



1  
00:00:00,080 --> 00:00:03,510  
are you ready for the event

2  
00:00:08,549 --> 00:00:05,749  
hello houston the expedition 63 crew is

3  
00:00:11,110 --> 00:00:08,559  
ready for the event

4  
00:00:13,669 --> 00:00:11,120  
jscpao this is mission control houston

5  
00:00:15,829 --> 00:00:13,679  
please call station 4 voice check

6  
00:00:18,470 --> 00:00:15,839  
station this is jscpao how do you hear

7  
00:00:23,509 --> 00:00:22,070  
jcpo loud and clear

8  
00:00:25,269 --> 00:00:23,519  
great we'll start this off with a

9  
00:00:26,870 --> 00:00:25,279  
question from twitter it's probably for

10  
00:00:29,109 --> 00:00:26,880  
you chris

11  
00:00:34,870 --> 00:00:29,119  
it's from rick when they open the hatch

12  
00:00:38,790 --> 00:00:36,709  
it absolutely did in fact there was a

13  
00:00:40,709 --> 00:00:38,800

little bit of of space smell in the

14

00:00:43,030 --> 00:00:40,719

vestibule then when we've got

15

00:00:44,389 --> 00:00:43,040

that hatch open you could tell it was a

16

00:00:46,869 --> 00:00:44,399

brand new vehicle

17

00:00:48,470 --> 00:00:46,879

with uh smiley faces on the other side

18

00:00:51,110 --> 00:00:48,480

smiley face on mine

19

00:00:52,229 --> 00:00:51,120

just as if you had bought a new car the

20

00:00:53,750 --> 00:00:52,239

same kind of reaction

21

00:00:57,110 --> 00:00:53,760

wonderful to see my friends and

22

00:00:58,389 --> 00:00:57,120

wonderful to see a brand new vehicle

23

00:01:06,950 --> 00:00:58,399

all right we'll start off with a

24

00:01:12,789 --> 00:01:08,149

let's start off with a question from

25

00:01:16,390 --> 00:01:12,799

bill harwood cbs

26  
00:01:17,749 --> 00:01:16,400  
hey can you hear me now testing one two

27  
00:01:19,590 --> 00:01:17,759  
could you guys hear me now i'm clear

28  
00:01:21,429 --> 00:01:19,600  
bill

29  
00:01:23,109 --> 00:01:21,439  
okay sorry about that uh i just want to

30  
00:01:25,030 --> 00:01:23,119  
go back to what bob was saying yesterday

31  
00:01:26,550 --> 00:01:25,040  
describing the ride up hill

32  
00:01:28,310 --> 00:01:26,560  
uh you were comparing it a little bit to

33  
00:01:30,149 --> 00:01:28,320  
shuttle i was more interested in

34  
00:01:31,670 --> 00:01:30,159  
how did the first stage of the falcon 9

35  
00:01:32,710 --> 00:01:31,680  
feel compared to the shuttle when it was

36  
00:01:35,030 --> 00:01:32,720  
on solid

37  
00:01:36,310 --> 00:01:35,040  
how did the second stage feel you made

38  
00:01:37,830 --> 00:01:36,320

it sound like maybe a little rougher

39

00:01:39,990 --> 00:01:37,840

than the shuttle on the

40

00:01:41,190 --> 00:01:40,000

main engines uh and just wondering if

41

00:01:42,870 --> 00:01:41,200

there was ever a point in there when you

42

00:01:50,469 --> 00:01:42,880

looked over at doug and went wow this

43

00:01:54,469 --> 00:01:52,149

well bill you took the words right out

44

00:01:55,830 --> 00:01:54,479

of our mouth a summary from yesterday

45

00:01:58,709 --> 00:01:55,840

was good

46

00:02:01,109 --> 00:01:58,719

smoother first stage a little rougher

47

00:02:03,109 --> 00:02:01,119

second stage than we saw on shuttle and

48

00:02:03,670 --> 00:02:03,119

that i think both of us were expecting

49

00:02:05,990 --> 00:02:03,680

we did

50

00:02:07,429 --> 00:02:06,000

actually comment on it while we were

51  
00:02:08,070 --> 00:02:07,439  
going uphill i think we tried to

52  
00:02:09,990 --> 00:02:08,080  
verbalize

53  
00:02:12,070 --> 00:02:10,000  
as much of the new experience as we were

54  
00:02:13,670 --> 00:02:12,080  
having just to make sure they were

55  
00:02:18,150 --> 00:02:13,680  
for real between the two of us we were

56  
00:02:25,030 --> 00:02:19,430  
all right let's go to a question from

57  
00:02:28,630 --> 00:02:26,790  
hi thanks for taking my question stephen

58  
00:02:30,790 --> 00:02:28,640  
clark from space flight now

59  
00:02:32,470 --> 00:02:30,800  
uh just to follow up on that uh what was

60  
00:02:33,750 --> 00:02:32,480  
the sensation in miku in

61  
00:02:35,509 --> 00:02:33,760  
station operations since that's

62  
00:02:37,350 --> 00:02:35,519  
something that was not

63  
00:02:38,869 --> 00:02:37,360

experienced really during shuttle to

64

00:02:40,869 --> 00:02:38,879

shut down the engines and then

65

00:02:42,550 --> 00:02:40,879

ignite a new engine in flight i'm also

66

00:02:43,509 --> 00:02:42,560

curious about how your experiences were

67

00:02:50,949 --> 00:02:43,519

with the spacesuits

68

00:02:53,190 --> 00:02:50,959

in flight thank you very much

69

00:02:54,630 --> 00:02:53,200

i think the question was about the

70

00:02:57,190 --> 00:02:54,640

difference with

71

00:02:59,270 --> 00:02:57,200

uh staging between the space shuttle and

72

00:03:01,270 --> 00:02:59,280

the dragon since we didn't shut down the

73

00:03:03,190 --> 00:03:01,280

main engines on the space shuttle

74

00:03:05,270 --> 00:03:03,200

uh like we went through for first stage

75

00:03:06,790 --> 00:03:05,280

and second stage there was a significant

76

00:03:08,630 --> 00:03:06,800

difference between the solid rocket

77

00:03:09,990 --> 00:03:08,640

boosters on the shuttle in that second

78

00:03:11,990 --> 00:03:10,000

stage and so

79

00:03:13,430 --> 00:03:12,000

i think we all definitely felt that

80

00:03:15,350 --> 00:03:13,440

separation and heard the clunk

81

00:03:17,430 --> 00:03:15,360

associated with it

82

00:03:19,110 --> 00:03:17,440

doug and i both commented on i think

83

00:03:22,869 --> 00:03:19,120

doug commented on it first that

84

00:03:25,270 --> 00:03:22,879

we did feel some uh early zero g when we

85

00:03:26,869 --> 00:03:25,280

came off of the first stage and uh we're

86

00:03:28,710 --> 00:03:26,879

getting ready to transition to the

87

00:03:30,149 --> 00:03:28,720

second stage and then we felt that

88

00:03:32,949 --> 00:03:30,159



second stage

89

00:03:34,309 --> 00:03:32,959

light and i think the the next question

90

00:03:36,070 --> 00:03:34,319

was about these suits

91

00:03:37,430 --> 00:03:36,080

let's uh doug if you want to talk a

92

00:03:39,830 --> 00:03:37,440

little bit about our experience with the

93

00:03:42,949 --> 00:03:41,910

yeah the suits in general bob and i have

94

00:03:44,789 --> 00:03:42,959

had a uh

95

00:03:47,270 --> 00:03:44,799

ton of time in those suits i bet you

96

00:03:49,910 --> 00:03:47,280

we've donned and doffed those suits

97

00:03:50,949 --> 00:03:49,920

a couple hundred times so the suits

98

00:03:52,869 --> 00:03:50,959

themselves i

99

00:03:54,630 --> 00:03:52,879

if you're not familiar with them they're

100

00:03:57,670 --> 00:03:54,640

custom designed and custom

101  
00:03:58,630 --> 00:03:57,680  
fitted so they're very comfortable they

102  
00:04:00,630 --> 00:03:58,640  
were actually

103  
00:04:01,990 --> 00:04:00,640  
much easier to get in and out of in zero

104  
00:04:05,190 --> 00:04:02,000  
g as we figured out

105  
00:04:08,710 --> 00:04:05,200  
over the course of the two days and uh

106  
00:04:10,070 --> 00:04:08,720  
yeah we complemented the suit team those

107  
00:04:13,509 --> 00:04:10,080  
things worked uh

108  
00:04:17,189 --> 00:04:13,519  
very well and everything we expected

109  
