> 00:04:31,360
what they've told you initially about

117
00:04:37,670 --> 00:04:35,990
well i'm not sure if the

118
00:04:39,430 --> 00:04:37,680
if the divers are actually

119
00:04:42,150 --> 00:04:39,440
at the spacecraft but

120
00:04:44,550 --> 00:04:42,160
the boats certainly are and um all

121
00:04:46,629 --> 00:04:44,560
accounts from the boat boats are that it

122
00:04:49,510 --> 00:04:46,639
looks really good uh we're getting ready

123
00:04:51,189 --> 00:04:49,520
to attach the cables to um pull dragon

124
00:04:53,350 --> 00:04:51,199
out of the water and place it on the

125
00:04:54,310 --> 00:04:53,360
barge for return to port

126
00:04:57,030 --> 00:04:54,320
and

127
00:04:59,350 --> 00:04:57,040
everything's looking really good so

128
00:05:05,189 --> 00:05:02,550
second question for you sir um

129
00:05:08,230 --> 00:05:05,199
what sort of message would you like the

130
00:05:12,310 --> 00:05:08,240
the success of your mission

131
00:05:14,550 --> 00:05:12,320
to send to the u.s policy makers

132
00:05:16,950 --> 00:05:14,560
in support of commercial space not not

133
00:05:19,510 --> 00:05:16,960
just for spacex but for the industry the

134
00:05:22,230 --> 00:05:19,520
wider industry

135
00:05:23,510 --> 00:05:22,240
sure i think it really

136
00:05:25,749 --> 00:05:23,520
shows that

137
00:05:28,150 --> 00:05:25,759
that that commercial space flight can be

138
00:05:30,390 --> 00:05:28,160

successful um i mean this this mission

139
00:05:31,830 --> 00:05:30,400
worked for the you know first time right

140
00:05:34,230 --> 00:05:31,840
out of the gate all phases of the

141
00:05:35,029 --> 00:05:34,240
mission were successful um and it was

142
00:05:37,350 --> 00:05:35,039
done

143
00:05:38,469 --> 00:05:37,360
obviously in close partnership with with

144
00:05:40,629 --> 00:05:38,479
nasa but

145
00:05:43,430 --> 00:05:40,639
in a different way

146
00:05:46,950 --> 00:05:43,440
and and it shows that different way um

147
00:05:48,629 --> 00:05:46,960
works and and we should reinforce that

148
00:05:50,790 --> 00:05:48,639
and it's uh it's also got it seems to

149
00:05:53,110 --> 00:05:50,800
have gotten the american public really

150
00:05:54,870 --> 00:05:53,120
excited which is exciting because i mean

151
00:05:57,430 --> 00:05:54,880
because we really want we want kids to

152
00:05:58,469 --> 00:05:57,440
be inspired about space flight and and

153
00:06:01,430 --> 00:05:58,479
this seems to have gotten their

154
00:06:02,469 --> 00:06:01,440
attention and um and i think it makes

155
00:06:04,870 --> 00:06:02,479
sense for

156
00:06:06,230 --> 00:06:04,880
uh there to be more resources applied in

157
00:06:11,510 --> 00:06:06,240
this direction when you have something

158
00:06:15,909 --> 00:06:13,590
rather gentlemen

159
00:06:18,309 --> 00:06:15,919
from liftoff to the mission itself to

160
00:06:21,590 --> 00:06:18,319
splash down it seemed everything went

161
00:06:26,309 --> 00:06:21,600
flawlessly uh did it exceed or match or

162
00:06:31,270 --> 00:06:28,150
what do you think

163
00:06:32,629 --> 00:06:31,280

um yeah i i well

164
00:06:35,350 --> 00:06:32,639
you know um

165
00:06:38,390 --> 00:06:35,360
when you've been uh deeply involved in

166
00:06:40,710 --> 00:06:38,400
the design of a complex machine um when

167
00:06:42,309 --> 00:06:40,720
you see it operate you know all the

168
00:06:43,350 --> 00:06:42,319
things that can go wrong

169
00:06:48,469 --> 00:06:43,360
so

170
00:06:49,749 --> 00:06:48,479
constantly thinking about what what

171
00:06:51,350 --> 00:06:49,759
you know they can go wrong in this way

172
00:06:52,790 --> 00:06:51,360
that way and there's sort of a long list

173
00:06:54,790 --> 00:06:52,800
of like a thousand ways that it could

174
00:06:57,990 --> 00:06:54,800
that it could fail so

175
00:06:59,589 --> 00:06:58,000
um this this may sound sort of odd but

176
00:07:01,430 --> 00:06:59,599
but um

177
00:07:03,510 --> 00:07:01,440
but when you see it actually work work

178
00:07:04,309 --> 00:07:03,520
you're sort of surprised

179
00:07:06,070 --> 00:07:04,319
so

180
00:07:07,670 --> 00:07:06,080
which is not to say that we didn't

181
00:07:09,350 --> 00:07:07,680
expect it to work

182
00:07:10,790 --> 00:07:09,360
or uh but

183
00:07:13,830 --> 00:07:10,800
it's just you can see so many ways that

184
00:07:15,670 --> 00:07:13,840
it can fail and and then it works and

185
00:07:18,710 --> 00:07:15,680
and you're like wow okay

186
00:07:20,070 --> 00:07:18,720
it it didn't fail

187
00:07:21,749 --> 00:07:20,080
um

188
00:07:23,670 --> 00:07:21,759

but i think anyone who's who's been

189
00:07:25,189 --> 00:07:23,680
involved in the design of a really

190
00:07:31,029 --> 00:07:25,199
complicated machine could sympathize

191
00:07:34,950 --> 00:07:33,350
uh robert perlman with collectspace.com

192
00:07:36,550 --> 00:07:34,960
with a question a couple of questions

193
00:07:38,469 --> 00:07:36,560
first for alan

194
00:07:39,270 --> 00:07:38,479
you mentioned starting up crs flights

195
00:07:40,710 --> 00:07:39,280
with

196
00:07:42,710 --> 00:07:40,720
spacex

197
00:07:44,070 --> 00:07:42,720
given the really clean flight

198
00:07:46,070 --> 00:07:44,080
how quickly do you think you'll be able

199
00:07:46,790 --> 00:07:46,080
to turn around to say they have a go to

200
00:07:50,070 --> 00:07:46,800
go

201
00:07:52,309 --> 00:07:50,080
for the first operational flight and um

202
00:07:53,350 --> 00:07:52,319
and are there any needed changes uh

203
00:07:55,589 --> 00:07:53,360
given what you've seen during the

204
00:07:56,869 --> 00:07:55,599
mission

205
00:07:59,029 --> 00:07:56,879
you know i don't i don't think it's

206
00:08:01,270 --> 00:07:59,039
going to take very long

207
00:08:02,390 --> 00:08:01,280
i was looking at the criteria we set for

208
00:08:04,230 --> 00:08:02,400
the mission

209
00:08:06,309 --> 00:08:04,240
and pretty much

210
00:08:07,830 --> 00:08:06,319
pretty much every one of them

211
00:08:09,909 --> 00:08:07,840
looks solid

212
00:08:11,670 --> 00:08:09,919
the only thing left to go is the actual

213
00:08:13,749 --> 00:08:11,680

recovery of the cargo and we should be

214
00:08:15,830 --> 00:08:13,759
seeing that uh come back to the dock

215
00:08:17,510 --> 00:08:15,840
here in a couple days for the early

216
00:08:19,430 --> 00:08:17,520
access cargo and then

217
00:08:22,469 --> 00:08:19,440
we'll get the dragon back to

218
00:08:24,230 --> 00:08:22,479
texas mcgregor texas and uh spacex will

219
00:08:25,189 --> 00:08:24,240
deliver the rest of the cargo compliment

220
00:08:27,589 --> 00:08:25,199
to us

221
00:08:29,189 --> 00:08:27,599
uh and that that'll complete the formal

222
00:08:31,430 --> 00:08:29,199
objectives that we had for the mission

223
00:08:34,709 --> 00:08:31,440
everything else looks good we'll get a

224
00:08:37,269 --> 00:08:34,719
quick look report from spacex next week

225
00:08:39,829 --> 00:08:37,279
and then we'll await the

226
00:08:41,509 --> 00:08:39,839
final report a post flight

227
00:08:42,709 --> 00:08:41,519
several weeks later after that and i

228
00:08:44,389 --> 00:08:42,719
just don't think it's going to take us

229
00:08:46,710 --> 00:08:44,399
very long to

