



NASA  
Director's Guest  
Lyndon B. Johnson  
Space Center

NASA  
Visitor Center  
Education Office Guest  
Robert Alford

1  
00:00:04,150 --> 00:00:02,230  
good afternoon thank you for joining us

2  
00:00:06,869 --> 00:00:04,160  
here at the johnson space center

3  
00:00:08,230 --> 00:00:06,879  
even as the expedition 4849 crew is

4  
00:00:09,589 --> 00:00:08,240  
making their way to the international

5  
00:00:11,430 --> 00:00:09,599  
space station

6  
00:00:12,310 --> 00:00:11,440  
the pace of launch activities is picking

7  
00:00:14,150 --> 00:00:12,320  
up

8  
00:00:16,710 --> 00:00:14,160  
we are joined excited to be joined today

9  
00:00:18,070 --> 00:00:16,720  
by the expedition 4950 crew

10  
00:00:20,070 --> 00:00:18,080  
who will be launched to the

11  
00:00:22,390 --> 00:00:20,080  
international space station out of

12  
00:00:24,710 --> 00:00:22,400  
baikonur the baikonur cosmodrome in

13  
00:00:25,830 --> 00:00:24,720

kazakhstan uh the afternoon of september

14

00:00:27,349 --> 00:00:25,840

23rd

15

00:00:29,429 --> 00:00:27,359

u.s time

16

00:00:31,269 --> 00:00:29,439

with us today is veteran nasa astronaut

17

00:00:33,350 --> 00:00:31,279

shane kimbrough who will be a flight

18

00:00:36,630 --> 00:00:33,360

engineer for expedition 49 and the

19

00:00:38,630 --> 00:00:36,640

commander for expedition 50.

20

00:00:39,750 --> 00:00:38,640

next to him is first time flyer sergey

21

00:00:41,430 --> 00:00:39,760

ryushkov

22

00:00:44,630 --> 00:00:41,440

from alvaros cosmos who will be the

23

00:00:46,069 --> 00:00:44,640

soyuz commander for the ms-02 vehicle

24

00:00:49,029 --> 00:00:46,079

and he will be the flight engineer for

25

00:00:51,510 --> 00:00:49,039

expedition 49 and 50.

26

00:00:53,910 --> 00:00:51,520

next to sergey is andre

27

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

borisenko also from ross cosmos who will

28

00:00:57,510 --> 00:00:55,120

also be the flight engineer for

29

00:00:58,950 --> 00:00:57,520

expeditions 49 and 50.

30

00:01:00,229 --> 00:00:58,960

let me turn it over to shane can you

31

00:01:02,069 --> 00:01:00,239

tell us a little bit about what you and

32

00:01:04,229 --> 00:01:02,079

your crewmates will be doing on orbit

33

00:01:06,310 --> 00:01:04,239

yeah thanks jenny um we are excited

34

00:01:08,950 --> 00:01:06,320

about the launch last night to see

35

00:01:11,270 --> 00:01:08,960

anatoly and kate and takuya

36

00:01:12,710 --> 00:01:11,280

launch beautifully out of kazakhstan and

37

00:01:14,630 --> 00:01:12,720

then head up to the international space

38

00:01:16,390 --> 00:01:14,640

station they'll be there in a few days

39

00:01:17,990 --> 00:01:16,400

and we look forward to seeing them uh

40

00:01:19,990 --> 00:01:18,000

open the hatch and cross over to their

41

00:01:21,830 --> 00:01:20,000

new home in space for about uh anywhere

42

00:01:23,990 --> 00:01:21,840

from four to six months

43

00:01:25,109 --> 00:01:24,000

um for our mission as was mentioned

44

00:01:26,870 --> 00:01:25,119

we're going to launch towards the end of

45

00:01:28,469 --> 00:01:26,880

september

46

00:01:30,789 --> 00:01:28,479

and i'm very lucky and happy to be

47

00:01:32,149 --> 00:01:30,799

flying with the gentleman to my right

48

00:01:33,510 --> 00:01:32,159

let me tell you a little bit about them

49

00:01:36,310 --> 00:01:33,520

before i get talking about our mission

50

00:01:38,710 --> 00:01:36,320

if that's okay um sergey to my immediate

51  
00:01:43,270 --> 00:01:38,720  
right is a pilot i was a pilot in the

52  
00:01:45,510 --> 00:01:43,280  
russian air force flew mig-29s and I-39s

53  
00:01:48,149 --> 00:01:45,520  
in the russian air force very decorated

54  
00:01:49,990 --> 00:01:48,159  
of course in his military career

55  
00:01:52,830 --> 00:01:50,000  
he was chosen as an astronaut or

56  
00:01:56,469 --> 00:01:52,840  
cosmonaut candidate back in

57  
00:01:59,510 --> 00:01:56,479  
2006. in the class 14 for the cosmonauts

58  
00:02:01,109 --> 00:01:59,520  
and he finished his training around 2009

59  
00:02:02,950 --> 00:02:01,119  
and has been waiting for this space

60  
00:02:05,590 --> 00:02:02,960  
flight for a few years so he's ready to

61  
00:02:07,350 --> 00:02:05,600  
go we're excited to see his reaction to

62  
00:02:08,710 --> 00:02:07,360  
microgravity the first time he gets to

63  
00:02:11,589 --> 00:02:08,720

experience it

64

00:02:14,309 --> 00:02:11,599

to sergey's right is andre borisenko as

65

00:02:16,790 --> 00:02:14,319

was mentioned a veteran space flier

66

00:02:18,150 --> 00:02:16,800

he is an engineer by trade

67

00:02:20,869 --> 00:02:18,160

he actually worked in the mission

68

00:02:22,869 --> 00:02:20,879

control center in moscow for many years

69

00:02:24,949 --> 00:02:22,879

he worked on the motion control system

70

00:02:26,630 --> 00:02:24,959

for the mir space station

71

00:02:28,470 --> 00:02:26,640

and then he ended up being a flight

72

00:02:29,910 --> 00:02:28,480

director for mir and the international

73

00:02:31,430 --> 00:02:29,920

space station so really unique

74

00:02:33,270 --> 00:02:31,440

background

75

00:02:35,110 --> 00:02:33,280

super super smart person i'm looking

76

00:02:36,550 --> 00:02:35,120

forward to learning from him

77

00:02:40,470 --> 00:02:36,560

throughout our whole mission

78

00:02:42,550 --> 00:02:40,480

he did fly on expedition 27 and 28 back

79

00:02:44,070 --> 00:02:42,560

in 2011.