00:04:17,199 --> 00:04:23,990  
lauren gresh the verge

110  
00:04:28,790 --> 00:04:27,350  
is there any perhaps feedback for spacex

111  
00:04:30,390 --> 00:04:28,800  
and nasa that you have about any

112  
00:04:32,150 --> 00:04:30,400  
potential changes that you would make

113  
00:04:37,510 --> 00:04:32,160

for the next cruise you fly on clear

114

00:04:40,550 --> 00:04:39,270

were there any changes that we would

115

00:04:43,670 --> 00:04:40,560

make i think

116

00:04:57,990 --> 00:04:43,680

it was your question i i don't

117

00:05:03,990 --> 00:04:59,830

we're not hearing you lauren let's move

118

00:05:09,029 --> 00:05:06,629

i for taking my question and i'm glad to

119

00:05:11,270 --> 00:05:09,039

see you all are well up there

120

00:05:13,270 --> 00:05:11,280

as you know houston is the home demand

121

00:05:14,790 --> 00:05:13,280

space flight and in many ways

122

00:05:16,550 --> 00:05:14,800

uh the people here who know you

123

00:05:18,550 --> 00:05:16,560

personally from timber grove

124

00:05:19,830 --> 00:05:18,560

clear lake those who've watched from

125

00:05:22,629 --> 00:05:19,840

nassau bay

126

00:05:23,510 --> 00:05:22,639

webster you know seen you train and your

127

00:05:26,310 --> 00:05:23,520

journey

128

00:05:28,390 --> 00:05:26,320

to to get where you're at today some of

129

00:05:30,710 --> 00:05:28,400

them may be like your sons who

130

00:05:32,550 --> 00:05:30,720

are younger and and maybe inspired by

131

00:05:34,310 --> 00:05:32,560

the things that you all are doing

132

00:05:36,230 --> 00:05:34,320

what is your message to those who are

133

00:05:39,029 --> 00:05:36,240

watching from

134

00:05:45,110 --> 00:05:39,039

from houston from all of these areas in

135

00:05:48,870 --> 00:05:48,230

well i think my first thing i would say

136

00:05:51,909 --> 00:05:48,880

about that

137

00:05:52,710 --> 00:05:51,919

is you know just never quit what you're

138

00:05:54,790 --> 00:05:52,720

doing this is

139

00:05:55,830 --> 00:05:54,800

this was an extremely long road for bob

140

00:06:00,309 --> 00:05:55,840

and i we last

141

00:06:02,790 --> 00:06:00,319

flew in 2010 and 2011

142

00:06:03,749 --> 00:06:02,800

and then when nasa stopped flying

143

00:06:06,950 --> 00:06:03,759

shuttles that was

144

00:06:07,749 --> 00:06:06,960

uh in the middle of 2011 and it's just

145

00:06:09,909 --> 00:06:07,759

taken that

146

00:06:12,309 --> 00:06:09,919

hard work and dedication over the last

147

00:06:13,670 --> 00:06:12,319

nine almost nine years to get us where

148

00:06:16,309 --> 00:06:13,680

we're at now

149

00:06:17,909 --> 00:06:16,319

back in uh launching rockets from the

150

00:06:19,830 --> 00:06:17,919

united states

151  
00:06:21,270 --> 00:06:19,840  
back at space station docking to the

152  
00:06:22,150 --> 00:06:21,280  
front of space station where shuttle

153  
00:06:25,510 --> 00:06:22,160  
used to dock

154  
00:06:26,950 --> 00:06:25,520  
and i would just say take a message from

155  
00:06:29,510 --> 00:06:26,960  
nasa in that

156  
00:06:30,150 --> 00:06:29,520  
anything is possible you know we've had

157  
00:06:33,430 --> 00:06:30,160  
a

158  
00:06:38,230 --> 00:06:33,440  
to

159  
00:06:39,189 --> 00:06:38,240  
the agency's made of what the commercial

160  
00:06:41,990 --> 00:06:39,199  
crew program did

161  
00:06:42,390 --> 00:06:42,000  
and what spacex did i hope they take

162  
00:06:45,590 --> 00:06:42,400  
some

163  
00:06:46,390 --> 00:06:45,600

uh pride and uh a sense of

164

00:06:50,390 --> 00:06:46,400

accomplishment

165

00:06:54,070 --> 00:06:52,950

i think for both of us also the houston

166

00:06:56,309 --> 00:06:54,080

area

167

00:06:58,070 --> 00:06:56,319

is where we call home now and it

168

00:06:59,830 --> 00:06:58,080

certainly is true that

169

00:07:01,270 --> 00:06:59,840

the home of johnson space center the

170

00:07:04,309 --> 00:07:01,280

home of human space flight

171

00:07:06,309 --> 00:07:04,319

take seriously that that's our home

172

00:07:08,870 --> 00:07:06,319

that is that the home of human space

173

00:07:12,309 --> 00:07:08,880

flight we have excellent support there

174

00:07:14,790 --> 00:07:12,319

i had a parade of appropriately

175

00:07:17,430 --> 00:07:14,800

interestingly social distancing

176

00:07:20,150 --> 00:07:17,440

individuals lining my neighborhood

177

00:07:20,790 --> 00:07:20,160

in the half mile or so as i departed on

178

00:07:24,070 --> 00:07:20,800

my way

179

00:07:24,790 --> 00:07:24,080

to the ellington field to head down to

180

00:07:26,790 --> 00:07:24,800

florida

181

00:07:27,990 --> 00:07:26,800

and i know that i just had wonderful

182

00:07:31,029 --> 00:07:28,000

support and i'm

183

00:07:33,430 --> 00:07:31,039

to all our friends and families at home

184

00:07:34,950 --> 00:07:33,440

thank you guys for everything and we

185

00:07:37,270 --> 00:07:34,960

just couldn't have done it without all

186

00:07:38,950 --> 00:07:37,280

of you

187

00:07:42,710 --> 00:07:38,960

thank you so much i know that probably

188

00:07:44,629 --> 00:07:42,720



means so much to them godspeed

189

00:07:47,670 --> 00:07:44,639

let's go to a question from chris

190

00:07:51,350 --> 00:07:49,830

hey guys it's chris davenport from the

191

00:07:53,110 --> 00:07:51,360

washington post thanks for taking the

192

00:07:54,469 --> 00:07:53,120

time and congrats on your flight and

193

00:07:56,790 --> 00:07:54,479

i'll try not to

194

00:07:58,469 --> 00:07:56,800

leave you hanging this time to follow up

195

00:07:59,110 --> 00:07:58,479

on bill and steven's question about the

196

00:08:00,950 --> 00:07:59,120

ride

197

00:08:02,629 --> 00:08:00,960

i wonder if you can walk us through you

198

00:08:03,670 --> 00:08:02,639

know some of the technological

199

00:08:05,909 --> 00:08:03,680

differences between

200

00:08:07,670 --> 00:08:05,919

shuttle uh that led to the difference in

201

00:08:09,110 --> 00:08:07,680

the experiences and then

202

00:08:10,629 --> 00:08:09,120

maybe a little bit more of what were

203

00:08:12,710 --> 00:08:10,639

some of the key moments during the

204

00:08:17,589 --> 00:08:12,720

ascent phase that stood out to you guys

205

00:08:20,629 --> 00:08:20,150

hey chris good to talk with you um i

206

00:08:24,070 --> 00:08:20,639

think

207

00:08:25,510 --> 00:08:24,080

just generically the falcon 9 is a

208

00:08:27,430 --> 00:08:25,520

liquid fueled rocket

209

00:08:29,029 --> 00:08:27,440

remember shuttle had solid rocket

210

00:08:30,869 --> 00:08:29,039

boosters to start with those

211

00:08:32,709 --> 00:08:30,879

burned very rough for the first two and

212

00:08:35,670 --> 00:08:32,719

a half minutes the first stage

213

00:08:36,149 --> 00:08:35,680

with falcon 9 were the nine merlin

214

00:08:37,990 --> 00:08:36,159

engines

215

00:08:40,469 --> 00:08:38,000

and roughly the same amount of time and

216

00:08:42,949 --> 00:08:40,479

it was a much smoother ride obviously

217

00:08:45,110 --> 00:08:42,959

because it was a liquid engine

218

00:08:46,310 --> 00:08:45,120

ascent at that point where the

219

00:08:48,230 --> 00:08:46,320

differences started

220

00:08:50,790 --> 00:08:48,240

for i think both bob and i and we

221

00:08:53,430 --> 00:08:50,800