230
00:08:49,829 --> 00:08:46,720
to make the determination that this was

231
00:08:51,750 --> 00:08:49,839
a extremely successful mission and they

232
00:08:54,630 --> 00:08:51,760
are should be well on their way to

233
00:08:57,269 --> 00:08:54,640
starting uh the services great

234
00:08:59,829 --> 00:08:57,279
um you know on a side note by the way um

235
00:09:02,870 --> 00:08:59,839
so so on in the approach to space

236
00:09:04,710 --> 00:09:02,880
station um we did have some slight

237
00:09:06,310 --> 00:09:04,720
trouble with the the lidars which are

238
00:09:08,230 --> 00:09:06,320

kind of like the laser radars that do

239
00:09:09,190 --> 00:09:08,240
sort of a laser image scan of the space

240
00:09:11,590 --> 00:09:09,200
station

241
00:09:13,670 --> 00:09:11,600
as you're coming in to do the docking um

242
00:09:15,030 --> 00:09:13,680
and uh and it was a little flaky coming

243
00:09:16,710 --> 00:09:15,040
in but we were able to make some

244
00:09:18,150 --> 00:09:16,720
adjustments while it was on station and

245
00:09:20,070 --> 00:09:18,160
then as we backed up we were able to

246
00:09:23,350 --> 00:09:20,080
confirm that those adjustments

247
00:09:28,070 --> 00:09:23,360
worked so we're able to eliminate the

248
00:09:32,550 --> 00:09:30,230
thanks and um elon just a quick

249
00:09:35,590 --> 00:09:32,560
follow-up uh when do you anticipate the

250
00:09:37,670 --> 00:09:35,600
first clear images of dragon

251
00:09:40,150 --> 00:09:37,680
in the water or on the barge to be

252
00:09:41,829 --> 00:09:40,160
available for us to see

253
00:09:46,070 --> 00:09:41,839
i'm hoping we'll have those images to

254
00:09:49,670 --> 00:09:48,389
okay that is it here in houston before

255
00:09:50,949 --> 00:09:49,680
we go to the phone lines we have a

256
00:09:52,870 --> 00:09:50,959
question that was emailed in from bill

257
00:09:54,790 --> 00:09:52,880
hennigan with l.a times he's got a

258
00:09:57,030 --> 00:09:54,800
question for elon he is saying that

259
00:09:58,389 --> 00:09:57,040
spacex has many challenges

260
00:10:00,070 --> 00:09:58,399
that it has set out for itself in the

261
00:10:04,470 --> 00:10:00,080
coming year what do you believe is the

262
00:10:07,269 --> 00:10:04,480
next big milestone for your company

263
00:10:09,829 --> 00:10:08,470

that there's

264
00:10:13,509 --> 00:10:09,839
for the remainder of this year there's

265
00:10:16,949 --> 00:10:13,519
um you know we're competing to do uh to

266
00:10:19,030 --> 00:10:16,959
upgrade dragon uh to carry astronauts um

267
00:10:21,030 --> 00:10:19,040
and so that's an ongoing competition and

268
00:10:22,949 --> 00:10:21,040
um

269
00:10:23,750 --> 00:10:22,959
we're hopeful that uh

270
00:10:25,509 --> 00:10:23,760
um

271
00:10:27,110 --> 00:10:25,519
we'll win that contract

272
00:10:29,430 --> 00:10:27,120
uh and um

273
00:10:31,750 --> 00:10:29,440
it's it's it's actually uh

274
00:10:33,269 --> 00:10:31,760
it's both gonna carry uh it would carry

275
00:10:35,030 --> 00:10:33,279
astronauts and it would also

276
00:10:36,310 --> 00:10:35,040
land on land

277
00:10:38,470 --> 00:10:36,320
and have the ability to land

278
00:10:41,110 --> 00:10:38,480
propulsively uh with the accuracy of a

279
00:10:42,630 --> 00:10:41,120
helicopter so it's it's a significant

280
00:10:44,949 --> 00:10:42,640
technology upgrade as well so we're

281
00:10:47,430 --> 00:10:44,959
really excited about that and about

282
00:10:49,190 --> 00:10:47,440
doing further tests on that on that uh

283
00:10:49,990 --> 00:10:49,200
propulsive landing capability later this

284
00:10:51,110 --> 00:10:50,000
year

285
00:10:53,910 --> 00:10:51,120
um

286
00:10:57,430 --> 00:10:53,920
and uh and then doing our first uh

287
00:10:58,949 --> 00:10:57,440
operational cargo resupply mission um

288
00:11:00,870 --> 00:10:58,959

which is hopefully towards the end of

289
00:11:02,870 --> 00:11:00,880
summer

290
00:11:04,710 --> 00:11:02,880
contingent on nasa approval

291
00:11:09,670 --> 00:11:04,720
and

292
00:11:10,550 --> 00:11:09,680
capability for the falcon 9 rocket as

293
00:11:12,230 --> 00:11:10,560
well

294
00:11:15,030 --> 00:11:12,240
and i think there'll be some exciting

295
00:11:16,230 --> 00:11:15,040
footage later this year on on that front

296
00:11:17,670 --> 00:11:16,240
um

297
00:11:19,350 --> 00:11:17,680
yes there's a lot going on and then

298
00:11:21,269 --> 00:11:19,360
hopefully uh next year we'll be

299
00:11:24,069 --> 00:11:21,279
launching uh falcon heavy which will be

300
00:11:26,630 --> 00:11:24,079
the a very large rocket with

301
00:11:30,389 --> 00:11:26,640
twice the thrust of of any um rocket

302
00:11:33,269 --> 00:11:31,990
okay let's go to the phone lines we have

303
00:11:35,430 --> 00:11:33,279
a completely full

304
00:11:36,470 --> 00:11:35,440
uh list of uh reporters on the phone

305
00:11:38,630 --> 00:11:36,480
lines we're going to ask you that you

306
00:11:40,150 --> 00:11:38,640
keep it to uh one question if you can

307
00:11:41,990 --> 00:11:40,160
and make sure you direct it to either mr

308
00:11:43,190 --> 00:11:42,000
musk or mr moyer we'll start off with

309
00:11:46,150 --> 00:11:43,200
jason parr

310
00:11:49,030 --> 00:11:46,160
with uh wired magazine

311
00:11:51,590 --> 00:11:49,040
yeah the question is for mr musk and was

312
00:11:53,269 --> 00:11:51,600
curious with the success of the

313
00:11:56,230 --> 00:11:53,279

the cop flight

314
00:11:58,389 --> 00:11:56,240
are there any changes to dragon that you

315
00:11:59,910 --> 00:11:58,399
will now be making uh that you didn't

316
00:12:02,230 --> 00:11:59,920
expect to be able to make because of the

317
00:12:04,150 --> 00:12:02,240
success are there any uh for the first

318
00:12:05,910 --> 00:12:04,160
crs flight is there any ability to do

319
00:12:08,470 --> 00:12:05,920
things you didn't expect because of the

320
00:12:12,949 --> 00:12:10,629
um yeah i think we'll i mean we'll make

321
00:12:15,269 --> 00:12:12,959
a series of uh minor adjustments and

322
00:12:17,269 --> 00:12:15,279
improvements and nothing major um

323
00:12:19,829 --> 00:12:17,279
because uh really

324
00:12:22,230 --> 00:12:19,839
there's there's not much to fix um but

325
00:12:25,190 --> 00:12:22,240
we but we will um we'll we'll make minor

326
00:12:26,949 --> 00:12:25,200
improvements and adjustments and

327
00:12:29,190 --> 00:12:26,959
probably improve a little more of the

328
00:12:30,389 --> 00:12:29,200
automation so um

329
00:12:32,629 --> 00:12:30,399
we don't have to have quite so many

330
00:12:34,230 --> 00:12:32,639
people in in mission control

331
00:12:35,829 --> 00:12:34,240
um

332
00:12:38,949 --> 00:12:35,839
but really it's it's this there's not

333
00:12:40,389 --> 00:12:38,959
much to to fix it went very well

334
00:12:43,350 --> 00:12:40,399
um where we'll see that the big

335
00:12:46,150 --> 00:12:43,360
technology upgrades are uh with dragon

336
00:12:48,550 --> 00:12:46,160
version two um and then there'll be a

337
00:12:50,389 --> 00:12:48,560
modest uh technology upgrade uh with

338
00:12:57,269 --> 00:12:50,399

dragon flight six

339
00:13:01,190 --> 00:12:58,790
okay i think that's it from jason let's

340