80

00:02:45,270 --> 00:02:44,080

he started out as a flight engineer on

81

00:02:46,710 --> 00:02:45,280

that mission but then became the

82

00:02:48,949 --> 00:02:46,720

commander of the international space

83

00:02:50,550 --> 00:02:48,959

station so again i look to gain his

84

00:02:52,390 --> 00:02:50,560

draw from his experience

85

00:02:54,390 --> 00:02:52,400

so we're going to add both as we enter

86

00:02:56,070 --> 00:02:54,400

our new home here in september

87

00:02:57,430 --> 00:02:56,080

our mission is slated to be about five

88

00:02:58,710 --> 00:02:57,440

months long

89  
00:03:00,710 --> 00:02:58,720  
we're going to come home towards the end

90  
00:03:02,550 --> 00:03:00,720  
of february is the plan right now we

91  
00:03:03,830 --> 00:03:02,560  
have a busy five months as you might

92  
00:03:05,110 --> 00:03:03,840  
imagine

93  
00:03:07,350 --> 00:03:05,120  
as soon as we get there it's going to

94  
00:03:09,190 --> 00:03:07,360  
get really busy because a japanese

95  
00:03:12,149 --> 00:03:09,200  
vehicle is going to show up a really big

96  
00:03:14,949 --> 00:03:12,159  
resupply vehicle called htv will show up

97  
00:03:17,190 --> 00:03:14,959  
about a week or so after we arrive

98  
00:03:19,350 --> 00:03:17,200  
and in that has a lot of science and

99  
00:03:20,790 --> 00:03:19,360  
research of course but also has a lot of

100  
00:03:22,949 --> 00:03:20,800  
things that we're going to be dealing

101

00:03:25,430 --> 00:03:22,959

with during our spacewalks

102

00:03:27,990 --> 00:03:25,440

right now the plan is for takuya onishi

103

00:03:28,949 --> 00:03:28,000

the japanese astronaut and myself to go

104

00:03:31,030 --> 00:03:28,959

outside

105

00:03:32,789 --> 00:03:31,040

and do two spacewalks

106

00:03:34,949 --> 00:03:32,799

to replace batteries on the outside of

107

00:03:37,110 --> 00:03:34,959

the space station so those big batteries

108

00:03:38,470 --> 00:03:37,120

are actually inside the the japanese

109

00:03:39,990 --> 00:03:38,480

vehicle that's coming up so we look

110

00:03:41,509 --> 00:03:40,000

forward to getting them out and getting

111

00:03:43,350 --> 00:03:41,519

them ready to go

112

00:03:45,430 --> 00:03:43,360

for our spacewalks

113

00:03:48,229 --> 00:03:45,440

as the plan stands right now

114

00:03:49,670 --> 00:03:48,239

takuya anatoly and

115

00:03:51,270 --> 00:03:49,680

kate are supposed to come home towards

116

00:03:53,270 --> 00:03:51,280

the end of october so after we finish

117

00:03:55,990 --> 00:03:53,280

our spacewalks we'll be busy getting

118

00:03:57,509 --> 00:03:56,000

them ready to depart the space station

119

00:03:59,910 --> 00:03:57,519

and getting them back on their way back

120

00:04:01,509 --> 00:03:59,920

to earth and then we'll be alone for

121

00:04:03,670 --> 00:04:01,519

anywhere from up to one or two weeks the

122

00:04:05,910 --> 00:04:03,680

three of us will be on the space station

123

00:04:08,949 --> 00:04:05,920

um until the next crew arrives which

124

00:04:10,390 --> 00:04:08,959

will be peggy whitson tomorrow pesquet

125

00:04:12,229 --> 00:04:10,400

and oleg novitskiy so we're looking

126  
00:04:13,509 --> 00:04:12,239  
forward to that as well so once november

127  
00:04:16,310 --> 00:04:13,519  
december time frame hits we're going to

128  
00:04:18,870 --> 00:04:16,320  
be doing a lot of science and research

129  
00:04:20,550 --> 00:04:18,880  
as well into the new year in january and

130  
00:04:22,710 --> 00:04:20,560  
february kind of starts winding things

131  
00:04:23,670 --> 00:04:22,720  
down for us as we get ready to head back

132  
00:04:24,790 --> 00:04:23,680  
home

133  
00:04:26,469 --> 00:04:24,800  
during our five months we're going to

134  
00:04:29,030 --> 00:04:26,479  
have several visiting vehicles so

135  
00:04:30,230 --> 00:04:29,040  
vehicles that only carry equipment or

136  
00:04:32,230 --> 00:04:30,240  
cargo

137  
00:04:33,990 --> 00:04:32,240  
visit visit us while we're there we're

138  
00:04:36,469 --> 00:04:34,000

going to have several u.s vehicles the

139

00:04:38,550 --> 00:04:36,479

japanese vehicle i mentioned earlier

140

00:04:40,150 --> 00:04:38,560

and you know those launches are all

141

00:04:42,550 --> 00:04:40,160

always up in the air but we look forward

142

00:04:44,070 --> 00:04:42,560

to all those vehicles arriving and us

143

00:04:46,150 --> 00:04:44,080

then grabbing most of those sticking

144

00:04:47,670 --> 00:04:46,160

them on the space station and it's kind

145

00:04:49,350 --> 00:04:47,680

of like christmas every time one shows

146

00:04:51,189 --> 00:04:49,360

up because there's a bunch of fresh food

147

00:04:53,030 --> 00:04:51,199

and new clothes and

148

00:04:55,430 --> 00:04:53,040

new equipment for us to work on so we're

149

00:04:56,710 --> 00:04:55,440

really excited about our mission

150

00:04:58,310 --> 00:04:56,720

fantastic

151  
00:05:00,070 --> 00:04:58,320  
we'll now take some questions from the

152  
00:05:02,230 --> 00:05:00,080  
audience we'll start with the media here

153  
00:05:04,310 --> 00:05:02,240  
at johnson space center then we'll go to

154  
00:05:06,150 --> 00:05:04,320  
the other nasa centers reporters on the

155  
00:05:07,990 --> 00:05:06,160  
phone bridge and then we'll take some

156  
00:05:10,150 --> 00:05:08,000  
questions from social media

157  
00:05:11,590 --> 00:05:10,160  
we also have a some guests in the

158  
00:05:13,270 --> 00:05:11,600  
audience today from the boys and girls

159  
00:05:16,070 --> 00:05:13,280  
club of greater houston so we'll take

160  
00:05:17,990 --> 00:05:16,080  
some questions from them too

161  
00:05:21,510 --> 00:05:18,000  
if you have a question for social media

162  
00:05:22,790 --> 00:05:21,520  
please use the hashtag asknasa

163  
00:05:24,230 --> 00:05:22,800

and if you are on the phone bridge if

164

00:05:25,670 --> 00:05:24,240

you have a question please remember to

165

00:05:28,390 --> 00:05:25,680

press star 1

166

00:05:29,510 --> 00:05:28,400

and press star 2 if your question has

167

00:05:31,510 --> 00:05:29,520

already been asked and you need to

168

00:05:33,909 --> 00:05:31,520

withdraw it so with that any questions

169

00:05:38,150 --> 00:05:33,919

from here yes mark

170

00:05:43,029 --> 00:05:40,710

this is for shane kimbrough i believe

171

00:05:45,749 --> 00:05:43,039

these batteries go on p6 the oldest of

172

00:05:47,749 --> 00:05:45,759

the solar power modules if i'm right

173

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

if that's correct can you talk about

174

00:05:51,909 --> 00:05:50,000

some of the challenges of i guess you're

175

00:05:52,950 --> 00:05:51,919

going to take all of mob and replace all

176

00:05:56,230 --> 00:05:52,960

of them

177

00:05:57,749 --> 00:05:56,240

it sounds like a big toy yeah so

178

00:05:59,590 --> 00:05:57,759

really it comes down to it's a shell

179

00:06:00,950 --> 00:05:59,600

game we have a lot of big boxes that

180

00:06:03,670 --> 00:06:00,960

we're having to move around and then

181

00:06:05,590 --> 00:06:03,680

replace them with newer smaller boxes so

182

00:06:07,749 --> 00:06:05,600

technology just like here on earth has

183

00:06:09,749 --> 00:06:07,759

gotten things a lot smaller so

184

00:06:11,350 --> 00:06:09,759

really about the size of two batteries

185

00:06:13,029 --> 00:06:11,360

the old batteries will now be replaced

186

00:06:14,550 --> 00:06:13,039

with just one of those

187

00:06:16,309 --> 00:06:14,560

so we're going to have some empty space

188

00:06:17,590 --> 00:06:16,319

so to speak and in those spaces we're

189

00:06:19,590 --> 00:06:17,600

going to put things called adapter

190

00:06:20,870 --> 00:06:19,600

plates and then these new batteries on

191

00:06:22,469 --> 00:06:20,880

top so

192

00:06:24,870 --> 00:06:22,479

it just comes down to a shell game it's

193

00:06:26,790 --> 00:06:24,880

very choreographed uh we've been

194

00:06:29,110 --> 00:06:26,800

practicing this in the nbl in the pool

195

00:06:31,350 --> 00:06:29,120

for for the last year now not just our

196

00:06:33,189 --> 00:06:31,360

crew but other other crews as well so

197

00:06:35,029 --> 00:06:33,199

we're really making sure the procedures

198

00:06:36,870 --> 00:06:35,039

are well thought out and the team that's

199

00:06:41,110 --> 00:06:36,880

working on that pretty much has it all

200

00:06:44,870 --> 00:06:43,350

i'm also interested in what

201  
00:06:46,550 --> 00:06:44,880  
what

202  
00:06:48,870 --> 00:06:46,560  
your expedition

203  
00:06:51,189 --> 00:06:48,880  
would be or might be prepared to do in

204  
00:06:53,189 --> 00:06:51,199  
terms of of advancing the commercial

205  
00:06:55,830 --> 00:06:53,199  
crew

206  
00:06:57,589 --> 00:06:55,840  
objectives either with eba or

207  
00:06:59,589 --> 00:06:57,599  
inside activity

208  
00:07:01,029 --> 00:06:59,599  
a good question mark

209  
00:07:03,510 --> 00:07:01,039  
prior to us getting there if everything

210  
00:07:04,710 --> 00:07:03,520  
goes well the crew in front of us will

211  
00:07:07,270 --> 00:07:04,720  
install the international docking

212  
00:07:09,430 --> 00:07:07,280  
adapater the ida on the very front of the

213  
00:07:11,189 --> 00:07:09,440

space station that'll obviously allow

214

00:07:12,870 --> 00:07:11,199

commercial vehicles to dock there

215

00:07:14,309 --> 00:07:12,880

that'll be a huge thing

216

00:07:16,790 --> 00:07:14,319

along with that is you know routing

217

00:07:18,390 --> 00:07:16,800

cables and connecting things that kate

218

00:07:20,230 --> 00:07:18,400

and jeff williams are scheduled to do

219

00:07:23,830 --> 00:07:20,240

right now

220

00:07:25,350 --> 00:07:23,840

so hopefully that'll all be done if not

221

00:07:26,870 --> 00:07:25,360

then that potentially could be something

222

00:07:29,350 --> 00:07:26,880

that our crews would go out and do as

223

00:07:33,270 --> 00:07:29,360

well so that could be either me and kate

224

00:07:34,629 --> 00:07:33,280

or me and tokuyo or kaden tokuya so

225

00:07:36,309 --> 00:07:34,639

that's certainly a big help to the

226

00:07:38,070 --> 00:07:36,319

station for commercial crew

227

00:07:39,270 --> 00:07:38,080

we have a lot of research of course that

228

00:07:41,350 --> 00:07:39,280

we're doing that's going to advance

229

00:07:42,870 --> 00:07:41,360

commercial crew as well as

230

00:07:44,869 --> 00:07:42,880

the further exploration of the solar

231

00:07:47,909 --> 00:07:44,879

system down the road so we're excited

232

00:07:48,869 --> 00:07:47,919

about those kind of things of course

233

00:07:53,749 --> 00:07:48,879

robert

234

00:07:56,469 --> 00:07:53,759

regarding yesterday's launch

235

00:07:59,670 --> 00:07:56,479

uh how closely are

236

00:08:01,110 --> 00:07:59,680

or how dependent of a smooth flight of

237

00:08:01,909 --> 00:08:01,120

mso1

238

00:08:05,350 --> 00:08:01,919

um

239

00:08:07,270 --> 00:08:05,360

affects your flight of mso2 uh

240

00:08:08,950 --> 00:08:07,280

is there any chance that uh the i

241

00:08:11,029 --> 00:08:08,960

believe you're planning for a two-day

242

00:08:14,150 --> 00:08:11,039

rendezvous would that be shortened to

243

00:08:16,150 --> 00:08:14,160

the 34 to the four but if this flight

244

00:08:18,150 --> 00:08:16,160

goes completely

245

00:08:19,029 --> 00:08:18,160

uh i think the answer is unfortunately

246

00:08:24,070 --> 00:08:19,039

no

247

00:08:25,350 --> 00:08:24,080

planned for 34 orbit because we actually

248

00:08:27,029 --> 00:08:25,360

have test objectives we're going to meet

249

00:08:29,270 --> 00:08:27,039

during those couple days

250

00:08:31,029 --> 00:08:29,280

before we get to the space station

251

00:08:34,949 --> 00:08:31,039

and we're not doing specifically the

252

00:08:36,550 --> 00:08:34,959

same test that ms-1 is doing now so

253

00:08:37,750 --> 00:08:36,560