commented on it

222

00:08:54,070 --> 00:08:53,440

at the moment was at staging and it was

223

00:08:57,670 --> 00:08:54,080

very similar

224

00:09:00,070 --> 00:08:57,680

to what you saw in the apollo 13

225

00:09:01,670 --> 00:09:00,080

movie where they staged from first to

226

00:09:05,509 --> 00:09:01,680

second stage so the

227

00:09:08,550 --> 00:09:05,519

first stage engine shut off and then

228

00:09:09,269 --> 00:09:08,560

it takes a second almost a second might

229

00:09:10,870 --> 00:09:09,279

have been

230

00:09:13,190 --> 00:09:10,880

less than that but it seemed like it

231

00:09:16,230 --> 00:09:13,200

took took some time

232

00:09:18,389 --> 00:09:16,240

between the booster separating

233

00:09:21,670 --> 00:09:18,399

and then the merlin vacuum engine

234

00:09:25,110 --> 00:09:21,680

starting and so at that point we go from

235

00:09:28,310 --> 00:09:25,120

roughly three g's to zero g's

236

00:09:30,550 --> 00:09:28,320

for i don't know half a second probably

237

00:09:31,829 --> 00:09:30,560

and then when that merlin vacuum engine

238

00:09:35,269 --> 00:09:31,839

fires then we

239

00:09:37,590 --> 00:09:35,279

start accelerating again for the next

240

00:09:39,030 --> 00:09:37,600

five six minutes until we uh achieve

241

00:09:41,430 --> 00:09:39,040

orbit so

242

00:09:43,030 --> 00:09:41,440

totally different than shuttle and you

243

00:09:44,870 --> 00:09:43,040

know it was smooth it got a little

244

00:09:46,389 --> 00:09:44,880

rougher as bob had mentioned before with

245

00:09:47,990 --> 00:09:46,399

the merlin vacuum engine and

246

00:09:49,430 --> 00:09:48,000

and it'll be interesting to talk to the

247

00:09:51,350 --> 00:09:49,440

spacex folks to

248

00:09:53,430 --> 00:09:51,360

find out why it was a little bit rougher

249

00:09:56,070 --> 00:09:53,440

ride on second stage than it

250

00:09:58,550 --> 00:09:56,080

was for shuttle on those three main

251  
00:10:02,949 --> 00:10:00,230  
all right let's try marcia dunn from the

252  
00:10:05,030 --> 00:10:02,959  
associated press

253  
00:10:06,710 --> 00:10:05,040  
hey doug uh good to see everybody up

254  
00:10:09,509 --> 00:10:06,720  
there um i'm wondering

255  
00:10:09,990 --> 00:10:09,519  
have you captured the flag yet have you

256  
00:10:11,670 --> 00:10:10,000  
actually

257  
00:10:13,509 --> 00:10:11,680  
put your hands on it is it a board

258  
00:10:16,389 --> 00:10:13,519  
dragon uh

259  
00:10:16,790 --> 00:10:16,399  
and what are your thoughts about laying

260  
00:10:18,949 --> 00:10:16,800  
claim

261  
00:10:20,710 --> 00:10:18,959  
to that flag since you are one of the

262  
00:10:21,269 --> 00:10:20,720  
ones who put it there nine long years

263  
00:10:26,550 --> 00:10:21,279

ago

264

00:10:33,509 --> 00:10:30,389

hey marcia the short answer is

265

00:10:34,150 --> 00:10:33,519

chris had it right on the hatch where we

266

00:10:39,670 --> 00:10:34,160

left it

267

00:10:42,870 --> 00:10:41,590

and i think he's got a note do not

268

00:10:46,630 --> 00:10:42,880

forget to take

269

00:10:48,389 --> 00:10:46,640

uh with crew dragon so

270

00:10:51,030 --> 00:10:48,399

depending on how long we stay up here

271

00:10:51,910 --> 00:10:51,040

can uh you can bet we will take it with

272

00:10:56,630 --> 00:10:51,920

us

273

00:11:00,310 --> 00:10:59,110

from that standpoint i think you know

274

00:11:03,030 --> 00:11:00,320

we've talked about this

275

00:11:03,509 --> 00:11:03,040

uh flag before many times over the last

276

00:11:05,150 --> 00:11:03,519

uh

277

00:11:06,949 --> 00:11:05,160

nine years since we left it here on

278

00:11:10,150 --> 00:11:06,959

sts-135 and i think the

279

00:11:11,509 --> 00:11:10,160

important point is is as i said before

280

00:11:14,150 --> 00:11:11,519

just returning launch

281

00:11:15,910 --> 00:11:14,160

capability to the united states to and

282

00:11:17,990 --> 00:11:15,920

from the international space station

283

00:11:19,430 --> 00:11:18,000

and uh that's what this flag really

284

00:11:23,030 --> 00:11:19,440

means and

285

00:11:25,190 --> 00:11:23,040

and i think a little bit more it's

286

00:11:26,310 --> 00:11:25,200

it's to the thousands of people that

287

00:11:28,630 --> 00:11:26,320

made it possible

288

00:11:29,910 --> 00:11:28,640



from the folks at spacex to the folks at

289

00:11:33,590 --> 00:11:29,920

nasa to the folks

290

00:11:35,350 --> 00:11:33,600

within the commercial crew program and

291

00:11:36,790 --> 00:11:35,360

we just are lucky enough to be able to

292

00:11:38,870 --> 00:11:36,800

take it home with us and

293

00:11:40,389 --> 00:11:38,880

that will be our plan here in a month or

294

00:11:43,670 --> 00:11:40,399

two or three or four

295

00:11:44,310 --> 00:11:43,680

depending on what as bob says what uncle

296

00:11:48,470 --> 00:11:44,320

kirk

297

00:11:53,509 --> 00:11:50,629

let's go to a question from mark caro

298

00:11:57,430 --> 00:11:56,230

mark caro aviation week my question is

299

00:12:00,470 --> 00:11:57,440

for chris

300

00:12:01,910 --> 00:12:00,480

cassidy from your perspective what

301  
00:12:05,430 --> 00:12:01,920  
skills and iss

302  
00:12:08,629 --> 00:12:05,440  
training do doug and bob bring to the

303  
00:12:09,350 --> 00:12:08,639  
iss mix especially now and how will

304  
00:12:11,829 --> 00:12:09,360  
those help

305  
00:12:17,110 --> 00:12:11,839  
to ramp up operations internally and

306  
00:12:20,389 --> 00:12:19,590  
well you know experience goes a long way

307  
00:12:22,629 --> 00:12:20,399  
and

308  
00:12:24,470 --> 00:12:22,639  
both these guys is their third flight

309  
00:12:27,350 --> 00:12:24,480  
and so it really doesn't matter

310  
00:12:29,269 --> 00:12:27,360  
in in my opinion shuttle flight

311  
00:12:30,069 --> 00:12:29,279  
experience or station flight experience

312  
00:12:32,230 --> 00:12:30,079  
it's all

313  
00:12:34,150 --> 00:12:32,240

has to do with working in space working

314

00:12:36,150 --> 00:12:34,160

efficiently understanding the

315

00:12:38,310 --> 00:12:36,160

the system and the methodology with

316

00:12:39,829 --> 00:12:38,320

which we work back and forth and hand in

317

00:12:41,670 --> 00:12:39,839

hand with mission control

318

00:12:42,949 --> 00:12:41,680

and once you understand that and grasp

319

00:12:44,550 --> 00:12:42,959

all those concepts

320

00:12:46,310 --> 00:12:44,560

the work part is i don't want to say

321

00:12:49,269 --> 00:12:46,320

easy but uh

322

00:12:49,990 --> 00:12:49,279

it just kind of happens together and and

323

00:12:52,629 --> 00:12:50,000

we've already

324

00:12:54,150 --> 00:12:52,639

seen that today is day one and and uh

325

00:12:56,310 --> 00:12:54,160

and they're hitting the ground running

326

00:12:57,670 --> 00:12:56,320

unloading the vehicle and and we've got

327

00:12:59,509 --> 00:12:57,680

uh htv

328

00:13:01,509 --> 00:12:59,519

right at our feet and we'll be working

329

00:13:02,790 --> 00:13:01,519

in in there in very short order probably

330

00:13:05,110 --> 00:13:02,800

after we hang up from this

331

00:13:06,230 --> 00:13:05,120

this conversation together the three of

332

00:13:09,030 --> 00:13:06,240

us will

333

00:13:10,790 --> 00:13:09,040

