



1
00:00:05,990 --> 00:00:03,990
good afternoon and welcome to nasa's

2
00:00:09,270 --> 00:00:06,000
kennedy space center in florida for

3
00:00:11,430 --> 00:00:09,280
today's spacex crs6 post-launch news

4
00:00:13,270 --> 00:00:11,440
conference which is always a pleasure to

5
00:00:15,030 --> 00:00:13,280
have a post-launch news conference after

6
00:00:17,269 --> 00:00:15,040
a spectacular liftoff today of the

7
00:00:19,189 --> 00:00:17,279
falcon 9 rocket we are pleased today to

8
00:00:21,269 --> 00:00:19,199
be joined by

9
00:00:23,670 --> 00:00:21,279
dan hartman

10
00:00:25,269 --> 00:00:23,680
dan is the deputy international space

11
00:00:27,830 --> 00:00:25,279
station program manager from nasa's

12
00:00:30,710 --> 00:00:27,840
johnson space center in houston

13
00:00:32,549 --> 00:00:30,720

and by hans kunigsmann vice president of

14

00:00:35,430 --> 00:00:32,559

mission assurance for spacex and the

15

00:00:36,709 --> 00:00:35,440

chief engineer for spacex on this launch

16

00:00:38,950 --> 00:00:36,719

and we'll start off with opening

17

00:00:40,630 --> 00:00:38,960

comments and be happy to take questions

18

00:00:42,549 --> 00:00:40,640

dan all right thank you mike and good

19

00:00:45,910 --> 00:00:42,559

afternoon everybody first of all

20

00:00:48,150 --> 00:00:45,920

congratulations to our our spacex team

21

00:00:49,830 --> 00:00:48,160

from hawthorne to mcgregor to the folks

22

00:00:51,270 --> 00:00:49,840

here at the cape they did just a

23

00:00:52,869 --> 00:00:51,280

tremendous job

24

00:00:54,709 --> 00:00:52,879

getting the vehicle prepared after the

25

00:00:57,270 --> 00:00:54,719

weather delay yesterday

26
00:01:00,069 --> 00:00:57,280
as mentioned it was just a spectacular

27
00:01:01,349 --> 00:01:00,079
launch and everything looks to be on

28
00:01:05,189 --> 00:01:01,359
track

29
00:01:06,070 --> 00:01:05,199
for now a with a launch today a grapple

30
00:01:08,950 --> 00:01:06,080
and

31
00:01:10,789 --> 00:01:08,960
eventual birth to the to our node 2 on

32
00:01:13,670 --> 00:01:10,799
the international space station

33
00:01:14,550 --> 00:01:13,680
on friday morning at 6 a.m houston time

34
00:01:16,310 --> 00:01:14,560
so

35
00:01:18,149 --> 00:01:16,320
we're looking forward to that the crews

36
00:01:21,270 --> 00:01:18,159
uh completely trained ready to go

37
00:01:23,830 --> 00:01:21,280
systems onboard the iss uh are ready to

38
00:01:26,230 --> 00:01:23,840

to receive uh receive the dragon

39

00:01:28,149 --> 00:01:26,240

and then once we uh once we birth we'll

40

00:01:29,830 --> 00:01:28,159

take a day another day for hatch opening

41

00:01:32,390 --> 00:01:29,840

and then we will get on with our with

42

00:01:35,109 --> 00:01:32,400

our research program uh there's over 40

43

00:01:37,510 --> 00:01:35,119

experiments on this mission uh directly

44

00:01:40,310 --> 00:01:37,520

related to uh the the one year studies

45

00:01:42,630 --> 00:01:40,320

that we've been conducting and so the

46

00:01:44,310 --> 00:01:42,640

teams are ready to go our payload folks

47

00:01:46,950 --> 00:01:44,320

in huntsville alabama have done a great

48

00:01:48,710 --> 00:01:46,960

job in getting prepared for this our

49

00:01:50,630 --> 00:01:48,720

principal investigators for all these

50

00:01:52,630 --> 00:01:50,640

experiments are ready to go and so we

51

00:01:54,550 --> 00:01:52,640

look forward to the delivery

52

00:01:56,310 --> 00:01:54,560

on on friday morning

53

00:01:58,550 --> 00:01:56,320

and with that i'll turn it over to hans

54

00:02:00,870 --> 00:01:58,560

and give you a status of

55

00:02:02,789 --> 00:02:00,880

falcon and dragon performance all right

56

00:02:05,830 --> 00:02:02,799

thank you very much and uh

57

00:02:07,830 --> 00:02:05,840

thanks dan so uh i'm i'm super happy

58

00:02:10,309 --> 00:02:07,840

it's a good launch and i would like to

59

00:02:13,430 --> 00:02:10,319

thank a couple folks the ground team

60

00:02:15,510 --> 00:02:13,440

that did awesome over the last 24 hours

61

00:02:18,390 --> 00:02:15,520

and over the entire integration time

62

00:02:20,710 --> 00:02:18,400

launch control team was was great

63

00:02:23,030 --> 00:02:20,720

the whole vehicle responsible engineer

64

00:02:25,110 --> 00:02:23,040

team that works those launches just

65

00:02:27,830 --> 00:02:25,120

performed flawless and awesome the

66

00:02:30,869 --> 00:02:27,840

entire countdown was very quiet there

67

00:02:34,150 --> 00:02:30,879

was basically nothing to