they're different test objectives that

254

00:08:39,670 --> 00:08:37,760

the engineers and scientists on the

255

00:08:41,750 --> 00:08:39,680

ground in russia want to see

256

00:08:42,870 --> 00:08:41,760

so we'll have a different profile some

257

00:08:44,470 --> 00:08:42,880

of the tests will be similar but in

258

00:08:45,990 --> 00:08:44,480

general they're different profiles that

259

00:08:47,910 --> 00:08:46,000

we're going to to do and during those

260

00:08:49,350 --> 00:08:47,920

two days to make sure that that vehicle

261

00:08:51,030 --> 00:08:49,360

gets really

262

00:08:53,590 --> 00:08:51,040

you know tested like it should before we

263

00:08:55,750 --> 00:08:53,600

start this four orbit rendezvous

264

00:08:58,150 --> 00:08:55,760

if i can ask a follow-up

265

00:09:00,870 --> 00:08:58,160

given the new satellite relay system

266

00:09:02,710 --> 00:09:00,880

does that allow for any type of

267

00:09:04,470 --> 00:09:02,720

live broadcast from the soyuz itself

268

00:09:05,990 --> 00:09:04,480

during that two-day rendezvous that's a

269

00:09:07,269 --> 00:09:06,000

good question i'm not sure the answer to

270

00:09:09,269 --> 00:09:07,279

that i may have to defer to the

271

00:09:10,790 --> 00:09:09,279

cosmonauts um i know it's going to be a

272

00:09:12,870 --> 00:09:10,800

nice capability i don't think we have

273

00:09:14,949 --> 00:09:12,880

all the the things in place to make that

274

00:09:16,870 --> 00:09:14,959

happen now but it would be great if we

275

00:09:22,389 --> 00:09:16,880

could have some telemetry and live video

276

00:09:29,750 --> 00:09:25,750

yes so usms include a new

277

00:09:30,790 --> 00:09:29,760

tv system digital and it

278

00:09:33,350 --> 00:09:30,800

allows

279

00:09:37,590 --> 00:09:34,790

get

280

00:09:39,590 --> 00:09:37,600

according cover satellite coverage

281

00:09:45,269 --> 00:09:39,600

uh data from

282

00:09:49,350 --> 00:09:46,630

haley do we have any social media

283

00:09:52,070 --> 00:09:49,360

questions yeah um we have one from ben

284

00:09:54,550 --> 00:09:52,080

evans on twitter and he is wondering how

285

00:09:56,310 --> 00:09:54,560

does the training of an iss commander

286

00:09:58,630 --> 00:09:56,320

differ from the training of a flight

287

00:10:00,870 --> 00:09:58,640

engineer um are there any additional

288

00:10:03,030 --> 00:10:00,880

tasks that a commander transport

289

00:10:05,190 --> 00:10:03,040

uh yeah good question in general it's

290

00:10:06,630 --> 00:10:05,200

the same training depending um when

291

00:10:08,150 --> 00:10:06,640

we're in the soyuz it's different i

292

00:10:10,150 --> 00:10:08,160

think he's talking about space station

293

00:10:11,829 --> 00:10:10,160

so on the space station we do have a

294

00:10:13,350 --> 00:10:11,839

little bit of a different commander flow

295

00:10:16,550 --> 00:10:13,360

i think in russia when i go over there i

296

00:10:18,310 --> 00:10:16,560

get an extra 10 or 12 hours of specific

297

00:10:20,389 --> 00:10:18,320

commander training that i wouldn't have

298

00:10:21,829 --> 00:10:20,399

gotten if i was a flight engineer

299

00:10:23,750 --> 00:10:21,839

here in the u.s it's i don't know what

300

00:10:26,069 --> 00:10:23,760

the hour number is but there's kind of a

301

00:10:28,069 --> 00:10:26,079

small delta i guess of ours that i'll

302

00:10:31,590 --> 00:10:28,079

get here because i'm the commander

303

00:10:35,829 --> 00:10:33,990

we happen to have another one yeah um so

304

00:10:38,150 --> 00:10:35,839

we have another one from mariana on

305

00:10:40,710 --> 00:10:38,160

twitter and she is wondering do you plan

306

00:10:42,550 --> 00:10:40,720

to take any photographs to share with us

307

00:10:44,150 --> 00:10:42,560

i would love to see some auroras and

308

00:10:46,069 --> 00:10:44,160

storms

309

00:10:48,150 --> 00:10:46,079

well of course um i think taking

310

00:10:49,990 --> 00:10:48,160

pictures becomes our natural hobby up

311

00:10:51,750 --> 00:10:50,000

there and our downtime

312

00:10:53,190 --> 00:10:51,760

and i look forward to sharing those and

313

00:10:56,470 --> 00:10:53,200

hopefully you'll follow us on social

314

00:10:58,470 --> 00:10:56,480

media and be able to follow my accounts

315

00:10:59,829 --> 00:10:58,480

and get to see some some pictures i know

316

00:11:02,150 --> 00:10:59,839

some folks have sent some really nice

317

00:11:03,990 --> 00:11:02,160

things down i will self admit i'm not

318

00:11:06,230 --> 00:11:04,000

the greatest photographer so hopefully

319

00:11:08,230 --> 00:11:06,240

i'll step up my game and be able to send

320

00:11:10,230 --> 00:11:08,240

some beautiful shots of auroras like you

321

00:11:13,750 --> 00:11:10,240

mentioned and maybe storms and other

322

00:11:15,269 --> 00:11:13,760

things that the earth is experiencing

323

00:11:16,790 --> 00:11:15,279

is there anything in particular anyone

324

00:11:22,550 --> 00:11:16,800

you guys wants to take pictures of while

325

00:11:26,870 --> 00:11:24,150

houston

326

00:11:29,750 --> 00:11:26,880

good answer

327

00:11:31,509 --> 00:11:29,760

yeah anything sergey

328

00:11:32,710 --> 00:11:31,519

a lot of things

329

00:11:35,670 --> 00:11:32,720

i still

330

00:11:39,350 --> 00:11:35,680

doesn't finish a whole list of my

331

00:11:42,870 --> 00:11:40,710

yeah i want to take pictures of

332

00:11:44,470 --> 00:11:42,880

certainly places i've lived and maybe

333

00:11:46,069 --> 00:11:44,480

universities or schools i've been

334

00:11:47,430 --> 00:11:46,079

involved with

335

00:11:48,949 --> 00:11:47,440

i'm going to do something unique and try

336

00:11:50,629 --> 00:11:48,959

to take a bunch of pictures of golf

337

00:11:51,750 --> 00:11:50,639

courses around the world because i don't

338

00:11:52,550 --> 00:11:51,760

think that's something anybody's done

339

00:11:57,670 --> 00:11:52,560

before

340

00:12:01,750 --> 00:12:00,389

yes ma'am hi sophie sanchez with uh

341

00:12:03,269 --> 00:12:01,760

chicago

342

00:12:05,910 --> 00:12:03,279

i made a question for shane there's a

343

00:12:07,829 --> 00:12:05,920

lot of resident student-based programs

344

00:12:09,110 --> 00:12:07,839

uh happening right now on the iss we

345

00:12:10,470 --> 00:12:09,120

have several students here today is

346

00:12:11,990 --> 00:12:10,480

there any program

347

00:12:13,590 --> 00:12:12,000

specifically that you're looking forward

348

00:12:15,030 --> 00:12:13,600

to communicating with students here on

349

00:12:16,230 --> 00:12:15,040

earth

350

00:12:17,670 --> 00:12:16,240

i know there's a handful maybe that

351

00:12:19,430 --> 00:12:17,680

we'll get to do that with and i'm not

352

00:12:21,350 --> 00:12:19,440

sure which ones they are except for one

353

00:12:23,590 --> 00:12:21,360

called spheres i know that's something

354

00:12:25,750 --> 00:12:23,600

that has been used almost every year the

355

00:12:27,590 --> 00:12:25,760

last several years with students on the

356

00:12:28,870 --> 00:12:27,600

ground and they actually are controlling

357

00:12:29,990 --> 00:12:28,880

them so it's going to be really neat to

358

00:12:31,269 --> 00:12:30,000

interact with them and see their

359

00:12:32,550 --> 00:12:31,279

excitement

360

00:12:35,110 --> 00:12:32,560

i know there's a handful of others

361

00:12:36,389 --> 00:12:35,120

that'll involve students as well all of

362

00:12:38,389 --> 00:12:36,399

those are going to be really exciting

363

00:12:40,629 --> 00:12:38,399

for me i love working with students

364

00:12:43,269 --> 00:12:40,639

i used to be a former professor and

365

00:12:45,350 --> 00:12:43,279

teacher so i really enjoy seeing them

366

00:12:49,670 --> 00:12:45,360

get excited about in this case math and

367

00:12:52,550 --> 00:12:51,190

speaking of students we have a few in

368

00:12:54,150 --> 00:12:52,560

the audience do any of you guys have any

369

00:12:55,269 --> 00:12:54,160

questions

370

00:12:57,190 --> 00:12:55,279

yes sir

371

00:12:59,269 --> 00:12:57,200

one or two for you guys

372

00:13:01,590 --> 00:12:59,279

can you tell the climate change of earth

373

00:13:03,269 --> 00:13:01,600

from space

374

00:13:05,910 --> 00:13:03,279

can you tell the climate change of earth

375

00:13:07,430 --> 00:13:05,920

from space so while we're in space

376

00:13:09,190 --> 00:13:07,440

we're kind of in an environment like

377

00:13:11,030 --> 00:13:09,200

you're sitting in right now so we're on

378

00:13:13,030 --> 00:13:11,040

the space station it's kind of a closed

379

00:13:14,550 --> 00:13:13,040

environment it's it's controlled with

380

00:13:16,790 --> 00:13:14,560

air conditioning just like we are in

381

00:13:19,190 --> 00:13:16,800

this room so in that sense you don't

382

00:13:20,550 --> 00:13:19,200

feel it at all you know if you really

383

00:13:22,069 --> 00:13:20,560

went outside

384

00:13:23,910 --> 00:13:22,079

you'd see a big change so when we go out

385

00:13:25,910 --> 00:13:23,920

for spacewalks you actually do sense

386

00:13:28,150 --> 00:13:25,920

some of these uh the big climate

387

00:13:30,310 --> 00:13:28,160

differences in space and earth

388

00:13:32,470 --> 00:13:30,320

when you go outside to do a spacewalk or

389

00:13:34,790 --> 00:13:32,480

if in general when you if anybody went

390

00:13:35,910 --> 00:13:34,800

outside it's about 200 degrees when the

391

00:13:37,670 --> 00:13:35,920

sun's out

392

00:13:39,430 --> 00:13:37,680

and it's about minus 200 when the sun

393

00:13:41,110 --> 00:13:39,440

goes away so

394

00:13:43,030 --> 00:13:41,120

really big temperature differences which

395

00:13:45,269 --> 00:13:43,040

we don't experience you know that range

396

00:13:46,550 --> 00:13:45,279

of temperatures on earth so that's one

397

00:13:47,829 --> 00:13:46,560

thing of course there's no air to

398

00:13:49,430 --> 00:13:47,839

breathe up there if you went outside

399

00:13:50,710 --> 00:13:49,440

without your spacesuit on so that's a

400

00:13:53,829 --> 00:13:50,720

huge difference

401  
00:13:56,550 --> 00:13:53,839  
like humans cannot survive in in the

402  
00:13:57,990 --> 00:13:56,560  
environment of space without protection

403  
00:13:59,670 --> 00:13:58,000  
unlike here on earth we're lucky enough

404  
00:14:01,430 --> 00:13:59,680  
we can walk around and we have air to

405  
00:14:02,949 --> 00:14:01,440  
breathe and we can survive so there's

406  
00:14:04,150 --> 00:14:02,959  
those are some of the differences i

407  
00:14:05,430 --> 00:14:04,160  
guess hopefully that answered your

408  
00:14:07,269 --> 00:14:05,440  
question

409  
00:14:10,150 --> 00:14:07,279  
thank you

410  
00:14:12,230 --> 00:14:10,160  
young lady all the way in the back

411  
00:14:15,910 --> 00:14:12,240  
sorry gentlemen all the way in the back

412  
00:14:17,269 --> 00:14:15,920  
yes does building in space make me dizzy

413  
00:14:18,949 --> 00:14:17,279

does floating make you dizzy is that

414

00:14:20,870 --> 00:14:18,959

what yes floating in space make you

415

00:14:22,230 --> 00:14:20,880

dizzy no it's just the coolest thing in

416

00:14:25,110 --> 00:14:22,240

the world you you would love it

417

00:14:26,790 --> 00:14:25,120

everybody loves it flying around is

418

00:14:28,389 --> 00:14:26,800

something i think most of us dreamed of

419

00:14:30,870 --> 00:14:28,399

since we were younger than you than you

420

00:14:32,790 --> 00:14:30,880

folks that are here and getting to do it

421

00:14:35,829 --> 00:14:32,800

for real and and really not being in

422

00:14:37,350 --> 00:14:35,839

control is kind of interesting at first

423

00:14:40,150 --> 00:14:37,360

and then you really learn how to fly

424

00:14:42,150 --> 00:14:40,160

around and be efficient and not break

425

00:14:43,910 --> 00:14:42,160

things and not run into things

426

00:14:45,509 --> 00:14:43,920

so that's kind of fun and it'll be neat

427