00:13:03,910 --> 00:13:01,200
go to charles atkinson

341
00:13:06,629 --> 00:13:03,920
yeah so charles axeman examiner.com for

342
00:13:08,470 --> 00:13:06,639
elon good afternoon congratulations

343
00:13:11,750 --> 00:13:08,480
and uh would you in your own words

344
00:13:12,870 --> 00:13:11,760
called dragon's flight a textbook flight

345
00:13:14,870 --> 00:13:12,880
and

346
00:13:18,829 --> 00:13:14,880
asked john about this yesterday about

347
00:13:22,870 --> 00:13:21,269
spacecraft um

348
00:13:26,150 --> 00:13:22,880
yeah this this this really went

349
00:13:28,870 --> 00:13:26,160
extremely well uh and um

350
00:13:30,550 --> 00:13:28,880
you know in in sort of um in in sort of

351
00:13:33,190 --> 00:13:30,560
say baseball terminology this this would

352
00:13:35,030 --> 00:13:33,200
be like a grand slam it's it's really uh

353
00:13:36,389 --> 00:13:35,040
i almost feel like it's more success

354
00:13:37,269 --> 00:13:36,399
than we had a reasonable right to expect

355
00:13:38,230 --> 00:13:37,279
but it

356
00:13:41,430 --> 00:13:38,240
so

357
00:13:42,870 --> 00:13:41,440
i hope we're able to repeat it

358
00:13:45,110 --> 00:13:42,880
that's going to be our focus is making

359
00:13:47,670 --> 00:13:45,120
sure that they were repeated well in

360
00:13:49,670 --> 00:13:47,680
future flights

361
00:13:53,350 --> 00:13:49,680
there are no plans to individually name

362
00:13:55,990 --> 00:13:53,360
dragons uh yet uh i think um i think we

363
00:13:58,230 --> 00:13:56,000

want to have the vehicles be

364
00:13:59,910 --> 00:13:58,240
reusable before they they have names

365
00:14:03,910 --> 00:13:59,920
others are going to think a lot of names

366
00:14:10,470 --> 00:14:07,189
okay let's go to matthew travis

367
00:14:12,629 --> 00:14:10,480
oh matthew travis with zero g news and

368
00:14:14,629 --> 00:14:12,639
like everybody else congratulations on

369
00:14:16,470 --> 00:14:14,639
your accomplishment today

370
00:14:19,030 --> 00:14:16,480
and this is for elon

371
00:14:20,470 --> 00:14:19,040
um the international space university is

372
00:14:22,870 --> 00:14:20,480
hosting their

373
00:14:24,710 --> 00:14:22,880
space studies program this summer down

374
00:14:27,110 --> 00:14:24,720
here at florida tech in melbourne which

375
00:14:28,629 --> 00:14:27,120
is just a stone's throw from where the

376
00:14:30,230 --> 00:14:28,639
falcon was launched

377
00:14:32,629 --> 00:14:30,240
and i was wondering what you would have

378
00:14:34,150 --> 00:14:32,639
to say to those students or any students

379
00:14:37,110 --> 00:14:34,160
who are watching this

380
00:14:38,870 --> 00:14:37,120
and are inspired by spacex and are eager

381
00:14:42,550 --> 00:14:38,880
to get involved in the commercial space

382
00:14:45,750 --> 00:14:44,389
um

383
00:14:47,829 --> 00:14:45,760
well uh

384
00:14:49,430 --> 00:14:47,839
i i hope that

385
00:14:51,990 --> 00:14:49,440
today's events were were really

386
00:14:53,189 --> 00:14:52,000
inspiring and and encourage many uh

387
00:14:56,310 --> 00:14:53,199
people to

388
00:14:58,710 --> 00:14:56,320

go into the space industry and uh and

389
00:15:00,150 --> 00:14:58,720
and and encourage the

390
00:15:02,949 --> 00:15:00,160
kids that are trying to decide what to

391
00:15:06,069 --> 00:15:02,959
study at school to to study

392
00:15:07,670 --> 00:15:06,079
engineering and aerospace uh because i

393
00:15:09,350 --> 00:15:07,680
think this that we're really at the dawn

394
00:15:10,629 --> 00:15:09,360
of a new era of space exploration where

395
00:15:13,350 --> 00:15:10,639
there's going to be a huge amount of

396
00:15:17,590 --> 00:15:13,360
opportunity and

397
00:15:20,629 --> 00:15:19,030
okay let's go to marcia done with the

398
00:15:23,430 --> 00:15:20,639
associated press

399
00:15:24,949 --> 00:15:23,440
yes hi for mr musk um two quick

400
00:15:27,030 --> 00:15:24,959
questions was this more or less a

401
00:15:30,069 --> 00:15:27,040
bull's-eye for the splashdown i'm just

402
00:15:30,949 --> 00:15:30,079
wondering how close to the x mark you

403
00:15:33,430 --> 00:15:30,959
got

404
00:15:35,749 --> 00:15:33,440
and can you shed light now on any of the

405
00:15:39,430 --> 00:15:35,759
surprises that were tucked away aboard

406
00:15:42,629 --> 00:15:40,710
oh

407
00:15:43,670 --> 00:15:42,639
um

408
00:15:45,110 --> 00:15:43,680
you know

409
00:15:47,110 --> 00:15:45,120
there weren't really any any big

410
00:15:48,710 --> 00:15:47,120
surprises this time around in terms of

411
00:15:50,629 --> 00:15:48,720
stuff to attack uh tucked away on the

412
00:15:53,350 --> 00:15:50,639
dragon or if there are surprises a

413
00:15:55,030 --> 00:15:53,360

surprise to me too um i may discover

414
00:15:56,949 --> 00:15:55,040
something um

415
00:15:59,350 --> 00:15:56,959
so uh in terms of landing accuracy it

416
00:16:00,870 --> 00:15:59,360
was it was very accurate uh the key

417
00:16:03,189 --> 00:16:00,880
point of in terms of determining

418
00:16:05,829 --> 00:16:03,199
accuracy is uh what was the position

419
00:16:07,990 --> 00:16:05,839
when the parachutes opened um and we'll

420
00:16:10,470 --> 00:16:08,000
know that once we recover the telemetry

421
00:16:13,430 --> 00:16:10,480
from the vehicle but uh it appeared as

422
00:16:16,150 --> 00:16:13,440
though we were again um really hitting

423
00:16:18,629 --> 00:16:16,160
the bull's eye inaccuracy

424
00:16:23,509 --> 00:16:18,639
it you know appears perhaps within

425
00:16:23,519 --> 00:16:28,069
okay daryl nail with fox orlando

426
00:16:33,590 --> 00:16:31,430
hello uh thank you i wanted to ask elon

427
00:16:35,910 --> 00:16:33,600
about what he was doing we could see you

428
00:16:37,590 --> 00:16:35,920
on the mission control monitor at

429
00:16:39,030 --> 00:16:37,600
hawthorne california it looks like you

430
00:16:41,590 --> 00:16:39,040
were sipping a drink

431
00:16:44,310 --> 00:16:41,600
maybe making some tweets tell me about

432
00:16:46,870 --> 00:16:44,320
what you're doing as the uh spacecraft

433
00:16:49,350 --> 00:16:46,880
was re-entering and then what moment

434
00:16:52,550 --> 00:16:49,360
there was where you felt that this had

435
00:16:54,629 --> 00:16:52,560
been a successful mission

436
00:16:56,310 --> 00:16:54,639
sure um well what i'm doing is i'm

437
00:16:58,629 --> 00:16:56,320
looking at the data that's coming in

438
00:17:00,550 --> 00:16:58,639

from the spacecraft so this dragon is

439
00:17:01,590 --> 00:17:00,560
constantly beaming back data on all its

440
00:17:04,309 --> 00:17:01,600
systems so i'm just looking at the

441
00:17:06,470 --> 00:17:04,319
systems to see is everything working i

442
00:17:09,189 --> 00:17:06,480
know it's everything nominal is there

443
00:17:11,990 --> 00:17:09,199
anything odd happening

444
00:17:16,870 --> 00:17:13,829
is is the heat shield working what are

445
00:17:19,110 --> 00:17:16,880
the temperatures like pressures

446
00:17:20,549 --> 00:17:19,120
voltages all the data that's coming in

447
00:17:21,510 --> 00:17:20,559
and um

448
00:17:22,710 --> 00:17:21,520
although honestly there's not much i

449
00:17:24,390 --> 00:17:22,720
could do about it so if something is

450
00:17:27,110 --> 00:17:24,400
