



NASA's SpaceX Crew-2

Crew News Conference

1
00:02:00,069 --> 00:00:25,270
[Music]

2
00:02:00,079 --> 00:02:07,670
so

3
00:06:53,909 --> 00:02:13,110
[Music]

4
00:06:53,919 --> 00:07:02,430
so

5
00:07:55,670 --> 00:07:28,960
[Music]

6
00:08:16,230 --> 00:07:58,190
this is nasa tv

7
00:08:18,150 --> 00:08:16,240
[Music]

8
00:08:20,550 --> 00:08:18,160
hello everyone and apologies for the

9
00:08:23,110 --> 00:08:20,560
delayed start welcome to today's

10
00:08:24,869 --> 00:08:23,120
briefing the crew of the nasa spacex

11
00:08:26,950 --> 00:08:24,879
crew 2 mission to the international

12
00:08:28,710 --> 00:08:26,960
space station this will be the second

13
00:08:30,869 --> 00:08:28,720

crew rotation flight of the u.s

14

00:08:32,469 --> 00:08:30,879
commercial spacecraft craft with

15

00:08:34,709 --> 00:08:32,479
astronauts to the international space

16

00:08:37,110 --> 00:08:34,719
station the astronauts on that mission

17

00:08:39,589 --> 00:08:37,120
and with us today are nasa astronauts

18

00:08:41,670 --> 00:08:39,599
shane kimbrough and megan macarthur

19

00:08:45,269 --> 00:08:41,680
japan aerospace exploration agency

20

00:08:47,910 --> 00:08:45,279
astronaut aki hoshide and european space

21

00:08:49,670 --> 00:08:47,920
agency astronaut tomah pesquet

22

00:08:52,230 --> 00:08:49,680
they will launch aboard a crew dragon

23

00:08:55,190 --> 00:08:52,240
spacecraft atop a falcon 9 rocket to the

24

00:08:56,949 --> 00:08:55,200
space station no earlier than april 20th

25

00:08:58,150 --> 00:08:56,959
from nasa's kennedy space center in

26

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

florida

27

00:09:02,230 --> 00:09:00,160

shane kimbrough is the commander of the

28

00:09:03,190 --> 00:09:02,240

crew dragon spacecraft and the crew 2

29

00:09:05,910 --> 00:09:03,200

mission

30

00:09:07,990 --> 00:09:05,920

shane has spent a total of 189 days in

31

00:09:10,949 --> 00:09:08,000

space on two missions and performed six

32

00:09:12,870 --> 00:09:10,959

spacewalks he is a retired u.s army

33

00:09:15,750 --> 00:09:12,880

colonel and had recent aerospace

34

00:09:17,670 --> 00:09:15,760

engineering and operations research

35

00:09:19,590 --> 00:09:17,680

megan macarthur is the pilot of the crew

36

00:09:20,790 --> 00:09:19,600

dragon spacecraft and second in command

37

00:09:22,550 --> 00:09:20,800

for the mission

38

00:09:24,389 --> 00:09:22,560

megan flew on the space shuttle atlantis

39

00:09:26,310 --> 00:09:24,399

for the final hubble space telescope

40

00:09:28,470 --> 00:09:26,320

servicing mission but this will be her

41

00:09:30,389 --> 00:09:28,480

first trip to the space station she held

42

00:09:32,230 --> 00:09:30,399

degrees in aerospace engineering and

43

00:09:34,310 --> 00:09:32,240

oceanography

44

00:09:36,949 --> 00:09:34,320

aki hoshide is a mission specialist for

45

00:09:39,590 --> 00:09:36,959

crew 2. aki is a veteran of two space

46

00:09:41,269 --> 00:09:39,600

flights the sts-124 space shuttle

47

00:09:43,430 --> 00:09:41,279

mission to deliver the japanese

48

00:09:45,190 --> 00:09:43,440

experiment module kibo to the

49

00:09:48,389 --> 00:09:45,200

international space station and

50

00:09:51,269 --> 00:09:48,399

long-duration mission expedition 323

51
00:09:52,710 --> 00:09:51,279
where he spent 124 days in space

52
00:09:54,550 --> 00:09:52,720
the crew dragon will be the third

53
00:09:57,269 --> 00:09:54,560
spacecraft for aki to fly to the

54
00:09:59,350 --> 00:09:57,279
orbiting laboratory

55
00:10:01,110 --> 00:09:59,360
tamar pesquet will also be a mission

56
00:10:03,350 --> 00:10:01,120
specialist for gu2

57
00:10:05,430 --> 00:10:03,360
tomah flew as part of expeditions 50 and

58
00:10:08,470 --> 00:10:05,440
51 launching aboard a russian soyuz

59
00:10:09,509 --> 00:10:08,480
spacecraft and spending 196 days in

60
00:10:13,430 --> 00:10:09,519
space

61
00:10:15,030 --> 00:10:13,440
maintain the station

62
00:10:17,350 --> 00:10:15,040
now we'll hear brief remarks from the

63
00:10:20,150 --> 00:10:17,360

crew and then we'll take questions on

64

00:10:22,470 --> 00:10:20,160

the phone please press star 1 to ask a

65

00:10:24,470 --> 00:10:22,480

question and star 2 to withdraw a

66

00:10:25,509 --> 00:10:24,480

question if your question's already been

67

00:10:27,509 --> 00:10:25,519

asked

68

00:10:30,389 --> 00:10:27,519

you can ask questions on social media

69

00:10:32,310 --> 00:10:30,399

using the hashtag asknasa

70

00:10:34,069 --> 00:10:32,320

shane let's start with you if you will

71

00:10:35,350 --> 00:10:34,079

each just tell us a little bit about how

72

00:10:38,310 --> 00:10:35,360

you're feeling and what this mission

73

00:10:39,670 --> 00:10:38,320

means to you shane

74

00:10:41,990 --> 00:10:39,680

we're ready

75

00:10:46,470 --> 00:10:42,000

on the screen

76

00:10:49,590 --> 00:10:48,310

i hope not

77

00:10:55,700 --> 00:10:49,600

everybody

78

00:10:55,710 --> 00:10:59,990

[Music]