00:14:46,870 --> 00:14:45,519

watching sergey for the first time

428

00:14:47,910 --> 00:14:46,880

learning how to fly

429

00:14:49,509 --> 00:14:47,920

and uh

430

00:14:51,750 --> 00:14:49,519

andre and i could be laughing at them

431

00:14:53,990 --> 00:14:51,760

now it'll take us a few days to get back

432

00:14:55,670 --> 00:14:54,000

into flying mode as well but in general

433

00:14:57,189 --> 00:14:55,680

it doesn't make you dizzy you may have

434

00:14:58,629 --> 00:14:57,199

seen astronauts before do a bunch of

435

00:15:00,790 --> 00:14:58,639

somersaults

436

00:15:02,790 --> 00:15:00,800

on tv or something and if you do a lot

437

00:15:04,069 --> 00:15:02,800

of those yeah you can make yourself

438

00:15:06,069 --> 00:15:04,079

dizzy but in general just floating

439

00:15:07,110 --> 00:15:06,079

around is not

440

00:15:08,310 --> 00:15:07,120

so we're going to get to watch you guys

441

00:15:12,310 --> 00:15:08,320

do a lot of those and make yourselves

442

00:15:14,310 --> 00:15:12,320

dizzy yeah we'll try we'll see

443

00:15:16,790 --> 00:15:14,320

any other questions from you guys

444

00:15:18,230 --> 00:15:16,800

yes ma'am right here in the blue glasses

445

00:15:20,150 --> 00:15:18,240

if you could stand up when you ask a

446

00:15:22,150 --> 00:15:20,160

question that would be easier for us to

447

00:15:24,389 --> 00:15:22,160

hear what are the qualifications to be

448

00:15:26,949 --> 00:15:24,399

an astronaut what are the qualifications

449

00:15:28,069 --> 00:15:26,959

to be an astronaut wow good question

450

00:15:29,910 --> 00:15:28,079

we're actually having an astronaut

451

00:15:32,310 --> 00:15:29,920

selection right now so it's somewhat

452

00:15:34,230 --> 00:15:32,320

fresh in everybody's mind around here

453

00:15:36,550 --> 00:15:34,240

there are several basic qualifications

454

00:15:38,150 --> 00:15:36,560

and mainly including education that you

455

00:15:40,150 --> 00:15:38,160

need you need a background in math

456

00:15:41,910 --> 00:15:40,160

science or engineering

457

00:15:44,069 --> 00:15:41,920

and that's a

458

00:15:45,670 --> 00:15:44,079

an undergraduate degree is kind of the

459

00:15:47,509 --> 00:15:45,680

baseline of course if you have a

460

00:15:49,829 --> 00:15:47,519

graduate degree in one of those fields

461

00:15:52,230 --> 00:15:49,839

it only helps your application so most

462

00:15:54,550 --> 00:15:52,240

folks these days have a master's degree

463

00:15:56,949 --> 00:15:54,560

or a phd or a doctorate degree

464

00:15:58,550 --> 00:15:56,959

in a math science or engineering field

465

00:16:00,230 --> 00:15:58,560

they also look for people with unique

466

00:16:02,150 --> 00:16:00,240

backgrounds

467

00:16:04,710 --> 00:16:02,160

whether that's scientists or military

468

00:16:06,150 --> 00:16:04,720

officers or pilots or people maybe that

469

00:16:07,749 --> 00:16:06,160

jumped out of airplanes or climb

470

00:16:09,990 --> 00:16:07,759

mountains and those kind of unique

471

00:16:11,430 --> 00:16:10,000

things that a lot of people don't do and

472

00:16:13,430 --> 00:16:11,440

i think what they're kind of looking for

473

00:16:15,670 --> 00:16:13,440

there maybe is just people that can

474

00:16:17,269 --> 00:16:15,680

operate in kind of really strange

475

00:16:19,110 --> 00:16:17,279

environments and environments that that

476

00:16:21,350 --> 00:16:19,120

you don't have a whole lot of things

477

00:16:23,509 --> 00:16:21,360

like here on earth we're pretty blessed

478

00:16:25,269 --> 00:16:23,519

in general with with

479

00:16:27,110 --> 00:16:25,279

some pretty nice stuff so if you can

480

00:16:28,790 --> 00:16:27,120

find someone that can live kind of

481

00:16:30,069 --> 00:16:28,800

without all that stuff that's one of the

482

00:16:32,310 --> 00:16:30,079

traits i think they look for in

483

00:16:34,150 --> 00:16:32,320

astronauts

484

00:16:37,269 --> 00:16:34,160

and we have a call on the phone bridge

485

00:16:43,110 --> 00:16:37,279

sarah lewin

486

00:16:45,350 --> 00:16:43,120

was curious uh

487

00:16:47,189 --> 00:16:45,360

sorry i'm hearing a little feedback um i

488

00:16:48,870 --> 00:16:47,199

was curious whether you could describe

489

00:16:51,829 --> 00:16:48,880

how the three of you work together as a

490

00:16:53,749 --> 00:16:51,839

team thanks sarah good question we've

491

00:16:55,670 --> 00:16:53,759

been training now for a little over two

492

00:16:57,430 --> 00:16:55,680

years together

493

00:16:59,350 --> 00:16:57,440

i think i took my first trip to russia

494

00:17:01,030 --> 00:16:59,360

about two years ago

495

00:17:02,870 --> 00:17:01,040

and they started coming over to the us

496

00:17:04,549 --> 00:17:02,880

shortly after that

497

00:17:06,069 --> 00:17:04,559

so we've obviously grown over these last

498

00:17:07,990 --> 00:17:06,079

couple years we didn't know each other

499

00:17:09,590 --> 00:17:08,000

or i didn't know them at all previously

500

00:17:10,870 --> 00:17:09,600

um i'm sure they knew each other but i

501  
00:17:13,429 --> 00:17:10,880  
didn't know them

502  
00:17:15,110 --> 00:17:13,439  
and so really our first training session

503  
00:17:16,630 --> 00:17:15,120  
together i met them

504  
00:17:17,669 --> 00:17:16,640  
one day and three or four days later

505  
00:17:20,069 --> 00:17:17,679  
they threw us out in the middle of the

506  
00:17:21,829 --> 00:17:20,079  
woods for winter survival training

507  
00:17:24,230 --> 00:17:21,839  
in the middle of russia so

508  
00:17:26,870 --> 00:17:24,240  
it was you know eight feet deep deep of

509  
00:17:28,470 --> 00:17:26,880  
snow and freezing cold and

510  
00:17:29,909 --> 00:17:28,480  
we survived for three or four days

511  
00:17:31,590 --> 00:17:29,919  
together and that's how we got to know

512  
00:17:33,110 --> 00:17:31,600  
each other initially

513  
00:17:34,789 --> 00:17:33,120

so we needed some skills we needed to

514

00:17:36,390 --> 00:17:34,799

learn how to use teamwork uh

515

00:17:37,990 --> 00:17:36,400

communication

516

00:17:39,430 --> 00:17:38,000

and all those things which transfer over

517

00:17:40,630 --> 00:17:39,440

obviously to making a good crew for

518

00:17:42,230 --> 00:17:40,640

space flight and that's why we do

519

00:17:44,310 --> 00:17:42,240

training like that

520

00:17:45,990 --> 00:17:44,320

then we eventually got into the soyuz

521

00:17:47,110 --> 00:17:46,000

and started training together as a crew

522

00:17:49,190 --> 00:17:47,120

in the vehicle

523

00:17:51,350 --> 00:17:49,200

the russian vehicle which is

524

00:17:53,350 --> 00:17:51,360

which was really great training for me

525

00:17:54,950 --> 00:17:53,360

and our crew together just to see how

526

00:17:57,110 --> 00:17:54,960

each other works and and trying to

527

00:18:00,390 --> 00:17:57,120

figure out everybody's responsibilities

528

00:18:01,750 --> 00:18:00,400

and roles before we take off for space

529

00:18:04,070 --> 00:18:01,760

what else have we done we've done water

530

00:18:06,549 --> 00:18:04,080

survival training together as well

531

00:18:07,590 --> 00:18:06,559

last summer we did that in russia

532

00:18:09,909 --> 00:18:07,600

where they throw you out in the middle

533

00:18:11,350 --> 00:18:09,919

of a lake and a capsule and you kind of

534

00:18:13,029 --> 00:18:11,360

survive and

535

00:18:14,630 --> 00:18:13,039

see if you can use all the equipment and

536

00:18:16,549 --> 00:18:14,640

get out safely so we learned how to do

537

00:18:18,390 --> 00:18:16,559

that in case we actually land in the

538

00:18:20,390 --> 00:18:18,400

water which which doesn't happen very

539

00:18:22,230 --> 00:18:20,400

often thank goodness but uh

540

00:18:24,390 --> 00:18:22,240

if so we'll be ready to go but in

541

00:18:26,950 --> 00:18:24,400

general i think our crew is we're really

542

00:18:29,190 --> 00:18:26,960

coming together we had our we had final

543

00:18:31,190 --> 00:18:29,200

exams as a backup crew in in february

544

00:18:33,110 --> 00:18:31,200

and march and i think at that point we

545

00:18:36,390 --> 00:18:33,120

really started coming together

546

00:18:38,470 --> 00:18:36,400

um as a crew i really saw it

547

00:18:39,990 --> 00:18:38,480

as kind of gelling and really performing

548

00:18:41,990 --> 00:18:40,000

well and we did really well in the final

549

00:18:43,270 --> 00:18:42,000

exams and hopefully we'll do the same

550

00:18:46,789 --> 00:18:43,280

here in a few months and we go back to

551

00:18:48,789 --> 00:18:46,799

russia for our prime flow final exams

552

00:18:50,950 --> 00:18:48,799

andre what's it like been to be training

553

00:18:52,390 --> 00:18:50,960

for your second time up in space station

554

00:19:07,669 --> 00:18:52,400

what's been different what's been the

555

00:19:07,679 --> 00:19:21,029

um

556

00:19:23,510 --> 00:19:22,470

of course the training was very

557

00:19:25,190 --> 00:19:23,520

different

558

00:19:27,270 --> 00:19:25,200

first of all when i was training the

559

00:19:29,909 --> 00:19:27,280

second time everything was more like a

560

00:19:31,350 --> 00:19:29,919

repeat and so it was good to have a

561

00:19:45,750 --> 00:19:31,360

refresher and everything that i learned

562

00:19:49,510 --> 00:19:47,830

on the other hand i think i have a

563

00:19:51,750 --> 00:19:49,520

better understanding than those who are

564

00:19:53,190 --> 00:19:51,760

flying for the first time to really know

565

00:19:55,669 --> 00:19:53,200

what is important

566

00:20:04,470 --> 00:19:55,679

for station and what you can just take

567

00:20:09,270 --> 00:20:07,110

special police but there is no such

568

00:20:11,669 --> 00:20:09,280

thing as extra knowledge or too much

569

00:20:13,750 --> 00:20:11,679

knowledge for a crew member the more you

570

00:20:15,029 --> 00:20:13,760

know the better you are off as a crew

571

00:20:18,870 --> 00:20:15,039

member

572

00:20:22,870 --> 00:20:20,149

any other questions from the media in

573

00:20:27,270 --> 00:20:23,990

robert

574

00:20:29,110 --> 00:20:27,280

um

575

00:20:31,750 --> 00:20:29,120

when you get up there beam will have

576  
00:20:34,390 --> 00:20:31,760  
been uh the bigelow expandable activity

577  
00:20:36,149 --> 00:20:34,400  
module will have been uh inflated and

578  
00:20:38,230 --> 00:20:36,159  
deployed for some time

579  
00:20:41,029 --> 00:20:38,240  
um has there been any further talk about

580  
00:20:42,710 --> 00:20:41,039  
utilization there was some hint at

581  
00:20:45,669 --> 00:20:42,720  
maybe some commercial utilization on

582  
00:20:47,190 --> 00:20:45,679  
board or what activities you might um

583  
00:20:49,270 --> 00:20:47,200  
how you'd interact with it or is it

584  
00:20:51,110 --> 00:20:49,280  
still just inspections

585  
00:20:53,270 --> 00:20:51,120  
from what i've been trained on it's just

586  
00:20:55,830 --> 00:20:53,280  
inspections um so every

587  
00:20:57,270 --> 00:20:55,840  
five to six months we'll go inside

588  
00:20:59,029 --> 00:20:57,280

get some readings from all the sensors

589

00:21:00,870 --> 00:20:59,039

inside send them down to the ground and

590

00:21:02,149 --> 00:21:00,880

then close the hatch so there's not

591

00:21:03,669 --> 00:21:02,159

going to be a whole lot of activity at

592

00:21:05,029 --> 00:21:03,679

least during our mission i think that's

593

00:21:06,789 --> 00:21:05,039

the case for the next couple of years at

594

00:21:08,870 --> 00:21:06,799

least that's the plan right now

595

00:21:12,310 --> 00:21:08,880

that could obviously change as time goes

596

00:21:13,750 --> 00:21:12,320

on but that's a plan for us

597

00:21:15,669 --> 00:21:13,760

all right i saw some other young hands

598

00:21:17,990 --> 00:21:15,679

go up who else has a question

599

00:21:19,350 --> 00:21:18,000

young lady with the blue bows

600

00:21:21,590 --> 00:21:19,360

do you want to stand up and ask a