be um tackling the overall mission of

334

00:13:11,590 --> 00:13:10,800

the space station which is conducting

335

00:13:15,269 --> 00:13:11,600

science

336

00:13:16,550 --> 00:13:15,279

maintaining the space station

337

00:13:18,550 --> 00:13:16,560

and then there's some operational

338

00:13:20,230 --> 00:13:18,560

objectives sprinkled in the mix at some

339

00:13:22,949 --> 00:13:20,240

point we'll get a plan for

340

00:13:25,110 --> 00:13:22,959

uh potential spacewalks and uh and we'll

341

00:13:26,949 --> 00:13:25,120

execute all that

342

00:13:29,269 --> 00:13:26,959

we don't just sit up here at dinner and

343

00:13:30,790 --> 00:13:29,279

decide when all those activities are

344

00:13:31,990 --> 00:13:30,800

going to be done the prioritization is

345

00:13:33,910 --> 00:13:32,000

done in houston

346

00:13:35,430 --> 00:13:33,920

and uh and then we execute the plan so

347

00:13:39,430 --> 00:13:35,440

the three of us are pretty excited to

348

00:13:39,440 --> 00:13:43,189

joy roulette with reuters

349

00:13:46,870 --> 00:13:45,430

hey uh thanks for doing this um i was

350

00:13:48,230 --> 00:13:46,880

wondering so since you guys made it to

351  
00:13:50,870 --> 00:13:48,240  
the space station um

352  
00:13:51,269 --> 00:13:50,880  
how does it feel i guess not knowing how

353  
00:13:52,470 --> 00:13:51,279  
long

354  
00:13:54,629 --> 00:13:52,480  
you guys are going to stay there for

355  
00:13:55,509 --> 00:13:54,639  
does it feel weird and um i was also

356  
00:13:57,990 --> 00:13:55,519  
wondering if

357  
00:13:59,509 --> 00:13:58,000  
any time during the trip to the space

358  
00:14:00,870 --> 00:13:59,519  
station that if you guys noticed

359  
00:14:02,629 --> 00:14:00,880  
anything

360  
00:14:04,310 --> 00:14:02,639  
unexpected that you didn't experience

361  
00:14:09,829 --> 00:14:04,320  
during training or sims

362  
00:14:13,110 --> 00:14:11,990  
well thank you it's a good question i

363  
00:14:14,870 --> 00:14:13,120

think

364

00:14:17,030 --> 00:14:14,880

several recent crews have had a little

365

00:14:18,230 --> 00:14:17,040

bit more uncertainty than we've had

366

00:14:20,230 --> 00:14:18,240

historically

367

00:14:21,430 --> 00:14:20,240

for how long their mission duration was

368

00:14:23,750 --> 00:14:21,440

going to be

369

00:14:24,629 --> 00:14:23,760

but i guess maybe on the percentage

370

00:14:26,310 --> 00:14:24,639

scale

371

00:14:27,430 --> 00:14:26,320

doug and i have a maybe the most

372

00:14:29,990 --> 00:14:27,440

uncertainty because it could be

373

00:14:32,150 --> 00:14:30,000

relatively short or we could potentially

374

00:14:35,110 --> 00:14:32,160

double or triple maybe what was

375

00:14:36,790 --> 00:14:35,120

originally expected for us uh just a few

376

00:14:39,189 --> 00:14:36,800

short months ago and so

377

00:14:40,389 --> 00:14:39,199

it's a little bit strange i'm trying to

378

00:14:42,949 --> 00:14:40,399

explain it to my son

379

00:14:44,069 --> 00:14:42,959

just six years old and from his

380

00:14:45,509 --> 00:14:44,079

perspective

381

00:14:48,230 --> 00:14:45,519

he's just excited that we're going to

382

00:14:50,629 --> 00:14:48,240

get a dog when i get home and so

383

00:14:52,550 --> 00:14:50,639

he's accepting that uncertainty and

384

00:14:53,829 --> 00:14:52,560

continuing to send messages to me while

385

00:14:55,670 --> 00:14:53,839

i'm on orbit

386

00:14:57,430 --> 00:14:55,680

as far as unexpected things while we

387

00:14:59,509 --> 00:14:57,440

were headed uphill i think i said a

388

00:15:00,069 --> 00:14:59,519



little bit about this uh yesterday but

389

00:15:05,430 --> 00:15:00,079

the

390

00:15:08,470 --> 00:15:05,440

vibration

391

00:15:10,470 --> 00:15:08,480

the experiences that we felt actually

392

00:15:11,990 --> 00:15:10,480

riding a real rocket going through the

393

00:15:14,870 --> 00:15:12,000

fueling operation

394

00:15:16,550 --> 00:15:14,880

that was a new experience for us as you

395

00:15:18,629 --> 00:15:16,560

probably know the space shuttle was

396

00:15:20,389 --> 00:15:18,639

fueled when the astronauts arrived

397

00:15:22,629 --> 00:15:20,399

doug and i went through the fueling

398

00:15:24,710 --> 00:15:22,639

operation on board dragon which was

399

00:15:26,389 --> 00:15:24,720

different from us and so

400

00:15:28,230 --> 00:15:26,399

going through the the hearing the

401

00:15:30,790 --> 00:15:28,240

venting and the valve sounds

402

00:15:32,069 --> 00:15:30,800

and the little vibrations associated

403

00:15:34,629 --> 00:15:32,079

with that operation

404

00:15:35,110 --> 00:15:34,639

was a new experience for us and so that

405

00:15:38,310 --> 00:15:35,120

was

406

00:15:40,230 --> 00:15:38,320

training but nothing out of family the

407

00:15:42,550 --> 00:15:40,240

team did a really great job of

408

00:15:43,990 --> 00:15:42,560

recording that audio during the demo one

409

00:15:45,749 --> 00:15:44,000

mission during the mission that was a

410

00:15:46,870 --> 00:15:45,759

little bit over a year ago that came to

411

00:15:49,990 --> 00:15:46,880

space station

412

00:15:50,949 --> 00:15:50,000

with uh no people on board and played

413

00:15:52,550 --> 00:15:50,959

that back for us

414

00:15:54,629 --> 00:15:52,560

tied to the audio so we've heard all

415

00:15:56,389 --> 00:15:54,639

those sounds pretty much before and so

416

00:15:58,629 --> 00:15:56,399

that was extremely helpful

417

00:16:00,629 --> 00:15:58,639

we have the same tool for coming home

418

00:16:01,910 --> 00:16:00,639

and look forward to seeing how well that

419

00:16:06,150 --> 00:16:01,920

matches up with

420

00:16:06,160 --> 00:16:11,030

robert perlman

421

00:16:18,069 --> 00:16:14,069

thank you um hi chris doug and bob

422

00:16:20,710 --> 00:16:18,079

um for doug and bob i wonder uh

423

00:16:22,710 --> 00:16:20,720

during the ascent or during your

424

00:16:25,189 --> 00:16:22,720

overnight period was there a point where

425

00:16:27,269 --> 00:16:25,199

the sense of history sort of seeped in

426

00:16:29,030 --> 00:16:27,279

where you sort of where you allowed

427

00:16:32,710 --> 00:16:29,040

yourself to just consider

428

00:16:34,550 --> 00:16:32,720

the history that you were making um uh

429

00:16:43,670 --> 00:16:34,560

what when were that what were those

430

00:16:48,150 --> 00:16:46,629

honestly robert good to talk to you i

431

00:16:50,550 --> 00:16:48,160

don't know if we

432

00:16:51,350 --> 00:16:50,560

ever reflected on it uh over the 19-hour

433

00:16:54,550 --> 00:16:51,360

rendezvous

434

00:16:56,069 --> 00:16:54,560

i i mean i think uh you know you may

435

00:16:57,910 --> 00:16:56,079

have random thoughts going through your

436

00:17:01,590 --> 00:16:57,920

head every now and again but you know

437

00:17:03,430 --> 00:17:01,600

both bob and i are uh over the last five

438

00:17:05,669 --> 00:17:03,440

years been pretty focused on

439

00:17:07,110 --> 00:17:05,679

this this mission and actually flying

440

00:17:09,990 --> 00:17:07,120

this mission and i think

441

00:17:10,630 --> 00:17:10,000

that's really what we uh put our entire

442

00:17:13,909 --> 00:17:10,640

effort

443

00:17:15,750 --> 00:17:13,919

mentally and physically into uh from the