68

00:02:35,910 --> 00:02:34,160

work on it was automated completely and

69

00:02:37,589 --> 00:02:35,920

very little chatter on the nets and

70

00:02:39,430 --> 00:02:37,599

everything was just

71

00:02:43,350 --> 00:02:39,440

rolling down and special thanks to the

72

00:02:45,910 --> 00:02:44,150

i'm

73

00:02:47,830 --> 00:02:45,920

after yesterday and these pretty

74

00:02:51,430 --> 00:02:47,840

dramatic uh

75

00:02:53,910 --> 00:02:51,440

three minutes before liftoff hold

76

00:02:55,110 --> 00:02:53,920

it was a lot better today

77

00:02:57,589 --> 00:02:55,120

and

78

00:02:58,630 --> 00:02:57,599

okay falcon 9 did great from what i can

79

00:03:00,949 --> 00:02:58,640

tell

80

00:03:02,790 --> 00:03:00,959

just looking at the the console

81

00:03:03,830 --> 00:03:02,800

shutdown velocities were right on the

82

00:03:07,830 --> 00:03:03,840

money

83

00:03:10,309 --> 00:03:07,840

the velocity is right and typically the

84

00:03:11,830 --> 00:03:10,319

uh the orbit is right too

85

00:03:14,630 --> 00:03:11,840

um

86

00:03:17,030 --> 00:03:14,640

the one thing that was uh different or

87

00:03:18,949 --> 00:03:17,040

new this time was we stayed the camera

88

00:03:20,309 --> 00:03:18,959

from the second stage stayed on dragon

89

00:03:22,949 --> 00:03:20,319

so you could see

90

00:03:24,789 --> 00:03:22,959

the uh solar array the covers go away

91

00:03:26,229 --> 00:03:24,799

and then you could see the solar arrays

92

00:03:27,750 --> 00:03:26,239

unfold

93

00:03:30,070 --> 00:03:27,760

and another say oh yeah there it is

94

00:03:31,589 --> 00:03:30,080

actually that is such a phenomenal

95

00:03:34,710 --> 00:03:31,599

picture

96

00:03:38,390 --> 00:03:36,470

and in the past we turned the vehicle

97

00:03:39,589 --> 00:03:38,400

away just before that so uh this time we

98

00:03:41,509 --> 00:03:39,599

fixed that and

99

00:03:43,750 --> 00:03:41,519

have really good uh good pictures of the

100

00:03:46,229 --> 00:03:43,760

solar array and dragon deploying these

101
00:03:47,509 --> 00:03:46,239
solar rays from what i hear dragon is in

102
00:03:49,589 --> 00:03:47,519
perfect shape

103
00:03:52,149 --> 00:03:49,599
um

104
00:03:54,789 --> 00:03:52,159
going towards the station the orbit race

105
00:03:57,429 --> 00:03:54,799
burns coming up basically the

106
00:03:59,190 --> 00:03:57,439
gnc door openings coming up shortly so

107
00:04:02,309 --> 00:03:59,200
from from what i heard on the way up

108
00:04:03,429 --> 00:04:02,319
here everything is just just working

109
00:04:05,190 --> 00:04:03,439
fine and

110
00:04:08,710 --> 00:04:05,200
nothing

111
00:04:11,509 --> 00:04:09,589
yeah

112
00:04:15,990 --> 00:04:11,519
i can

113
00:04:20,229 --> 00:04:18,710

totally not important after the primary

114

00:04:23,189 --> 00:04:20,239

objective which is to

115

00:04:25,430 --> 00:04:23,199

provide food and cargo and science to

116

00:04:28,150 --> 00:04:25,440

the iss which is the

117

00:04:30,790 --> 00:04:28,160

big thing the landing uh on the drone

118

00:04:31,909 --> 00:04:30,800

ship um we seem to have landed a little

119

00:04:32,710 --> 00:04:31,919

bit too hard

120

00:04:34,950 --> 00:04:32,720

um

121

00:04:36,870 --> 00:04:34,960

there's the vehicle coming in so that's

122

00:04:38,310 --> 00:04:36,880

i'm always amazed by that because on one

123

00:04:42,150 --> 00:04:38,320

side we see it going off here and then

124

00:04:45,270 --> 00:04:42,160

we see it you know 200 miles further

125

00:04:47,189 --> 00:04:45,280

somewhere else on a on a drone ship that

126

00:04:51,350 --> 00:04:47,199

sits in the middle of the ocean we see

127

00:04:53,590 --> 00:04:51,360

it coming down so uh it came down and it

128

00:04:55,189 --> 00:04:53,600

landed apparently a little bit too hard

129

00:04:56,870 --> 00:04:55,199

i saw three

130

00:04:58,710 --> 00:04:56,880

two frames basically and then that was

131

00:05:00,629 --> 00:04:58,720

the end of it so we're still looking at

132

00:05:02,629 --> 00:05:00,639

data we need to analyze what happened

133

00:05:04,790 --> 00:05:02,639

looking at the data um

134

00:05:06,710 --> 00:05:04,800

itself quickly i heard that everything

135

00:05:10,950 --> 00:05:06,720

seemed to be fine so it's not quite

136

00:05:13,749 --> 00:05:10,960

clear what happened but um it's it's uh

137

00:05:15,909 --> 00:05:13,759

so certainly uh

138

00:05:18,070 --> 00:05:15,919

needs more work in the next next couple

139