601  
00:21:23,270 --> 00:21:21,600  
question thank you what are the do nots

602  
00:21:26,950 --> 00:21:23,280  
of space

603  
00:21:31,830 --> 00:21:26,960  
shouldn't you do in space shouldn't you

604  
00:21:36,070 --> 00:21:33,830  
obviously safety of the crew is the

605  
00:21:38,390 --> 00:21:36,080  
really the primary mission for all of us

606  
00:21:40,070 --> 00:21:38,400  
to make sure we all stay safe and so

607  
00:21:42,149 --> 00:21:40,080  
anything that's gonna

608  
00:21:43,669 --> 00:21:42,159  
to be unsafe for us whether it's an

609  
00:21:44,789 --> 00:21:43,679  
activity we're doing we're not doing it

610  
00:21:46,549 --> 00:21:44,799  
correctly

611  
00:21:49,350 --> 00:21:46,559  
those kind of things you just really got

612  
00:21:51,110 --> 00:21:49,360  
to be sure that you're going to be safe

613  
00:21:53,110 --> 00:21:51,120

and we can you know there's of course

614

00:21:54,549 --> 00:21:53,120

emergencies can happen just like they do

615

00:21:56,630 --> 00:21:54,559

here on earth and we've got to be ready

616

00:21:57,669 --> 00:21:56,640

to to handle those

617

00:21:58,870 --> 00:21:57,679

so we don't want to do anything that

618

00:22:01,190 --> 00:21:58,880

maybe would cause one of those

619

00:22:03,510 --> 00:22:01,200

emergencies that would be very bad

620

00:22:06,390 --> 00:22:03,520

um but in general we're trained very

621

00:22:08,310 --> 00:22:06,400

well to know the the dangers and know

622

00:22:10,870 --> 00:22:08,320

kind of what we need to do and not do

623

00:22:12,390 --> 00:22:10,880

procedures we use procedures

624

00:22:14,950 --> 00:22:12,400

religiously so that we don't make

625

00:22:16,870 --> 00:22:14,960

mistakes that may cause one of these bad

626

00:22:18,549 --> 00:22:16,880

things to happen so

627

00:22:20,630 --> 00:22:18,559

we want to make sure we're helping each

628

00:22:22,230 --> 00:22:20,640

other out so as a crew if you have time

629

00:22:23,750 --> 00:22:22,240

to get somebody else to help you that's

630

00:22:25,190 --> 00:22:23,760

always a benefit

631

00:22:26,950 --> 00:22:25,200

so that you're not maybe doing something

632

00:22:29,350 --> 00:22:26,960

on your own and you might skip a step in

633

00:22:30,710 --> 00:22:29,360

the procedure unintentionally but you

634

00:22:32,470 --> 00:22:30,720

still may skip it but you have somebody

635

00:22:34,710 --> 00:22:32,480

else helping you and looking at it that

636

00:22:35,990 --> 00:22:34,720

usually doesn't happen so

637

00:22:37,029 --> 00:22:36,000

i don't know how else to answer that

638

00:22:38,230 --> 00:22:37,039

question

639

00:22:40,230 --> 00:22:38,240

you don't want to you don't want to

640

00:22:42,149 --> 00:22:40,240

steal your buddy's food so that's

641

00:22:44,310 --> 00:22:42,159

probably one thing you don't want to do

642

00:22:45,909 --> 00:22:44,320

because they get mad

643

00:22:48,149 --> 00:22:45,919

but it's okay to trade lunches we can

644

00:22:49,990 --> 00:22:48,159

trade yes we'll do some good trades i'll

645

00:22:52,789 --> 00:22:50,000

get to eat some great russian food and

646

00:22:53,750 --> 00:22:52,799

we'll share our american food with them

647

00:22:55,350 --> 00:22:53,760

and that kind of thing but you don't

648

00:22:57,909 --> 00:22:55,360

want to go stealing all of their food

649

00:22:59,990 --> 00:22:57,919

because they get angry when that happens

650

00:23:02,149 --> 00:23:00,000

and i would as well so that's probably

651  
00:23:04,549 --> 00:23:02,159  
the biggest do not uh when you're up

652  
00:23:06,390 --> 00:23:04,559  
there but also is you know we're living

653  
00:23:08,070 --> 00:23:06,400  
in a small area in general so you just

654  
00:23:09,909 --> 00:23:08,080  
have to kind of maintain your own things

655  
00:23:11,350 --> 00:23:09,919  
don't be a don't be a slob don't have

656  
00:23:13,750 --> 00:23:11,360  
your stuff all over the place because it

657  
00:23:15,350 --> 00:23:13,760  
gets in everybody else's way

658  
00:23:17,430 --> 00:23:15,360  
so that's maybe good training for all of

659  
00:23:18,789 --> 00:23:17,440  
us here on the ground as well

660  
00:23:21,029 --> 00:23:18,799  
so you got to clean your room every week

661  
00:23:22,710 --> 00:23:21,039  
you got to clean your room every day so

662  
00:23:24,789 --> 00:23:22,720  
yeah

663  
00:23:26,710 --> 00:23:24,799

sergey as a first time flyer what's been

664

00:23:31,430 --> 00:23:26,720

the best piece of advice you've been

665

00:23:35,350 --> 00:23:34,230

i hope my best advice is

666

00:23:36,630 --> 00:23:35,360

i'll get

667

00:23:37,909 --> 00:23:36,640

on board

668

00:23:38,710 --> 00:23:37,919

because i have

669

00:23:40,470 --> 00:23:38,720

to

670

00:23:43,830 --> 00:23:40,480

as i call them

671

00:23:46,390 --> 00:23:43,840

the not ip the ep very experienced

672

00:23:51,590 --> 00:23:49,190

and i hope everything will in the future

673

00:23:53,590 --> 00:23:51,600

i'm sure you'll do wonderfully

674

00:23:56,710 --> 00:23:53,600

any other questions from the

675

00:24:00,549 --> 00:23:59,029

how do you adapt in outer space

676

00:24:01,909 --> 00:24:00,559

how do you adapt an abstract that's a

677

00:24:04,710 --> 00:24:01,919

good question your body is pretty

678

00:24:06,630 --> 00:24:04,720

amazing and that it really adapts after

679

00:24:08,390 --> 00:24:06,640

you know three or four days

680

00:24:10,789 --> 00:24:08,400

it adapts really well to this really

681

00:24:12,310 --> 00:24:10,799

strange environment that you're in

682

00:24:13,750 --> 00:24:12,320

if you can imagine you're floating

683

00:24:15,350 --> 00:24:13,760

around but also everything inside your

684

00:24:17,830 --> 00:24:15,360

body is floating around in different

685

00:24:19,190 --> 00:24:17,840

places and it's used to being so

686

00:24:20,789 --> 00:24:19,200

your body kind of reacts to that

687

00:24:23,430 --> 00:24:20,799

initially but then after a couple days

688

00:24:25,190 --> 00:24:23,440

it settles out really nicely and

689

00:24:27,590 --> 00:24:25,200

we have this thing called a fluid shift

690

00:24:29,750 --> 00:24:27,600

so a lot of the water and fluid in your

691

00:24:31,830 --> 00:24:29,760

body kind of shifts up towards your head

692

00:24:33,510 --> 00:24:31,840

and so you may notice we'll watch if

693

00:24:35,269 --> 00:24:33,520

you're watching saturday or sunday after

694

00:24:37,350 --> 00:24:35,279

you see the crew dock to the space

695

00:24:39,350 --> 00:24:37,360

station you may see their faces kind of

696

00:24:40,630 --> 00:24:39,360

all very full looking

697

00:24:42,070 --> 00:24:40,640

and that's because the fluid is kind of

698

00:24:43,909 --> 00:24:42,080

shifted up towards their head and that's

699

00:24:45,590 --> 00:24:43,919

very common

700

00:24:47,110 --> 00:24:45,600

and so your body sometimes it stays

701

00:24:48,789 --> 00:24:47,120

there sometimes it goes away everybody's

702

00:24:50,710 --> 00:24:48,799

a little bit different but in general

703

00:24:52,070 --> 00:24:50,720

your body adapts really well and you get

704

00:24:53,830 --> 00:24:52,080

used to

705

00:24:55,750 --> 00:24:53,840

being in a place where guess what up

706

00:24:57,590 --> 00:24:55,760

there's no upside down there's no up or

707

00:24:59,590 --> 00:24:57,600

down you can be upside down talking to

708

00:25:00,390 --> 00:24:59,600

me and it's not weird it's totally

709

00:25:02,149 --> 00:25:00,400

normal

710

00:25:03,669 --> 00:25:02,159

all right so it's for humans on earth

711

00:25:05,669 --> 00:25:03,679

it's very tough to kind of get your

712

00:25:07,110 --> 00:25:05,679

brain around that but after a few days

713

00:25:08,549 --> 00:25:07,120

when you see somebody hanging upside

714

00:25:09,909 --> 00:25:08,559

down talking to you you're like well

715

00:25:12,230 --> 00:25:09,919

that's kind of cool

716

00:25:14,230 --> 00:25:12,240

and it's just normal so your body reacts

717

00:25:15,990 --> 00:25:14,240

really well

718

00:25:18,470 --> 00:25:16,000

do we have any social media questions

719

00:25:20,870 --> 00:25:18,480

yeah um we have one from elisa on

720

00:25:22,950 --> 00:25:20,880

twitter and she is wondering along with

721

00:25:24,549 --> 00:25:22,960

new experiments are there any ongoing

722

00:25:26,630 --> 00:25:24,559

experiments that you will get to either

723

00:25:28,630 --> 00:25:26,640

continue or wrap up from

724

00:25:30,470 --> 00:25:28,640

something the last crew set up

725

00:25:32,070 --> 00:25:30,480

ah let me think about that i know

726

00:25:33,990 --> 00:25:32,080

there's plenty that

727

00:25:35,190 --> 00:25:34,000

will be ongoing fluid shifts is one of

728

00:25:36,950 --> 00:25:35,200

them that i kind of mentioned a minute

729

00:25:39,510 --> 00:25:36,960

ago but it's an experiment where we're

730

00:25:41,190 --> 00:25:39,520

trying to quantify why this phenomenon

731

00:25:42,710 --> 00:25:41,200

happens and what it's actually doing to

732

00:25:44,950 --> 00:25:42,720

our bodies

733

00:25:47,909 --> 00:25:44,960

i will be helping out sergei in this

734

00:25:49,990 --> 00:25:47,919

fluid shifts experiments um the russians

735

00:25:51,990 --> 00:25:50,000

and and and all the other astronauts are

736

00:25:53,350 --> 00:25:52,000

using this um so we do some of the

737

00:25:56,149 --> 00:25:53,360

activities on the russian side of the

738

00:25:58,149 --> 00:25:56,159

space station and some on the u.s side

739

00:25:59,430 --> 00:25:58,159

also peggy whitson

740

00:26:00,950 --> 00:25:59,440

and kate rubins are doing that

741

00:26:03,669 --> 00:26:00,960

experiment so i will hopefully get to

742

00:26:05,269 --> 00:26:03,679

help them out as well

743

00:26:07,029 --> 00:26:05,279

there are what are other ones i'm

744

00:26:08,710 --> 00:26:07,039

thinking of

745

00:26:11,350 --> 00:26:08,720

there's plenty that have to do with bone

746

00:26:12,789 --> 00:26:11,360

loss and muscle loss that most of us

747

00:26:15,110 --> 00:26:12,799

have signed up to

748

00:26:16,789 --> 00:26:15,120

participate in so those will i will

749

00:26:18,870 --> 00:26:16,799

learn obviously from the folks when i

750

00:26:20,310 --> 00:26:18,880

get there how to do these things and

751

00:26:22,230 --> 00:26:20,320

it'll carry on to me and then i'll pass

752

00:26:24,149 --> 00:26:22,240

them along to the next folks so that we

753

00:26:26,549 --> 00:26:24,159

can hopefully try to quantify you know

754

00:26:28,710 --> 00:26:26,559

why we're losing bone bone loss or bone

755

00:26:30,470 --> 00:26:28,720

mass excuse me or in bone density and be

756

00:26:34,230 --> 00:26:30,480

able to help folks as we try to get out

757

00:26:38,149 --> 00:26:35,990

awesome and we have another one from

758

00:26:39,990 --> 00:26:38,159

mariana on twitter and she's wondering

759

00:26:41,510 --> 00:26:40,000

what the two day rendezvous is like for

760

00:26:42,950 --> 00:26:41,520

you do you have to be strapped into your

761

00:26:44,789 --> 00:26:42,960

seat the whole time or can you get up

762

00:26:46,870 --> 00:26:44,799

and move around what is that like yeah

763

00:26:48,070 --> 00:26:46,880

that's a great question so we're like

764

00:26:50,390 --> 00:26:48,080

like you mentioned we're gonna get to

765

00:26:52,950 --> 00:26:50,400

experience this two-day rendezvous in a

766

00:26:54,070 --> 00:26:52,960

very small volume um so it'll be really

767

00:26:55,269 --> 00:26:54,080

interesting

768

00:26:56,710 --> 00:26:55,279

um

769

00:26:59,110 --> 00:26:56,720

what you do get to get out of your seat

770

00:27:01,510 --> 00:26:59,120

to answer your question um so after

771

00:27:03,510 --> 00:27:01,520

several hours you get into space

772

00:27:04,950 --> 00:27:03,520

you get things all set up on the vehicle

773

00:27:06,470 --> 00:27:04,960

you run through your checklist and then