444

00:17:19,110 --> 00:17:15,760

time we walked out uh

445

00:17:20,710 --> 00:17:19,120

of the onc building until we docked with

446

00:17:21,510 --> 00:17:20,720

space station and of course we're still

447

00:17:23,590 --> 00:17:21,520

doing it but

448

00:17:24,789 --> 00:17:23,600

uh you know was just focusing on

449

00:17:27,270 --> 00:17:24,799

everything we could do

450

00:17:29,029 --> 00:17:27,280

to make sure we did what we needed to do

451  
00:17:30,630 --> 00:17:29,039  
to make it a successful ascent

452  
00:17:34,070 --> 00:17:30,640  
rendezvous and docking

453  
00:17:36,710 --> 00:17:34,080  
and then also try to take in

454  
00:17:37,750 --> 00:17:36,720  
all the things that uh the falcon 9 and

455  
00:17:39,590 --> 00:17:37,760  
the dragon

456  
00:17:40,870 --> 00:17:39,600  
showed us you know the noises the

457  
00:17:43,990 --> 00:17:40,880  
maneuvers any

458  
00:17:45,190 --> 00:17:44,000  
any nuances any anything that we can let

459  
00:17:47,190 --> 00:17:45,200  
other folks know

460  
00:17:48,390 --> 00:17:47,200  
to be aware of as they fly that vehicle

461  
00:17:51,190 --> 00:17:48,400  
and i think

462  
00:17:52,789 --> 00:17:51,200  
you know for for me anyway you know the

463  
00:17:55,270 --> 00:17:52,799

historical aspect of it

464

00:17:57,110 --> 00:17:55,280

uh is certain certainly notable but i

465

00:17:58,870 --> 00:17:57,120

think it's something to

466

00:18:00,710 --> 00:17:58,880

maybe consider after this mission

467

00:18:02,390 --> 00:18:00,720

mission's complete you know we're we're

468

00:18:04,310 --> 00:18:02,400

not even

469

00:18:06,150 --> 00:18:04,320

in any way shape or form halfway through

470

00:18:06,549 --> 00:18:06,160

the mission yet we've just docked we

471

00:18:09,110 --> 00:18:06,559

still

472

00:18:09,750 --> 00:18:09,120

got to do our mission here with chris

473

00:18:12,950 --> 00:18:09,760

and then

474

00:18:15,909 --> 00:18:12,960

undock depart and

475

00:18:17,669 --> 00:18:15,919

do a reentry and then a landing and then

476

00:18:21,430 --> 00:18:17,679

a recovery so

477

00:18:24,390 --> 00:18:21,440

plenty of work to do and you know we'll

478

00:18:28,230 --> 00:18:24,400

probably uh think a lot more about that

479

00:18:32,549 --> 00:18:28,240

when the time comes

480

00:18:36,310 --> 00:18:34,070

hey guys monica whitering here thanks

481

00:18:38,470 --> 00:18:36,320

for taking my question this is for

482

00:18:40,230 --> 00:18:38,480

bob and doug i'm wondering what were

483

00:18:40,870 --> 00:18:40,240

some of the first things that you wanted

484

00:18:43,190 --> 00:18:40,880

to see

485

00:18:45,430 --> 00:18:43,200

or do after you arrived at the space

486

00:18:46,870 --> 00:18:45,440

station and has it changed much since

487

00:18:49,190 --> 00:18:46,880

you were last there or does it still

488

00:18:54,789 --> 00:18:49,200



kind of feel like a second home to you

489

00:18:58,230 --> 00:18:56,470

well i don't want to speak for doug on

490

00:19:00,150 --> 00:18:58,240

this one but one of the things i was

491

00:19:01,590 --> 00:19:00,160

most excited about was being able to

492

00:19:03,990 --> 00:19:01,600

make a phone call home

493

00:19:04,630 --> 00:19:04,000

you know with it's been a long time

494

00:19:07,190 --> 00:19:04,640

since i

495

00:19:08,710 --> 00:19:07,200

launched into orbit and i've got a

496

00:19:10,470 --> 00:19:08,720

little boy who

497

00:19:12,549 --> 00:19:10,480

got a chance to watch me do that for the

498

00:19:13,990 --> 00:19:12,559

first time in his life and i just wanted

499

00:19:15,830 --> 00:19:14,000

to understand

500

00:19:17,350 --> 00:19:15,840

what his experience was and share that a

501  
00:19:19,110 --> 00:19:17,360  
little bit with him while it was still

502  
00:19:21,830 --> 00:19:19,120  
fresh in his mind

503  
00:19:23,270 --> 00:19:21,840  
he was able to make the trip back to

504  
00:19:25,510 --> 00:19:23,280  
houston after watching the

505  
00:19:27,350 --> 00:19:25,520  
docking from down in florida and was

506  
00:19:29,350 --> 00:19:27,360  
pretty excited about the the whole thing

507  
00:19:31,830 --> 00:19:29,360  
so that was a wonderful for me

508  
00:19:32,630 --> 00:19:31,840  
as far as the space station goes i'll

509  
00:19:34,470 --> 00:19:32,640  
tell you it

510  
00:19:36,470 --> 00:19:34,480  
it seems a lot like it did when i was

511  
00:19:38,310 --> 00:19:36,480  
here last there is a

512  
00:19:40,789 --> 00:19:38,320  
quite a bit more science going on quite

513  
00:19:41,990 --> 00:19:40,799

a bit more equipment on some of the rack

514

00:19:44,630 --> 00:19:42,000

faces especially

515

00:19:45,430 --> 00:19:44,640

over on the the gym side or down in node

516

00:19:47,750 --> 00:19:45,440

three

517

00:19:49,590 --> 00:19:47,760

but the overall structure and layout is

518

00:19:52,390 --> 00:19:49,600

uh is very similar

519

00:19:54,470 --> 00:19:52,400

uh we did comments yesterday about the

520

00:19:56,710 --> 00:19:54,480

airlock configuration it's not as

521

00:19:57,830 --> 00:19:56,720

clean as how chris and i remember it

522

00:19:59,750 --> 00:19:57,840

from our shuttle

523

00:20:01,350 --> 00:19:59,760

experiences because that was those

524

00:20:02,789 --> 00:20:01,360

flights were really about the assembly

525

00:20:03,909 --> 00:20:02,799

of space station and the airlock was

526

00:20:05,669 --> 00:20:03,919

ready to go

527

00:20:07,430 --> 00:20:05,679

and we're in a different mode of

528

00:20:08,470 --> 00:20:07,440

operation onboard space station right

529

00:20:11,190 --> 00:20:08,480

now so

530

00:20:12,870 --> 00:20:11,200

i know the way space station works is

531

00:20:15,830 --> 00:20:12,880

you pretty much have to configure

532

00:20:16,710 --> 00:20:15,840

each specific area for the task at hand

533

00:20:18,710 --> 00:20:16,720

and so the

534

00:20:19,990 --> 00:20:18,720

mating adapter that we docked to on the

535

00:20:22,470 --> 00:20:20,000

forward part of the space station

536

00:20:24,870 --> 00:20:22,480

was all cleared out for our arrival all

537

00:20:26,549 --> 00:20:24,880

that stowage was moved around

538

00:20:28,230 --> 00:20:26,559

quite a bit of stowage was probably

539

00:20:31,270 --> 00:20:28,240

repositioned for htv's

540

00:20:33,270 --> 00:20:31,280

arrival from from japan and

541

00:20:36,390 --> 00:20:33,280

we'll have to do some reconfiguration in

542

00:20:38,070 --> 00:20:36,400

other areas as we continue to

543

00:20:39,590 --> 00:20:38,080

conduct operations on board the space

544

00:20:40,630 --> 00:20:39,600

station there's just so much going on

545

00:20:42,789 --> 00:20:40,640

that you

546

00:20:45,350 --> 00:20:42,799

you've got more stuff than you have

547

00:20:46,870 --> 00:20:45,360

places to just stow it without

548

00:20:48,789 --> 00:20:46,880

you know fully being able to conduct the

549

00:20:53,029 --> 00:20:48,799

operation

550

00:20:53,350 --> 00:20:53,039

anything to end let's go across the pond

551  
00:20:56,549 --> 00:20:53,360  
to

552  
00:20:58,070 --> 00:20:56,559  
jackie goddard with the times

553  
00:21:00,710 --> 00:20:58,080  
thank you i'm jackie got off of the

554  
00:21:03,350 --> 00:21:00,720  