79

00:11:21,990 --> 00:11:01,750

all right stand by everyone just a

80

00:11:27,110 --> 00:11:24,470

okay everyone crew can you give me a nod

81

00:11:29,110 --> 00:11:27,120

if you can hear me

82

00:11:31,910 --> 00:11:29,120

awesome all right i have gone through

83

00:11:33,509 --> 00:11:31,920

intros and i'm sorry we didn't have your

84

00:11:35,350 --> 00:11:33,519

audio there where you can hear but we

85

00:11:37,269 --> 00:11:35,360

are ready to hear from you

86

00:11:38,870 --> 00:11:37,279

so shane let's start with you if you

87

00:11:40,310 --> 00:11:38,880

will just tell us a little bit about how

88

00:11:43,509 --> 00:11:40,320

you're feeling and what this mission

89

00:11:45,030 --> 00:11:43,519

means to you thanks megan i'm looking

90

00:11:47,030 --> 00:11:45,040

forward to flying with this great crew

91

00:11:49,269 --> 00:11:47,040

that you see on the screen uh it's been

92

00:11:51,430 --> 00:11:49,279

the first time in over 20 years that a

93

00:11:53,670 --> 00:11:51,440

crew from nasa esa and jackson have

94

00:11:55,030 --> 00:11:53,680

flown together so that's pretty cool too

95

00:11:56,310 --> 00:11:55,040

we're looking forward to spending

96

00:11:58,550 --> 00:11:56,320

several months on the international

97

00:12:01,750 --> 00:11:58,560

space station

98

00:12:04,550 --> 00:12:01,760

that's fantastic okay megan

99

00:12:06,230 --> 00:12:04,560

well megan i um you know we get pretty

100

00:12:07,829 --> 00:12:06,240

intense with our training especially in

101
00:12:09,350 --> 00:12:07,839
these last couple of months so when the

102
00:12:11,509 --> 00:12:09,360
press conference arrives you know that

103
00:12:13,350 --> 00:12:11,519
launch is just around the corner so we

104
00:12:15,190 --> 00:12:13,360
are starting to get excited we have been

105
00:12:16,629 --> 00:12:15,200
very busy with all of our training and

106
00:12:18,550 --> 00:12:16,639
just want to give a shout out to both

107
00:12:20,230 --> 00:12:18,560
our nasa and spacex training teams that

108
00:12:21,910 --> 00:12:20,240
have done such a great job getting us

109
00:12:23,110 --> 00:12:21,920
ready we're ready and we're excited to

110
00:12:25,829 --> 00:12:23,120
fly

111
00:12:28,069 --> 00:12:25,839
thank you okay aki

112
00:12:30,710 --> 00:12:28,079
yeah it's i'm very excited and very

113
00:12:34,069 --> 00:12:30,720

privileged to fly with this uh find uh

114

00:12:36,629 --> 00:12:34,079

roommates and spend some time up there

115

00:12:40,150 --> 00:12:36,639

um especially flying on a new

116

00:12:42,550 --> 00:12:40,160

crew dragon see what it's like to fly um

117

00:12:45,590 --> 00:12:42,560

you know and compare differences and

118

00:12:47,430 --> 00:12:45,600

similarity with a shuttle and soyuz

119

00:12:50,230 --> 00:12:47,440

but it's gonna be a lot of fun up there

120

00:12:52,069 --> 00:12:50,240

i'm very excited and ready

121

00:12:53,910 --> 00:12:52,079

awesome yeah we're excited to hear what

122

00:12:55,590 --> 00:12:53,920

you think about the launch

123

00:12:57,190 --> 00:12:55,600

um tomorrow

124

00:12:58,629 --> 00:12:57,200

yeah and uh it's it's starting to be

125

00:13:01,190 --> 00:12:58,639

that time again when everything is the

126

00:13:02,870 --> 00:13:01,200

last the last uh eva run in the pool the

127

00:13:04,550 --> 00:13:02,880

last training of this the last meeting

128

00:13:06,629 --> 00:13:04,560

with that so it means the launch is uh

129

00:13:08,710 --> 00:13:06,639

is getting closer and it's a great

130

00:13:11,509 --> 00:13:08,720

feeling it reminds me of my previous

131

00:13:12,870 --> 00:13:11,519

flight so i think i think we've uh we've

132

00:13:14,310 --> 00:13:12,880

reached that level when we're almost

133

00:13:17,030 --> 00:13:14,320

ready to fly there's a few finishing

134

00:13:19,110 --> 00:13:17,040

touches to put on the crew uh we can't

135

00:13:20,550 --> 00:13:19,120

wait to start you know getting to work

136

00:13:23,509 --> 00:13:20,560

there's a lot of work to be done up

137

00:13:24,949 --> 00:13:23,519

there on the iss we're very motivated

138

00:13:26,629 --> 00:13:24,959

and i know we're gonna get some work

139

00:13:28,550 --> 00:13:26,639

done and have a great time doing it so

140

00:13:30,710 --> 00:13:28,560

looking forward to it

141

00:13:33,110 --> 00:13:30,720

very exciting thank you okay now we'll

142

00:13:34,870 --> 00:13:33,120

take questions from media marcia dunn

143

00:13:38,870 --> 00:13:34,880

with associated press go ahead with your

144

00:13:42,470 --> 00:13:40,949

mcarthur um

145

00:13:45,670 --> 00:13:42,480

as you well know you're flying in the

146

00:13:48,470 --> 00:13:45,680

same capsule as doug and bob

147

00:13:50,470 --> 00:13:48,480

and what does uh what insight did bob

148

00:13:53,430 --> 00:13:50,480

give you not just about this particular

149

00:13:54,949 --> 00:13:53,440

capsule but also um about the space

150

00:13:57,030 --> 00:13:54,959

station where you've never been thank

151
00:13:59,110 --> 00:13:57,040

you

152
00:14:01,750 --> 00:13:59,120

well my husband has been very supportive

153
00:14:03,590 --> 00:14:01,760

as i get ready to go on this mission it

154
00:14:05,189 --> 00:14:03,600

was but about two weeks after he got

155
00:14:07,910 --> 00:14:05,199

home that he took over kind of all the

156
00:14:09,430 --> 00:14:07,920

home-based duties and has watched me go

157
00:14:11,269 --> 00:14:09,440

through this pretty intensive training

158
00:14:13,590 --> 00:14:11,279

flow so he's been there along the way to

159
00:14:16,230 --> 00:14:13,600

give me some pointers and feedbacks and

160
00:14:17,910 --> 00:14:16,240

and things to look out for and it's been

161
00:14:20,389 --> 00:14:17,920

really great having his uh having his

162
00:14:22,550 --> 00:14:20,399

advice along the way

163
00:14:25,430 --> 00:14:22,560

all right let's go to bill harwood with

164

00:14:27,670 --> 00:14:25,440

cbs news

165

00:14:29,430 --> 00:14:27,680

hey thanks uh you know if you have flown

166

00:14:31,269 --> 00:14:29,440

on soyuz i guess and two of phone on

167

00:14:32,710 --> 00:14:31,279

soyuz and shuttle

168

00:14:35,110 --> 00:14:32,720

could one of you talk a little bit about

169

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

the spacex experience in general what

170

00:14:38,710 --> 00:14:36,800

you like about it maybe what you miss

171

00:14:40,310 --> 00:14:38,720

about the other vehicles i mean given

172

00:14:42,310 --> 00:14:40,320

all that automation i would think it's

173

00:14:45,829 --> 00:14:42,320

an easier flow than the other vehicles

174

00:14:47,829 --> 00:14:45,839

but that for you to tell me thanks

175

00:14:49,670 --> 00:14:47,839

hey bill i'll start this is shane uh

176

00:14:52,310 --> 00:14:49,680

it's been really fantastic training with

177

00:14:53,990 --> 00:14:52,320

the spacex team uh and the nasa teams of

178

00:14:54,710 --> 00:14:54,000

course but it's a new vehicle for all of

179

00:14:56,150 --> 00:14:54,720

us

180

00:14:57,990 --> 00:14:56,160

and so for me

181

00:15:00,069 --> 00:14:58,000

of course i train on space station

182

00:15:01,750 --> 00:15:00,079

before so for me it's really exciting to

183

00:15:04,470 --> 00:15:01,760

have this new vehicle and go through the

184

00:15:06,710 --> 00:15:04,480

training flow with the spacex folks and

185

00:15:08,310 --> 00:15:06,720

uh they've been fantastic you know we're

186

00:15:09,670 --> 00:15:08,320

all still learning it's a it's a new

187

00:15:12,150 --> 00:15:09,680

vehicle it's not one that has a lot of

188

00:15:14,150 --> 00:15:12,160

history on it so as we go through and

189

00:15:16,550 --> 00:15:14,160

train we get to make some comments and

190

00:15:18,230 --> 00:15:16,560

inputs and they've been very um you know

191

00:15:20,230 --> 00:15:18,240

helpful in listening to our comments and

192

00:15:21,829 --> 00:15:20,240

actually making changes to some of the

193

00:15:26,389 --> 00:15:21,839

procedures and some of the equipment

194

00:15:38,949 --> 00:15:28,790

all right let's go to chris davenport

195

00:15:44,470 --> 00:15:41,430

we'll come back to chris let's try joey

196

00:15:46,629 --> 00:15:44,480

roulette with the verge

197

00:15:49,030 --> 00:15:46,639

hey uh thanks for doing this i was gonna

198

00:15:50,870 --> 00:15:49,040

ask if you guys have

199

00:15:53,269 --> 00:15:50,880

thought of a name yet for this capsule

200

00:15:55,749 --> 00:15:53,279

but since it's being reused it i guess

201
00:15:57,430 --> 00:15:55,759
the name sticks as endeavor

202
00:15:58,870 --> 00:15:57,440
but is there a name that you guys wish

203
00:15:59,910 --> 00:15:58,880
could you could give this mission or is

204
00:16:01,670 --> 00:15:59,920
there anything

205
00:16:04,069 --> 00:16:01,680
um you guys would like to characterize

206
00:16:05,509 --> 00:16:04,079
with this mission thanks

207
00:16:06,949 --> 00:16:05,519
yeah i'll start i'll let the other crew

208
00:16:08,870 --> 00:16:06,959
members answer because i think everybody

209
00:16:10,470 --> 00:16:08,880
have a different different taste i'm

210
00:16:12,069 --> 00:16:10,480
really excited that it's called endeavor

211
00:16:14,310 --> 00:16:12,079
because that's the space shuttle that i

212
00:16:15,910 --> 00:16:14,320
got to fly on so for me it's a familiar

213
00:16:18,069 --> 00:16:15,920

term to a spacecraft so i'm really

214

00:16:22,150 --> 00:16:18,079

excited to fly on this crew dragon

215

00:16:28,310 --> 00:16:24,550

all right how about mary liz bender with

216

00:16:32,150 --> 00:16:30,389

yeah thank you for taking my question

217

00:16:33,670 --> 00:16:32,160

megan you talked about the

218

00:16:34,949 --> 00:16:33,680

intense training that you've gone

219

00:16:36,629 --> 00:16:34,959

through in the last couple months and

220

00:16:37,670 --> 00:16:36,639

that's not something that we usually get

221

00:16:40,389 --> 00:16:37,680

to hear

222

00:16:41,829 --> 00:16:40,399

a lot about and you know you just you

223

00:16:44,470 --> 00:16:41,839

all just touched on the fact that this

224

00:16:45,670 --> 00:16:44,480

is a brand new vehicle so can you talk a

225

00:16:47,590 --> 00:16:45,680

little bit about some of the most

226

00:16:49,590 --> 00:16:47,600

intense parts of that training and then

227

00:16:52,710 --> 00:16:49,600

whatever it is that you have to do prior

228

00:16:54,629 --> 00:16:52,720

to launch from now until then

229

00:16:56,389 --> 00:16:54,639

sure really the most the thing that

230

00:16:58,790 --> 00:16:56,399

makes the training intense is just the

231

00:17:00,710 --> 00:16:58,800

volume and variety of the things that we

232

00:17:03,110 --> 00:17:00,720

have to cram into our brains before we

233

00:17:04,710 --> 00:17:03,120

get ready to launch so we're not only

234

00:17:06,549 --> 00:17:04,720

learning a brand new vehicle that we're

235

00:17:08,549 --> 00:17:06,559

going to launch in and how to monitor

236

00:17:11,189 --> 00:17:08,559

and operate in that vehicle but we're

237

00:17:12,549 --> 00:17:11,199

also uh learning all of the things that

238

00:17:14,630 --> 00:17:12,559

we're going to be expected to do while

239

00:17:16,150 --> 00:17:14,640

living aboard the space station and so

240

00:17:17,510 --> 00:17:16,160

that's not only caring for the space

241

00:17:19,909 --> 00:17:17,520

station but it's also conducting a

242

00:17:21,669 --> 00:17:19,919

variety of different science experiments

243

00:17:22,710 --> 00:17:21,679

that's really the goal of our being up

244

00:17:24,390 --> 00:17:22,720

there we'll be doing hundreds of

245

00:17:26,230 --> 00:17:24,400

different science experiments in the six

246

00:17:27,750 --> 00:17:26,240

months that were there so we can't train

247

00:17:29,350 --> 00:17:27,760

for every specific thing that we're

248

00:17:31,510 --> 00:17:29,360

going to be doing so we take a

249

00:17:33,750 --> 00:17:31,520

skills-based approach to our training

250

00:17:35,270 --> 00:17:33,760

and try to learn sort of broad based as

251

00:17:37,270 --> 00:17:35,280

much as we can across all of these

252

00:17:38,470 --> 00:17:37,280

different areas so that we can tackle

253

00:17:40,870 --> 00:17:38,480

all of the different things that come

254

00:17:43,270 --> 00:17:40,880

our way

255

00:17:46,789 --> 00:17:43,280

okay the next question is from mark caro

256

00:17:49,750 --> 00:17:46,799

with aviation week and space technology

257

00:17:53,190 --> 00:17:49,760

thank you very much mine's for shane and

258

00:17:54,230 --> 00:17:53,200

megan you're you're flying with a um

259

00:17:57,430 --> 00:17:54,240

represent

260

00:17:59,909 --> 00:17:57,440

an international crew that sort of to me

261

00:18:02,150 --> 00:17:59,919

looks a little bit out to do what things

262

00:18:04,789 --> 00:18:02,160

might be like for artemis and i'm just

263

00:18:06,470 --> 00:18:04,799

wondering if you if you have any sort of

264

00:18:09,029 --> 00:18:06,480

sense

265

00:18:10,870 --> 00:18:09,039

of how that experience of flying

266

00:18:12,549 --> 00:18:10,880

internationally with

267

00:18:14,230 --> 00:18:12,559

partners

268

00:18:16,390 --> 00:18:14,240

that are uh

269

00:18:17,270 --> 00:18:16,400

joining nasa for artemis

270

00:18:19,110 --> 00:18:17,280

um

271

00:18:21,510 --> 00:18:19,120

how does that sort of feed into the

272

00:18:23,350 --> 00:18:21,520

future

273

00:18:25,190 --> 00:18:23,360

thanks mark we've been you know doing

274

00:18:26,950 --> 00:18:25,200

this playing with international partners

275

00:18:28,470 --> 00:18:26,960

for many decades now which has been

276

00:18:31,270 --> 00:18:28,480

fantastic it makes

277

00:18:33,430 --> 00:18:31,280

you know all of our agencies stronger it

278

00:18:35,350 --> 00:18:33,440

makes our crews longer and we're excited

279

00:18:38,310 --> 00:18:35,360

to have a very diverse crew if you look

280

00:18:39,350 --> 00:18:38,320

at issa and jaxa and nasa together

281

00:18:40,470 --> 00:18:39,360

and

282

00:18:42,150 --> 00:18:40,480

of course like you mentioned it's going

283

00:18:43,510 --> 00:18:42,160

to be part of the artemis program as

284

00:18:45,110 --> 00:18:43,520

well we hope

285

00:18:46,950 --> 00:18:45,120

more partners will join that as we go

286

00:18:49,029 --> 00:18:46,960

forward but really looking forward to

287

00:18:52,310 --> 00:18:49,039

our crew flying together and experience

288

00:18:54,070 --> 00:18:52,320

in this this international crew

289

00:18:55,830 --> 00:18:54,080

mark you've said that i myself are going

290

00:18:57,190 --> 00:18:55,840

to fly to the moon on an artemis flight

291

00:18:58,789 --> 00:18:57,200

that's why that's what i get from your

292

00:19:00,070 --> 00:18:58,799

question so i'm happy that you're

293

00:19:02,789 --> 00:19:00,080

pointing that out

294

00:19:04,390 --> 00:19:02,799

[Laughter]