going wrong but it's you know you can't

451
00:17:28,950 --> 00:17:27,120
help but watch no matter what and uh and

452
00:17:30,950 --> 00:17:28,960
the point at which the the main

453
00:17:33,590 --> 00:17:30,960
parachutes opened and all three were

454
00:17:35,510 --> 00:17:33,600
were working and uh

455
00:17:37,750 --> 00:17:35,520
dragon was descending normally that's

456
00:17:38,950 --> 00:17:37,760
that's the point of which i i really

457
00:17:40,789 --> 00:17:38,960
felt um

458
00:17:42,789 --> 00:17:40,799
relieved and and knew that the mission

459
00:17:46,470 --> 00:17:42,799
was was likely to be

460
00:17:50,150 --> 00:17:48,390
okay jackie goddard with the times of

461
00:17:52,390 --> 00:17:50,160
london

462
00:17:54,789 --> 00:17:52,400
hello and my question is for elon musk

463
00:17:56,549 --> 00:17:54,799

congratulations first of all um it's

464
00:17:58,150 --> 00:17:56,559
clear that you felt very personally hurt

465
00:18:01,110 --> 00:17:58,160
by the fact that some of the space

466
00:18:03,350 --> 00:18:01,120
heroes who inspired you were also among

467
00:18:06,710 --> 00:18:03,360
the most prominent doubters

468
00:18:08,549 --> 00:18:06,720
of commercial crew and cargo

469
00:18:10,630 --> 00:18:08,559
can you describe how much of an

470
00:18:13,029 --> 00:18:10,640
emotional journey this whole endeavor

471
00:18:14,950 --> 00:18:13,039
has been and have there been low points

472
00:18:18,549 --> 00:18:14,960
where you were even

473
00:18:23,830 --> 00:18:22,470
well it's certainly been a very um

474
00:18:26,950 --> 00:18:23,840
difficult

475
00:18:28,710 --> 00:18:26,960
an arduous emotional journey

476
00:18:30,630 --> 00:18:28,720
not so much in recent years have been

477
00:18:32,390 --> 00:18:30,640
fantastic but with the early years were

478
00:18:35,029 --> 00:18:32,400
very difficult uh

479
00:18:37,190 --> 00:18:35,039
and um it was particularly difficult

480
00:18:39,029 --> 00:18:37,200
in 2008 when

481
00:18:40,870 --> 00:18:39,039
the third flight of our falcon wine

482
00:18:42,870 --> 00:18:40,880
rocket which is a smaller precursor to

483
00:18:45,430 --> 00:18:42,880
falcon 9 when that third flight failed

484
00:18:48,950 --> 00:18:45,440
to reach orbit uh that was that was very

485
00:18:51,510 --> 00:18:48,960
tough um because we um we were low on

486
00:18:54,470 --> 00:18:53,190
and the economy was was in a very

487
00:18:56,870 --> 00:18:54,480
difficult

488
00:18:59,110 --> 00:18:56,880

situation um it's not clear whether

489
00:19:01,029 --> 00:18:59,120
spacex would would be here today if

490
00:19:01,990 --> 00:19:01,039
flight 4 had not succeeded fortunately

491
00:19:03,590 --> 00:19:02,000
it did

492
00:19:07,190 --> 00:19:03,600
and um and then since then things have

493
00:19:09,750 --> 00:19:07,200
gone extremely well uh but it's been um

494
00:19:11,510 --> 00:19:09,760
it has been very difficult

495
00:19:14,150 --> 00:19:11,520
in the early years and then lately it's

496
00:19:15,909 --> 00:19:14,160
been wonderful so

497
00:19:17,590 --> 00:19:15,919
i guess in order to

498
00:19:20,549 --> 00:19:17,600
experience the wonderful elements just

499
00:19:21,669 --> 00:19:20,559
that this perhaps you have to allow for

500
00:19:23,750 --> 00:19:21,679
the terrible

501
00:19:26,070 --> 00:19:23,760
side of things

502
00:19:27,590 --> 00:19:26,080
but uh but enough of that

503
00:19:29,990 --> 00:19:27,600
but this is

504
00:19:31,029 --> 00:19:30,000
this is this is a fantastic day

505
00:19:32,950 --> 00:19:31,039
um

506
00:19:34,630 --> 00:19:32,960
and uh

507
00:19:35,909 --> 00:19:34,640
you know i i i can't express my

508
00:19:37,909 --> 00:19:35,919
appreciation

509
00:19:39,110 --> 00:19:37,919
for nasa enough uh

510
00:19:40,710 --> 00:19:39,120
and um

511
00:19:42,710 --> 00:19:40,720
and and you know frankly spacex wouldn't

512
00:19:45,190 --> 00:19:42,720
wouldn't be here without we we would

513
00:19:46,870 --> 00:19:45,200

have died it's a you know

514
00:19:47,990 --> 00:19:46,880
if not for nasa so

515
00:19:50,830 --> 00:19:48,000
um

516
00:19:53,110 --> 00:19:50,840
you know the words are not

517
00:19:56,710 --> 00:19:53,120
enough okay let's go to irene klotz with

518
00:20:00,390 --> 00:19:58,870
thanks very much um hi my question is

519
00:20:02,149 --> 00:20:00,400
also for elon

520
00:20:04,789 --> 00:20:02,159
i understand that with this third

521
00:20:07,750 --> 00:20:04,799
successful flight of falcon 9 the

522
00:20:09,510 --> 00:20:07,760
company is now positioned to compete for

523
00:20:11,830 --> 00:20:09,520
some military

524
00:20:13,430 --> 00:20:11,840
satellite launches can you just briefly

525
00:20:16,549 --> 00:20:13,440
discuss that and

526
00:20:17,909 --> 00:20:16,559
what what else you'd need to do with the

527
00:20:20,870 --> 00:20:17,919
with the rocket

528
00:20:23,350 --> 00:20:20,880
in terms of a flight history to uh go

529
00:20:25,990 --> 00:20:23,360
after even more than the two set-asides

530
00:20:28,870 --> 00:20:27,190
sure um

531
00:20:31,190 --> 00:20:28,880
this is uh

532
00:20:32,710 --> 00:20:31,200
so that's at this point spacex has done

533
00:20:35,270 --> 00:20:32,720
done very well in terms of winning

534
00:20:37,190 --> 00:20:35,280
customers in in all markets um obviously

535
00:20:39,270 --> 00:20:37,200
nasa is our our biggest and most

536
00:20:42,230 --> 00:20:39,280
significant customer but we've we've won

537
00:20:44,390 --> 00:20:42,240
many commercial uh launch contracts for

538
00:20:45,669 --> 00:20:44,400

flying broadcast and communication

539
00:20:49,590 --> 00:20:45,679
satellites

540
00:20:51,590 --> 00:20:49,600
thing from from a wide range of

541
00:20:54,549 --> 00:20:51,600
customers so there's we've got over 40

542
00:20:56,630 --> 00:20:54,559
launches under contract um and 12 12 of

543
00:20:58,230 --> 00:20:56,640
those for nasa and the others are from

544
00:21:00,310 --> 00:20:58,240
a wide array of other customers so it's

545
00:21:01,990 --> 00:21:00,320
things are going very well

546
00:21:04,630 --> 00:21:02,000
the the one market that we've not yet

547
00:21:06,230 --> 00:21:04,640
been successful with um is launching of

548
00:21:09,029 --> 00:21:06,240
defensive apartment satellites although

549
00:21:11,830 --> 00:21:09,039
we're hopeful that we'll win um what one

550
00:21:14,390 --> 00:21:11,840
or two demonstration launches this year

551
00:21:16,230 --> 00:21:14,400
um and then um we're looking forward to

552
00:21:17,909 --> 00:21:16,240
serving the needs of the defense

553
00:21:19,669 --> 00:21:17,919
department in terms of launching

554
00:21:21,990 --> 00:21:19,679
satellites uh

555
00:21:24,870 --> 00:21:22,000
on the main contract um as soon as

556
00:21:27,350 --> 00:21:24,880
possible and hopefully this the success

557
00:21:31,510 --> 00:21:27,360
of of the third success of falcon 9 in a

558
00:21:32,470 --> 00:21:31,520
row will be um what will give them the

559
00:21:40,789 --> 00:21:32,480
the

560
00:21:43,590 --> 00:21:42,470
all right ken kramer with space flight

561
00:21:45,029 --> 00:21:43,600
news

562
00:21:47,669 --> 00:21:45,039
hi thank you very much and

563
00:21:50,630 --> 00:21:47,679