times of london and congratulations

555  
00:21:05,430 --> 00:21:03,360  
this message this mission feels so much

556  
00:21:07,110 --> 00:21:05,440  
more funky and futuristic with

557  
00:21:09,190 --> 00:21:07,120  
everything from the capsules

558  
00:21:10,310 --> 00:21:09,200  
look to the touch screens the technology

559  
00:21:13,110 --> 00:21:10,320  
the suits

560  
00:21:13,990 --> 00:21:13,120  
um does this feel like the jetsons um

561  
00:21:15,750 --> 00:21:14,000  
can you describe

562  
00:21:17,190 --> 00:21:15,760  
some of the emotion around it over the

563  
00:21:18,630 --> 00:21:17,200

ride up hill

564

00:21:20,549 --> 00:21:18,640

and somebody has to ask it that

565

00:21:21,830 --> 00:21:20,559

all-important question that the child in

566

00:21:30,230 --> 00:21:21,840

all of us needs to know

567

00:21:32,950 --> 00:21:30,240

how was the crew dragon toilet thank you

568

00:21:33,430 --> 00:21:32,960

well it's good to talk to you um let me

569

00:21:38,070 --> 00:21:33,440

think

570

00:21:43,750 --> 00:21:38,080

uh

571

00:21:45,669 --> 00:21:43,760

tried to be very forward thinking and

572

00:21:47,909 --> 00:21:45,679

cutting edge and

573

00:21:49,590 --> 00:21:47,919

it is one of the factors that went into

574

00:21:51,510 --> 00:21:49,600

the design of the crew dragon

575

00:21:52,710 --> 00:21:51,520

and our spacesuits and everything about

576

00:21:56,789 --> 00:21:52,720

the vehicle

577

00:21:59,909 --> 00:21:56,799

and you know for us as

578

00:22:01,990 --> 00:21:59,919

the the test pilots so to speak um

579

00:22:03,029 --> 00:22:02,000

you know we're there to evaluate how it

580

00:22:05,669 --> 00:22:03,039

does the mission

581

00:22:07,430 --> 00:22:05,679

and uh so far it's done uh just

582

00:22:09,110 --> 00:22:07,440

absolutely spectacularly

583

00:22:11,270 --> 00:22:09,120

you know it's uh it's a very clean

584

00:22:14,390 --> 00:22:11,280

vehicle i think most

585

00:22:16,789 --> 00:22:14,400

people think it's a really

586

00:22:18,070 --> 00:22:16,799

cool looking vehicle i know my son

587

00:22:21,669 --> 00:22:18,080

thinks so

588

00:22:22,230 --> 00:22:21,679



and it it does everything we need it to

589

00:22:24,789 --> 00:22:22,240

do

590

00:22:25,990 --> 00:22:24,799

uh for this mission so we're very happy

591

00:22:29,350 --> 00:22:26,000

with that part of it

592

00:22:31,270 --> 00:22:29,360

um let's see the toilet

593

00:22:32,870 --> 00:22:31,280

i think we had a bet to see when that

594

00:22:33,669 --> 00:22:32,880

question was going to be asked about

595

00:22:36,710 --> 00:22:33,679

dragon

596

00:22:38,549 --> 00:22:36,720

and it works very similar to the uh

597

00:22:40,149 --> 00:22:38,559

the one we were used to in the space

598

00:22:43,510 --> 00:22:40,159

shuttle and it worked very well we had

599

00:22:48,789 --> 00:22:46,549

all right next is peter king good

600

00:22:50,070 --> 00:22:48,799

morning uh peter king with cbs news

601  
00:22:52,310 --> 00:22:50,080  
radio and i know

602  
00:22:53,190 --> 00:22:52,320  
bob and doug that you're up there uh to

603  
00:22:55,669 --> 00:22:53,200  
help chris

604  
00:22:57,990 --> 00:22:55,679  
uh overcome that shorthanded situation

605  
00:22:59,510 --> 00:22:58,000  
but it also gives the spacex people a

606  
00:23:01,510 --> 00:22:59,520  
chance to evaluate

607  
00:23:03,190 --> 00:23:01,520  
the dragon's long-term performance

608  
00:23:04,070 --> 00:23:03,200  
during its exposure to the elements

609  
00:23:05,270 --> 00:23:04,080  
while you're up there

610  
00:23:14,710 --> 00:23:05,280  
what are some of the things they're

611  
00:23:19,270 --> 00:23:16,950  
well you're absolutely right that will

612  
00:23:22,310 --> 00:23:19,280  
put the dragon through its paces

613  
00:23:25,029 --> 00:23:22,320

in preparation for the crew one flight

614

00:23:26,230 --> 00:23:25,039

we already spent quite a bit of the day

615

00:23:28,950 --> 00:23:26,240

preparing

616

00:23:29,270 --> 00:23:28,960

basically dragon to serve its purpose as

617

00:23:32,390 --> 00:23:29,280

a

618

00:23:34,870 --> 00:23:32,400

vehicle so

619

00:23:36,789 --> 00:23:34,880

doug and i spent quite a bit of time

620

00:23:38,149 --> 00:23:36,799

getting the equipment prepared so that

621

00:23:40,630 --> 00:23:38,159

that vehicle is

622

00:23:43,430 --> 00:23:40,640

is ready to go and execute that mission

623

00:23:45,590 --> 00:23:43,440

and we probably did a little more

624

00:23:46,789 --> 00:23:45,600

as a part of that than other crews will

625

00:23:49,269 --> 00:23:46,799

do in the future

626  
00:23:51,830 --> 00:23:49,279  
we've performed some connections with

627  
00:23:54,070 --> 00:23:51,840  
the computer systems to make sure that

628  
00:23:56,310 --> 00:23:54,080  
we can configure the communication

629  
00:23:58,310 --> 00:23:56,320  
between everything from the soyuz to the

630  
00:23:59,909 --> 00:23:58,320  
rest of the space station back to dragon

631  
00:24:02,710 --> 00:23:59,919  
if we needed to do that from

632  
00:24:03,430 --> 00:24:02,720  
inside of our small little vehicle and

633  
00:24:06,230 --> 00:24:03,440  
we

634  
00:24:08,310 --> 00:24:06,240  
established that that stuff all works

635  
00:24:10,310 --> 00:24:08,320  
and we'll continue to do small checkouts

636  
00:24:13,029 --> 00:24:10,320  
like that we'll go through the process

637  
00:24:13,669 --> 00:24:13,039  
of powering down dragon taking it to its

638  
00:24:16,390 --> 00:24:13,679

uh

639

00:24:18,310 --> 00:24:16,400

kind of hibernate hibernated states and

640

00:24:19,110 --> 00:24:18,320

then bring it back up here in just a few

641

00:24:20,950 --> 00:24:19,120

short days

642

00:24:22,390 --> 00:24:20,960

just to make sure that that process goes

643

00:24:24,549 --> 00:24:22,400

smoothly again

644

00:24:26,549 --> 00:24:24,559

every crew won't need to do that sort of

645

00:24:27,590 --> 00:24:26,559

an evaluation but since it's the first

646

00:24:29,190 --> 00:24:27,600

flight

647

00:24:30,710 --> 00:24:29,200

we really are putting her through her

648

00:24:33,830 --> 00:24:30,720

paces to make sure

649

00:24:34,870 --> 00:24:33,840

that any of the little aspects of the

650

00:24:36,870 --> 00:24:34,880

mission that

651  
00:24:38,710 --> 00:24:36,880  
it might be called upon to support is

652  
00:24:40,390 --> 00:24:38,720  
ready to do that and so

653  
00:24:41,830 --> 00:24:40,400  
that's from the hibernated state that's

654  
00:24:43,909 --> 00:24:41,840  
from a regular departure

655  
00:24:45,830 --> 00:24:43,919  
or to you know serve as another

656  
00:24:47,269 --> 00:24:45,840  
environment for us to go and safe haven

657  
00:24:48,870 --> 00:24:47,279  
in should we need to if there was a

658  
00:24:50,230 --> 00:24:48,880  
problem on board space station and we'll

659  
00:24:53,029 --> 00:24:50,240  
do all those things

660  
00:24:54,950 --> 00:24:53,039  
before we call her operational and then

661  
00:24:55,669 --> 00:24:54,960  
really pick up with a primary task

662  
00:24:58,830 --> 00:24:55,679  
focused on

663  
00:24:59,990 --> 00:24:58,840

helping chris out on the space station

664

00:25:03,789 --> 00:25:00,000

side

665

00:25:06,310 --> 00:25:03,799