774

00:27:08,149 --> 00:27:06,480

you get to get out and get out of your

775

00:27:09,909 --> 00:27:08,159

spacesuit actually too

776

00:27:11,830 --> 00:27:09,919

which will be nice after being in that

777

00:27:13,430 --> 00:27:11,840

for several hours so we'll get out of

778

00:27:14,950 --> 00:27:13,440

that we'll get comfortable and like

779

00:27:17,190 --> 00:27:14,960

shorts and a t-shirt and we'll kind of

780

00:27:18,950 --> 00:27:17,200

hang out and those clothes for the

781

00:27:20,470 --> 00:27:18,960

couple days that we're doing these other

782

00:27:22,630 --> 00:27:20,480

tests on the vehicle

783

00:27:23,990 --> 00:27:22,640

and while we're orbiting the earth

784

00:27:26,149 --> 00:27:24,000

just prior to getting to the space

785

00:27:28,149 --> 00:27:26,159

station we'll get back in our spacesuits

786

00:27:29,350 --> 00:27:28,159

and get back in our seats

787

00:27:31,669 --> 00:27:29,360

strapped in

788

00:27:32,950 --> 00:27:31,679

just like we were at launch

789

00:27:34,470 --> 00:27:32,960

and that's to protect us in case

790

00:27:36,070 --> 00:27:34,480

something happens is we're going to dock

791

00:27:38,470 --> 00:27:36,080

to the space station

792

00:27:39,830 --> 00:27:38,480

so once we get there of course then

793

00:27:42,389 --> 00:27:39,840

it takes a while for all the pressures

794

00:27:44,149 --> 00:27:42,399

to equalize we get out of our spacesuits

795

00:27:45,590 --> 00:27:44,159

get into a nice looking flight suit

796

00:27:47,110 --> 00:27:45,600

because we'll get to

797

00:27:48,870 --> 00:27:47,120

come across the hatch and have a little

798

00:27:50,470 --> 00:27:48,880

video conference with our family shortly

799

00:27:51,750 --> 00:27:50,480

after that so that's how that's going to

800

00:27:53,350 --> 00:27:51,760

work

801  
00:27:54,950 --> 00:27:53,360  
awesome and we have one more fun one

802  
00:27:56,389 --> 00:27:54,960  
that i think uh

803  
00:27:58,710 --> 00:27:56,399  
shane you might be interested in we have

804  
00:27:59,830 --> 00:27:58,720  
a question from kelly on twitter

805  
00:28:01,510 --> 00:27:59,840  
and you mentioned you're going to be

806  
00:28:03,430 --> 00:28:01,520  
taking pictures of golf courses from

807  
00:28:05,909 --> 00:28:03,440  
space are there any other live sporting

808  
00:28:07,909 --> 00:28:05,919  
events you plan to tune into from space

809  
00:28:11,029 --> 00:28:07,919  
while you're up there i plan yeah as

810  
00:28:12,630 --> 00:28:11,039  
many as possible i'm a big sports fan

811  
00:28:14,149 --> 00:28:12,640  
so obviously we'll be up there in

812  
00:28:16,310 --> 00:28:14,159  
college football season and the pro

813  
00:28:18,710 --> 00:28:16,320

football season so i look forward to

814

00:28:19,990 --> 00:28:18,720

watching um as many games as i can we

815

00:28:21,029 --> 00:28:20,000

don't have a lot of free time by the way

816

00:28:22,710 --> 00:28:21,039

but

817

00:28:24,389 --> 00:28:22,720

they can stream up games to us which

818

00:28:26,710 --> 00:28:24,399

will be nice to kind of catch maybe 10

819

00:28:28,149 --> 00:28:26,720

15 minutes at a time of a game but

820

00:28:30,310 --> 00:28:28,159

just to stay connected i think that will

821

00:28:31,830 --> 00:28:30,320

help me stay connected with the earth

822

00:28:34,070 --> 00:28:31,840

the world series is going on i'm a

823

00:28:35,430 --> 00:28:34,080

baseball fan as well so

824

00:28:36,870 --> 00:28:35,440

they will be tied into that and of

825

00:28:38,630 --> 00:28:36,880

course the super bowl next year will be

826

00:28:39,990 --> 00:28:38,640

in houston so we're going to have a lot

827

00:28:42,470 --> 00:28:40,000

of events maybe

828

00:28:46,070 --> 00:28:42,480

tied into the super bowl to be able to

829

00:28:49,909 --> 00:28:47,990

any other questions in the room yes

830

00:28:50,950 --> 00:28:49,919

ma'am hi sophie sanchez with captain

831

00:28:53,669 --> 00:28:50,960

chicago

832

00:28:55,190 --> 00:28:53,679

um shane uh building on the science

833

00:28:57,430 --> 00:28:55,200

experiments question that was asked

834

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

earlier uh your first stay on the

835

00:29:00,950 --> 00:28:59,120

station was more of a

836

00:29:02,789 --> 00:29:00,960

maintenance and building experience and

837

00:29:05,510 --> 00:29:02,799

this is going to be very science-heavy

838

00:29:06,950 --> 00:29:05,520

um do you find the training and the

839

00:29:08,710 --> 00:29:06,960

process for that more or less

840

00:29:10,789 --> 00:29:08,720

challenging

841

00:29:12,389 --> 00:29:10,799

um i would say it's equally as

842

00:29:13,830 --> 00:29:12,399

challenging and this is really going to

843

00:29:15,909 --> 00:29:13,840

get i'm going to get the best of both

844

00:29:17,430 --> 00:29:15,919

worlds because really my first month

845

00:29:19,590 --> 00:29:17,440

like i mentioned is all about doing

846

00:29:21,029 --> 00:29:19,600

space walks and it's very similar to my

847

00:29:22,549 --> 00:29:21,039

shuttle mission and we went out there

848

00:29:24,070 --> 00:29:22,559

and just went outside and did you know

849

00:29:26,789 --> 00:29:24,080

repaired some things put some new things

850

00:29:28,630 --> 00:29:26,799

in and that'll be very very similar

851  
00:29:30,149 --> 00:29:28,640  
but once november december january

852  
00:29:31,909 --> 00:29:30,159  
february it will be very science

853  
00:29:33,669 --> 00:29:31,919  
intensive like you mentioned

854  
00:29:35,830 --> 00:29:33,679  
it's been i'm not a scientist by trade

855  
00:29:36,870 --> 00:29:35,840  
so it's been really interesting to me to

856  
00:29:38,230 --> 00:29:36,880  
kind of learn about all these

857  
00:29:41,190 --> 00:29:38,240  
experiments and meet some of the

858  
00:29:43,669 --> 00:29:41,200  
scientists that have really dedicated a

859  
00:29:45,909 --> 00:29:43,679  
huge chunk of their careers to a certain

860  
00:29:47,350 --> 00:29:45,919  
experiment we're going to work on so we

861  
00:29:49,110 --> 00:29:47,360  
have a lot of responsibility to make

862  
00:29:51,029 --> 00:29:49,120  
sure we do it correctly for that

863  
00:29:52,310 --> 00:29:51,039

scientist and they're from all around

864

00:29:53,990 --> 00:29:52,320

the world so it's kind of neat to be

865

00:29:56,310 --> 00:29:54,000

able to work with all these folks from

866

00:29:58,149 --> 00:29:56,320

from all around the world and you know

867

00:29:59,750 --> 00:29:58,159

five ten years from now i think all this

868

00:30:00,789 --> 00:29:59,760

whatever the science that we do now will

869

00:30:02,870 --> 00:30:00,799

actually be

870

00:30:04,470 --> 00:30:02,880

getting published and and realized and

871

00:30:06,070 --> 00:30:04,480

helping people back here on earth so

872

00:30:09,510 --> 00:30:06,080

that's kind of an exciting thing for me

873

00:30:12,149 --> 00:30:09,520

to be part of that

874

00:30:16,630 --> 00:30:12,159

any other questions

875

00:30:19,909 --> 00:30:18,549

how do you control the robots who uses

876

00:30:21,430 --> 00:30:19,919

space

877

00:30:22,630 --> 00:30:21,440

how do we control the robots is that the

878

00:30:24,549 --> 00:30:22,640

question yes sir

879

00:30:25,909 --> 00:30:24,559

so we have a robotic arm that we use

880

00:30:27,510 --> 00:30:25,919

that's on the outside of the space

881

00:30:29,190 --> 00:30:27,520

station so we control that from the

882

00:30:31,430 --> 00:30:29,200

inside with hand controllers very

883

00:30:33,510 --> 00:30:31,440

similar to like a fighter jet or a

884

00:30:36,470 --> 00:30:33,520

helicopter maybe or the simulators that

885

00:30:38,389 --> 00:30:36,480

you guys may have on video games so we

886

00:30:39,590 --> 00:30:38,399

control it with that and we have cameras

887

00:30:41,510 --> 00:30:39,600

all over the outside of the space

888

00:30:43,990 --> 00:30:41,520

station as well as on the robotic

889

00:30:45,190 --> 00:30:44,000

robotic arm itself which help us to make

890

00:30:46,549 --> 00:30:45,200

sure we're not going to run into

891

00:30:48,630 --> 00:30:46,559

anything so that's very important of

892

00:30:50,470 --> 00:30:48,640

course but we use that to move things

893

00:30:51,830 --> 00:30:50,480

around we move people around sometimes

894

00:30:53,510 --> 00:30:51,840

on the end of that and we move equipment

895

00:30:55,269 --> 00:30:53,520

around as well

896

00:30:57,190 --> 00:30:55,279

we have some other we have a couple of

897

00:30:59,350 --> 00:30:57,200

those arms one from canada on the

898

00:31:01,110 --> 00:30:59,360

outside and the japanese also have a

899

00:31:02,630 --> 00:31:01,120

kind of a smaller robotic arm that we

900

00:31:04,789 --> 00:31:02,640

use sometimes

901  
00:31:06,470 --> 00:31:04,799  
to do similar things

902  
00:31:08,389 --> 00:31:06,480  
the robots on board you may have heard

903  
00:31:10,310 --> 00:31:08,399  
of a thing called robonauts that's one

904  
00:31:12,310 --> 00:31:10,320  
of the the experiments we'll get to mess

905  
00:31:14,630 --> 00:31:12,320  
around with while we're up there but it

906  
00:31:16,870 --> 00:31:14,640  
looks like uh kind of looks like a a

907  
00:31:18,789 --> 00:31:16,880  
space spacey astronaut

908  
00:31:21,350 --> 00:31:18,799  
that may be out of a movie

909  
00:31:24,310 --> 00:31:21,360  
but we we get to to do some neat tasks

910  
00:31:25,750 --> 00:31:24,320  
with that um repair it when it breaks so

911  
00:31:27,990 --> 00:31:25,760  
sometimes it doesn't feel so good so we

912  
00:31:29,830 --> 00:31:28,000  
have to help it out and repair it but

913  
00:31:32,070 --> 00:31:29,840

otherwise it'll be doing some tasks and

914

00:31:33,350 --> 00:31:32,080

all that technology is is kind of fun

915

00:31:35,350 --> 00:31:33,360

right now but it's going to be things

916

00:31:37,909 --> 00:31:35,360

that we'll use down the road as we get

917

00:31:42,389 --> 00:31:37,919

into going into out of low earth orbit

918

00:31:46,470 --> 00:31:44,470

i saw a few more hands going up i think

919

00:31:49,430 --> 00:31:46,480

yes ma'am

920

00:31:51,669 --> 00:31:49,440

how long before a man reaches mars how

921

00:31:54,070 --> 00:31:51,679

long before a man reaches mars that's a

922

00:31:56,149 --> 00:31:54,080

great question um of course i don't have

923

00:31:58,070 --> 00:31:56,159

the exact answer but my guess would be i

924

00:32:00,789 --> 00:31:58,080

don't know maybe 20 years from now so

925

00:32:02,149 --> 00:32:00,799

when you when you kids are you know old

926  
00:32:03,909 --> 00:32:02,159  
like us

927  
00:32:06,149 --> 00:32:03,919  
we'll hopefully be sending people to

928  
00:32:08,470 --> 00:32:06,159  
mars it'll be your generation that

929  
00:32:10,070 --> 00:32:08,480  
actually sends the first person to mars

930  
00:32:11,269 --> 00:32:10,080  
so that's kind of cool if you guys are

931  
00:32:12,710 --> 00:32:11,279  
interested in that kind of thing maybe

932  
00:32:13,909 --> 00:32:12,720  
it'll be you

933  
00:32:17,750 --> 00:32:13,919  
i don't know would anyone have you three

934  
00:32:17,760 --> 00:32:21,590  
we'll leave that to you guys

935  
00:32:25,830 --> 00:32:23,110  
and you look

936  
00:32:28,149 --> 00:32:25,840  
all the way in the back second one in

937  
00:32:31,669 --> 00:32:28,159  
yes sir

938  
00:32:34,230 --> 00:32:31,679

does every asthma have an opportunity to

939

00:32:36,310 --> 00:32:34,240

go into space does every astronaut have

940

00:32:38,630 --> 00:32:36,320

an opportunity to go to space very good

941

00:32:39,750 --> 00:32:38,640

question um i would say in general yes

942

00:32:42,230 --> 00:32:39,760

every now and then there's something

943

00:32:44,070 --> 00:32:42,240

that happens maybe medically that it

944

00:32:45,110 --> 00:32:44,080

won't allow them to go to space but in

945