congratulations uh to nasa and spacex on

564
00:21:52,470 --> 00:21:50,640
a fantastic mission and launch uh my

565
00:21:53,270 --> 00:21:52,480
question is uh really for for both of

566
00:21:57,750 --> 00:21:53,280
you

567
00:21:59,990 --> 00:21:57,760
these 12 missions from spacex and from

568
00:22:02,390 --> 00:22:00,000
the cygnus because it was mentioned the

569
00:22:04,950 --> 00:22:02,400
other day that the atv and the hdb may

570
00:22:05,830 --> 00:22:04,960
be maybe ending soon so are you looking

571
00:22:08,390 --> 00:22:05,840
at

572
00:22:10,149 --> 00:22:08,400
building more than the 12 and

573
00:22:21,909 --> 00:22:10,159
and what is the contract outlook for

574
00:22:25,510 --> 00:22:23,669
we're just going to stand by for uh one

575
00:22:27,190 --> 00:22:25,520
second ken can you repeat your question

576
00:22:30,070 --> 00:22:27,200
real quick they had a quick power outage

577
00:22:32,149 --> 00:22:30,080
there at uh on site

578
00:22:34,630 --> 00:22:32,159
um well congratulations on the mission

579
00:22:36,549 --> 00:22:34,640
um again my question is um it was

580
00:22:38,549 --> 00:22:36,559
mentioned the other day that the htv and

581
00:22:40,549 --> 00:22:38,559
the atv may be ending in the next two or

582
00:22:42,710 --> 00:22:40,559
three years so for both of you i'm

583
00:22:44,549 --> 00:22:42,720
wondering if you're looking beyond these

584
00:22:46,310 --> 00:22:44,559
these initial missions

585
00:22:49,029 --> 00:22:46,320
and thinking about contracts you know

586
00:22:51,029 --> 00:22:49,039
beyond to to service the space station

587
00:22:53,350 --> 00:22:51,039
from 2015 to

588
00:22:59,750 --> 00:22:53,360

its projected end in 2020 and beyond

589
00:23:03,110 --> 00:23:01,430
okay we're going to stand by real quick

590
00:23:04,710 --> 00:23:03,120
uh we need to reestablish our link with

591
00:23:06,789 --> 00:23:04,720
the spacex team there in hawthorne

592
00:23:07,909 --> 00:23:06,799
california so just stand by here on nasa

593
00:23:09,590 --> 00:23:07,919
television we're going to get the link

594
00:23:10,710 --> 00:23:09,600
back up and running and we'll be back

595
00:23:13,990 --> 00:23:10,720
with our briefing here in just a few

596
00:23:16,390 --> 00:23:15,270
hi everybody josh barley back here at

597
00:23:17,990 --> 00:23:16,400
the johnson space center again welcome

598
00:23:19,990 --> 00:23:18,000
back from our intermission that we just

599
00:23:21,830 --> 00:23:20,000
had in our briefing i think we're going

600
00:23:24,470 --> 00:23:21,840
to resume we have the connection back

601
00:23:25,750 --> 00:23:24,480
with our friends out of spacex uh ken

602
00:23:27,990 --> 00:23:25,760
kramer if you are still on the line with

603
00:23:30,390 --> 00:23:28,000
space space flight news go ahead and ask

604
00:23:32,230 --> 00:23:30,400
your question one more time for us okay

605
00:23:34,310 --> 00:23:32,240
i am here thank you

606
00:23:35,510 --> 00:23:34,320
um congratulations again on the mission

607
00:23:38,789 --> 00:23:35,520
to nasa

608
00:23:40,710 --> 00:23:38,799
and uh spacex was truly fantastic my

609
00:23:42,789 --> 00:23:40,720
question is um looking beyond these

610
00:23:44,630 --> 00:23:42,799
these 12 missions um

611
00:23:46,870 --> 00:23:44,640
we've got to service the space station

612
00:23:48,710 --> 00:23:46,880
for for for many years to come till the

613
00:23:51,830 --> 00:23:48,720

end of this decade but as was mentioned

614
00:23:53,830 --> 00:23:51,840
the other day the atv and htv production

615
00:23:56,789 --> 00:23:53,840
lines are going to come to an end

616
00:23:58,710 --> 00:23:56,799
so uh what's what's the plan um

617
00:24:00,630 --> 00:23:58,720
are you looking at that and any any

618
00:24:04,149 --> 00:24:00,640
contracts for beyond these these 12

619
00:24:08,950 --> 00:24:06,470
well certainly uh these uh current

620
00:24:11,750 --> 00:24:08,960
contracts run through uh i believe it's

621
00:24:14,630 --> 00:24:11,760
uh 2015 and the station's gonna need

622
00:24:18,230 --> 00:24:14,640
some cargo resupply so absolutely we'll

623
00:24:20,230 --> 00:24:18,240
be uh working on uh follow-on activities

624
00:24:21,430 --> 00:24:20,240
to be sure we fulfill our obligations

625
00:24:23,350 --> 00:24:21,440
for

626
00:24:24,390 --> 00:24:23,360
supplying the space station

627
00:24:25,590 --> 00:24:24,400
and

628
00:24:27,669 --> 00:24:25,600
we'll be

629
00:24:30,470 --> 00:24:27,679
working on that

630
00:24:32,950 --> 00:24:30,480
on that very soon and also i think it's

631
00:24:35,190 --> 00:24:32,960
very important to to look beyond the

632
00:24:39,110 --> 00:24:35,200
space station because

633
00:24:43,750 --> 00:24:41,590
in order to to complete

634
00:24:46,390 --> 00:24:43,760
our exploration goals

635
00:24:48,070 --> 00:24:46,400
that we absolutely must have our strong

636
00:24:49,990 --> 00:24:48,080
partnerships with commercial industry

637
00:24:50,870 --> 00:24:50,000
and i know there are opportunities out

638
00:24:53,430 --> 00:24:50,880

there

639
00:24:56,310 --> 00:24:53,440
that will fit very well within our

640
00:25:01,350 --> 00:24:56,320
architecture for uh exploration so we'll

641
00:25:05,590 --> 00:25:03,269
okay let's go to dan leone with space

642
00:25:09,909 --> 00:25:07,590
hi everybody thanks for having us this

643
00:25:11,909 --> 00:25:09,919
is a question for alan but it's uh more

644
00:25:13,830 --> 00:25:11,919
of a solicitation for comment alan since

645
00:25:15,590 --> 00:25:13,840
the good questions have been asked could

646
00:25:16,789 --> 00:25:15,600
you comment now that this mission's in

647
00:25:19,590 --> 00:25:16,799
the books

648
00:25:22,230 --> 00:25:19,600
on nasa on the space station program

649
00:25:24,549 --> 00:25:22,240
office's view of spacex's reliability a

650
00:25:28,630 --> 00:25:24,559
a compare and contrast with the before

651
00:25:32,630 --> 00:25:31,190
so i'm sorry maybe you could refer

652
00:25:35,830 --> 00:25:32,640
again i

653
00:25:38,710 --> 00:25:37,590
i'm sorry what did you ask me to repeat

654
00:25:40,310 --> 00:25:38,720
something

655
00:25:48,470 --> 00:25:40,320
yes please

656
00:25:48,480 --> 00:25:53,029
repeat the question

657
00:25:58,310 --> 00:25:55,669
it was a i would like alan to comment

658
00:25:59,830 --> 00:25:58,320
from the space station program offices

659
00:26:01,990 --> 00:25:59,840
of queue

660
00:26:04,710 --> 00:26:02,000
on the reliability of

661
00:26:07,110 --> 00:26:04,720
spacex hardware and

662
00:26:10,549 --> 00:26:07,120
delivery architecture now that we have a

663
00:26:11,750 --> 00:26:10,559

delivery in the books

664
00:26:14,390 --> 00:26:11,760
absolutely

665
00:26:15,909 --> 00:26:14,400
well uh you know the statistics show

666
00:26:20,390 --> 00:26:15,919
that uh

667
00:26:22,149 --> 00:26:20,400
the launch of the a new rocket

668
00:26:24,630 --> 00:26:22,159
first three launches of a new rocket

669
00:26:27,269 --> 00:26:24,640
have a significant chance of not working

670
00:26:28,950 --> 00:26:27,279
so well yes i'm very familiar with that

671
00:26:31,269 --> 00:26:28,960
including all three not working in the

672
00:26:33,510 --> 00:26:31,279
case of falcon 1.