295

00:19:05,909 --> 00:19:04,400

that's awesome i'm sure he wishes he

296

00:19:07,990 --> 00:19:05,919

could make the rules

297

00:19:10,789 --> 00:19:08,000

um let's go to trevor cesnik with

298

00:19:13,270 --> 00:19:10,799

everyday astronaut

299

00:19:15,110 --> 00:19:13,280

uh yes hello

300

00:19:16,950 --> 00:19:15,120

i was wondering if megan or shane could

301
00:19:19,830 --> 00:19:16,960
talk about the big adventures from the

302
00:19:21,510 --> 00:19:19,840
shuttle iva suit to the spacex iba suit

303
00:19:22,710 --> 00:19:21,520
and then if anything that you guys are

304
00:19:26,630 --> 00:19:22,720
going to miss

305
00:19:31,430 --> 00:19:29,110
go ahead megan sure so i i think your

306
00:19:33,990 --> 00:19:31,440
question is asking us to compare the

307
00:19:35,350 --> 00:19:34,000
suit that we wear during ask an entry on

308
00:19:37,350 --> 00:19:35,360
the space shuttle to the suit that we

309
00:19:39,190 --> 00:19:37,360
wear for ascent and entry

310
00:19:41,190 --> 00:19:39,200
for the spacex vehicle so i'm going to

311
00:19:42,789 --> 00:19:41,200
address that question um we have spent a

312
00:19:44,549 --> 00:19:42,799
lot of time very recently actually

313
00:19:47,350 --> 00:19:44,559

working with the suit design teams at

314

00:19:49,190 --> 00:19:47,360

spacex to really customize our suits

315

00:19:51,190 --> 00:19:49,200

they're very fitted in a way that our

316

00:19:53,270 --> 00:19:51,200

space our space shuttle suits were not

317

00:19:55,830 --> 00:19:53,280

the space shuttle suits were designed

318

00:19:58,310 --> 00:19:55,840

more generically to fit a wider group of

319

00:20:00,310 --> 00:19:58,320

people and so they're looser and which

320

00:20:03,190 --> 00:20:00,320

makes them sort of easier to move around

321

00:20:06,310 --> 00:20:03,200

and easier to get on and off um the

322

00:20:08,549 --> 00:20:06,320

spacex suits are definitely more uh more

323

00:20:10,149 --> 00:20:08,559

custom fit more tailored and so that

324

00:20:11,669 --> 00:20:10,159

does present some challenges when

325

00:20:13,669 --> 00:20:11,679

getting in and out of the suits but the

326

00:20:15,510 --> 00:20:13,679

suits are highly capable most important

327

00:20:17,830 --> 00:20:15,520

thing about any spacesuit is that it

328

00:20:20,390 --> 00:20:17,840

keeps you safe in any emergency

329

00:20:22,230 --> 00:20:20,400

situation and it doesn't impede your

330

00:20:24,070 --> 00:20:22,240

normal activities that you do to operate

331

00:20:26,310 --> 00:20:24,080

the spaceship and so i would say that

332

00:20:28,470 --> 00:20:26,320

both both of the suits both for shuttle

333

00:20:31,750 --> 00:20:28,480

and for the crew dragon are able to meet

334

00:20:31,760 --> 00:20:38,230

okay the next question is from nhk

335

00:20:41,909 --> 00:20:40,310

i think you will take my question

336

00:20:44,310 --> 00:20:41,919

well i have a question for jack pastor

337

00:20:46,390 --> 00:20:44,320

another hoshide sound here uh so this is

338

00:20:47,830 --> 00:20:46,400

the third flight to space and uh what is

339

00:20:49,029 --> 00:20:47,840

the application for the flight then have

340

00:20:50,390 --> 00:20:49,039

one question

341

00:20:53,350 --> 00:20:50,400

and you'll be the second japanese

342

00:20:54,549 --> 00:20:53,360

commander expedition 65 so can i have

343

00:20:58,230 --> 00:20:54,559

your thoughts on how you're going to

344

00:21:00,630 --> 00:20:58,240

lead this diverse crew as a commander

345

00:21:02,549 --> 00:21:00,640

sure um i didn't get your first question

346

00:21:05,909 --> 00:21:02,559

because you repeat that

347

00:21:08,549 --> 00:21:05,919

oh sure uh so this is uh this is uh

348

00:21:10,789 --> 00:21:08,559

third flight to space and so i'd like to

349

00:21:14,230 --> 00:21:10,799

hear his uh

350

00:21:16,549 --> 00:21:14,240

anticipation for the flight

351

00:21:19,110 --> 00:21:16,559

okay yeah it's uh it's my third flight

352

00:21:22,390 --> 00:21:19,120

so uh you know and especially third

353

00:21:25,430 --> 00:21:22,400

flight to station so i know what it's

354

00:21:26,310 --> 00:21:25,440

like to live and uh work there

355

00:21:28,149 --> 00:21:26,320

um

356

00:21:30,950 --> 00:21:28,159

of course uh there's been a lot of

357

00:21:34,070 --> 00:21:30,960

upgrades since i've flown uh almost ten

358

00:21:37,350 --> 00:21:34,080

years ago nine years ago um

359

00:21:39,750 --> 00:21:37,360

but uh with this crew and uh the crew on

360

00:21:41,190 --> 00:21:39,760

board it will be a lot of fun a lot of

361

00:21:42,870 --> 00:21:41,200

uh you know

362

00:21:44,630 --> 00:21:42,880

different activities different

363

00:21:46,549 --> 00:21:44,640

experiments and i'm looking forward to

364

00:21:48,870 --> 00:21:46,559

that and uh

365

00:21:50,149 --> 00:21:48,880

with respect to being the commander of

366

00:21:52,070 --> 00:21:50,159

the station

367

00:21:53,430 --> 00:21:52,080

we don't know just yet when that's going

368

00:21:56,470 --> 00:21:53,440

to happen but

369

00:22:00,390 --> 00:21:56,480

i'm looking forward to just working with

370

00:22:07,430 --> 00:22:02,310

all right let's take a question from

371

00:22:11,430 --> 00:22:09,350

hi thanks for doing this um this

372

00:22:12,789 --> 00:22:11,440

question is for all of you just taking a

373

00:22:14,710 --> 00:22:12,799

step back and knowing that you're

374

00:22:16,630 --> 00:22:14,720

getting close to launch what are you

375

00:22:18,630 --> 00:22:16,640

most anxious or nervous about what if

376

00:22:19,990 --> 00:22:18,640

anything is keeping you up at night or

377

00:22:23,270 --> 00:22:20,000

giving you the jitters when you think

378

00:22:27,270 --> 00:22:25,270

come by you want to go yeah i can take

379

00:22:29,510 --> 00:22:27,280

that um there's i don't think there's

380

00:22:31,590 --> 00:22:29,520

anything really keep him keeping us at

381

00:22:33,990 --> 00:22:31,600

night because if you i mean if you worry

382

00:22:35,510 --> 00:22:34,000

too much in that in that line of work uh

383

00:22:38,310 --> 00:22:35,520

you're not gonna last very long so i

384

00:22:40,870 --> 00:22:38,320

think everybody's pretty relaxed um very

385

00:22:43,270 --> 00:22:40,880

professional but also relaxed uh i think

386

00:22:45,110 --> 00:22:43,280

we trust the system and nasa's put a

387

00:22:47,190 --> 00:22:45,120

system in work spacex as a system

388

00:22:49,029 --> 00:22:47,200

everybody's contributing everybody's

389

00:22:51,430 --> 00:22:49,039

doing part of the job and we have a lot

390

00:22:54,789 --> 00:22:51,440

of trust into that

391

00:22:56,310 --> 00:22:54,799

so nothing keeps us awake at night

392

00:22:57,990 --> 00:22:56,320

on the other hand like shane pointed out

393

00:22:58,950 --> 00:22:58,000

before it's a new vehicle so it's the

394

00:23:02,870 --> 00:22:58,960

third

395

00:23:04,549 --> 00:23:02,880

operational flight after the initial

396

00:23:06,870 --> 00:23:04,559

test flight

397

00:23:09,029 --> 00:23:06,880

so we need more data we need a lot of

398

00:23:11,190 --> 00:23:09,039

launchers we want this to become you

399

00:23:12,549 --> 00:23:11,200

know right away to get to the space

400

00:23:14,870 --> 00:23:12,559

station which means i don't know down

401
00:23:16,470 --> 00:23:14,880
the line hundreds of launchers maybe but

402
00:23:18,230 --> 00:23:16,480
we don't have this data yet we don't

403
00:23:20,390 --> 00:23:18,240
have the statistics so we're being maybe

404
00:23:22,470 --> 00:23:20,400
a little bit more cautious

405
00:23:24,230 --> 00:23:22,480
and we tend to double check everything

406
00:23:25,830 --> 00:23:24,240
and i think with that

407
00:23:28,149 --> 00:23:25,840
uh and the fact that everybody is doing

408
00:23:30,710 --> 00:23:28,159
their jobs uh it's gonna be flawless at

409
00:23:32,550 --> 00:23:30,720
least that's what i think about when i

410
00:23:33,750 --> 00:23:32,560
go to bed at night

411
00:23:35,029 --> 00:23:33,760
[Music]