00:32:47,029 --> 00:32:45,120

general

946

00:32:48,470 --> 00:32:47,039

you come as an astronaut candidate you

947

00:32:50,389 --> 00:32:48,480

go through training

948

00:32:52,789 --> 00:32:50,399

once you pass all of those exams then

949

00:32:53,669 --> 00:32:52,799

you're ready to be assigned to a mission

950

00:32:56,310 --> 00:32:53,679

and

951

00:32:57,430 --> 00:32:56,320

i think in general most cases that's

952

00:33:01,110 --> 00:32:57,440

you'll get assigned to a mission and

953

00:33:01,120 --> 00:33:08,149

i think i saw another handbag yes sir

954

00:33:12,630 --> 00:33:10,230

what's the name of the rocket used to go

955

00:33:18,149 --> 00:33:12,640

to space

956

00:33:22,230 --> 00:33:19,669

the rocket has

957

00:33:25,110 --> 00:33:22,240

the same name as a

958

00:33:27,830 --> 00:33:25,120

vehicle as i use but a different uh

959

00:33:31,430 --> 00:33:27,840

additional part a rocket has uh so

960

00:33:34,950 --> 00:33:31,440

useful and the vehicle is i use ms

961

00:33:37,509 --> 00:33:34,960

it depends on some technical nuances

962

00:33:40,230 --> 00:33:37,519

so the soyuz is the way we americans say

963

00:33:42,149 --> 00:33:40,240

it um it's called sius in russian like

964

00:33:44,149 --> 00:33:42,159

sergey mentioned so if you ever hear

965

00:33:45,669 --> 00:33:44,159

soyuz it could be talking about the

966

00:33:47,830 --> 00:33:45,679

rocket or it could be talking about the

967

00:33:48,870 --> 00:33:47,840

spacecraft and like you mentioned

968

00:33:50,870 --> 00:33:48,880

they're sitting at you know the

969

00:33:53,509 --> 00:33:50,880

spacecraft sits on top of the rocket and

970

00:33:55,350 --> 00:33:53,519

they just have a little a couple letters

971

00:33:57,509 --> 00:33:55,360

at the end of the soyuz that make it

972

00:33:59,830 --> 00:33:57,519

different so the ms if you see ms that

973

00:34:05,350 --> 00:33:59,840

means that's the spacecraft we're on if

974

00:34:09,109 --> 00:34:06,789

yes sir

975

00:34:11,030 --> 00:34:09,119

how long do you stay in space

976

00:34:12,710 --> 00:34:11,040

so we're gonna all the missions are a

977

00:34:14,389 --> 00:34:12,720

little bit different in general we say

978

00:34:16,389 --> 00:34:14,399

six months but it usually ends up being

979

00:34:18,069 --> 00:34:16,399

about five and a half months and our

980

00:34:19,909 --> 00:34:18,079

mission will end up being if it stays

981

00:34:23,270 --> 00:34:19,919

the way it's planned right now it'll be

982

00:34:25,909 --> 00:34:24,790

long time

983

00:34:27,190 --> 00:34:25,919

you guys would probably stay a little

984

00:34:29,589 --> 00:34:27,200

longer if you could

985

00:34:30,710 --> 00:34:29,599

yeah we'll see

986

00:34:32,230 --> 00:34:30,720

we'll see

987

00:34:35,669 --> 00:34:32,240

it's always fun but i think we're always

988

00:34:37,190 --> 00:34:35,679

ready to come home

989

00:34:38,550 --> 00:34:37,200

what will you miss most when you're in

990

00:34:40,149 --> 00:34:38,560

orbit

991

00:34:41,829 --> 00:34:40,159

i'll certainly miss my family and

992

00:34:43,829 --> 00:34:41,839

friends and uh

993

00:34:45,109 --> 00:34:43,839

just being with them

994

00:34:46,950 --> 00:34:45,119

we've got some

995

00:34:47,909 --> 00:34:46,960

a lot of dynamics going on in our family

996

00:34:49,349 --> 00:34:47,919

with

997

00:34:51,829 --> 00:34:49,359

kids going to college and things so i

998

00:34:53,589 --> 00:34:51,839

kind of miss those first experiences for

999

00:34:55,270 --> 00:34:53,599

my daughters but

1000

00:34:57,829 --> 00:34:55,280

i get to be in touch obviously but just

1001

00:35:00,150 --> 00:34:57,839

not here present physically so

1002

00:35:03,030 --> 00:35:00,160

that's what i'll miss the most

1003

00:35:05,190 --> 00:35:03,040

what will you guys miss about earth

1004

00:35:08,069 --> 00:35:05,200

of course my son my parents

1005

00:35:10,950 --> 00:35:08,079

my relatives um

1006

00:35:14,829 --> 00:35:10,960

but i think uh

1007

00:35:16,630 --> 00:35:14,839

stay in between the sky yeah i mean

1008

00:35:18,870 --> 00:35:16,640

space and

1009

00:35:20,870 --> 00:35:18,880

earth

1010

00:35:23,109 --> 00:35:20,880

great opportunity to feel

1011

00:35:24,710 --> 00:35:23,119

that they're

1012

00:35:26,950 --> 00:35:24,720

near them near me

1013

00:35:35,589 --> 00:35:26,960

and then

1014

00:35:40,710 --> 00:35:38,230

family friends and something from earth

1015

00:35:43,430 --> 00:35:41,829

very good

1016

00:35:47,270 --> 00:35:43,440

yeah there's no pizza in space for you

1017

00:35:52,310 --> 00:35:49,829

any other questions

1018

00:35:54,630 --> 00:35:52,320

oh fantastic that's um somewhat related

1019

00:35:56,310 --> 00:35:54,640

to that topic elisa wants to know how do

1020

00:35:57,589 --> 00:35:56,320

you communicate with your families when

1021

00:35:59,349 --> 00:35:57,599

you're in space

1022

00:36:01,910 --> 00:35:59,359

we have several ways to communicate

1023

00:36:03,270 --> 00:36:01,920

email is is now almost like it is here

1024

00:36:05,270 --> 00:36:03,280

on earth so it's

1025

00:36:06,710 --> 00:36:05,280

it's pretty instantaneous sometimes we

1026

00:36:09,190 --> 00:36:06,720

have issues but in general it's

1027

00:36:10,790 --> 00:36:09,200

instantaneous email so that's nice

1028

00:36:12,950 --> 00:36:10,800

we have a phone that we can use to call

1029

00:36:14,790 --> 00:36:12,960

home as well they can't call us but we

1030

00:36:16,950 --> 00:36:14,800

can call them

1031

00:36:18,870 --> 00:36:16,960

so it's kind of a one-way deal

1032

00:36:20,870 --> 00:36:18,880

and once a week we'll get to do a video

1033

00:36:22,790 --> 00:36:20,880

conference with our families usually

1034

00:36:24,550 --> 00:36:22,800

schedule on the weekend during our down

1035

00:36:26,069 --> 00:36:24,560

time so that will be a nice

1036

00:36:27,430 --> 00:36:26,079

nice thing to not just be able to talk

1037

00:36:28,790 --> 00:36:27,440

to them but to see them and see what's

1038

00:36:30,470 --> 00:36:28,800

going on

1039

00:36:31,829 --> 00:36:30,480

and now it's it's so nice because you

1040

00:36:33,510 --> 00:36:31,839

can do it on an ipad or they could be

1041

00:36:35,109 --> 00:36:33,520

anywhere they don't have to be here at

1042

00:36:36,950 --> 00:36:35,119

johnson space center

1043

00:36:40,470 --> 00:36:36,960

like they used to be

1044

00:36:42,870 --> 00:36:40,480

what other ways can we communicate uh i

1045

00:36:44,630 --> 00:36:42,880

think that's about it in general so

1046

00:36:46,470 --> 00:36:44,640

thanks

1047

00:36:48,950 --> 00:36:46,480

and we have a call on the phone bridge

1048

00:36:54,470 --> 00:36:51,990

hi um i was curious what

1049

00:36:56,790 --> 00:36:54,480

the most complicated experiment each of

1050

00:37:00,150 --> 00:36:56,800

you has trained to do is or you know an

1051

00:37:04,550 --> 00:37:01,750

good question i'm trying to think

1052

00:37:07,829 --> 00:37:04,560

they're all complicated for me so clear

1053

00:37:09,750 --> 00:37:07,839

now it's all of them actually are

1054

00:37:11,829 --> 00:37:09,760

even with very limited background in

1055

00:37:13,430 --> 00:37:11,839

science like myself

1056

00:37:15,270 --> 00:37:13,440

their procedures are so well laid out

1057

00:37:17,190 --> 00:37:15,280

and in the history and the background of

1058

00:37:18,550 --> 00:37:17,200

the experiment that we get

1059

00:37:20,710 --> 00:37:18,560

with the kind of a packet of the

1060

00:37:21,990 --> 00:37:20,720

procedures is so well done

1061

00:37:23,589 --> 00:37:22,000

and that's done by a lot of people here

1062

00:37:26,790 --> 00:37:23,599

on the ground to make sure that we can

1063

00:37:28,390 --> 00:37:26,800

all just perform the experiment without

1064

00:37:30,150 --> 00:37:28,400

maybe messing up the data or the

1065

00:37:32,790 --> 00:37:30,160

research so

1066

00:37:35,510 --> 00:37:32,800

i don't really consider any of them

1067

00:37:36,950 --> 00:37:35,520

any more difficult than the others

1068

00:37:39,750 --> 00:37:36,960

maybe i'll have a different answer when

1069

00:37:41,990 --> 00:37:39,760

i get home but as for now

1070

00:37:44,950 --> 00:37:42,000

that's what i think

1071

00:37:47,670 --> 00:37:44,960

i think the most complicated experiment

1072

00:37:52,630 --> 00:37:48,630

expect

1073

00:37:53,829 --> 00:37:52,640

on board we'll circle up it's a is a

1074

00:37:57,589 --> 00:37:53,839

experiment

1075

00:37:58,870 --> 00:37:57,599

using mario's equipment

1076  
00:38:00,310 --> 00:37:58,880  
moscow

1077  
00:38:02,710 --> 00:38:00,320  
atrophy

1078  
00:38:04,390 --> 00:38:02,720  
research experiment system something

1079  
00:38:05,589 --> 00:38:04,400  
like that and

1080  
00:38:09,109 --> 00:38:05,599  
it

1081  
00:38:12,230 --> 00:38:09,119  
takes

1082  
00:38:13,750 --> 00:38:12,240  
a half of module columbus european

1083  
00:38:16,829 --> 00:38:13,760  
and a lot of

1084  
00:38:19,589 --> 00:38:16,839  
equipment a lot of laptop

1085  
00:38:29,349 --> 00:38:19,599  
cables and

1086  
00:38:29,359 --> 00:38:46,870  
experience

1087  
00:38:52,069 --> 00:38:49,589  
the entire space flight is like one big

1088  
00:38:54,069 --> 00:38:52,079

experiment not just ours but everyone's

1089

00:38:55,910 --> 00:38:54,079

it has many parts for example we're

1090

00:38:58,230 --> 00:38:55,920

testing new technology

1091

00:38:59,829 --> 00:38:58,240

there's a scientific component

1092

00:39:01,910 --> 00:38:59,839

we'll do experiments on the mice that

1093

00:39:03,510 --> 00:39:01,920

will fly along with us and the crew

1094

00:39:12,069 --> 00:39:03,520

itself is

1095

00:39:12,079 --> 00:39:27,270

partner

1096

00:39:31,750 --> 00:39:29,270

and the results of this big experiment

1097

00:39:33,670 --> 00:39:31,760

that is called our space flight

1098

00:39:35,109 --> 00:39:33,680

hopefully will be useful for the

1099

00:39:37,829 --> 00:39:35,119

children that are sitting right here in

1100

00:39:42,390 --> 00:39:37,839

front of us in their life and also in

1101

00:39:48,950 --> 00:39:43,589

do you have any other questions in the

1102

00:39:52,950 --> 00:39:50,870

do you have any social media yeah we i

1103

00:39:54,950 --> 00:39:52,960

think this one is uh a good one to be

1104

00:39:56,550 --> 00:39:54,960

related to uh preparing for space and

1105

00:39:57,750 --> 00:39:56,560

doing some of the complicated things you

1106

00:40:01,750 --> 00:39:57,760

do there

1107

00:40:03,910 --> 00:40:01,760

so tom on twitter is uh wondering how

1108

00:40:06,630 --> 00:40:03,920

realistic the pool work in the in the

1109

00:40:08,870 --> 00:40:06,640

mbf is to actually doing the work in

1110

00:40:11,349 --> 00:40:08,880

space is that a good preparation for you

1111

00:40:13,829 --> 00:40:11,359

yeah the pool the nbl neutral buoyancy

1112

00:40:15,589 --> 00:40:13,839

lab is an amazing training facility

1113

00:40:18,069 --> 00:40:15,599

it's not perfect of course because guess

1114

00:40:21,670 --> 00:40:18,079

what the pool still has gravity

1115

00:40:23,670 --> 00:40:21,680

but in general it's a really nice analog

1116

00:40:25,990 --> 00:40:23,680

so that when we get in the pool we have

1117

00:40:27,829 --> 00:40:26,000

divers that kind of move weights around

1118

00:40:29,670 --> 00:40:27,839

our suit to to make us float so when

1119

00:40:31,030 --> 00:40:29,680

they let go of us you don't sink or

1120

00:40:33,510 --> 00:40:31,040

float that's why they call it neutrally

1121

00:40:35,910 --> 00:40:33,520

buoyant and so that's kind of simulates

1122

00:40:37,349 --> 00:40:35,920

space right but

1123

00:40:39,589 --> 00:40:37,359

if you go upside down in the pool guess

1124

00:40:41,190 --> 00:40:39,599

what the blood still rushes to your head

1125

00:40:42,790 --> 00:40:41,200

the weight of the spacesuit is on your

1126