leo enright with irish television

666

00:25:07,190 --> 00:25:06,320

congratulations bob and doug and as we

667

00:25:11,110 --> 00:25:07,200

say in ireland

668

00:25:12,070 --> 00:25:11,120

slaw nawalia safe home um i have another

669

00:25:13,669 --> 00:25:12,080

question about

670

00:25:15,510 --> 00:25:13,679

launch and about something that was

671

00:25:18,390 --> 00:25:15,520

different this time

672

00:25:19,350 --> 00:25:18,400

your final call out before seco was

673

00:25:28,549 --> 00:25:19,360

shannon

674

00:25:30,549 --> 00:25:28,559

and i'd rather expect that we're going

675

00:25:33,110 --> 00:25:30,559

to be hearing this call out a lot

676  
00:25:34,310 --> 00:25:33,120  
uh in the years to come so a lot of

677  
00:25:40,870 --> 00:25:34,320  
people in ireland

678  
00:25:44,470 --> 00:25:42,549  
well hello ireland that's a that's a

679  
00:25:47,669 --> 00:25:44,480  
great question

680  
00:25:50,390 --> 00:25:47,679  
so the uh ascent trajectory

681  
00:25:51,990 --> 00:25:50,400  
offers us some opportunities if needed

682  
00:25:53,830 --> 00:25:52,000  
if we have got a failure with a launch

683  
00:25:56,470 --> 00:25:53,840  
vehicle to abort

684  
00:25:58,390 --> 00:25:56,480  
and some of those scenarios involve a

685  
00:25:58,950 --> 00:25:58,400  
boarding fairly close to kennedy space

686  
00:26:00,950 --> 00:25:58,960  
center

687  
00:26:02,149 --> 00:26:00,960  
along the east coast of the united

688  
00:26:05,110 --> 00:26:02,159



states all the way up

689

00:26:05,909 --> 00:26:05,120

towards newfoundland even into canada

690

00:26:07,909 --> 00:26:05,919

and then

691

00:26:09,669 --> 00:26:07,919

once our trajectory hits a certain point

692

00:26:12,950 --> 00:26:09,679

and we get high enough

693

00:26:16,950 --> 00:26:12,960

we are going to abort forward to uh

694

00:26:19,269 --> 00:26:16,960

the uk and the ireland area specifically

695

00:26:21,269 --> 00:26:19,279

and we can do that and the later stages

696

00:26:21,909 --> 00:26:21,279

of our powered flight before the engine

697

00:26:25,350 --> 00:26:21,919

shut down

698

00:26:27,750 --> 00:26:25,360

so that's our call to

699

00:26:28,950 --> 00:26:27,760

mission control and hawthorne to let him

700

00:26:31,669 --> 00:26:28,960

know that we see

701  
00:26:32,470 --> 00:26:31,679  
that change in the abort destination if

702  
00:26:36,789 --> 00:26:32,480  
if that

703  
00:26:36,799 --> 00:26:40,789  
sophie sanchez chicago now

704  
00:26:44,390 --> 00:26:43,590  
hola from chicago um doug as a test

705  
00:26:46,310 --> 00:26:44,400  
pilot

706  
00:26:47,830 --> 00:26:46,320  
what was it like for you taking control

707  
00:26:49,510 --> 00:26:47,840  
of endeavor for the first time

708  
00:26:53,029 --> 00:26:49,520  
and then if you think both share a

709  
00:26:54,710 --> 00:26:53,039  
little bit about the docking procedure

710  
00:27:00,710 --> 00:26:54,720  
how it compared to the soyuz backing

711  
00:27:04,310 --> 00:27:03,269  
flying the dragon was exactly how we

712  
00:27:05,590 --> 00:27:04,320  
expected it to be

713  
00:27:07,830 --> 00:27:05,600

and that was one of the reasons we

714

00:27:10,710 --> 00:27:07,840

wanted to do the manual flight test

715

00:27:11,590 --> 00:27:10,720

uh twice so we did it shortly after we

716

00:27:14,710 --> 00:27:11,600

got to orbit

717

00:27:17,909 --> 00:27:14,720

uh on our first day and then

718

00:27:18,870 --> 00:27:17,919

when we were on the final portion of the

719

00:27:22,389 --> 00:27:18,880

docking axis

720

00:27:24,630 --> 00:27:22,399

we did it again yesterday and

721

00:27:26,310 --> 00:27:24,640

it's all to prove that that capability

722

00:27:29,269 --> 00:27:26,320

works for future crews if

723

00:27:29,990 --> 00:27:29,279

if need be most folks are familiar with

724

00:27:32,149 --> 00:27:30,000

the fact that

725

00:27:33,830 --> 00:27:32,159

dragon is designed to be totally

726  
00:27:36,470 --> 00:27:33,840  
automated from the time it launches

727  
00:27:38,549 --> 00:27:36,480  
until the time it returns to earth but

728  
00:27:39,510 --> 00:27:38,559  
if there's any systems failures or other

729  
00:27:41,350 --> 00:27:39,520  
issues we

730  
00:27:42,950 --> 00:27:41,360  
would like to know with confidence that

731  
00:27:45,029 --> 00:27:42,960  
if we take over manually

732  
00:27:48,789 --> 00:27:45,039  
the the vehicle will do what we what we

733  
00:27:52,230 --> 00:27:48,799  
need it to do

734  
00:27:55,750 --> 00:27:53,830  
thank you so much for taking my call and

735  
00:27:58,149 --> 00:27:55,760  
uh congratulations on your flight it

736  
00:27:58,789 --> 00:27:58,159  
was amazing to watch um chris what was

737  
00:28:00,789 --> 00:27:58,799  
your

738  
00:28:01,990 --> 00:28:00,799

the biggest thing you you felt or

739

00:28:04,710 --> 00:28:02,000

thought as endeavour

740

00:28:05,029 --> 00:28:04,720

approached the iss and bomb and doug

741

00:28:07,190 --> 00:28:05,039

same

742

00:28:09,029 --> 00:28:07,200

question for you what were your your

743

00:28:10,070 --> 00:28:09,039

biggest thoughts or emotions as you as

744

00:28:11,909 --> 00:28:10,080

you pulled up to this

745

00:28:13,909 --> 00:28:11,919

this place you haven't been in you know

746

00:28:14,549 --> 00:28:13,919

many many years and i'm also curious i

747

00:28:16,389 --> 00:28:14,559

want to ask

748

00:28:17,750 --> 00:28:16,399

the spaceview question a different way

749

00:28:19,269 --> 00:28:17,760

what's your five-star review

750

00:28:21,190 --> 00:28:19,279

well what would you rate it what would

751  
00:28:22,710 --> 00:28:21,200  
you say about the spacesuits and your

752  
00:28:27,430 --> 00:28:22,720  
if you had to review them online thank

753  
00:28:30,710 --> 00:28:28,950  
i'll take the first part of that

754  
00:28:32,310 --> 00:28:30,720  
question from the space station side of

755  
00:28:33,430 --> 00:28:32,320  
things what was going through my mind

756  
00:28:35,430 --> 00:28:33,440  
while they were

757  
00:28:36,870 --> 00:28:35,440  
uh well there's sort of several phases

758  
00:28:39,510 --> 00:28:36,880  
one was during

759  
00:28:40,230 --> 00:28:39,520  
launch and that was quite exciting for

760  
00:28:42,710 --> 00:28:40,240  
the three of us

761  
00:28:44,710 --> 00:28:42,720  
on board we flew directly over the

762  
00:28:46,310 --> 00:28:44,720  
kennedy space center two minutes before

763  
00:28:47,830 --> 00:28:46,320

launch got some nice pictures of the

764

00:28:49,669 --> 00:28:47,840

launch pad we were

765

00:28:51,909 --> 00:28:49,679

out over the ocean at the time of engine

766

00:28:53,590 --> 00:28:51,919

ignition so we couldn't quite see plus

767

00:28:54,310 --> 00:28:53,600

we were in the day and ksc was in the

768

00:28:56,389 --> 00:28:54,320

day so

769

00:28:58,230 --> 00:28:56,399

we didn't see the actual launch but that

770

00:28:59,909 --> 00:28:58,240

was very very exciting and the three of

771

00:29:01,669 --> 00:28:59,919

us were

772

00:29:03,830 --> 00:29:01,679

we're just cheering just much like you

773

00:29:06,950 --> 00:29:03,840

were i'm sure fast forward to

774

00:29:07,909 --> 00:29:06,960

to yesterday when uh we're watching the

775