00:05:21,670 --> 00:05:18,080

missions which by the way the the next

140

00:05:23,029 --> 00:05:21,680

attempt would be then on on cs7

141

00:05:25,270 --> 00:05:23,039

um

142

00:05:26,469 --> 00:05:25,280

other than that that was pretty much all

143

00:05:28,150 --> 00:05:26,479

i had

144

00:05:29,990 --> 00:05:28,160

all right thank you hans we'll be happy

145

00:05:31,830 --> 00:05:30,000

to take questions now um

146

00:05:34,070 --> 00:05:31,840

please wait for the microphone state

147

00:05:36,150 --> 00:05:34,080

your name and affiliation and to whom

148

00:05:38,550 --> 00:05:36,160

you're addressing the question

149

00:05:40,870 --> 00:05:38,560

and we'll begin with marcia dunn marcia

150

00:05:42,629 --> 00:05:40,880

done associated press regarding the

151
00:05:44,230 --> 00:05:42,639
secondary mission um do you think you'll

152
00:05:45,749 --> 00:05:44,240
be able to recover any of the boost or

153
00:05:47,909 --> 00:05:45,759
have you heard whether there is anything

154
00:05:50,230 --> 00:05:47,919
left to be gotten the there's a crew

155
00:05:52,390 --> 00:05:50,240
boat but it's standing away from the

156
00:05:54,550 --> 00:05:52,400
drone ship for safety

157
00:05:55,990 --> 00:05:54,560
and they are what i heard is they're on

158
00:05:58,870 --> 00:05:56,000
the way it

159
00:06:00,469 --> 00:05:58,880
might take a while one two three maybe

160
00:06:02,790 --> 00:06:00,479
two and a half hours to get there i'm

161
00:06:04,830 --> 00:06:02,800
guessing a little bit and then they can

162
00:06:07,830 --> 00:06:04,840
see what happened

163
00:06:10,870 --> 00:06:07,840

um by the time i left we didn't have

164

00:06:13,430 --> 00:06:10,880

data so i couldn't see what's on the

165

00:06:14,390 --> 00:06:13,440

drone ship itself um

166

00:06:16,150 --> 00:06:14,400

but i'm

167

00:06:17,110 --> 00:06:16,160

pretty sure there will be something to

168

00:06:20,870 --> 00:06:17,120

recover

169

00:06:27,110 --> 00:06:21,670

ken

170

00:06:29,110 --> 00:06:27,120

universe today um for dan um talk a

171

00:06:31,029 --> 00:06:29,120

little bit first about what a relief it

172

00:06:33,189 --> 00:06:31,039

is that this is successful you has a

173

00:06:34,550 --> 00:06:33,199

have a single string only to orbit so

174

00:06:36,469 --> 00:06:34,560

that's got to be a great relief talk

175

00:06:38,070 --> 00:06:36,479

about that the second thing is you

176

00:06:39,350 --> 00:06:38,080

talked a little bit about i'd like you

177

00:06:40,629 --> 00:06:39,360

to talk a little bit about the future

178

00:06:43,430 --> 00:06:40,639

missions you already talked about the

179

00:06:46,070 --> 00:06:43,440

docking adapters on uh spacex7 tell us a

180

00:06:48,230 --> 00:06:46,080

little bit else what's going on spacex7

181

00:06:50,230 --> 00:06:48,240

as well as i think that the beam is

182

00:06:52,070 --> 00:06:50,240

going up on the spacex eight talk about

183

00:06:54,870 --> 00:06:52,080

what's coming up the rest of the year on

184

00:06:56,390 --> 00:06:54,880

these spacex flights thank you sure um

185

00:06:58,870 --> 00:06:56,400

let's see the first part of the question

186

00:07:01,270 --> 00:06:58,880

oh single string you know we're

187

00:07:03,029 --> 00:07:01,280

we are single string until we get uh our

188

00:07:04,550 --> 00:07:03,039

orbital team back and find in the

189

00:07:07,350 --> 00:07:04,560

november time period you know we do have

190

00:07:09,510 --> 00:07:07,360

the htv vehicle we just did have an atv

191

00:07:11,270 --> 00:07:09,520

vehicle come and go and so you know

192

00:07:13,430 --> 00:07:11,280

single string in the commercial side yes

193

00:07:17,029 --> 00:07:13,440

but we do have other other ways to get

194

00:07:19,029 --> 00:07:17,039

cargo to orbit we do at times share and

195

00:07:20,150 --> 00:07:19,039

get some cargo up on progress vehicles

196

00:07:22,070 --> 00:07:20,160

and so

197

00:07:24,309 --> 00:07:22,080

there's there's multiple ways to to to

198

00:07:25,830 --> 00:07:24,319

get cargo up but it is certainly nice to

199

00:07:27,589 --> 00:07:25,840

to get these behind us

200

00:07:29,749 --> 00:07:27,599

with you know 2 000

201
00:07:31,749 --> 00:07:29,759
kilograms of cargo going up as far as

202
00:07:33,189 --> 00:07:31,759
future missions

203
00:07:38,870 --> 00:07:33,199
spacex

204
00:07:40,230 --> 00:07:38,880
do plan to fly the beam

205
00:07:41,830 --> 00:07:40,240
that is

206
00:07:43,990 --> 00:07:41,840
i want to say in the september time