673
00:26:35,269 --> 00:26:33,520
more likely than not yeah

674
00:26:36,950 --> 00:26:35,279
during the first three flights of

675
00:26:39,269 --> 00:26:36,960
certainly a new commercial vehicle yeah

676
00:26:40,630 --> 00:26:39,279
uh history has shown that they they

677
00:26:42,789 --> 00:26:40,640
have a more likely

678
00:26:45,029 --> 00:26:42,799
absolutely chance of failure than having

679
00:26:47,590 --> 00:26:45,039
all three successes so i i would say

680
00:26:49,990 --> 00:26:47,600
absolutely at this point uh not only

681
00:26:52,870 --> 00:26:50,000
statistically but

682
00:26:55,269 --> 00:26:52,880
but what we've seen proven now is that

683
00:26:58,390 --> 00:26:55,279
is a very reliable

684
00:27:01,750 --> 00:27:00,070
statistics also show that on the

685
00:27:04,149 --> 00:27:01,760
spacecraft side they tend to be more

686
00:27:05,990 --> 00:27:04,159
reliable in their beginning

687
00:27:08,789 --> 00:27:06,000
uh

688
00:27:10,549 --> 00:27:08,799

but i would say this vehicle performed

689
00:27:12,789 --> 00:27:10,559
so solid

690
00:27:20,310 --> 00:27:15,669
the

691
00:27:23,510 --> 00:27:20,320
are something that can be easily tweaked

692
00:27:25,350 --> 00:27:23,520
and i i would say quite confidently that

693
00:27:27,430 --> 00:27:25,360
we're looking at quite a reliable space

694
00:27:28,789 --> 00:27:27,440
transportation system here and i'm sure

695
00:27:32,070 --> 00:27:28,799
it's going to serve the space station

696
00:27:36,549 --> 00:27:34,070
okay let's go to clara moskowitz with

697
00:27:38,950 --> 00:27:36,559
space.com

698
00:27:41,590 --> 00:27:38,960
yes hi thanks um my question is for elon

699
00:27:43,029 --> 00:27:41,600
as well i'm wondering uh if you can say

700
00:27:44,870 --> 00:27:43,039
anything about the plan for this

701
00:27:47,269 --> 00:27:44,880
particular capsule if it's going to go

702
00:27:51,110 --> 00:27:47,279
on public display and if so where you

703
00:27:57,029 --> 00:27:52,950
um we don't have any definitive plans

704
00:27:58,710 --> 00:27:57,039
for this capsule um for the spacecraft

705
00:27:59,510 --> 00:27:58,720
and in terms of where i'd like to see it

706
00:28:00,789 --> 00:27:59,520
end up

707
00:28:03,830 --> 00:28:00,799
i guess

708
00:28:05,110 --> 00:28:03,840
i think it'd be cool to uh show it to uh

709
00:28:06,630 --> 00:28:05,120
maybe do a little tour of the country

710
00:28:09,029 --> 00:28:06,640
and show it to people

711
00:28:11,510 --> 00:28:09,039
around the country uh get you know in

712
00:28:13,990 --> 00:28:11,520
particular uh get uh kids and students

713
00:28:16,070 --> 00:28:14,000

uh excited about space i think that's

714
00:28:17,909 --> 00:28:16,080
anything we do to sort of help on the

715
00:28:21,510 --> 00:28:17,919
education front i think would be really

716
00:28:29,110 --> 00:28:22,870
okay thanks claire let's go to alan

717
00:28:32,549 --> 00:28:31,350
and i guess msnbc question would be for

718
00:28:34,070 --> 00:28:32,559
and when you're referring to a

719
00:28:36,470 --> 00:28:34,080
compulsive landing

720
00:28:39,110 --> 00:28:36,480
uh does that mean that you would switch

721
00:28:41,110 --> 00:28:39,120
to uh landing on land rather than

722
00:28:44,870 --> 00:28:41,120
splashing down later in

723
00:28:47,750 --> 00:28:44,880
the flights for nasa resupply uh and uh

724
00:28:49,190 --> 00:28:47,760
if so what's the procedure for

725
00:28:51,669 --> 00:28:49,200
proving that out

726
00:28:55,669 --> 00:28:53,510
i'm sure so

727
00:28:58,070 --> 00:28:55,679
well so the next version of dragon

728
00:29:00,470 --> 00:28:58,080
dragon version two

729
00:29:01,269 --> 00:29:00,480
will have propulsive landing capability

730
00:29:04,549 --> 00:29:01,279
um

731
00:29:06,310 --> 00:29:04,559
by virtue of the uh integrated uh escape

732
00:29:08,549 --> 00:29:06,320
thrusters so because we're gonna do

733
00:29:10,950 --> 00:29:08,559
something that's that's new uh which is

734
00:29:12,549 --> 00:29:10,960
to integrate the escape thrusters into

735
00:29:13,990 --> 00:29:12,559
the sidewall of the dragon spacecraft

736
00:29:15,350 --> 00:29:14,000
and make use of the same propellant that

737
00:29:17,350 --> 00:29:15,360
would otherwise be used for on-orbit

738
00:29:20,230 --> 00:29:17,360

maneuvering we have this added ability

739
00:29:21,510 --> 00:29:20,240
which is to do for false landing um and

740
00:29:23,350 --> 00:29:21,520
which i think it's really cool that's

741
00:29:27,110 --> 00:29:23,360
sort of like how spaceships land in you

742
00:29:30,149 --> 00:29:27,120
know sci-fi movies and um so i think and

743
00:29:31,510 --> 00:29:30,159
and that that also enables landing on

744
00:29:33,110 --> 00:29:31,520
you know

745
00:29:34,950 --> 00:29:33,120
in other parts of the solar system that

746
00:29:36,789 --> 00:29:34,960
don't have an atmosphere or have a very

747
00:29:38,710 --> 00:29:36,799
thin atmosphere

748
00:29:41,269 --> 00:29:38,720
and obviously don't have any any uh

749
00:29:43,190 --> 00:29:41,279
landing strips so

750
00:29:45,190 --> 00:29:43,200
it's the ways i think spacecraft were to

751
00:29:47,110 --> 00:29:45,200
land and

752
00:29:48,149 --> 00:29:47,120
it will hopefully enable a lot of

753
00:29:49,830 --> 00:29:48,159
interesting

754
00:29:51,350 --> 00:29:49,840
potential missions

755
00:29:53,029 --> 00:29:51,360
because i think it could be

756
00:29:54,950 --> 00:29:53,039
a generalized

757
00:29:56,789 --> 00:29:54,960
science delivery platform for other

758
00:29:57,590 --> 00:29:56,799
places in the solar system

759
00:30:00,230 --> 00:29:57,600
and

760
00:30:02,310 --> 00:30:00,240
think we'll

761
00:30:03,269 --> 00:30:02,320
we'll start hopefully doing some

762
00:30:05,430 --> 00:30:03,279
uh

763
00:30:07,590 --> 00:30:05,440

some propulsive landing

764
00:30:09,110 --> 00:30:07,600
initial tests later this year

765
00:30:11,029 --> 00:30:09,120
and i'm not sure when it would actually

766
00:30:13,510 --> 00:30:11,039
go operational but it would i would say

767
00:30:15,430 --> 00:30:13,520
it's probably um

768
00:30:18,950 --> 00:30:15,440
you know three years

769
00:30:20,470 --> 00:30:18,960
uh if things go well um and then maybe

770
00:30:23,750 --> 00:30:20,480
four or five if we encounter some

771
00:30:25,110 --> 00:30:23,760
challenges along the way

772
00:30:26,789 --> 00:30:25,120
okay quick reminder for everybody on the

773
00:30:28,389 --> 00:30:26,799
phone lines if you're uh listening to us

774
00:30:29,510 --> 00:30:28,399
and also watching us online we ask that

775
00:30:31,990 --> 00:30:29,520
you turn your computer down because it

776
00:30:33,669 --> 00:30:32,000
makes us hear ourselves uh twice which

777
00:30:40,389 --> 00:30:33,679
is not fun let's go to roger ball with

778
00:30:44,950 --> 00:30:42,549
good afternoon to you once again my

779
00:30:46,710 --> 00:30:44,960
congratulations on a great prize it was

780
00:31:03,269 --> 00:30:46,720
a great video that we were unable to see

781
00:31:06,549 --> 00:31:04,470
super difficult to hear you

782
00:31:07,990 --> 00:31:06,559
unfortunately um i wonder if

783
00:31:09,750 --> 00:31:08,000
if there's some sort of something in the

784
00:31:11,350 --> 00:31:09,760
background that you perhaps turned down

785
00:31:29,430 --> 00:31:11,360
because it's unfortunate i could not

786
00:31:32,230 --> 00:31:31,029
roger we're still having i don't know

787
00:31:34,389 --> 00:31:32,240
who it is on the line that's got their

788
00:31:36,149 --> 00:31:34,399

speakers turned up but again if you guys

789
00:31:37,430 --> 00:31:36,159
have uh your your computer's turned on

790
00:31:38,789 --> 00:31:37,440
and you're listening to us we ask that

791
00:31:41,110 --> 00:31:38,799
you actually turn it down because it's

792
00:31:42,070 --> 00:31:41,120
causing our briefers uh some trouble