412
00:23:36,870 --> 00:23:35,039
fantastic

413
00:23:40,230 --> 00:23:36,880

okay let's take a question from ken

414

00:23:42,149 --> 00:23:40,240

creamer with space up close

415

00:23:44,390 --> 00:23:42,159

hi thank you for taking my question and

416

00:23:46,950 --> 00:23:44,400

uh good luck to all four of you uh my

417

00:23:48,470 --> 00:23:46,960

question is for thomas pasquad you issa

418

00:23:50,390 --> 00:23:48,480

will be um

419

00:23:52,310 --> 00:23:50,400

having its first astronaut selection in

420

00:23:54,710 --> 00:23:52,320

about 11 years so i wonder if you could

421

00:23:55,830 --> 00:23:54,720

talk about uh what is your advice to

422

00:23:57,830 --> 00:23:55,840

them

423

00:23:59,590 --> 00:23:57,840

and uh also they're going to be a power

424

00:24:01,750 --> 00:23:59,600

astronaut could you comment about that

425

00:24:03,909 --> 00:24:01,760

and how often also do you think there

426
00:24:05,990 --> 00:24:03,919
will be flight opportunities for esa

427
00:24:08,789 --> 00:24:06,000
astronauts thank you

428
00:24:10,149 --> 00:24:08,799
that's a good question thanks um and uh

429
00:24:12,549 --> 00:24:10,159
indeed we don't have

430
00:24:13,669 --> 00:24:12,559
selections as frequently as nasa does

431
00:24:15,350 --> 00:24:13,679
because we

432
00:24:17,350 --> 00:24:15,360
simply have fewer flight opportunities

433
00:24:19,590 --> 00:24:17,360
to the space station

434
00:24:21,190 --> 00:24:19,600
but it was time i think to hire a new

435
00:24:23,750 --> 00:24:21,200
portion a new generation we've been

436
00:24:25,350 --> 00:24:23,760
around for 12 years already

437
00:24:28,470 --> 00:24:25,360
and so we're looking forward to having

438
00:24:30,390 --> 00:24:28,480

uh fresh blood and new talents

439

00:24:31,830 --> 00:24:30,400

now we're moving into a different era of

440

00:24:34,470 --> 00:24:31,840

human space flight we're going forward

441

00:24:36,310 --> 00:24:34,480

to the moon and uh hopefully it's gonna

442

00:24:39,029 --> 00:24:36,320

keep my generation busy in the years to

443

00:24:40,630 --> 00:24:39,039

come but we still have we still the iss

444

00:24:42,549 --> 00:24:40,640

um and all the flights that are

445

00:24:44,149 --> 00:24:42,559

associated to the with the iss in low

446

00:24:45,669 --> 00:24:44,159

earth orbit so hopefully those guys were

447

00:24:47,830 --> 00:24:45,679

gonna be there

448

00:24:49,669 --> 00:24:47,840

to start to start taking that part of

449

00:24:51,669 --> 00:24:49,679

the job um

450

00:24:53,350 --> 00:24:51,679

my advice to them you know you need

451
00:24:55,590 --> 00:24:53,360
three things i think to be a national

452
00:24:57,269 --> 00:24:55,600
adolescent you need to be to have some

453
00:24:58,950 --> 00:24:57,279
academic background because we're living

454
00:25:00,390 --> 00:24:58,960
in a technical scientific environment

455
00:25:01,590 --> 00:25:00,400
you need to have some operational

456
00:25:02,789 --> 00:25:01,600
experience

457
00:25:04,549 --> 00:25:02,799
because you're also in a dangerous

458
00:25:06,310 --> 00:25:04,559
environment and your decisions have

459
00:25:07,750 --> 00:25:06,320
consequences

460
00:25:09,510 --> 00:25:07,760
and you need to be international with

461
00:25:11,669 --> 00:25:09,520
the european space agency we speak all

462
00:25:14,070 --> 00:25:11,679
languages and look at us with japanese

463
00:25:15,590 --> 00:25:14,080

american russians and tomorrow maybe

464

00:25:17,750 --> 00:25:15,600

other nationalities onboard the space

465

00:25:19,909 --> 00:25:17,760

station so those are the things that

466

00:25:20,950 --> 00:25:19,919

those guys should have uh last part of

467

00:25:23,669 --> 00:25:20,960

your question

468

00:25:25,830 --> 00:25:23,679

we look at what it would take to send a

469

00:25:27,830 --> 00:25:25,840

handicapped person into because we're

470

00:25:31,669 --> 00:25:27,840

talking about inclusive we want to

471

00:25:33,269 --> 00:25:31,679

achieve that in every sector of society

472

00:25:35,430 --> 00:25:33,279

and so we're starting that project we

473

00:25:37,430 --> 00:25:35,440

don't really know how it's going to go

474

00:25:40,310 --> 00:25:37,440

we're going to study

475

00:25:41,909 --> 00:25:40,320

somebody hired during selection to help

476

00:25:43,430 --> 00:25:41,919

and then we'll talk to all the partners

477

00:25:44,870 --> 00:25:43,440

and we'll try to make it happen and

478

00:25:48,630 --> 00:25:44,880

that's going to be very exciting and uh

479

00:25:55,029 --> 00:25:50,470

all right let's take the next question

480

00:26:00,789 --> 00:25:58,789

hello my question concerns all the crew

481

00:26:03,190 --> 00:26:00,799

i was wondering if you are helping the

482

00:26:04,710 --> 00:26:03,200

russians with the naoka module and later

483

00:26:08,390 --> 00:26:04,720

we're shooting the film of director

484

00:26:12,789 --> 00:26:11,110

uh this is shane i'll start um

485

00:26:15,190 --> 00:26:12,799

yeah we haven't not been trained on that

486

00:26:16,470 --> 00:26:15,200

at all and we've just heard just a few

487

00:26:19,430 --> 00:26:16,480

things probably through the media like

488

00:26:21,110 --> 00:26:19,440

you have about the potential film but uh

489

00:26:24,230 --> 00:26:21,120

right now currently anyway we're not

490

00:26:26,549 --> 00:26:24,240

trained to help them out

491

00:26:28,630 --> 00:26:26,559

all right let's go okay

492

00:26:30,549 --> 00:26:28,640

i can jump on the on the european

493

00:26:33,510 --> 00:26:30,559

robotic arm there's a european arm that

494

00:26:36,710 --> 00:26:33,520

that comes up on that uh on that module

495

00:26:38,710 --> 00:26:36,720

um and i might have some tasks to to

496

00:26:40,789 --> 00:26:38,720

to perform with that european robotic

497

00:26:42,070 --> 00:26:40,799

arm so i've had some training but

498

00:26:45,350 --> 00:26:42,080

there's still some uncertainties in

499

00:26:46,870 --> 00:26:45,360

schedule so we'll we'll see what happens

500

00:26:49,269 --> 00:26:46,880

okay thank you

501
00:26:52,149 --> 00:26:49,279
the next question is from manuel masanti

502
00:26:54,310 --> 00:26:52,159
with debate

503
00:26:56,070 --> 00:26:54,320
so much and congratulations to the four

504
00:26:59,190 --> 00:26:56,080
of you for your upcoming mission and

505
00:27:03,029 --> 00:26:59,200
this is a question for aki um

506
00:27:05,350 --> 00:27:03,039
when q2 launches uh you will be on a

507
00:27:07,590 --> 00:27:05,360
very exclusive list of astronauts that

508
00:27:09,990 --> 00:27:07,600
has flown had a chance to to fly in

509
00:27:12,870 --> 00:27:10,000
three different spacecrafts along with

510
00:27:15,830 --> 00:27:12,880
uh with the chain as well uh but out of

511
00:27:18,149 --> 00:27:15,840
that least two are from japanese uh

512
00:27:20,549 --> 00:27:18,159
which is uh pretty remarkable what do

513
00:27:21,669 --> 00:27:20,559

you think about that

514

00:27:26,149 --> 00:27:21,679

so

515

00:27:29,029 --> 00:27:26,159

noguchi who flew on crew one and

516

00:27:31,750 --> 00:27:29,039

actually uh spending some time on iss

517

00:27:34,870 --> 00:27:31,760

right now i'll be the second japanese to

518

00:27:37,750 --> 00:27:34,880

fly on three vehicles um but

519

00:27:39,590 --> 00:27:37,760

that's for now and and for the future i

520

00:27:41,830 --> 00:27:39,600

think uh everyone's gonna be you know

521

00:27:43,830 --> 00:27:41,840

flying on different vehicles um

522

00:27:45,590 --> 00:27:43,840

you know either the commercial crew

523

00:27:48,389 --> 00:27:45,600

program vehicles or

524

00:27:50,710 --> 00:27:48,399

uh maybe going to moon and mars so i

525

00:27:53,669 --> 00:27:50,720

think it's uh it's a

526
00:27:57,510 --> 00:27:53,679
an honor for now but i hope everyone

527
00:27:59,990 --> 00:27:57,520
else will get a chance to do that too

528
00:28:02,389 --> 00:28:00,000
very exciting times thank you

529
00:28:05,669 --> 00:28:02,399
let's go to ulrike ebner with slug

530
00:28:11,350 --> 00:28:08,950
hi um the question is to all of you

531
00:28:13,750 --> 00:28:11,360
could you give us a brief overview on

532
00:28:15,590 --> 00:28:13,760
the vehicle training for example how

533
00:28:17,669 --> 00:28:15,600
long does it take to be familiar with

534
00:28:21,190 --> 00:28:17,679
the crew dragon and where does the

535
00:28:25,590 --> 00:28:23,590
hey thanks for your question um i'll try

536
00:28:27,350 --> 00:28:25,600
to start that megan and to monarchy can

537
00:28:29,110 --> 00:28:27,360
jump in if they need to

538
00:28:30,310 --> 00:28:29,120

most of our training for the spacex

539

00:28:32,389 --> 00:28:30,320

vehicle i think that's what you're

540

00:28:34,070 --> 00:28:32,399

talking about mainly is done in

541

00:28:36,070 --> 00:28:34,080

hawthorne california

542

00:28:37,590 --> 00:28:36,080

we do have we do have some weeks here in

543

00:28:39,510 --> 00:28:37,600

houston where we train because they have

544

00:28:40,710 --> 00:28:39,520

a simulator here as well

545

00:28:42,549 --> 00:28:40,720

i mean the way the training kind of

546

00:28:43,909 --> 00:28:42,559

lines up the first maybe month or two

547

00:28:46,230 --> 00:28:43,919

that you're in the training flow you're

548

00:28:48,630 --> 00:28:46,240

doing a lot of academic classes learning

549

00:28:50,070 --> 00:28:48,640

all their systems and then you progress

550

00:28:52,389 --> 00:28:50,080

into the simulator where you're just

551

00:28:54,149 --> 00:28:52,399

doing kind of standalone simulations

552

00:28:56,310 --> 00:28:54,159

which is you and your crewmates or maybe

553

00:28:57,430 --> 00:28:56,320

just in our case megan and i as pilot

554

00:28:59,110 --> 00:28:57,440

and commander

555

00:29:00,789 --> 00:28:59,120

and then eventually you'll get into the

556

00:29:03,190 --> 00:29:00,799

simulation campaign with the mission

557

00:29:04,630 --> 00:29:03,200

control teams from spacex and nasa and

558

00:29:06,549 --> 00:29:04,640

that's where we're kind of in that phase

559

00:29:08,149 --> 00:29:06,559

right now and kind of ramping that up

560

00:29:13,269 --> 00:29:08,159

with only a couple more weeks of that to

561

00:29:19,909 --> 00:29:15,350

okay let's take a question from marcia

562

00:29:23,350 --> 00:29:21,430

uh thanks so much

563

00:29:25,269 --> 00:29:23,360

i'm not quite sure who can best address

564

00:29:27,110 --> 00:29:25,279

this but my question basically has to do

565

00:29:27,990 --> 00:29:27,120

with how busy the space station has

566

00:29:29,590 --> 00:29:28,000

gotten

567

00:29:32,070 --> 00:29:29,600

there are so many vehicles coming and

568

00:29:34,470 --> 00:29:32,080

going and spacewalks and all of this

569

00:29:36,870 --> 00:29:34,480

and the advantage that you hear about by

570

00:29:39,510 --> 00:29:36,880

having so many of you crew aboard is

571

00:29:42,389 --> 00:29:39,520

that now you can do more science but i'm

572

00:29:44,950 --> 00:29:42,399

wondering how disruptive it is to have

573

00:29:46,389 --> 00:29:44,960

all of this activity going on because

574

00:29:48,630 --> 00:29:46,399

certainly when you're having dockings

575

00:29:50,070 --> 00:29:48,640

and departures and things that must

576

00:29:51,669 --> 00:29:50,080

interfere with the scientific

577

00:29:53,190 --> 00:29:51,679

experiments so

578

00:29:55,110 --> 00:29:53,200

could one of you who spent a lot of time

579

00:29:57,830 --> 00:29:55,120

on space station already sort of talk

580

00:29:59,750 --> 00:29:57,840

about how you weave in the scientific

581

00:30:02,710 --> 00:29:59,760

experiments amongst all this other

582

00:30:05,590 --> 00:30:02,720

activity that goes on on space station

583

00:30:07,590 --> 00:30:05,600

i can i can try that if you guys want um

584

00:30:09,190 --> 00:30:07,600

i think that's there's a part that is

585

00:30:11,350 --> 00:30:09,200

incompressible of the work we do on

586

00:30:13,029 --> 00:30:11,360

space station is just to to be able to

587

00:30:14,950 --> 00:30:13,039

live and work on the space station which

588

00:30:17,350 --> 00:30:14,960

is you know sleep eat

589

00:30:19,269 --> 00:30:17,360

exercise take care of your health and

590

00:30:20,630 --> 00:30:19,279

also manage the logistics so this you'll

591

00:30:22,549 --> 00:30:20,640

always have to do and you have to do it

592

00:30:25,029 --> 00:30:22,559

on the ground as well except you don't

593

00:30:27,269 --> 00:30:25,039