207
00:07:45,589 --> 00:07:44,000
period we are working with the bigelow

208
00:07:47,990 --> 00:07:45,599
folks now on

209
00:07:50,309 --> 00:07:48,000
how we're going to deploy the the module

210
00:07:52,390 --> 00:07:50,319
on node 3 aft

211
00:07:54,629 --> 00:07:52,400
when it gets there

212
00:07:56,790 --> 00:07:54,639
we'll inflate it we'll do some crew

213
00:07:58,230 --> 00:07:56,800

tended work inside of it but they have a

214

00:08:00,150 --> 00:07:58,240

lot of instrumentation that they're

215

00:08:02,070 --> 00:08:00,160

trying to to determine how this

216

00:08:03,350 --> 00:08:02,080

inflation inflation rate is going to

217

00:08:04,550 --> 00:08:03,360

happen and

218

00:08:06,710 --> 00:08:04,560

it'll be a tremendous learning

219

00:08:07,990 --> 00:08:06,720

experience for them uh the payload that

220

00:08:09,830 --> 00:08:08,000

we

221

00:08:11,990 --> 00:08:09,840

had on

222

00:08:13,350 --> 00:08:12,000

this mission was called cream which is a

223

00:08:15,670 --> 00:08:13,360

cosmic ray

224

00:08:17,350 --> 00:08:15,680

exploration that will be

225

00:08:19,270 --> 00:08:17,360

get back into

226

00:08:21,110 --> 00:08:19,280

the fold to go fly

227

00:08:23,589 --> 00:08:21,120

there's some

228

00:08:25,589 --> 00:08:23,599

i want to say stratospheric

229

00:08:26,869 --> 00:08:25,599

gaseous experiment called the sage i'm

230

00:08:28,790 --> 00:08:26,879

trying to remember what the acronym

231

00:08:31,029 --> 00:08:28,800

stands for that will go up

232

00:08:32,790 --> 00:08:31,039

here in the next few missions as well

233

00:08:34,709 --> 00:08:32,800

we have a muses payload that's a

234

00:08:37,829 --> 00:08:34,719

commercial endeavor that'll go on the

235

00:08:39,269 --> 00:08:37,839

outside on the elc and it'll accommodate

236

00:08:41,190 --> 00:08:39,279

numerous

237

00:08:43,509 --> 00:08:41,200

external payloads as well so

238

00:08:47,190 --> 00:08:43,519

uh our cargo i mean the trunk will be

239

00:08:48,870 --> 00:08:47,200

full uh as far as we envision um but

240

00:08:52,150 --> 00:08:48,880

that gives you a feeling for some of the

241

00:08:54,389 --> 00:08:52,160

signs we'll be flying on those missions

242

00:08:56,310 --> 00:08:54,399

uh hunts are there any um

243

00:08:58,150 --> 00:08:56,320

with the beam in the trunk are there any

244

00:09:00,150 --> 00:08:58,160

particular um

245

00:09:03,030 --> 00:09:00,160

actions special actions you have to take

246

00:09:06,710 --> 00:09:03,040

or is that pretty straightforward i

247

00:09:10,150 --> 00:09:08,470

yeah i don't i don't know

248

00:09:11,990 --> 00:09:10,160

so that's a basically a three latch

249

00:09:13,910 --> 00:09:12,000

system the beam the beam sits in the

250

00:09:15,829 --> 00:09:13,920

trunk we you know the spacex will

251
00:09:17,910 --> 00:09:15,839
uncommand the latches uh the arm will

252
00:09:20,470 --> 00:09:17,920
grab it pull it out and then we move it

253
00:09:23,509 --> 00:09:20,480
right over to uh note 3 aft

254
00:09:24,630 --> 00:09:23,519
for the deployment

255
00:09:27,670 --> 00:09:24,640
jason

256
00:09:29,190 --> 00:09:27,680
insider.com i've got a couple of months

257
00:09:31,509 --> 00:09:29,200
the first one is

258
00:09:32,550 --> 00:09:31,519
compared to the last landing attempt uh

259
00:09:34,230 --> 00:09:32,560
we know that you guys are going to try

260
00:09:37,910 --> 00:09:34,240
to walk it in and learn gain more data

261
00:09:40,230 --> 00:09:37,920
which with each flight um

262
00:09:42,150 --> 00:09:40,240
did we see a step forward in terms of

263
00:09:43,990 --> 00:09:42,160

landing on with this one and i have one

264

00:09:45,750 --> 00:09:44,000

other question absolutely

265

00:09:47,590 --> 00:09:45,760

i mean um

266

00:09:49,430 --> 00:09:47,600

the uh

267

00:09:51,110 --> 00:09:49,440

well the last language one do you that

268

00:09:52,949 --> 00:09:51,120

the second blending we can't really

269

00:09:54,310 --> 00:09:52,959

compare because there was no no barge

270

00:09:56,230 --> 00:09:54,320

there and you just have the data and on

271

00:09:59,190 --> 00:09:56,240

the data it looked great

272

00:10:00,949 --> 00:09:59,200

but um targeting the batch is

273

00:10:04,150 --> 00:10:00,959

more challenging of course and then on

274

00:10:06,310 --> 00:10:04,160

the first one um we we had

275

00:10:07,350 --> 00:10:06,320

the fin issues so we fixed we fixed that

276

00:10:11,670 --> 00:10:07,360

and

277