793
00:31:44,389 --> 00:31:42,080
hearing you

794
00:31:46,389 --> 00:31:44,399
uh so roger we can try one more time for

795
00:31:52,789 --> 00:31:46,399
you to ask your question to uh mr musk

796
00:31:52,799 --> 00:32:10,789
a while ago

797
00:32:19,430 --> 00:32:16,950
uh

798
00:32:21,269 --> 00:32:19,440
can't hear the question so we're going

799
00:32:24,230 --> 00:32:21,279
to stand by for just a few seconds uh

800
00:32:26,070 --> 00:32:24,240
peter king with cbs radio um if you can

801
00:32:27,750 --> 00:32:26,080
hear us go ahead

802
00:32:30,630 --> 00:32:27,760
i hear you loud and clear and thank you

803
00:32:32,549 --> 00:32:30,640
and this question is uh uh for for both

804
00:32:34,870 --> 00:32:32,559
gentlemen you know after apollo seven

805
00:32:37,430 --> 00:32:34,880
wally sharach called it a 100 percent

806
00:32:40,070 --> 00:32:37,440
was 101 success because they

807
00:32:42,070 --> 00:32:40,080
accomplished more than they expected to

808
00:32:44,230 --> 00:32:42,080
and so this is like you know take your

809
00:32:46,149 --> 00:32:44,240
pick of any of these three questions did

810
00:32:48,950 --> 00:32:46,159
you get everything done that you wanted

811
00:32:51,750 --> 00:32:48,960
to did you get more done than you hoped

812
00:32:57,430 --> 00:32:51,760
to get done or was there anything you

813
00:33:04,070 --> 00:33:01,430

well i mean i i can answer from uh

814
00:33:06,470 --> 00:33:04,080
the objectives and the success criteria

815
00:33:07,430 --> 00:33:06,480
we established for this milestone in

816
00:33:10,230 --> 00:33:07,440
fact

817
00:33:11,830 --> 00:33:10,240
two milestones because we originally had

818
00:33:14,789 --> 00:33:11,840
two flights planned

819
00:33:16,789 --> 00:33:14,799
to demonstrate all of these capabilities

820
00:33:17,669 --> 00:33:16,799
and

821
00:33:22,230 --> 00:33:17,679
they

822
00:33:24,389 --> 00:33:22,240
demonstration flight

823
00:33:26,149 --> 00:33:24,399
and i think you could see very

824
00:33:28,789 --> 00:33:26,159
objectively when you look at these and

825
00:33:30,470 --> 00:33:28,799
there were some 33 separate criteria

826
00:33:32,870 --> 00:33:30,480
that they had listed

827
00:33:36,310 --> 00:33:32,880
that it is very objective

828
00:33:38,870 --> 00:33:36,320
and easy to see that this this satisfied

829
00:33:42,310 --> 00:33:38,880
i believe 100

830
00:33:43,909 --> 00:33:42,320
of those of those criteria uh like i

831
00:33:45,830 --> 00:33:43,919
said there's a couple left to go we're

832
00:33:47,830 --> 00:33:45,840
going to have to see the cargo right get

833
00:33:50,389 --> 00:33:47,840
the cargo back in our hands those are

834
00:33:52,789 --> 00:33:50,399
the last two i told you before gwen and

835
00:33:55,029 --> 00:33:52,799
i would check off the

836
00:33:56,789 --> 00:33:55,039
the objectives as the mission moved

837
00:33:58,549 --> 00:33:56,799
along and and we

838
00:34:01,509 --> 00:33:58,559

we certainly were able to check them off

839
00:34:04,470 --> 00:34:01,519
now of course officially we will

840
00:34:06,389 --> 00:34:04,480
look at the post flight data and uh and

841
00:34:07,990 --> 00:34:06,399
do a make an official determination but

842
00:34:10,230 --> 00:34:08,000
i would say at this point it looks like

843
00:34:12,149 --> 00:34:10,240
a hundred percent success

844
00:34:13,909 --> 00:34:12,159
yeah i think that that is that's what it

845
00:34:15,349 --> 00:34:13,919
looks like looks like everything worked

846
00:34:17,430 --> 00:34:15,359
really well um

847
00:34:19,669 --> 00:34:17,440
some things did in fact work better than

848
00:34:21,909 --> 00:34:19,679
expected our solar panels for example

849
00:34:24,310 --> 00:34:21,919
generated more power than than we

850
00:34:27,190 --> 00:34:24,320
expected which was great um

851
00:34:29,270 --> 00:34:27,200
and so when we when we had attached to

852
00:34:31,109 --> 00:34:29,280
the space station our batteries were

853
00:34:33,270 --> 00:34:31,119
basically full

854
00:34:35,669 --> 00:34:33,280
and we expected them to be depleted a

855
00:34:37,829 --> 00:34:35,679
lot more so

856
00:34:39,510 --> 00:34:37,839
yeah i think on balance it's fair to say

857
00:34:40,710 --> 00:34:39,520
things really worked better than

858
00:34:42,230 --> 00:34:40,720
expected

859
00:34:45,510 --> 00:34:42,240
we have a lot of redundant systems and

860
00:34:47,349 --> 00:34:45,520
we really didn't need to use

861
00:34:48,389 --> 00:34:47,359
them hardly at all so

862
00:34:54,550 --> 00:34:48,399
i

863
00:34:57,910 --> 00:34:55,909

okay we got up to three more reporters

864
00:34:59,430 --> 00:34:57,920
on the phone lines before we uh get to

865
00:35:01,910 --> 00:34:59,440
those we've got a surprise for you we

866
00:35:03,750 --> 00:35:01,920
finally got the first uh image of dragon

867
00:35:06,230 --> 00:35:03,760
there in the pacific ocean spacex just

868
00:35:07,990 --> 00:35:06,240
released it a few minutes ago

869
00:35:10,550 --> 00:35:08,000
so there it is after a successful

870
00:35:13,910 --> 00:35:12,550
it's a very a very striking image so

871
00:35:16,390 --> 00:35:13,920
let's go to james dean with florida

872
00:35:17,349 --> 00:35:16,400
today

873
00:35:20,150 --> 00:35:17,359
thanks

874
00:35:22,870 --> 00:35:20,160
elon you said after the last or first

875
00:35:25,990 --> 00:35:22,880
dragon fight that a crew would have been

876
00:35:28,870 --> 00:35:26,000
both during uh re-entry

877
00:35:31,430 --> 00:35:28,880
again and um just more broadly

878
00:35:33,589 --> 00:35:31,440
um do you see the flight success

879
00:35:36,390 --> 00:35:33,599
having any implications for commercial

880
00:35:37,990 --> 00:35:36,400
crew in in general in terms of building

881
00:35:39,670 --> 00:35:38,000
very straightforward

882
00:35:40,390 --> 00:35:39,680
perhaps even just allowing you to focus

883
00:35:43,270 --> 00:35:40,400
more

884
00:35:43,280 --> 00:35:44,230
after initiative

885
00:35:50,790 --> 00:35:47,270
last or absolutely so um hypothetically

886
00:35:52,150 --> 00:35:50,800
if someone had stood aboard dragon

887
00:35:54,069 --> 00:35:52,160
and and then

888
00:35:55,990 --> 00:35:54,079

you know somebody jumped on board from

889
00:35:57,829 --> 00:35:56,000
the space station um we could have

890
00:35:59,670 --> 00:35:57,839
actually taken people to and from the

891
00:36:01,030 --> 00:35:59,680
space station with the cargo version of

892
00:36:02,470 --> 00:36:01,040
dragon that's perhaps important to

893
00:36:03,510 --> 00:36:02,480
appreciate and

894
00:36:04,870 --> 00:36:03,520
probably a lot of people aren't aware of

895
00:36:07,109 --> 00:36:04,880
it no no it's not something we would

896
00:36:08,550 --> 00:36:07,119
necessarily say is um

897
00:36:09,829 --> 00:36:08,560
uh

898
00:36:11,190 --> 00:36:09,839
it's not the right it wouldn't be the

899
00:36:13,190 --> 00:36:11,200
right move because we obviously want to

900
00:36:16,710 --> 00:36:13,200
make sure that the vehicle is

901
00:36:18,710 --> 00:36:16,720
um proven many times over before uh any

902
00:36:21,349 --> 00:36:18,720
any people are on board and we'd also

903
00:36:23,190 --> 00:36:21,359
want to add things like uh escape

904
00:36:24,630 --> 00:36:23,200
thrusters and to be able to get away

905
00:36:28,710 --> 00:36:24,640
from the launch vehicle in a worst-case

906
00:36:31,430 --> 00:36:28,720
scenario enhance the uh

907
00:36:33,349 --> 00:36:31,440
life support system and

908
00:36:36,230 --> 00:36:33,359
have obviously seats and

909
00:36:37,829 --> 00:36:36,240
controls and that kind of thing

910
00:36:40,550 --> 00:36:37,839
but it is it is kind of cool to think

911
00:36:41,990 --> 00:36:40,560
that if someone had stowed away on board

912
00:36:43,270 --> 00:36:42,000
dragon they actually would have been

913
00:36:44,390 --> 00:36:43,280