really notice it but so that that part

594

00:30:28,950 --> 00:30:27,279

takes i would say it's just my guess

595

00:30:30,950 --> 00:30:28,960

it's not official numbers but i would

596

00:30:32,310 --> 00:30:30,960

say take three people

597

00:30:34,149 --> 00:30:32,320

full time

598

00:30:36,710 --> 00:30:34,159

you're accrue six you're pretty much

599

00:30:38,950 --> 00:30:36,720

doing 50 of your time which is like the

600

00:30:40,310 --> 00:30:38,960

hard science which doesn't sound much

601
00:30:42,870 --> 00:30:40,320
but it's actually huge and if you're

602
00:30:45,750 --> 00:30:42,880
going to a base in antarctica it's less

603
00:30:48,149 --> 00:30:45,760
um but so we're in that sweet spot so if

604
00:30:50,389 --> 00:30:48,159
you if you start adding crew members

605
00:30:52,230 --> 00:30:50,399
then initially you get more return and

606
00:30:53,990 --> 00:30:52,240
then there must be a sweet spot

607
00:30:55,350 --> 00:30:54,000
somewhere where the curves intersect

608
00:30:57,269 --> 00:30:55,360
right we don't know where it is right

609
00:30:59,430 --> 00:30:57,279
now because we've never been more than

610
00:31:01,110 --> 00:30:59,440
three or four on the u.s west side but

611
00:31:04,070 --> 00:31:01,120
we're looking forward to figuring that

612
00:31:06,549 --> 00:31:04,080
out and we'll see um do we do we need

613
00:31:08,789 --> 00:31:06,559

seven eight do we need just six is it

614

00:31:10,549 --> 00:31:08,799

five i don't know but what i know is

615

00:31:11,909 --> 00:31:10,559

that people are looking at it very

616

00:31:13,990 --> 00:31:11,919

closely and there's very competent

617

00:31:16,149 --> 00:31:14,000

people on the ground that track every

618

00:31:18,070 --> 00:31:16,159

minute of our work on space station they

619

00:31:20,950 --> 00:31:18,080

try they track everything we do the

620

00:31:22,470 --> 00:31:20,960

output uh the work uh and in the

621

00:31:24,149 --> 00:31:22,480

different categories was it logistics

622

00:31:25,669 --> 00:31:24,159

was it science was it et cetera and they

623

00:31:27,350 --> 00:31:25,679

put together the statistics and then

624

00:31:29,590 --> 00:31:27,360

they made the decision because it's fed

625

00:31:31,110 --> 00:31:29,600

back into the system um so there's a

626
00:31:36,710 --> 00:31:31,120
sweet spot somewhere i don't know where

627
00:31:40,870 --> 00:31:38,389
all right great

628
00:31:44,470 --> 00:31:40,880
next question is from mary liz bender

629
00:31:49,029 --> 00:31:46,470
yeah thanks for taking my question again

630
00:31:50,389 --> 00:31:49,039
um i'm always intrigued by the ways that

631
00:31:52,710 --> 00:31:50,399
you might spend

632
00:31:55,509 --> 00:31:52,720
any free time and actually getting

633
00:31:56,470 --> 00:31:55,519
a question i hope it's a super busy

634
00:31:59,029 --> 00:31:56,480
schedule

635
00:32:01,269 --> 00:31:59,039
but for anybody who wants to answer are

636
00:32:03,350 --> 00:32:01,279
there any personal items that you're

637
00:32:05,590 --> 00:32:03,360
bringing with you that are special

638
00:32:12,149 --> 00:32:05,600

or any particular ways you thought about

639

00:32:12,159 --> 00:32:27,430

nike

640

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

i was just stuck on cupola looking out

641

00:32:33,590 --> 00:32:32,480

of the window and looking at the beauty

642

00:32:36,070 --> 00:32:33,600

of earth

643

00:32:37,190 --> 00:32:36,080

um i called it a black hole because you

644

00:32:39,110 --> 00:32:37,200

know

645

00:32:40,389 --> 00:32:39,120

i'll go take a look for 10 minutes but

646

00:32:42,389 --> 00:32:40,399

then

647

00:32:45,590 --> 00:32:42,399

just pass

648

00:32:46,470 --> 00:32:45,600

um it's that amazing and i think i'll be

649

00:32:51,669 --> 00:32:46,480

doing

650

00:32:56,389 --> 00:32:53,669

definitely a favorite pastime

651

00:32:59,509 --> 00:32:56,399

okay let's go to mcfall johnson with

652

00:33:02,870 --> 00:33:01,110

hey i just want to follow up on a

653

00:33:05,190 --> 00:33:02,880

question that was asked is megan earlier

654

00:33:07,909 --> 00:33:05,200

but this time extend it to everybody

655

00:33:10,070 --> 00:33:07,919

what advice or tips have you gotten some

656

00:33:11,750 --> 00:33:10,080

people ready for dragon what have they

657

00:33:13,590 --> 00:33:11,760

told you about with like riding and

658

00:33:15,350 --> 00:33:13,600

living in the vehicle and are you

659

00:33:17,750 --> 00:33:15,360

planning on taking any particular advice

660

00:33:19,430 --> 00:33:17,760

from them thanks

661

00:33:21,430 --> 00:33:19,440

yeah we've had the chance to

662

00:33:23,110 --> 00:33:21,440

debrief with crew one a little bit right

663

00:33:24,389 --> 00:33:23,120

after they got on orbit so it was really

664

00:33:25,909 --> 00:33:24,399

fresh in their mind after the launch

665

00:33:26,950 --> 00:33:25,919

experience and that was very helpful to

666

00:33:29,430 --> 00:33:26,960

us

667

00:33:30,950 --> 00:33:29,440

they're a lot of great advice on

668

00:33:33,029 --> 00:33:30,960

little things to do here and there to

669

00:33:34,470 --> 00:33:33,039

live in that small space for the you

670

00:33:35,830 --> 00:33:34,480

know day or day and a half that we'll

671

00:33:37,110 --> 00:33:35,840

probably be living in it before we get

672

00:33:40,310 --> 00:33:37,120

to the space station so those were

673

00:33:43,029 --> 00:33:40,320

helpful hints um the ride uphill um from

674

00:33:45,750 --> 00:33:43,039

bob and doug and from crew one um was

675

00:33:47,110 --> 00:33:45,760

really great um you know it's there's

676
00:33:49,190 --> 00:33:47,120
parts of it where you're pulling g's

677
00:33:51,350 --> 00:33:49,200
there's parts where you're not uh just a

678
00:33:53,029 --> 00:33:51,360
really fun night so it seems very

679
00:33:55,269 --> 00:33:53,039
in some ways to the other vehicles that

680
00:33:56,789 --> 00:33:55,279
we've launched on uh but i'm sure it's

681
00:33:58,230 --> 00:33:56,799
gonna be a bit different um with a

682
00:34:00,310 --> 00:33:58,240
couple stages of them here and i'm

683
00:34:03,029 --> 00:34:00,320
looking forward to

684
00:34:04,470 --> 00:34:03,039
feeling this the second stage light

685
00:34:06,950 --> 00:34:04,480
and give us a little boost as we head up

686
00:34:08,629 --> 00:34:06,960
to orbit

687
00:34:10,230 --> 00:34:08,639
and i'll i'll chime in with some more

688
00:34:11,669 --> 00:34:10,240

specifics one of the specific things

689

00:34:13,349 --> 00:34:11,679

that bob and i have talked about you

690

00:34:15,190 --> 00:34:13,359

know you look at photographs of the

691

00:34:17,349 --> 00:34:15,200

interior of crew dragon and it's very

692

00:34:19,589 --> 00:34:17,359

clean lined vehicle there's lots of

693

00:34:22,069 --> 00:34:19,599

little cubbies in heidi where your items

694

00:34:23,909 --> 00:34:22,079

are packed away and so um making sure

695

00:34:26,470 --> 00:34:23,919

that that's done very carefully in a way

696

00:34:28,470 --> 00:34:26,480

that the crew can

697

00:34:29,990 --> 00:34:28,480

get to without unpacking everything is

698

00:34:32,629 --> 00:34:30,000

something that they i know have talked a

699

00:34:34,230 --> 00:34:32,639

lot about with the with the spacex team

700

00:34:36,470 --> 00:34:34,240

and the team has made a lot of

701
00:34:38,389 --> 00:34:36,480
improvements in ages and have been

702
00:34:40,069 --> 00:34:38,399
showing us you know what what these

703
00:34:42,230 --> 00:34:40,079
different changes are and we'll have an

704
00:34:45,030 --> 00:34:42,240
opportunity just this week actually

705
00:34:47,190 --> 00:34:45,040
really look at um how how the vehicle is

706
00:34:49,510 --> 00:34:47,200
packed and it seems like maybe kind of a

707
00:34:50,869 --> 00:34:49,520
um you know not something that's super

708
00:34:52,550 --> 00:34:50,879
exciting but it can be really really

709
00:34:56,470 --> 00:34:52,560
important especially for people living

710
00:35:01,109 --> 00:34:58,310
okay let's take another question from

711
00:35:04,550 --> 00:35:01,119
marsha dunn with associated press

712
00:35:07,190 --> 00:35:04,560
uh yes for tomas aki um what will you be

713
00:35:08,950 --> 00:35:07,200

taking to represent your homeland um

714

00:35:11,670 --> 00:35:08,960

perhaps some uh

715

00:35:15,270 --> 00:35:11,680

cuisine or or other items or special

716

00:35:15,280 --> 00:35:17,829

you go first

717

00:35:21,430 --> 00:35:18,950

i was gonna say i'm gonna take some

718

00:35:23,589 --> 00:35:21,440

japanese food but it's not true for that

719

00:35:25,109 --> 00:35:23,599

i'm um i'm gonna take some yeah there'll

720

00:35:27,589 --> 00:35:25,119

be some french food i mean it's a cliché

721

00:35:29,270 --> 00:35:27,599

but i had to right um there was no way

722

00:35:32,390 --> 00:35:29,280

for me if i didn't want to be stripped

723

00:35:34,550 --> 00:35:32,400

of my citizenship so i um i had some

724

00:35:35,589 --> 00:35:34,560

some dishes made by different chefs and

725

00:35:37,829 --> 00:35:35,599

different uh

726

00:35:39,270 --> 00:35:37,839

catering companies in in france that i'm

727

00:35:41,109 --> 00:35:39,280

going to take with me on the space

728

00:35:42,950 --> 00:35:41,119

station not only for me but obviously i

729

00:35:44,870 --> 00:35:42,960

hope to invite

730

00:35:46,550 --> 00:35:44,880

everyone for a good dinner once in a

731

00:35:47,349 --> 00:35:46,560

while

732

00:35:52,790 --> 00:35:47,359

and

733

00:35:54,390 --> 00:35:52,800

control on uh

734

00:35:55,349 --> 00:35:54,400

in the space station so food is one of

735

00:35:56,790 --> 00:35:55,359

them

736

00:35:58,950 --> 00:35:56,800

so there's this there's also i mean

737

00:36:00,710 --> 00:35:58,960

obviously we'll have our own i'm i'm i'm

738

00:36:02,950 --> 00:36:00,720

thinking individual flags i'll put up my

739

00:36:05,829 --> 00:36:02,960

flag in the in columbus i've kind of

740

00:36:08,230 --> 00:36:05,839

claimed columbus uh as a as a french

741

00:36:10,550 --> 00:36:08,240

territory for six months because nobody

742

00:36:13,510 --> 00:36:10,560

can prevent me too

743

00:36:16,069 --> 00:36:13,520

and and i have lots of you know patches

744

00:36:17,829 --> 00:36:16,079

and for uh you know for organizations or

745

00:36:19,910 --> 00:36:17,839

for friends and families because i'm

746

00:36:21,990 --> 00:36:19,920

trying to share the the trip so that

747

00:36:23,910 --> 00:36:22,000

it's not only kind of a selfish dream

748

00:36:26,069 --> 00:36:23,920

that but it also means something to

749

00:36:29,589 --> 00:36:26,079

other people and also does some good to

750

00:36:31,589 --> 00:36:29,599

other people a lot of things uh prepared

751

00:36:35,829 --> 00:36:31,599

and i guess you'll have to follow the

752

00:36:40,390 --> 00:36:38,630

and i guess for me uh something similar

753

00:36:42,230 --> 00:36:40,400

that tomah just mentioned but uh

754

00:36:44,550 --> 00:36:42,240

japanese food

755

00:36:47,030 --> 00:36:44,560

i brought some last time to you but

756

00:36:49,589 --> 00:36:47,040

they've added a couple more so looking

757

00:36:52,069 --> 00:36:49,599

forward to that and if you follow soichi

758

00:36:54,630 --> 00:36:52,079

nobuchi's youtube video he's doing an

759

00:36:56,630 --> 00:36:54,640

amazing job showing you what kind of

760

00:36:57,670 --> 00:36:56,640

japanese food he's

761

00:36:59,349 --> 00:36:57,680

having

762

00:37:01,670 --> 00:36:59,359

so um

763

00:37:04,150 --> 00:37:01,680

again like just like thomas said

764

00:37:07,990 --> 00:37:04,160

i'm looking forward to sharing that with

765

00:37:10,710 --> 00:37:08,000

the entire crew of the space station

766

00:37:12,870 --> 00:37:10,720

all right sounds good

767

00:37:15,910 --> 00:37:12,880

let's take a question from gina sensory

768

00:37:18,710 --> 00:37:15,920

with abc news

769

00:37:21,990 --> 00:37:18,720

for megan megan how has the technology

770

00:37:23,510 --> 00:37:22,000

changed since you flew on sts-125

771

00:37:25,190 --> 00:37:23,520

will make it easier to stay in touch

772

00:37:27,270 --> 00:37:25,200

with your family when you're up there

773

00:37:29,670 --> 00:37:27,280

for six months

774

00:37:31,829 --> 00:37:29,680

hi gina thanks for the question well the

775

00:37:33,349 --> 00:37:31,839

shuttle mission that i was on

776

00:37:35,910 --> 00:37:33,359

we did not go to the international space