00:10:13,350 --> 00:10:11,680

more accurately this time from what i

278

00:10:15,350 --> 00:10:13,360

can tell but again i need to look at

279

00:10:16,069 --> 00:10:15,360

data we need to work work this out and

280

00:10:19,110 --> 00:10:16,079

uh

281

00:10:20,630 --> 00:10:19,120

and figure out how much better we did

282

00:10:21,670 --> 00:10:20,640

uh second question now you said that

283

00:10:22,870 --> 00:10:21,680

everything was right on the money the

284

00:10:24,470 --> 00:10:22,880

numbers were right aligned to what you

285

00:10:26,790 --> 00:10:24,480

expected now for a lot of us been

286

00:10:28,230 --> 00:10:26,800

following falcon 9 flights it almost

287

00:10:29,750 --> 00:10:28,240

seemed like the falcon took a little

288

00:10:31,350 --> 00:10:29,760

longer to get off the pad and into the

289

00:10:33,269 --> 00:10:31,360

sky this time around is that just a

290

00:10:35,990 --> 00:10:33,279

perception of a fault of our perception

291

00:10:37,509 --> 00:10:36,000

or was it a little slower going uphill i

292

00:10:39,590 --> 00:10:37,519

don't think so i don't think it was

293

00:10:40,710 --> 00:10:39,600

heavier than normal um i actually don't

294

00:10:43,110 --> 00:10:40,720

see it

295

00:10:45,350 --> 00:10:43,120

so so you see more than i do i look i

296

00:10:48,230 --> 00:10:45,360

look at screens and data and from from

297

00:10:50,150 --> 00:10:48,240

that it looked perfectly nominal i mean

298

00:10:51,430 --> 00:10:50,160

yeah

299

00:10:55,030 --> 00:10:51,440

james

300

00:10:58,069 --> 00:10:55,040

just recap the

301
00:11:00,550 --> 00:10:58,079
some of the basic numbers of the uh the

302
00:11:02,550 --> 00:11:00,560
booster flyback how high did it come

303
00:11:04,550 --> 00:11:02,560
down from how about what was its peak

304
00:11:06,630 --> 00:11:04,560
you know velocity that it that it just

305
00:11:08,150 --> 00:11:06,640
decelerated from and um you know

306
00:11:10,630 --> 00:11:08,160
approximately how far down range would

307
00:11:13,910 --> 00:11:10,640
you say it was or off the coast so it

308
00:11:14,870 --> 00:11:13,920
was about 212 miles out out there

309
00:11:16,389 --> 00:11:14,880
and

310
00:11:18,310 --> 00:11:16,399
the boost back burn

311
00:11:21,750 --> 00:11:18,320
um

312
00:11:22,949 --> 00:11:21,760
brings the uh the the apogee down to 125

313
00:11:25,030 --> 00:11:22,959

kilometers

314

00:11:27,030 --> 00:11:25,040

so it's not it's actually not very well

315

00:11:28,949 --> 00:11:27,040

this is pretty high but um if you would

316

00:11:32,230 --> 00:11:28,959

let it go it would go higher basically

317

00:11:35,030 --> 00:11:32,240

huh so it reduces that um the entry

318

00:11:37,750 --> 00:11:35,040

velocity is uh

319

00:11:40,470 --> 00:11:37,760

i think in uh in q alpha and and dynamic

320

00:11:43,430 --> 00:11:40,480

pressure not in nothing velocity so it's

321

00:11:45,190 --> 00:11:43,440

it's a it's a medium number three four

322

00:11:47,430 --> 00:11:45,200

if i recall this correctly

323

00:11:50,069 --> 00:11:47,440

so um

324

00:11:52,310 --> 00:11:50,079

and uh

325

00:11:54,389 --> 00:11:52,320

the from what i can tell the burns were

326

00:11:55,910 --> 00:11:54,399

all right on time which tells me that

327

00:11:57,110 --> 00:11:55,920

the mission

328

00:11:59,590 --> 00:11:57,120

moves on

329

00:12:02,550 --> 00:11:59,600

nominally because the vehicle decides on

330

00:12:04,949 --> 00:12:02,560

its own when it burns it has a certain

331

00:12:06,629 --> 00:12:04,959

certain criteria that it needs to comply

332

00:12:09,190 --> 00:12:06,639

with height and

333

00:12:10,550 --> 00:12:09,200

velocity and when i see the burn going

334

00:12:12,310 --> 00:12:10,560

right on the money with the time

335

00:12:14,310 --> 00:12:12,320

basically the timeline then i know that

336

00:12:15,910 --> 00:12:14,320

the mission is is progressing very

337

00:12:17,750 --> 00:12:15,920

accurately from what i could tell during

338

00:12:19,670 --> 00:12:17,760

the mission it looked like right on the

339

00:12:21,269 --> 00:12:19,680

money from from that perspective but a

340

00:12:22,629 --> 00:12:21,279

lot of that is uh

341

00:12:24,710 --> 00:12:22,639

need to go back and look at the here i

342

00:12:26,470 --> 00:12:24,720

basically i basically

343

00:12:29,350 --> 00:12:26,480

saw what happened and then i ran out and

344

00:12:30,389 --> 00:12:29,360

jumped in the car and drove over here so

345