00:29:10,830 --> 00:29:07,919

vehicle do

776

00:29:12,389 --> 00:29:10,840

its uh stair-step maneuver up to our

777

00:29:15,110 --> 00:29:12,399

altitude and

778

00:29:17,110 --> 00:29:15,120

yvonne and i uh could see we were

779

00:29:20,070 --> 00:29:17,120

looking out the cupola window we saw it

780

00:29:21,830 --> 00:29:20,080

very far away about 19 20 kilometers and

781

00:29:23,190 --> 00:29:21,840

then it got brighter and brighter and

782

00:29:26,549 --> 00:29:23,200

bigger and bigger

783

00:29:27,990 --> 00:29:26,559

and uh and it struck me that that little

784

00:29:29,990 --> 00:29:28,000

tiny dot

785

00:29:32,149 --> 00:29:30,000

was going to be fixed to a piece of

786

00:29:34,549 --> 00:29:32,159

metal that was about 15 meters from

787

00:29:37,909 --> 00:29:34,559

where i was looking where i was standing

788

00:29:39,830 --> 00:29:37,919



so to speak and um and then they came up

789

00:29:41,510 --> 00:29:39,840

to our same altitude and started coming

790

00:29:44,470 --> 00:29:41,520

directly in on the docking access and i

791

00:29:46,149 --> 00:29:44,480

had the camera out one particular point

792

00:29:48,549 --> 00:29:46,159

and i cracked open the window to get a

793

00:29:51,190 --> 00:29:48,559

picture and i realized that

794

00:29:52,470 --> 00:29:51,200

inside that spacecraft were two of my

795

00:29:55,350 --> 00:29:52,480

colleagues and friends

796

00:29:56,870 --> 00:29:55,360

and they're going 17 500 miles an hour

797

00:29:59,190 --> 00:29:56,880

and we're going 17

798

00:30:01,269 --> 00:29:59,200

500 miles an hour and we are bringing

799

00:30:03,750 --> 00:30:01,279

these two vehicles together

800

00:30:05,990 --> 00:30:03,760

uh with a computer and then backing it

801  
00:30:07,510 --> 00:30:06,000  
up and and i could monitor this process

802  
00:30:09,350 --> 00:30:07,520  
on the telemetry

803  
00:30:11,029 --> 00:30:09,360  
and so from a technical nature i was

804  
00:30:13,510 --> 00:30:11,039  
pretty amazed at the whole thing

805  
00:30:14,310 --> 00:30:13,520  
just realizing what was happening but

806  
00:30:17,510 --> 00:30:14,320  
then uh

807  
00:30:20,070 --> 00:30:17,520  
you fold into that the historic

808  
00:30:21,909 --> 00:30:20,080  
aspect of the whole day and what it

809  
00:30:23,350 --> 00:30:21,919  
means to america what it means to our

810  
00:30:24,470 --> 00:30:23,360  
nation space program

811  
00:30:27,029 --> 00:30:24,480  
what it means to international

812  
00:30:29,590 --> 00:30:27,039  
cooperation and commercial cooperation

813  
00:30:30,549 --> 00:30:29,600

it just was kind of awe-inspiring to be

814

00:30:33,269 --> 00:30:30,559

honest with you

815

00:30:34,710 --> 00:30:33,279

and then that was a fleeting moment back

816

00:30:36,789 --> 00:30:34,720

to the operations

817

00:30:43,990 --> 00:30:36,799

but it was it was pretty impressive day

818

00:30:49,830 --> 00:30:47,430

as far as the docking was concerned um

819

00:30:51,909 --> 00:30:49,840

dragon flew pretty similar to shuttle it

820

00:30:53,190 --> 00:30:51,919

had very similar characteristics the

821

00:30:55,350 --> 00:30:53,200

automation

822

00:30:57,269 --> 00:30:55,360

would have made or did make the same

823

00:30:57,830 --> 00:30:57,279

corrections that i think either bob or i

824

00:31:00,149 --> 00:30:57,840

would have

825

00:31:01,750 --> 00:31:00,159

as we were coming in and the thing that

826

00:31:03,750 --> 00:31:01,760

really stood out to both of us and we

827

00:31:05,909 --> 00:31:03,760

mentioned it as soon as we docked is we

828

00:31:08,149 --> 00:31:05,919

didn't feel the docking

829

00:31:09,430 --> 00:31:08,159

it was just so smooth and then we were

830

00:31:11,430 --> 00:31:09,440

docked which

831

00:31:12,710 --> 00:31:11,440

in shuttle you felt a little bit of a

832

00:31:16,149 --> 00:31:12,720

jolt nothing

833

00:31:17,750 --> 00:31:16,159

real heavy but you felt it and we asked

834

00:31:19,350 --> 00:31:17,760

the guys on board station the same

835

00:31:19,750 --> 00:31:19,360

question and they said we didn't feel it

836

00:31:22,549 --> 00:31:19,760

either

837

00:31:23,430 --> 00:31:22,559

which is typical more typical but anyway

838

00:31:25,750 --> 00:31:23,440

that really

839

00:31:27,110 --> 00:31:25,760

really surprised me so that either just

840

00:31:30,310 --> 00:31:27,120

the velocities or

841

00:31:32,310 --> 00:31:30,320

the uh the the strength of the docking

842

00:31:35,509 --> 00:31:32,320

mechanism really absorbed any

843

00:31:37,509 --> 00:31:35,519

any any uh inertia as we

844

00:31:39,430 --> 00:31:37,519

came into dock and it was pretty neat

845

00:31:45,350 --> 00:31:39,440

that we couldn't feel anything at all on

846

00:31:48,470 --> 00:31:47,350

i think uh for both doug and i we'd have

847

00:31:51,350 --> 00:31:48,480

to give the suits a

848

00:31:53,750 --> 00:31:51,360

five-star rating you know each suit is

849

00:31:55,509 --> 00:31:53,760

is point designed for a very specific

850

00:31:57,190 --> 00:31:55,519

mission this one is point designed for

851  
00:31:59,350 --> 00:31:57,200  
us to sit in our seats

852  
00:32:00,950 --> 00:31:59,360  
and protect protect us if there's a fire

853  
00:32:01,990 --> 00:32:00,960  
or any sort of a problem with the

854  
00:32:04,070 --> 00:32:02,000  
atmosphere

855  
00:32:05,830 --> 00:32:04,080  
on board dragon it's leaking out or has

856  
00:32:08,789 --> 00:32:05,840  
smoke in it or anything like that

857  
00:32:10,149 --> 00:32:08,799  
and so these suits that didn't have to

858  
00:32:12,230 --> 00:32:10,159  
do that job for us

859  
00:32:13,350 --> 00:32:12,240  
which was nice but it was clear that

860  
00:32:17,029 --> 00:32:13,360  
they were ready

861  
00:32:19,190 --> 00:32:17,039  
we had a great checks of the suits as we

862  
00:32:21,029 --> 00:32:19,200  
as we continued uphill and pre-launch

863  
00:32:22,870 --> 00:32:21,039

and i just can't say enough about the

864

00:32:25,990 --> 00:32:22,880

the spacex team

865

00:32:28,070 --> 00:32:26,000

chris trigg eric maria

866

00:32:29,669 --> 00:32:28,080

and and all the other members of that

867

00:32:31,990 --> 00:32:29,679

team have just done an outstanding job

868

00:32:34,310 --> 00:32:32,000

supporting us getting them tailor fit

869

00:32:43,110 --> 00:32:34,320

to fit on us and we look forward to

870

00:32:45,029 --> 00:32:43,120

seeing how they perform

871

00:32:46,710 --> 00:32:45,039

station this is houston acr that

872

00:32:48,950 --> 00:32:46,720

concludes our event as we count down to

873

00:32:54,830 --> 00:32:48,960

20 continuous years of humans living and

874

00:32:54,840 --> 00:33:22,830

station

875

00:33:22,840 --> 00:33:35,990

uh

876

00:33:39,909 --> 00:33:37,830

and that concludes our event as we count

877

00:33:41,350 --> 00:33:39,919

down to 20 continuous years of humans

878

00:33:42,389 --> 00:33:41,360

living and working on the international

879

00:33:44,110 --> 00:33:42,399

space station

880

00:33:46,070 --> 00:33:44,120

thank you to all participants from

881

00:33:48,310 --> 00:33:46,080

jscpao in the media

882

00:33:59,000 --> 00:33:48,320

station we are now resuming operational

883

00:34:21,389 --> 00:34:06,350

[Music]