777

00:37:38,069 --> 00:37:35,920

station we did in fact have an iphone

778

00:37:39,750 --> 00:37:38,079

with us but our commander actually never

779

00:37:41,349 --> 00:37:39,760

let us get it out and use it he wanted

780

00:37:43,190 --> 00:37:41,359

us to make sure we got all the work done

781

00:37:45,670 --> 00:37:43,200

first so we didn't actually have the

782

00:37:47,589 --> 00:37:45,680

opportunity to phone home we did have an

783

00:37:48,710 --> 00:37:47,599

opportunity for a single video

784

00:37:50,470 --> 00:37:48,720

conference

785

00:37:53,270 --> 00:37:50,480

with family so i did take advantage of

786

00:37:54,870 --> 00:37:53,280

that um the long duration mission to the

787

00:37:56,550 --> 00:37:54,880

international space station of course

788

00:37:59,030 --> 00:37:56,560

will have a weekly conferences with

789

00:38:01,109 --> 00:37:59,040

family um as well as the ability to use

790

00:38:02,790 --> 00:38:01,119

the phone just about at any time so i'm

791

00:38:04,630 --> 00:38:02,800

looking forward to that i'm looking

792

00:38:06,710 --> 00:38:04,640

forward to surprising my mom with a

793

00:38:08,150 --> 00:38:06,720

phone call from space and and you know

794

00:38:11,190 --> 00:38:08,160

calling friends and family when i have

795

00:38:13,990 --> 00:38:12,470

very cool

796

00:38:15,670 --> 00:38:14,000

all right let's take another question

797

00:38:17,990 --> 00:38:15,680

from chuck fields with your space

798

00:38:20,710 --> 00:38:18,000

journey

799

00:38:22,790 --> 00:38:20,720

thanks for taking my call um human space

800

00:38:24,550 --> 00:38:22,800

exploration is growing remarkably fast

801
00:38:26,150 --> 00:38:24,560
and this international mission with the

802
00:38:28,310 --> 00:38:26,160
refurbished spacecraft is a great

803
00:38:29,510 --> 00:38:28,320
example of that uh this is for anyone

804
00:38:31,910 --> 00:38:29,520
how do you hope this mission will

805
00:38:37,030 --> 00:38:31,920
inspire others to become astronauts or

806
00:38:41,030 --> 00:38:38,950
well yeah we're going to do our very

807
00:38:45,030 --> 00:38:41,040
best to represent

808
00:38:47,349 --> 00:38:45,040
nasa and esa and jaxa and spacex

809
00:38:49,109 --> 00:38:47,359
in the international space station and

810
00:38:51,510 --> 00:38:49,119
hopefully by just our actions and the

811
00:38:53,910 --> 00:38:51,520
way we we're professional and the way we

812
00:38:55,829 --> 00:38:53,920
have a good time as well um that'll just

813
00:38:57,510 --> 00:38:55,839

translate into some kind of inspiration

814

00:38:59,589 --> 00:38:57,520

for somebody i don't know

815

00:39:01,190 --> 00:38:59,599

who's out there that's watching but as

816

00:39:02,950 --> 00:39:01,200

you mentioned it's an international crew

817

00:39:04,790 --> 00:39:02,960

so that in itself

818

00:39:07,030 --> 00:39:04,800

can just show the possibilities that are

819

00:39:08,470 --> 00:39:07,040

out there and uh

820

00:39:12,230 --> 00:39:08,480

i don't know if anybody else wants to

821

00:39:15,750 --> 00:39:13,430

i think it's great i think the fact that

822

00:39:17,829 --> 00:39:15,760

that megan is our pilot and she's

823

00:39:19,589 --> 00:39:17,839

awesome should inspire a lot of girls as

824

00:39:21,430 --> 00:39:19,599

well and we're trying to have we're

825

00:39:23,510 --> 00:39:21,440

trying to reach 50

826

00:39:24,870 --> 00:39:23,520

you know in in uh in the application

827

00:39:27,270 --> 00:39:24,880

selection for the astronaut selection

828

00:39:29,910 --> 00:39:27,280

this is difficult but i think the the

829

00:39:32,069 --> 00:39:29,920

fact that we have megan and uh is

830

00:39:33,910 --> 00:39:32,079

certainly helping the cause and i'm

831

00:39:37,190 --> 00:39:33,920

hoping next astronaut selection for

832

00:39:40,069 --> 00:39:37,200

eastside is going to be 50 male 50 women

833

00:39:44,470 --> 00:39:42,950

all right awesome um let's

834

00:39:46,390 --> 00:39:44,480

switch over to a couple of questions

835

00:39:48,069 --> 00:39:46,400

that have come in on social media a

836

00:39:50,470 --> 00:39:48,079

reminder to all the media you can still

837

00:39:53,270 --> 00:39:50,480

ask questions using star one or withdraw

838

00:39:55,190 --> 00:39:53,280

your question using star two and you can

839

00:39:57,270 --> 00:39:55,200

ask questions on social media using the

840

00:40:00,230 --> 00:39:57,280

hashtag asknasa

841

00:40:02,069 --> 00:40:00,240

so um for from deanna on facebook she

842

00:40:04,470 --> 00:40:02,079

wants to know how

843

00:40:07,030 --> 00:40:04,480

will your particular science discipline

844

00:40:11,190 --> 00:40:07,040

be used and and advanced during this

845

00:40:15,190 --> 00:40:13,109

that's a great question oh sorry go

846

00:40:18,470 --> 00:40:15,200

ahead shane is there a scientist among

847

00:40:21,589 --> 00:40:19,990

well what i was going to say is one of

848

00:40:23,670 --> 00:40:21,599

the things that's really wonderful about

849

00:40:25,750 --> 00:40:23,680

the job that we get to do is we all have

850

00:40:28,230 --> 00:40:25,760

training as scientists and engineers but

851

00:40:30,550 --> 00:40:28,240

the research that we do on orbit is not

852

00:40:32,150 --> 00:40:30,560

necessarily directly related to our

853

00:40:34,309 --> 00:40:32,160

individual discipline that we came

854

00:40:36,630 --> 00:40:34,319

through for example in graduate school

855

00:40:38,470 --> 00:40:36,640

so you know we get very general training

856

00:40:39,270 --> 00:40:38,480

and as a scientist and an engineer you

857

00:40:40,710 --> 00:40:39,280

get

858

00:40:43,430 --> 00:40:40,720

training across

859

00:40:46,470 --> 00:40:43,440

you know basic concepts physics biology

860

00:40:48,150 --> 00:40:46,480

chemistry mathematics mechanics and

861

00:40:49,910 --> 00:40:48,160

you're using all of this knowledge that

862

00:40:51,589 --> 00:40:49,920

you've gained throughout your education

863

00:40:53,430 --> 00:40:51,599

bringing that with you to nasa where you

864

00:40:55,589 --> 00:40:53,440

get some more specific training and how

865

00:40:57,510 --> 00:40:55,599

we conduct experiments but really you're

866

00:41:00,069 --> 00:40:57,520

relying on this generalized training

867

00:41:02,550 --> 00:41:00,079

that you've gotten and then the expert

868

00:41:04,630 --> 00:41:02,560

procedures that have been developed to

869

00:41:07,030 --> 00:41:04,640

to and and the well-designed experiments

870

00:41:08,390 --> 00:41:07,040

basically to enable success for the for

871

00:41:10,309 --> 00:41:08,400

the research that we're doing on space

872

00:41:11,910 --> 00:41:10,319

station um of course i haven't been to

873

00:41:13,750 --> 00:41:11,920

space station yet this was this will be

874

00:41:15,430 --> 00:41:13,760

my first long-duration mission i'm super

875

00:41:16,710 --> 00:41:15,440

excited about it and so probably one of

876

00:41:18,630 --> 00:41:16,720

these guys can tell you a little bit

877

00:41:23,589 --> 00:41:18,640

more about how their own background

878

00:41:27,750 --> 00:41:25,190

yeah so the part for me i came from an

879

00:41:29,589 --> 00:41:27,760

operational background and you know that

880

00:41:31,030 --> 00:41:29,599

definitely came in handy to alluded to

881

00:41:32,710 --> 00:41:31,040

it earlier but when we're running

882

00:41:34,550 --> 00:41:32,720

procedures and we're you know working

883

00:41:37,030 --> 00:41:34,560

with equipment uh that's very

884

00:41:38,710 --> 00:41:37,040

operationally oriented so for me that's

885

00:41:39,910 --> 00:41:38,720

that's one of my strong suits i think

886

00:41:42,150 --> 00:41:39,920

and it definitely played out on the

887

00:41:43,990 --> 00:41:42,160

space station

888

00:41:46,309 --> 00:41:44,000

it's a it's a it's a complete team

889

00:41:48,550 --> 00:41:46,319

effort i want to say we're just kind of

890

00:41:49,829 --> 00:41:48,560

the tip of the spear but the people

891

00:41:51,109 --> 00:41:49,839

running the experiments are on the

892

00:41:52,390 --> 00:41:51,119

ground and they're just telling us what

893

00:41:54,230 --> 00:41:52,400

to do they write the procedure they

894

00:41:55,910 --> 00:41:54,240

design the hardware so you could be

895

00:41:58,470 --> 00:41:55,920

doing some medical experiment i have

896

00:41:59,990 --> 00:41:58,480

zero background uh in medicine i mean we

897

00:42:01,430 --> 00:42:00,000

get some training here but obviously

898

00:42:04,870 --> 00:42:01,440

it's not enough to be

899

00:42:06,390 --> 00:42:04,880

an md or a phd obviously far from it but

900

00:42:07,990 --> 00:42:06,400

there'll be some very very smart people

901
00:42:09,589 --> 00:42:08,000
on the ground kind of directing us and

902
00:42:11,190 --> 00:42:09,599
telling us what to do we're being there

903
00:42:13,030 --> 00:42:11,200
to answer our question

904
00:42:14,470 --> 00:42:13,040
um and that's what makes the science

905
00:42:17,349 --> 00:42:14,480
efficient is that we we're doing our

906
00:42:19,270 --> 00:42:17,359
best but we have a lot of help

907
00:42:21,109 --> 00:42:19,280
that's great yeah we'll have thousands

908
00:42:23,030 --> 00:42:21,119
of researchers from across the world

909
00:42:24,790 --> 00:42:23,040
really that are the ones behind these

910
00:42:26,470 --> 00:42:24,800
experiments you'll be doing

911
00:42:28,790 --> 00:42:26,480
um let's take another question from

912
00:42:33,109 --> 00:42:28,800
facebook what will you miss most while

913
00:42:38,150 --> 00:42:35,430

no because it's only the space station

914

00:42:38,160 --> 00:42:41,349

you guys

915

00:42:45,750 --> 00:42:43,510

okay i'll jump in um

916

00:42:47,910 --> 00:42:45,760

i think you know apart from food we have

917

00:42:50,710 --> 00:42:47,920

a lot of variety on the space station

918

00:42:53,270 --> 00:42:50,720

now in terms of food so um it's good

919

00:42:55,109 --> 00:42:53,280

that we have the varieties because

920

00:42:57,670 --> 00:42:55,119

sometimes you

921

00:42:59,990 --> 00:42:57,680

eat one thing and you wish you have

922

00:43:02,309 --> 00:43:00,000

something else now we have a lot of

923

00:43:04,550 --> 00:43:02,319

variety so that's good um

924

00:43:06,790 --> 00:43:04,560

what i'm on my last

925

00:43:09,750 --> 00:43:06,800

long duration mission what i missed most

926
00:43:13,990 --> 00:43:09,760
was like fresh food which nowadays you

927
00:43:16,150 --> 00:43:14,000
get uh every time we get a cargo ship uh

928
00:43:18,950 --> 00:43:16,160
docked to the space station so that's

929
00:43:21,829 --> 00:43:18,960
good um the other thing was nature um

930
00:43:23,990 --> 00:43:21,839
like just the wind blowing in your face

931
00:43:27,910 --> 00:43:24,000
or you know the smell of trees that's

932
00:43:30,950 --> 00:43:27,920
something that i noticed after i came

933
00:43:32,870 --> 00:43:30,960
back that i missed most

934
00:43:34,630 --> 00:43:32,880
i think there's also sometimes the

935
00:43:36,230 --> 00:43:34,640
freedom to be able to you know do what

936
00:43:39,109 --> 00:43:36,240
you want and

937
00:43:41,030 --> 00:43:39,119
people you want which obviously you

938
00:43:42,309 --> 00:43:41,040

cannot do on the space station

939

00:43:43,750 --> 00:43:42,319

but the funny thing is actually not

940

00:43:45,270 --> 00:43:43,760

funny at all but is that now i think

941

00:43:47,270 --> 00:43:45,280

people can relate to this a little bit

942

00:43:49,270 --> 00:43:47,280

with what happened in 2020 people have

943

00:43:51,349 --> 00:43:49,280

experienced what it is to be kind of

944

00:43:52,710 --> 00:43:51,359

locked in one place and deprived of the

945

00:43:54,950 --> 00:43:52,720

the freedom to

946

00:43:56,390 --> 00:43:54,960

you know travel or go see the people you

947

00:43:57,670 --> 00:43:56,400

want to see and

948

00:43:59,109 --> 00:43:57,680

and so

949

00:44:00,870 --> 00:43:59,119

that's going to happen to us for six

950

00:44:02,710 --> 00:44:00,880

months again

951
00:44:04,150 --> 00:44:02,720
so i guess this is also something that

952
00:44:06,630 --> 00:44:04,160
when you come back to art you're very

953
00:44:07,910 --> 00:44:06,640
happy to uh to get that freedom to do

954
00:44:09,750 --> 00:44:07,920
whatever you want and go wherever you

955
00:44:10,870 --> 00:44:09,760
want again

956
00:44:12,710 --> 00:44:10,880
and of course we're all going to miss

957