00:12:32,949 --> 00:12:30,399

sorry

346

00:12:34,069 --> 00:12:32,959

so spacex7 is the next attempt i

347

00:12:36,470 --> 00:12:34,079

wondered if you could just run through

348

00:12:39,829 --> 00:12:36,480

your manifest between now and then um

349

00:12:41,750 --> 00:12:39,839

you were i think targeting 24th for

350

00:12:44,150 --> 00:12:41,760

the next yeah

351

00:12:46,710 --> 00:12:44,160

is on on the um

352

00:12:49,030 --> 00:12:46,720

april 24. is that still even despite

353

00:12:51,030 --> 00:12:49,040

your just you know one day slip here or

354

00:12:53,030 --> 00:12:51,040

scrub yeah that's just that should still

355

00:12:55,750 --> 00:12:53,040

uh still be fine okay and and what comes

356

00:12:57,829 --> 00:12:55,760

after that and after that comes cr7

357

00:13:00,470 --> 00:12:57,839

actually uh pat

358

00:13:02,550 --> 00:13:00,480

paddleboards if you count that too about

359

00:13:03,509 --> 00:13:02,560

falcon 9 and the cr7 is the next one

360

00:13:04,710 --> 00:13:03,519

then

361

00:13:05,670 --> 00:13:04,720

and the numbers are you know the numbers

362

00:13:07,990 --> 00:13:05,680

are now

363

00:13:10,069 --> 00:13:08,000

flipped around the next one is falcon 9

364

00:13:13,750 --> 00:13:10,079

17 and then

365

00:13:17,190 --> 00:13:13,760

cs7 is 920

366

00:13:19,430 --> 00:13:17,200

because falcon 919 goes from anywhere

367

00:13:20,949 --> 00:13:19,440

thanks

368

00:13:22,949 --> 00:13:20,959

okay in the back

369

00:13:24,310 --> 00:13:22,959

hi john klein with nasa social my

370

00:13:26,710 --> 00:13:24,320

question is also for

371

00:13:29,350 --> 00:13:26,720

hans um i'm fascinated by the secondary

372

00:13:32,230 --> 00:13:29,360

objective as you have more experiences

373

00:13:35,110 --> 00:13:32,240

where the landing of the of that

374

00:13:37,110 --> 00:13:35,120

booster isn't quite right are you

375

00:13:38,550 --> 00:13:37,120

less optimistic about the total number

376

00:13:41,509 --> 00:13:38,560

of recoveries you'll have when the

377

00:13:43,590 --> 00:13:41,519

system is working at its best capacity

378

00:13:45,590 --> 00:13:43,600

or will you be

379

00:13:47,829 --> 00:13:45,600

i'm pretty sure we figure this out and

380

00:13:50,230 --> 00:13:47,839

and make it work on the barge and it's

381

00:13:51,990 --> 00:13:50,240

just a matter of

382

00:13:53,910 --> 00:13:52,000

finding the right parameters finding the

383

00:13:55,750 --> 00:13:53,920

right method to do this i don't think

384

00:13:57,509 --> 00:13:55,760

there's something fundamental

385

00:13:58,870 --> 00:13:57,519

and at the end of the day i mean at the

386

00:14:02,470 --> 00:13:58,880

end of the day you want to land on land

387

00:14:03,750 --> 00:14:02,480

anyway so this is uh

388

00:14:07,910 --> 00:14:03,760

i want to say it makes it a little bit

389

00:14:11,509 --> 00:14:09,269

all right

390

00:14:14,710 --> 00:14:11,519

hello japanese newspapers are your meal

391

00:14:17,350 --> 00:14:14,720

a question for hans uh can i have a

392

00:14:19,590 --> 00:14:17,360

very basic number of

393

00:14:21,750 --> 00:14:19,600

fast stage of falcon 9

394

00:14:23,350 --> 00:14:21,760

toll on the diameter and

395

00:14:26,230 --> 00:14:23,360

weight

396

00:14:28,710 --> 00:14:26,240

when it's landing

397

00:14:32,230 --> 00:14:28,720

diameter is 12 feet

398

00:14:32,240 --> 00:14:36,150

around 60 to 70 000 pounds

399

00:14:42,949 --> 00:14:39,189

oh um the whole thing is 180 feet

400

00:14:47,110 --> 00:14:45,269

i think it's 130 140 feet it should be

401
00:14:48,550 --> 00:14:47,120
in the press code actually

402
00:14:52,470 --> 00:14:48,560
we don't have

403
00:14:55,350 --> 00:14:53,509
uh

404
00:14:56,829 --> 00:14:55,360
oh okay well it should be between 130

405
00:14:59,430 --> 00:14:56,839
140 feet i

406
00:15:00,870 --> 00:14:59,440
think okay i never saw this i never look

407
00:15:03,350 --> 00:15:00,880
at the stages alone i forgot the whole

408
00:15:05,509 --> 00:15:04,389
okay

409
00:15:09,829 --> 00:15:05,519
um

410
00:15:12,310 --> 00:15:09,839
question about uh increasing the crew

411
00:15:13,670 --> 00:15:12,320
size we talked a little bit about that

412
00:15:17,189 --> 00:15:13,680
um

413
00:15:18,470 --> 00:15:17,199

the commercial crew and obviously it's

414

00:15:20,870 --> 00:15:18,480

not going to happen on the very first

415

00:15:23,670 --> 00:15:20,880

flight when when do you envision

416

00:15:25,829 --> 00:15:23,680

increasing the crew size from from six