been okay

914
00:36:45,990 --> 00:36:44,400
so um

915
00:36:48,950 --> 00:36:46,000
so i think that's great and

916
00:36:51,910 --> 00:36:48,960
uh and i think this does provide a lot

917
00:36:53,270 --> 00:36:51,920
of evidence to support uh the promotion

918
00:36:55,270 --> 00:36:53,280
of the

919
00:36:58,470 --> 00:36:55,280
nasa commercial crew program

920
00:36:59,910 --> 00:36:58,480
and i'm hopeful that this will

921
00:37:02,069 --> 00:36:59,920
give give

922
00:37:04,390 --> 00:37:02,079
you know many congress that had concerns

923
00:37:06,390 --> 00:37:04,400
that this will give them reason to feel

924
00:37:10,230 --> 00:37:06,400
that that they can support

925
00:37:22,390 --> 00:37:11,510
okay thank you james let's go to hannah

926
00:37:26,870 --> 00:37:24,710
okay i think that we have lost uh hannah

927
00:37:27,829 --> 00:37:26,880
uh before we go to npr just a reminder

928
00:37:29,510 --> 00:37:27,839
if you've already asked your question

929
00:37:30,790 --> 00:37:29,520
i've already called on you uh please go

930
00:37:32,150 --> 00:37:30,800
ahead and mute your phone that's part of

931
00:37:33,589 --> 00:37:32,160
what's causing the the feedback that

932
00:37:36,550 --> 00:37:33,599
we're hearing so uh

933
00:37:38,310 --> 00:37:36,560
nell boyce with npr go ahead hey uh this

934
00:37:39,670 --> 00:37:38,320
message uh this question is for elon i'm

935
00:37:41,670 --> 00:37:39,680
wondering if you're able to see this

936
00:37:43,349 --> 00:37:41,680
first image of dragon that's come back

937
00:37:45,750 --> 00:37:43,359
floating the pacific and so what your

938
00:37:48,829 --> 00:37:45,760

thoughts are and also how you plan to

939
00:37:54,390 --> 00:37:51,990
um well i guess my my my thoughts are

940
00:37:55,910 --> 00:37:54,400
welcome home baby um that's that's what

941
00:37:58,150 --> 00:37:55,920
i'm thinking

942
00:38:00,630 --> 00:37:58,160
um really looking forward to seeing it

943
00:38:03,589 --> 00:38:00,640
arrive at the port and um

944
00:38:07,030 --> 00:38:03,599
and then uh unloading the cargo

945
00:38:11,990 --> 00:38:09,190
yeah it's just

946
00:38:16,630 --> 00:38:12,000
yeah i feel really really great it's

947
00:38:19,750 --> 00:38:18,230
okay a couple of quick follow-ups here

948
00:38:23,430 --> 00:38:19,760
in houston go ahead

949
00:38:25,430 --> 00:38:23,440
yeah matt sampson news 92 fm um

950
00:38:27,589 --> 00:38:25,440
this the the idea the concept of

951
00:38:29,670 --> 00:38:27,599
commercial flight working with nasa was

952
00:38:33,109 --> 00:38:29,680
was a bit of a controversial one when

953
00:38:36,310 --> 00:38:33,119
the current administration made it um

954
00:38:39,109 --> 00:38:36,320
for either gentlemen uh

955
00:38:41,030 --> 00:38:39,119
is this validation of that decision

956
00:38:42,550 --> 00:38:41,040
and have you heard any kind of

957
00:38:44,069 --> 00:38:42,560
congratulations

958
00:38:48,150 --> 00:38:44,079
from president obama or anyone

959
00:38:53,030 --> 00:38:51,190
um yeah so actually that the

960
00:38:55,750 --> 00:38:53,040
president called me last week

961
00:38:57,750 --> 00:38:55,760
to congratulate me on the uh and spacex

962
00:39:01,430 --> 00:38:57,760
and and nasa and everyone associated

963
00:39:03,349 --> 00:39:01,440

with the client to congratulate us on

964
00:39:05,829 --> 00:39:03,359
the success of the launch

965
00:39:07,430 --> 00:39:05,839
which i very much appreciated

966
00:39:08,710 --> 00:39:07,440
and we've received many

967
00:39:10,310 --> 00:39:08,720
calls from

968
00:39:12,230 --> 00:39:10,320
congress from

969
00:39:14,470 --> 00:39:12,240
both sides of the of the house and

970
00:39:16,790 --> 00:39:14,480
senate because i mean this is really

971
00:39:17,910 --> 00:39:16,800
um this is a bipartisan thing it's

972
00:39:19,670 --> 00:39:17,920
something this is something that's great

973
00:39:22,390 --> 00:39:19,680
for the country great for the world and

974
00:39:25,109 --> 00:39:22,400
i think it's it's something that um

975
00:39:27,030 --> 00:39:25,119
whatever party or affiliation you have

976
00:39:28,630 --> 00:39:27,040
you can feel great about about this

977
00:39:31,990 --> 00:39:28,640
because this is this is very much a

978
00:39:35,190 --> 00:39:33,750
and and i would uh

979
00:39:36,790 --> 00:39:35,200
i would add

980
00:39:38,470 --> 00:39:36,800
that

981
00:39:39,910 --> 00:39:38,480
when i uh

982
00:39:42,390 --> 00:39:39,920
talked earlier about the objectives

983
00:39:44,310 --> 00:39:42,400
we've set for the program i mean we

984
00:39:45,270 --> 00:39:44,320
weren't sure exactly how it was going to

985
00:39:46,870 --> 00:39:45,280
end up

986
00:39:48,630 --> 00:39:46,880
and

987
00:39:50,630 --> 00:39:48,640
it was a bit of an experiment when we

988
00:39:52,550 --> 00:39:50,640

started this this is a new way of doing

989
00:39:53,510 --> 00:39:52,560
business for nasa partnership where we

990
00:39:56,790 --> 00:39:53,520
become

991
00:39:58,950 --> 00:39:56,800
partners sharing costs sharing risk

992
00:40:03,829 --> 00:39:58,960
and of course today we get to share in

993
00:40:10,710 --> 00:40:07,589
it is a new way of doing business and

994
00:40:12,710 --> 00:40:10,720
by the fact that we were so successful

995
00:40:14,950 --> 00:40:12,720
in meeting these objectives that we set

996
00:40:17,270 --> 00:40:14,960
so early on i would say absolutely as an

997
00:40:20,150 --> 00:40:17,280
affirmation that this is a model that

998
00:40:25,109 --> 00:40:20,160
works and it certainly worked very well

999
00:40:29,750 --> 00:40:27,109
uh robert promo with collectspace.com

1000
00:40:31,750 --> 00:40:29,760
with a quick follow-up for elon um

1001
00:40:36,069 --> 00:40:31,760
dragon not only landed on time it landed

1002
00:40:37,750 --> 00:40:36,079
two seconds early uh was that a um

1003
00:40:40,069 --> 00:40:37,760
was that just due to the winds or the

1004
00:40:42,550 --> 00:40:40,079
swell the ocean or how does that um how

1005
00:40:45,589 --> 00:40:42,560
do you calculate a landing time for a

1006
00:40:46,710 --> 00:40:45,599
parachute drop capsule

1007
00:40:49,430 --> 00:40:46,720
yeah there's always a little bit of

1008
00:40:50,309 --> 00:40:49,440
variation depending upon the winds and

1009
00:40:51,990 --> 00:40:50,319
um

1010
00:40:53,510 --> 00:40:52,000
that's that's i think probably the

1011
00:40:54,870 --> 00:40:53,520
primary explanation for for a few

1012
00:40:55,829 --> 00:40:54,880
seconds of difference

1013
00:40:57,109 --> 00:40:55,839

um

1014
00:40:58,710 --> 00:40:57,119
so uh

1015
00:41:01,589 --> 00:40:58,720
yeah in fact

1016
00:41:04,390 --> 00:41:01,599
if it wasn't for wind drift uh we could

1017
00:41:05,589 --> 00:41:04,400
uh land dragon um with such accuracy

1018
00:41:09,270 --> 00:41:05,599
that we could actually put in somebody's

1019
00:41:12,870 --> 00:41:11,030
okay that's going to wrap it up for us

1020
00:41:14,150 --> 00:41:12,880
here in houston as we part ways we're

1021
00:41:15,750 --> 00:41:14,160
going to take one final look at the

1022
00:41:19,430 --> 00:41:15,760
dragon spacecraft there in the pacific

1023
00:41:22,950 --> 00:41:19,440
ocean after landing today at 10 42 a.m

1024
00:41:24,710 --> 00:41:22,960
central time 8 42 a.m pacific time

1025
00:41:25,910 --> 00:41:24,720
this mission came to a close very

1026
00:41:27,910 --> 00:41:25,920
successfully we want to thank you for

1027
00:41:29,430 --> 00:41:27,920
joining us during all these events ever

1028
00:41:30,630 --> 00:41:29,440
since dragon launched

1029
00:41:32,470 --> 00:41:30,640
back at the kennedy space center a

1030
00:41:33,589 --> 00:41:32,480
little more than a week ago of course

1031
00:41:35,589 --> 00:41:33,599
we'll have an update for you again

1032
00:41:38,390 --> 00:41:35,599
tomorrow on iss update at its normal