00:44:14,470 --> 00:44:12,720
our families that's that's a given i

958
00:44:15,430 --> 00:44:14,480
think that's the hard part for a lot of

959
00:44:16,790 --> 00:44:15,440
us

960
00:44:18,470 --> 00:44:16,800
but for me i'm going to miss a hot

961
00:44:20,069 --> 00:44:18,480
shower we don't have showers on

962
00:44:21,190 --> 00:44:20,079
playstation which surprises a lot of

963
00:44:22,870 --> 00:44:21,200

people but

964

00:44:25,430 --> 00:44:22,880

i will definitely miss that and adam

965

00:44:27,670 --> 00:44:25,440

walaki was saying just nature itself and

966

00:44:29,589 --> 00:44:27,680

you know weather and wind and

967

00:44:31,190 --> 00:44:29,599

smells of of earth

968

00:44:33,670 --> 00:44:31,200

will be greatly missed after a month or

969

00:44:34,870 --> 00:44:33,680

two have been up there

970

00:44:36,630 --> 00:44:34,880

all right for me

971

00:44:38,390 --> 00:44:36,640

to all of those things i think one of

972

00:44:40,390 --> 00:44:38,400

the things that i'll miss is the act of

973

00:44:42,870 --> 00:44:40,400

preparing a meal from scratch so

974

00:44:44,390 --> 00:44:42,880

preparing food and and getting to to

975

00:44:46,710 --> 00:44:44,400

share that we'll of course have some

976
00:44:48,309 --> 00:44:46,720
meal times together but you know i think

977
00:44:50,230 --> 00:44:48,319
it will be different cutting open a

978
00:44:51,589 --> 00:44:50,240
pre-prepared meal versus being able to

979
00:44:53,589 --> 00:44:51,599
create that yourself in your kitchen

980
00:44:55,510 --> 00:44:53,599
that's something that i'll miss

981
00:44:58,950 --> 00:44:55,520
it's my type of cooking opening up a

982
00:45:02,309 --> 00:45:00,309
we'll be excited to see what you can

983
00:45:04,390 --> 00:45:02,319
come up with up there

984
00:45:06,230 --> 00:45:04,400
all right from jacqueline irving on

985
00:45:08,069 --> 00:45:06,240
twitter what is the biggest difference

986
00:45:12,630 --> 00:45:08,079
between dragon training and shuttle

987
00:45:16,470 --> 00:45:15,270
um i'll start with that um

988
00:45:18,069 --> 00:45:16,480

so there's a you know is there some

989

00:45:20,150 --> 00:45:18,079

similarities and that the training for

990

00:45:21,829 --> 00:45:20,160

us will be about a year a little less

991

00:45:23,430 --> 00:45:21,839

than a year for some of us but the

992

00:45:25,430 --> 00:45:23,440

shuttle training is about a year to a

993

00:45:27,589 --> 00:45:25,440

year and a half so that's similar

994

00:45:29,109 --> 00:45:27,599

um the difference and one big one is

995

00:45:30,550 --> 00:45:29,119

that you go to california for most of

996

00:45:33,030 --> 00:45:30,560

your training and instead of staying in

997

00:45:35,190 --> 00:45:33,040

houston and we went to florida a lot

998

00:45:37,270 --> 00:45:35,200

more in the shuttle train than we do now

999

00:45:39,030 --> 00:45:37,280

for crew dragons so there's there's some

1000

00:45:40,710 --> 00:45:39,040

differences there you know they're both

1001
00:45:42,390 --> 00:45:40,720
space vehicles there's systems that you

1002
00:45:44,550 --> 00:45:42,400
have to learn there's very certain a lot

1003
00:45:46,390 --> 00:45:44,560
very similar kind of academic training

1004
00:45:47,510 --> 00:45:46,400
and simulator training that we're going

1005
00:45:49,109 --> 00:45:47,520
through so

1006
00:45:50,630 --> 00:45:49,119
um those are probably the biggest ones

1007
00:45:51,750 --> 00:45:50,640
obviously it's a different rocket that

1008
00:45:53,349 --> 00:45:51,760
we're launching on it's a different

1009
00:45:55,349 --> 00:45:53,359
spacecraft

1010
00:45:57,670 --> 00:45:55,359
but you know the flow in general um

1011
00:46:00,150 --> 00:45:57,680
about a year long and a lot of the same

1012
00:46:01,270 --> 00:46:00,160
kind of i guess the template is is

1013
00:46:04,069 --> 00:46:01,280

pretty similar where you're going to be

1014

00:46:05,990 --> 00:46:04,079

academics and then simulators and then

1015

00:46:07,270 --> 00:46:06,000

kind of go to the launch pad so looking

1016

00:46:08,470 --> 00:46:07,280

forward to hopefully being somewhat

1017

00:46:10,390 --> 00:46:08,480

similar another ride will be a little

1018

00:46:13,109 --> 00:46:10,400

bit different uh we hope that helps

1019

00:46:14,390 --> 00:46:13,119

answer your question

1020

00:46:16,790 --> 00:46:14,400

yep thanks

1021

00:46:18,470 --> 00:46:16,800

um let's take a question from rebecca on

1022

00:46:29,750 --> 00:46:18,480

facebook what are you most looking

1023

00:46:32,309 --> 00:46:31,109

so i think the thing that one of the

1024

00:46:33,430 --> 00:46:32,319

things you know we're looking forward to

1025

00:46:35,270 --> 00:46:33,440

at this point obviously is getting

1026

00:46:37,190 --> 00:46:35,280

started we've been like i said really

1027

00:46:39,750 --> 00:46:37,200

intensively training for about a year

1028

00:46:41,109 --> 00:46:39,760

together and and individually and you

1029

00:46:42,950 --> 00:46:41,119

know really looking forward to that

1030

00:46:44,790 --> 00:46:42,960

moment where the mission actually begins

1031

00:46:46,710 --> 00:46:44,800

and and we get to try out all of the

1032

00:46:48,790 --> 00:46:46,720

things that we've been been preparing

1033

00:46:50,550 --> 00:46:48,800

for for the last year

1034

00:46:52,470 --> 00:46:50,560

i agree

1035

00:46:54,630 --> 00:46:52,480

all right thank you

1036

00:46:56,470 --> 00:46:54,640

um from jacqueline on twitter what part

1037

00:46:58,710 --> 00:46:56,480

of your mission are you relieved is

1038

00:47:03,109 --> 00:46:58,720

automated and which parts do you wish

1039

00:47:07,430 --> 00:47:05,109

wow i mean spacecraft is it's a

1040

00:47:09,829 --> 00:47:07,440

futuristic spacecraft and it pretty much

1041

00:47:12,150 --> 00:47:09,839

can do it all like even soyuz and

1042

00:47:13,750 --> 00:47:12,160

shuttle were automated and you only

1043

00:47:15,349 --> 00:47:13,760

interacted with it

1044

00:47:17,190 --> 00:47:15,359

if something went wrong in general and

1045

00:47:19,030 --> 00:47:17,200

flew the thing manually so this is no

1046

00:47:20,870 --> 00:47:19,040

different than that it's the technology

1047

00:47:22,390 --> 00:47:20,880

is much different of course

1048

00:47:23,990 --> 00:47:22,400

i mean we're doing touch screens instead

1049

00:47:25,829 --> 00:47:24,000

of like a joystick in your hand to fly

1050

00:47:28,390 --> 00:47:25,839

the thing so that's pretty exciting

1051
00:47:30,710 --> 00:47:28,400
and uh but we're making an ir train to

1052
00:47:33,030 --> 00:47:30,720
take over manually um during any phase

1053
00:47:34,470 --> 00:47:33,040
of the flight if need be but hopefully

1054
00:47:36,870 --> 00:47:34,480
we'll just be along for the ride and get

1055
00:47:38,790 --> 00:47:36,880
to enjoy

1056
00:47:40,710 --> 00:47:38,800
there's one part that that i wish was

1057
00:47:42,630 --> 00:47:40,720
automated is on space station just to

1058
00:47:45,109 --> 00:47:42,640
find the items that you need to find to

1059
00:47:47,190 --> 00:47:45,119
do your work because there's so much

1060
00:47:49,190 --> 00:47:47,200
things up there because it's lots of

1061
00:47:51,589 --> 00:47:49,200
different experiments lots of equipment

1062
00:47:53,190 --> 00:47:51,599
station x grown big over the years lots

1063
00:47:55,030 --> 00:47:53,200

of modules

1064

00:47:55,990 --> 00:47:55,040

and so it takes some time to to find the

1065

00:47:57,430 --> 00:47:56,000

things you're looking for there are

1066

00:47:59,990 --> 00:47:57,440

thousands of items that are being

1067

00:48:01,750 --> 00:48:00,000

tracked from the ground track from you

1068

00:48:03,670 --> 00:48:01,760

know database onboard the space station

1069

00:48:05,990 --> 00:48:03,680

so if you could just press a button and

1070

00:48:07,670 --> 00:48:06,000

everything is going to show up to you

1071

00:48:09,270 --> 00:48:07,680

and you could do your work that would

1072

00:48:12,470 --> 00:48:09,280

that would be brilliant but i don't

1073

00:48:16,870 --> 00:48:14,710

all right we'll add it to the wish list

1074

00:48:20,790 --> 00:48:16,880

we'll take another question from ulrike

1075

00:48:24,950 --> 00:48:20,800

ebner with slug review

1076

00:48:26,950 --> 00:48:24,960

hi um this is a question for truma

1077

00:48:30,549 --> 00:48:26,960

as it is your second flight are there

1078

00:48:32,630 --> 00:48:30,559

any things you intend to do differently

1079

00:48:35,349 --> 00:48:32,640

from the first one

1080

00:48:38,069 --> 00:48:35,359

for example looking out of the window

1081

00:48:40,309 --> 00:48:38,079

more often or enjoying the sound of the

1082

00:48:43,030 --> 00:48:40,319

lounge i don't know if there's anything

1083

00:48:45,030 --> 00:48:43,040

you wish to do differently

1084

00:48:47,430 --> 00:48:45,040

yes

1085

00:48:49,430 --> 00:48:47,440

i wish to do any everything better than

1086

00:48:50,630 --> 00:48:49,440

the first time first of all hopefully

1087

00:48:52,470 --> 00:48:50,640

because with a little bit more

1088

00:48:54,630 --> 00:48:52,480

experience more training and any

1089

00:48:55,990 --> 00:48:54,640

experience of the first flight hopefully

1090

00:48:57,349 --> 00:48:56,000

less mistakes everything should be

1091

00:48:58,549 --> 00:48:57,359

better i hope

1092

00:49:00,230 --> 00:48:58,559

um

1093

00:49:02,390 --> 00:49:00,240

but then yeah the my first flight was

1094

00:49:04,230 --> 00:49:02,400

really i was so excited i was so i had

1095

00:49:06,230 --> 00:49:04,240

prepared i had waited for a long time i

1096

00:49:08,390 --> 00:49:06,240

had a lot of things that i wanted to do

1097

00:49:10,630 --> 00:49:08,400

a lot of projects

1098

00:49:13,349 --> 00:49:10,640

and i was always constantly constantly

1099

00:49:14,870 --> 00:49:13,359

busy busy with with things to do with

1100

00:49:16,790 --> 00:49:14,880

you know

1101
00:49:17,910 --> 00:49:16,800
small videos that i wanted to make uh

1102
00:49:20,230 --> 00:49:17,920
pictures

1103
00:49:21,510 --> 00:49:20,240
a journal calling friends i was i was

1104
00:49:23,270 --> 00:49:21,520
going to make sure i'm going to call all

1105
00:49:24,790 --> 00:49:23,280
my friends because i you never know

1106
00:49:26,630 --> 00:49:24,800
maybe it was going to be my only flight

1107
00:49:27,990 --> 00:49:26,640
so every single minute of every single

1108
00:49:29,270 --> 00:49:28,000
day i had something to do i had

1109
00:49:31,670 --> 00:49:29,280
something in the back of my mind

1110
00:49:33,349 --> 00:49:31,680
constantly constantly constantly

1111
00:49:36,069 --> 00:49:33,359
you know sunday's evening doesn't matter

1112
00:49:38,150 --> 00:49:36,079
that that just never stops um

1113
00:49:39,670 --> 00:49:38,160

so now for the second flight i think i

1114

00:49:41,270 --> 00:49:39,680

think i don't want this to happen

1115

00:49:43,030 --> 00:49:41,280

because it kind of prevented me from

1116

00:49:44,309 --> 00:49:43,040

enjoying it a little bit

1117

00:49:46,069 --> 00:49:44,319

so i think i'm going to take some time

1118

00:49:47,910 --> 00:49:46,079

just for myself with nothing to do which

1119

00:49:50,230 --> 00:49:47,920

i know is unbelievable but just 15

1120

00:49:53,190 --> 00:49:50,240

minutes for yourself with nothing to do

1121

00:49:55,190 --> 00:49:53,200

just drink a coffee look out the window

1122

00:49:56,470 --> 00:49:55,200

and just just soak it in don't take a

1123

00:49:57,510 --> 00:49:56,480

picture because if you take a picture

1124

00:49:59,829 --> 00:49:57,520

you have a picture but you don't have a

1125

00:50:01,990 --> 00:49:59,839

memory so instead of taking a picture

1126
00:50:03,910 --> 00:50:02,000
make yourself a memory drink the coffee

1127
00:50:05,750 --> 00:50:03,920
spend time with the people

1128
00:50:08,390 --> 00:50:05,760
and that's what i'm going to try to do

1129
00:50:10,950 --> 00:50:08,400
for that second flight

1130
00:50:15,589 --> 00:50:10,960
all right thank you let's go to randy

1131
00:50:17,990 --> 00:50:15,599
seagal with wstu radio

1132
00:50:20,390 --> 00:50:18,000
good afternoon quick question for you

1133
00:50:22,549 --> 00:50:20,400
guys the south n9 apparently has been

1134
00:50:25,750 --> 00:50:22,559
having some problems lately

1135
00:50:27,510 --> 00:50:25,760
does that cause you any thanks and also

1136
00:50:29,349 --> 00:50:27,520
as a second question is there any

1137
00:50:34,870 --> 00:50:29,359
surprises megan