417

00:15:27,590 --> 00:15:25,839

to seven how many how many commercial

418

00:15:29,670 --> 00:15:27,600

crew flights do we have to have before

419

00:15:31,350 --> 00:15:29,680

that happens

420

00:15:33,990 --> 00:15:31,360

okay there's some demonstration flights

421

00:15:37,269 --> 00:15:34,000

that will take uh take place in the

422

00:15:39,509 --> 00:15:37,279

late seventeens um and so early eighteen

423

00:15:41,990 --> 00:15:39,519

is when we're kind of planning for

424

00:15:43,910 --> 00:15:42,000

jumping our crew size up

425

00:15:45,990 --> 00:15:43,920

from a crew size of three on the usos

426

00:15:47,590 --> 00:15:46,000

side to a crew size of four which then

427

00:15:49,509 --> 00:15:47,600

effectively doubles our research

428

00:15:51,269 --> 00:15:49,519

capability at that time

429

00:15:53,430 --> 00:15:51,279

explain a little bit about why that

430

00:15:55,829 --> 00:15:53,440

doubles the research time by increasing

431

00:15:58,230 --> 00:15:55,839

just one crew member sure well it's it's

432

00:16:00,870 --> 00:15:58,240

effectively that right the the amount

433

00:16:03,030 --> 00:16:00,880

the we know how to maintain and do the

434

00:16:04,230 --> 00:16:03,040

systems work uh on the station with a

435

00:16:07,189 --> 00:16:04,240

crew of three

436

00:16:09,030 --> 00:16:07,199

and do 35 hours per week

437

00:16:11,430 --> 00:16:09,040

and so simply adding the extra crew

438

00:16:13,990 --> 00:16:11,440

member we don't envision uh putting any

439

00:16:15,749 --> 00:16:14,000

additional you know task on that i'm not

440

00:16:17,269 --> 00:16:15,759

saying we'll name people

441

00:16:20,230 --> 00:16:17,279

payload specialists or anything like

442

00:16:22,230 --> 00:16:20,240

that um but just the free the amount of

443

00:16:24,230 --> 00:16:22,240

time freed up that can be used for for

444

00:16:26,629 --> 00:16:24,240

research versus what we've learned over

445

00:16:28,310 --> 00:16:26,639

the last 10 years or so on what it takes

446

00:16:29,910 --> 00:16:28,320

for transfer of cargo what it takes for

447

00:16:32,230 --> 00:16:29,920

maintenance of the vehicle we think

448

00:16:34,150 --> 00:16:32,240

that's very achievable

449

00:16:36,150 --> 00:16:34,160

thank you

450

00:16:39,269 --> 00:16:36,160

stuartmoney interspace.net and my

451
00:16:41,110 --> 00:16:39,279
question is for hans um could you assess

452
00:16:43,110 --> 00:16:41,120
approximately what amount of fuel

453
00:16:44,310 --> 00:16:43,120
reserve might have been on board if

454
00:16:46,949 --> 00:16:44,320
everything had gone well with the

455
00:16:48,629 --> 00:16:46,959
landing attempt in other words how many

456
00:16:50,310 --> 00:16:48,639
seconds of hover

457
00:16:53,269 --> 00:16:50,320
potentially we're still in the tanks

458
00:16:54,790 --> 00:16:53,279
it's not a lot it's a few seconds

459
00:16:57,990 --> 00:16:54,800
at the order of two or three seconds

460
00:17:00,949 --> 00:16:59,509
and that also is of course tricky

461
00:17:03,030 --> 00:17:00,959
because if you know you run your car

462
00:17:07,990 --> 00:17:03,040
down to the fuel that you need in two or

463
00:17:12,230 --> 00:17:09,750

this one's for dan uh real quick can you

464

00:17:14,069 --> 00:17:12,240

tell us with uh crs6 here i mean excuse

465

00:17:15,909 --> 00:17:14,079

seven eight and what was what other

466

00:17:17,350 --> 00:17:15,919

experiments besides beam and some of the

467

00:17:19,669 --> 00:17:17,360

other payload so we can expect to see it

468

00:17:21,110 --> 00:17:19,679

take to orbit soon um

469

00:17:22,949 --> 00:17:21,120

i don't have the specific list in front

470

00:17:25,029 --> 00:17:22,959

of me i can tell you for the next uh i

471

00:17:27,510 --> 00:17:25,039

think sick we started with six seven

472

00:17:29,270 --> 00:17:27,520

eight and nine for sure we planned to to

473

00:17:30,549 --> 00:17:29,280

keep on flying the animals for animal

474

00:17:32,470 --> 00:17:30,559

research

475

00:17:33,750 --> 00:17:32,480

i believe on spacex9 we're going to also

476
00:17:36,470 --> 00:17:33,760
include

477
00:17:38,870 --> 00:17:36,480
some research from jaxa in in that same

478
00:17:40,549 --> 00:17:38,880
area of animal research

479
00:17:42,230 --> 00:17:40,559
um

480
00:17:43,669 --> 00:17:42,240
i'd have to go back and look i'm sure

481
00:17:45,510 --> 00:17:43,679
there's some additional experiments that

482
00:17:46,549 --> 00:17:45,520
were flying for fluid shifts to to

483
00:17:48,470 --> 00:17:46,559
support

484
00:17:50,310 --> 00:17:48,480
the human research and in the in the

485
00:17:52,230 --> 00:17:50,320
one-year increment

486
00:17:54,470 --> 00:17:52,240
that we plan to do but we we can

487
00:17:56,230 --> 00:17:54,480
certainly get those plans are in place

488
00:17:58,390 --> 00:17:56,240

uh probably all the way out to spacex

489

00:18:00,630 --> 00:17:58,400

nine uh to the end of the year and we

490

00:18:03,909 --> 00:18:00,640

can make that available through mike

491

00:18:05,590 --> 00:18:03,919

yeah okay all right uh

492

00:18:07,909 --> 00:18:05,600

there's a question for hans

493

00:18:09,909 --> 00:18:07,919

um yet again uh what are your thoughts

494

00:18:11,110 --> 00:18:09,919

on the recent ula reusability

495

00:18:15,590 --> 00:18:11,120

announcement

496

00:18:17,029 --> 00:18:15,600

um i mean this is me personally it's

497

00:18:18,630 --> 00:18:17,039

basically and uh

498

00:18:20,070 --> 00:18:18,640

i've

499

00:18:21,990 --> 00:18:20,080

i think there's some development work

500

00:18:23,430 --> 00:18:22,000

they need to do and

501
00:18:25,430 --> 00:18:23,440
they need to go through this and then we

502
00:18:26,950 --> 00:18:25,440
see how it works

503
00:18:30,630 --> 00:18:26,960
i don't know i mean i just think it's a

504
00:18:33,190 --> 00:18:32,310
you'll see in the end uh it's just i

505
00:18:34,470 --> 00:18:33,200
mean

506
00:18:36,070 --> 00:18:34,480
i don't want to judge it i saw it it

507
00:18:38,630 --> 00:18:36,080
started briefly and you know i was busy

508
00:18:40,950 --> 00:18:38,640
with the the launch preparations

509
00:18:43,750 --> 00:18:40,960
so i don't really pay too much attention

510
00:18:45,750 --> 00:18:43,760
to other vehicles and other companies at

511
00:18:47,190 --> 00:18:45,760
that time

512
00:18:48,870 --> 00:18:47,200
sorry

513
00:18:51,110 --> 00:18:48,880

okay one more question here and then

514

00:18:53,110 --> 00:18:51,120

we'll wrap it up hi

515

00:18:55,669 --> 00:18:53,120

hi uh enzo vito embryo riddle prescott

516

00:18:58,789 --> 00:18:55,679

nasa social this question is for hans

517

00:19:01,029 --> 00:18:58,799

are there any uh plans to uh

518

00:19:04,150 --> 00:19:01,039

reuse the dragon capsule

519

00:19:05,750 --> 00:19:04,160

on multiple crs missions

520

00:19:06,870 --> 00:19:05,760

is there any research doing on that

521

00:19:08,390 --> 00:19:06,880

right now

522

00:19:09,990 --> 00:19:08,400

well there's

523

00:19:11,669 --> 00:19:10,000

we look we look into can we use

524

00:19:13,270 --> 00:19:11,679

component can we use parts of the the

525

00:19:16,870 --> 00:19:13,280

dragon capsule and we talked about this

526
00:19:18,310 --> 00:19:16,880
um during the pre-launch conference too

527
00:19:20,549 --> 00:19:18,320
it's basically work and progress at this

528
00:19:26,070 --> 00:19:20,559
point in time

529
00:19:28,390 --> 00:19:26,950
okay

530
00:19:30,070 --> 00:19:28,400
that's uh

531
00:19:32,230 --> 00:19:30,080
we're gonna call it a wrap after a very

532
00:19:33,430 --> 00:19:32,240
successful day and uh the dragon

533
00:19:35,029 --> 00:19:33,440
spacecraft on its way to the

534
00:19:36,150 --> 00:19:35,039
international space station we will look

535
00:19:38,710 --> 00:19:36,160
forward to

536
00:19:41,350 --> 00:19:38,720
nasa television coverage of grapple and

537
00:19:43,350 --> 00:19:41,360
birthing on friday the nasa television

538
00:19:46,070 --> 00:19:43,360

coverage will begin at 5 00 a.m with

539

00:19:47,750 --> 00:19:46,080

grappling expected around 7 a.m

540

00:19:49,669 --> 00:19:47,760

thank you very much for coming between

541

00:19:51,110 --> 00:19:49,679

now and then please feel free to keep up

542

00:19:56,390 --> 00:19:51,120

with all the accomplishments of the

543

00:19:56,400 --> 00:20:01,029

spacex or www.nasa.gov

544

00:20:05,270 --> 00:20:03,430

station and we will close with a replay

545

00:20:14,070 --> 00:20:05,280

of today's fabulous launch thank you for

546

00:20:15,990 --> 00:20:15,029

nine

547

00:20:17,110 --> 00:20:16,000

eight

548

00:20:17,990 --> 00:20:17,120

seven

549

00:20:19,029 --> 00:20:18,000

six

550

00:20:21,029 --> 00:20:19,039

five

551
00:20:22,149 --> 00:20:21,039
four three

552
00:20:24,470 --> 00:20:22,159
two

553
00:20:29,590 --> 00:20:26,470
and liftoff

554
00:20:31,990 --> 00:20:29,600
the falcon soars from its perch toward

555
00:20:33,750 --> 00:20:32,000
the international space station