1138
00:50:38,549 --> 00:50:36,470

well i can answer the second question i

1139

00:50:40,150 --> 00:50:38,559

don't know um or i guess it wouldn't be

1140

00:50:42,710 --> 00:50:40,160

a surprise so i'll find out when i get

1141

00:50:44,069 --> 00:50:42,720

there i think

1142

00:50:45,670 --> 00:50:44,079

and your first question about the

1143

00:50:47,190 --> 00:50:45,680

falkline

1144

00:50:49,030 --> 00:50:47,200

yeah there have been a few issues i know

1145

00:50:50,790 --> 00:50:49,040

the teams are working very hard to work

1146

00:50:53,190 --> 00:50:50,800

through those we've been briefed about

1147

00:50:55,589 --> 00:50:53,200

every month on the updates of the of our

1148

00:50:57,109 --> 00:50:55,599

spacecraft as well as the rocket so

1149

00:50:59,670 --> 00:50:57,119

we're very confident that they're going

1150

00:51:01,349 --> 00:50:59,680

to figure out whatever's going wrong and

1151
00:51:02,790 --> 00:51:01,359
it's just been a few little things on a

1152
00:51:04,630 --> 00:51:02,800
few of these rockets they're launching

1153
00:51:05,910 --> 00:51:04,640
almost once a week so when you're

1154
00:51:07,190 --> 00:51:05,920
launching that often you're going to

1155
00:51:09,750 --> 00:51:07,200
everything's not going to go perfectly

1156
00:51:11,910 --> 00:51:09,760
so there's nothing major or catastrophic

1157
00:51:13,109 --> 00:51:11,920
that's happening it's just a few things

1158
00:51:16,309 --> 00:51:13,119
on the rocket that i know they're going

1159
00:51:18,230 --> 00:51:16,319
to get worked out before our flight

1160
00:51:20,829 --> 00:51:18,240
what about sleeping quarters when you

1161
00:51:23,510 --> 00:51:20,839
first get up to the

1162
00:51:25,510 --> 00:51:23,520
station that is the magic question i

1163
00:51:29,190 --> 00:51:25,520

think sleeping quarters so it's going to

1164

00:51:31,030 --> 00:51:29,200

be crazy with um if we do erect handover

1165

00:51:32,549 --> 00:51:31,040

which means crew one and and ourselves

1166

00:51:34,150 --> 00:51:32,559

will be up there along with the soyuz

1167

00:51:36,470 --> 00:51:34,160

crew so that's a lot of people on the

1168

00:51:38,549 --> 00:51:36,480

space station right now there's only six

1169

00:51:40,470 --> 00:51:38,559

sleep stations on board the entire space

1170

00:51:42,309 --> 00:51:40,480

station two on the russian side and four

1171

00:51:43,910 --> 00:51:42,319

on the u.s side

1172

00:51:45,829 --> 00:51:43,920

we hope to have one more installed

1173

00:51:47,910 --> 00:51:45,839

before we get there which would give us

1174

00:51:49,750 --> 00:51:47,920

a little bit of flexibility

1175

00:51:51,430 --> 00:51:49,760

but really for the handover time if we

1176
00:51:53,589 --> 00:51:51,440
hand over say about a week or so with

1177
00:51:55,430 --> 00:51:53,599
crew one uh we're going to be kind of i

1178
00:51:56,630 --> 00:51:55,440
think in a camp out mode or one of one

1179
00:51:58,630 --> 00:51:56,640
of the crews will be in the camp out

1180
00:52:01,270 --> 00:51:58,640
mode where we find a place to you know

1181
00:52:03,030 --> 00:52:01,280
to sleep on a wall somewhere or ceiling

1182
00:52:04,790 --> 00:52:03,040
it doesn't matter up there and then the

1183
00:52:06,790 --> 00:52:04,800
other crew will be in the sleep station

1184
00:52:08,309 --> 00:52:06,800
so we haven't worked out which crew is

1185
00:52:09,670 --> 00:52:08,319
going to do what yet but uh we're

1186
00:52:11,829 --> 00:52:09,680
looking forward to it again it's just

1187
00:52:13,829 --> 00:52:11,839
going to be a short you know time a week

1188
00:52:16,230 --> 00:52:13,839

or less that uh we'll be potentially

1189

00:52:18,549 --> 00:52:16,240

handing over with them and uh sleeping

1190

00:52:19,990 --> 00:52:18,559

will be although it's important it's a

1191

00:52:21,750 --> 00:52:20,000

pretty short time so i think we can all

1192

00:52:24,549 --> 00:52:21,760

handle a camping out trip for about a

1193

00:52:27,670 --> 00:52:26,549

definitely okay let's take a question

1194

00:52:31,270 --> 00:52:27,680

from martin

1195

00:52:35,829 --> 00:52:33,589

i would like to follow with the comment

1196

00:52:36,950 --> 00:52:35,839

of my basket about so many things on a

1197

00:52:41,589 --> 00:52:36,960

station

1198

00:52:44,470 --> 00:52:43,589

how do you not bump into something you

1199

00:52:46,470 --> 00:52:44,480

well

1200

00:52:48,950 --> 00:52:46,480

don't tell nasa or research but we

1201

00:52:50,309 --> 00:52:48,960

sometimes come in two things um

1202

00:52:51,670 --> 00:52:50,319

especially at the beginning we're trying

1203

00:52:53,829 --> 00:52:51,680

to be very careful but like you said

1204

00:52:55,510 --> 00:52:53,839

there's cables there's there's equipment

1205

00:52:57,349 --> 00:52:55,520

uh the equipment is designed so that

1206

00:52:59,750 --> 00:52:57,359

it's not you know so fragile that you

1207

00:53:02,230 --> 00:52:59,760

cannot even touch it or if it is then

1208

00:53:04,069 --> 00:53:02,240

it's put behind a rack uh behind a wall

1209

00:53:05,829 --> 00:53:04,079

it's protected because everything is is

1210

00:53:07,829 --> 00:53:05,839

designed and engineered for a space

1211

00:53:09,990 --> 00:53:07,839

flight but i think you you get used to

1212

00:53:11,990 --> 00:53:10,000

it initially the first few days or

1213

00:53:14,069 --> 00:53:12,000

depends on the on the astronauts can

1214

00:53:16,390 --> 00:53:14,079

take longer can be shorter but you have

1215

00:53:19,270 --> 00:53:16,400

to figure out a new way to move your

1216

00:53:21,510 --> 00:53:19,280

brains to rewire you know it's different

1217

00:53:23,589 --> 00:53:21,520

sensors and and provide you with a with

1218

00:53:25,109 --> 00:53:23,599

a good um a good understanding of your

1219

00:53:26,549 --> 00:53:25,119

environment so sometimes you bomb

1220

00:53:28,069 --> 00:53:26,559

sometimes you go too fast you want to

1221

00:53:29,510 --> 00:53:28,079

take a turn you miss the turn and if you

1222

00:53:31,510 --> 00:53:29,520

miss the turn on space station you go

1223

00:53:33,589 --> 00:53:31,520

straight and whatever is in front of you

1224

00:53:36,549 --> 00:53:33,599

you're going to bump into it so we're

1225

00:53:38,790 --> 00:53:36,559

going to try to minimize those events

1226
00:53:39,910 --> 00:53:38,800
but knowing that that that it might

1227
00:53:43,510 --> 00:53:39,920
happen

1228
00:53:45,589 --> 00:53:43,520
big deal but you just have to be very

1229
00:53:47,750 --> 00:53:45,599
careful very cautious very methodical at

1230
00:53:50,390 --> 00:53:47,760
the beginning and then not get too over

1231
00:53:55,030 --> 00:53:50,400
confident as as you learn how to fly

1232
00:53:59,910 --> 00:53:57,910
okay a question from lucy auberg with

1233
00:54:02,950 --> 00:53:59,920
asp

1234
00:54:04,950 --> 00:54:02,960
hi thanks for taking my question and i'm

1235
00:54:08,230 --> 00:54:04,960
sure you probably all

1236
00:54:09,510 --> 00:54:08,240
watched perseverance landing on mars

1237
00:54:11,589 --> 00:54:09,520
last month

1238
00:54:14,069 --> 00:54:11,599

and i know you're very much concentrated

1239

00:54:17,030 --> 00:54:14,079

on your current mission but are you all

1240

00:54:19,670 --> 00:54:17,040

dreaming about going to the to the moon

1241

00:54:22,390 --> 00:54:19,680

and then um to mars especially now that

1242

00:54:23,750 --> 00:54:22,400

you'll be flying with spacex the company

1243

00:54:25,910 --> 00:54:23,760

created with

1244

00:54:28,549 --> 00:54:25,920

the goal of going to mars does it seem

1245

00:54:36,870 --> 00:54:28,559

more and more tangible and are you all

1246

00:54:42,630 --> 00:54:39,829

although i just pointed at myself no no

1247

00:54:46,950 --> 00:54:44,870

shane you want to start with that

1248

00:54:49,270 --> 00:54:46,960

i had the chance to watch the landing

1249

00:54:50,870 --> 00:54:49,280

together actually out at spacex

1250

00:54:53,430 --> 00:54:50,880

that was pretty neat obviously a

1251
00:54:54,870 --> 00:54:53,440
historic moment and we were very excited

1252
00:54:57,109 --> 00:54:54,880
for all the teams involved especially

1253
00:54:59,589 --> 00:54:57,119
the folks at jpl that worked so hard on

1254
00:55:01,829 --> 00:54:59,599
on landing perseverance on mars that was

1255
00:55:03,109 --> 00:55:01,839
really special

1256
00:55:04,950 --> 00:55:03,119
i know i'm not going to be going to the

1257
00:55:06,150 --> 00:55:04,960
moon in mars but my colleagues here much

1258
00:55:07,829 --> 00:55:06,160
younger than me might have that

1259
00:55:09,910 --> 00:55:07,839
opportunity so even though i would love

1260
00:55:13,670 --> 00:55:09,920
to do that i think my flying days will

1261
00:55:16,870 --> 00:55:15,270
for ikea myself who've just been

1262
00:55:18,150 --> 00:55:16,880
assigned to if not i'm going to stop

1263
00:55:20,150 --> 00:55:18,160

saying this because i better get in

1264

00:55:21,829 --> 00:55:20,160

trouble with issa but i think what's

1265

00:55:24,230 --> 00:55:21,839

important is we if you're watching

1266

00:55:25,750 --> 00:55:24,240

robotic exploration is to understand

1267

00:55:27,430 --> 00:55:25,760

that those are just two branches of the

1268

00:55:29,109 --> 00:55:27,440

the exact same thing we're trying to

1269

00:55:30,950 --> 00:55:29,119

explore we're trying to get further into

1270

00:55:32,789 --> 00:55:30,960

the cosmos uh those are not two

1271

00:55:34,309 --> 00:55:32,799

competing activities and people like to

1272

00:55:35,829 --> 00:55:34,319

see it that way sometimes which bothers

1273

00:55:37,910 --> 00:55:35,839

me because when you talk to the

1274

00:55:38,870 --> 00:55:37,920

scientists you know being

1275

00:55:40,710 --> 00:55:38,880

behind

1276

00:55:42,789 --> 00:55:40,720

the rovers and all the interplanetary

1277

00:55:44,870 --> 00:55:42,799

missions they say we can't we can't wait

1278

00:55:46,630 --> 00:55:44,880

for the human for humans to be on the

1279

00:55:48,710 --> 00:55:46,640

surface because the return scientific

1280

00:55:50,549 --> 00:55:48,720

return is going to be so much it's going

1281

00:55:52,150 --> 00:55:50,559

to be 100 volts or maybe a thousand

1282

00:55:53,349 --> 00:55:52,160

folds but obviously it's more

1283

00:55:54,789 --> 00:55:53,359

complicated obviously it's more

1284

00:55:56,870 --> 00:55:54,799

dangerous and that's why we need those

1285

00:55:58,950 --> 00:55:56,880

precursor missions that's what we need

1286

00:56:01,190 --> 00:55:58,960

all the tasks that can be carried out by

1287

00:56:03,670 --> 00:56:01,200

by robots and rovers for sure please

1288

00:56:06,069 --> 00:56:03,680

absolutely they have to do it uh they

1289

00:56:08,069 --> 00:56:06,079

need to have budget as well and it's

1290

00:56:09,670 --> 00:56:08,079

those are not two competing activities

1291

00:56:11,430 --> 00:56:09,680

so those are two brushes of the same

1292

00:56:12,789 --> 00:56:11,440

activity and i think we work as a team

1293

00:56:15,829 --> 00:56:12,799

and there'll be scenarios in the future

1294

00:56:17,829 --> 00:56:15,839

when we work even more closely together

1295

00:56:19,270 --> 00:56:17,839

thank you well we're so excited to see

1296

00:56:21,670 --> 00:56:19,280

you up on the international space

1297

00:56:23,990 --> 00:56:21,680

station doing research that will help us

1298

00:56:26,309 --> 00:56:24,000

get people to the moon and mars and then

1299

00:56:28,630 --> 00:56:26,319

to see you or maybe your colleagues on

1300

00:56:30,390 --> 00:56:28,640

the moon and then eventually on mars and

1301

00:56:32,150 --> 00:56:30,400

i think that's a good place to wrap up

1302

00:56:34,230 --> 00:56:32,160

so thank you everyone for joining us

1303

00:56:36,150 --> 00:56:34,240

today thank you to the crew for

1304

00:56:38,390 --> 00:56:36,160

answering questions

1305

00:56:42,309 --> 00:56:38,400

and be sure to watch this crew launch

1306

00:56:44,630 --> 00:56:42,319

live online at nasa.gov on nasa tv or by

1307

00:56:46,950 --> 00:56:44,640

following nasa on social media you can

1308

00:56:48,549 --> 00:56:46,960

also follow all four of these people on

1309

00:56:50,710 --> 00:56:48,559

twitter and keep up with them throughout

1310

00:56:52,789 --> 00:56:50,720

the mission and be sure to check those

1311

00:56:54,630 --> 00:56:52,799

sites for updates and follow along on

1312

00:57:11,430 --> 00:56:54,640

their whole mission thank you everyone