00:40:45,109 --> 00:40:42,800

shoulders so

1127

00:40:46,710 --> 00:40:45,119

that's not realistic in space you can go

1128

00:40:48,710 --> 00:40:46,720

in any orientation in space and you're

1129

00:40:50,150 --> 00:40:48,720

going to feel exactly the same

1130

00:40:52,150 --> 00:40:50,160

so that's the biggest difference but in

1131

00:40:54,309 --> 00:40:52,160

general with the space station the whole

1132

00:40:55,670 --> 00:40:54,319

space station pretty much in the water

1133

00:40:57,030 --> 00:40:55,680

everything just like it is on the

1134

00:40:59,190 --> 00:40:57,040

outside the space station it's an

1135

00:41:01,349 --> 00:40:59,200

incredible trainer for knowing where you

1136

00:41:03,190 --> 00:41:01,359

are and then knowing how to do the tasks

1137

00:41:05,349 --> 00:41:03,200

that we're being trained to do

1138

00:41:06,630 --> 00:41:05,359

and then some potentially that

1139

00:41:07,990 --> 00:41:06,640

you know we don't really get trained on

1140

00:41:09,510 --> 00:41:08,000

but if something breaks we have to go

1141

00:41:11,670 --> 00:41:09,520

fix it just having that knowledge of

1142

00:41:13,349 --> 00:41:11,680

where things are and how to take you

1143

00:41:15,030 --> 00:41:13,359

know certain equipment in and out and

1144

00:41:16,550 --> 00:41:15,040

put new ones in and out

1145

00:41:19,109 --> 00:41:16,560

that's all incredible training that we

1146

00:41:20,950 --> 00:41:19,119

get at the nbl

1147

00:41:24,309 --> 00:41:20,960

what's been the most challenging

1148

00:41:26,870 --> 00:41:24,319

part of uh training for each one of you

1149

00:41:28,950 --> 00:41:26,880

um for me it's probably the travel

1150

00:41:30,550 --> 00:41:28,960

there's a lot of travel involved um over

1151

00:41:32,390 --> 00:41:30,560

these couple years you're probably gone

1152

00:41:34,390 --> 00:41:32,400

about half the time i would say uh and

1153

00:41:36,309 --> 00:41:34,400

we get to train it's really a unique

1154

00:41:39,109 --> 00:41:36,319

experience we get to train

1155

00:41:41,109 --> 00:41:39,119

in russia and japan and in germany where

1156

00:41:43,829 --> 00:41:41,119

the european astronaut training center

1157

00:41:45,829 --> 00:41:43,839

is so that's that's really unique um

1158

00:41:47,109 --> 00:41:45,839

because all those countries have modules

1159

00:41:48,790 --> 00:41:47,119

on the space station so they want to

1160

00:41:51,190 --> 00:41:48,800

make sure we're trained on their modules

1161

00:41:54,069 --> 00:41:51,200

as well as many of uh experiments that

1162

00:41:56,150 --> 00:41:54,079

those countries specifically want us to

1163

00:41:58,230 --> 00:41:56,160

perform while we're up in space

1164

00:42:00,470 --> 00:41:58,240

most of our time for for us is spinning

1165

00:42:03,109 --> 00:42:00,480

russia now because the vehicle we fly on

1166

00:42:05,270 --> 00:42:03,119

is russian all right the soyuz vehicle

1167

00:42:07,589 --> 00:42:05,280

obviously is is made in russia and we

1168

00:42:08,950 --> 00:42:07,599

train on it in star city russia

1169

00:42:10,630 --> 00:42:08,960

so that's where i see these gentlemen

1170

00:42:11,829 --> 00:42:10,640

most often

1171

00:42:13,829 --> 00:42:11,839

but that's probably been the hardest

1172

00:42:16,470 --> 00:42:13,839

thing just doing that and missing

1173

00:42:19,510 --> 00:42:16,480

events of my kids and missing my wife

1174

00:42:22,790 --> 00:42:19,520

and other family things

1175

00:42:24,950 --> 00:42:22,800

i agree with shane about

1176

00:42:27,270 --> 00:42:24,960

sayu's training because it's

1177

00:42:31,910 --> 00:42:27,280

i think the most complicated

1178

00:42:35,109 --> 00:42:31,920

most difficult part of our preparation

1179

00:42:39,030 --> 00:42:35,119

but about traveling for me it's

1180

00:42:46,230 --> 00:42:41,589

different perspective

1181

00:42:49,990 --> 00:42:48,150

how to get over jet lag let us know yeah

1182

00:42:52,069 --> 00:42:50,000

it's kind of a i was talking to my

1183

00:42:53,750 --> 00:42:52,079

colleague jeff williams and speaking of

1184

00:42:55,349 --> 00:42:53,760

the jet lag thing you're over these last

1185

00:42:57,589 --> 00:42:55,359

couple years we're kind of always in

1186

00:42:59,270 --> 00:42:57,599

this jet lag state he says that's the

1187

00:43:01,109 --> 00:42:59,280

best preparations for space flight you

1188

00:43:03,430 --> 00:43:01,119

can ever have because when you're up in

1189

00:43:05,750 --> 00:43:03,440

space you feel okay but you never feel

1190

00:43:07,589 --> 00:43:05,760

quite a hundred percent uh and it's just

1191

00:43:09,030 --> 00:43:07,599

you're kind of operating and doing

1192

00:43:11,430 --> 00:43:09,040

pretty challenging things and you're

1193

00:43:13,109 --> 00:43:11,440

just not 100 so it's this jet lag

1194

00:43:15,190 --> 00:43:13,119

recovery is a pretty good training for

1195

00:43:17,829 --> 00:43:15,200

space flight apparently

1196

00:43:19,990 --> 00:43:17,839

we're all training for space flight yeah

1197

00:43:22,470 --> 00:43:20,000

do you have another one haley yeah so we

1198

00:43:24,309 --> 00:43:22,480

have linda hughes on facebook and she's

1199

00:43:25,670 --> 00:43:24,319

wondering um from your previous mission

1200

00:43:27,430 --> 00:43:25,680

is there anything you're looking forward

1201  
00:43:30,150 --> 00:43:27,440  
to experiencing again or is it going to

1202  
00:43:32,309 --> 00:43:30,160  
be different on spa on space station any

1203  
00:43:34,390 --> 00:43:32,319  
um thing that you're looking forward to

1204  
00:43:36,230 --> 00:43:34,400  
for this mission yeah it's a lot

1205  
00:43:37,750 --> 00:43:36,240  
different um up there this time than it

1206  
00:43:39,270 --> 00:43:37,760  
was my last trip so i'm really looking

1207  
00:43:40,870 --> 00:43:39,280  
forward to some of the things that we

1208  
00:43:42,390 --> 00:43:40,880  
brought up there on that mission but we

1209  
00:43:45,030 --> 00:43:42,400  
didn't get a chance to set up before we

1210  
00:43:45,990 --> 00:43:45,040  
left the new exercise equipment called a

1211  
00:43:48,390 --> 00:43:46,000  
red

1212  
00:43:50,470 --> 00:43:48,400  
advanced resistive exercise device

1213  
00:43:51,430 --> 00:43:50,480

uh we got to bring that up in 2008 and

1214

00:43:53,030 --> 00:43:51,440

it's been

1215

00:43:55,510 --> 00:43:53,040

working really well for all of our

1216

00:43:56,870 --> 00:43:55,520

astronauts and cosmonauts keeping our

1217

00:43:58,630 --> 00:43:56,880

bones and

1218

00:44:00,550 --> 00:43:58,640

muscles healthy so it'll be neat to see

1219

00:44:02,069 --> 00:44:00,560

that actually use it

1220

00:44:05,990 --> 00:44:02,079

and the thing called the cupola which is

1221

00:44:08,150 --> 00:44:06,000

kind of a 360 degree window

1222

00:44:09,430 --> 00:44:08,160

little module i guess that's looks at

1223

00:44:11,750 --> 00:44:09,440

the earth all the time that was not

1224

00:44:13,510 --> 00:44:11,760

there last time i was there so

1225

00:44:15,190 --> 00:44:13,520

i'm really looking forward to hopping in

1226

00:44:16,309 --> 00:44:15,200

there and spending some time taking

1227

00:44:20,470 --> 00:44:16,319

pictures

1228

00:44:33,910 --> 00:44:20,480

um i guess that's about it for me thanks

1229

00:44:33,920 --> 00:44:46,309

um

1230

00:44:51,109 --> 00:44:48,390

well the last time i was there the six

1231

00:44:52,630 --> 00:44:51,119

months flew by as fast as six weeks and

1232

00:44:53,750 --> 00:44:52,640

i think for this time it will be the

1233

00:44:55,829 --> 00:44:53,760

same thing

1234

00:44:57,430 --> 00:44:55,839

because the experiences that you have on

1235

00:45:00,309 --> 00:44:57,440

board the station

1236

00:45:05,030 --> 00:45:00,319

you absorb them very easily but then it

1237

00:45:07,510 --> 00:45:06,470

do we have any other questions within

1238

00:45:08,710 --> 00:45:07,520

the audience

1239

00:45:12,630 --> 00:45:08,720

mark

1240

00:45:14,390 --> 00:45:12,640

uh for aviation space technology again

1241

00:45:16,470 --> 00:45:14,400

can you sort of explain where you are in

1242

00:45:18,390 --> 00:45:16,480

your overall training flow are you kind

1243

00:45:21,270 --> 00:45:18,400

of at the end of the session here in the

1244

00:45:24,470 --> 00:45:21,280

us at johnson and what happens to y'all

1245

00:45:25,990 --> 00:45:24,480

but that's kind of close but all perhaps

1246

00:45:28,630 --> 00:45:26,000

yeah so we're kind of winding down is

1247

00:45:30,150 --> 00:45:28,640

the the best way to put it um sergey and

1248

00:45:31,750 --> 00:45:30,160

andre have another

1249

00:45:34,069 --> 00:45:31,760

three or four more days here in the u.s

1250

00:45:35,430 --> 00:45:34,079

we'll have a big uh kind of our final

1251

00:45:37,910 --> 00:45:35,440

exam if you want to call it that

1252

00:45:40,550 --> 00:45:37,920

emergency training event with the

1253

00:45:41,829 --> 00:45:40,560

crew that's following us so peggy thomas

1254

00:45:43,589 --> 00:45:41,839

and oleg

1255

00:45:45,190 --> 00:45:43,599

they'll return from baikonur they were

1256

00:45:46,950 --> 00:45:45,200

the backup crew for the launch yesterday

1257

00:45:49,349 --> 00:45:46,960

they come in this weekend we'll have

1258

00:45:50,710 --> 00:45:49,359

that training with them on monday

1259

00:45:52,630 --> 00:45:50,720

and then these gentlemen will head back

1260

00:45:54,309 --> 00:45:52,640

to russia

1261

00:45:56,150 --> 00:45:54,319

for a little time off i think as well as

1262

00:45:58,309 --> 00:45:56,160

some more training

1263

00:45:59,910 --> 00:45:58,319

for me myself i get a little bit of time

1264

00:46:02,550 --> 00:45:59,920

off coming up and then i have a trip to

1265

00:46:04,309 --> 00:46:02,560

japan left towards the end of july where

1266

00:46:07,030 --> 00:46:04,319

i'll go get finally trained on some

1267

00:46:08,550 --> 00:46:07,040

experiments and their modules the htv

1268

00:46:11,589 --> 00:46:08,560

that's coming up i'll get specifically

1269

00:46:13,349 --> 00:46:11,599

trained on that a little more

1270

00:46:14,790 --> 00:46:13,359

then i'll come back for another week of

1271

00:46:16,870 --> 00:46:14,800

work here in the first week of august

1272

00:46:18,069 --> 00:46:16,880

and then i head out mid-august

1273

00:46:19,990 --> 00:46:18,079

to russia

1274

00:46:21,990 --> 00:46:20,000

about six weeks before launch is pretty

1275

00:46:24,870 --> 00:46:22,000

normal for the right seater like myself

1276

00:46:27,190 --> 00:46:24,880

to to show up in star city for us to get

1277

00:46:28,309 --> 00:46:27,200

ready for our final exams

1278

00:46:30,550 --> 00:46:28,319

go through that and then several

1279

00:46:31,829 --> 00:46:30,560

ceremonies over in in star city and in

1280

00:46:34,470 --> 00:46:31,839

moscow

1281

00:46:35,910 --> 00:46:34,480

prior to us leaving for baikonur usually

1282

00:46:38,150 --> 00:46:35,920

two or three weeks prior to launch we'll

1283

00:46:42,390 --> 00:46:38,160

head down there and be in quarantine

1284

00:46:45,270 --> 00:46:44,150

any other questions here

1285

00:46:48,150 --> 00:46:45,280

yes sir

1286

00:46:50,790 --> 00:46:48,160

um this is a question for mr shane uh

1287

00:46:52,790 --> 00:46:50,800

what's your favorite part of your job

1288

00:46:54,309 --> 00:46:52,800

wow good question and i i tell you i

1289

00:46:56,150 --> 00:46:54,319

could say that right now or i could say

1290

00:46:58,710 --> 00:46:56,160

it in my previous job as well in the

1291

00:47:00,550 --> 00:46:58,720

army and it's it's all about the people

1292

00:47:02,790 --> 00:47:00,560

i get to i've gotten to work with

1293

00:47:04,870 --> 00:47:02,800

incredible people very diverse people

1294

00:47:06,470 --> 00:47:04,880

very different backgrounds

1295

00:47:08,230 --> 00:47:06,480

but everybody brings something to the

1296

00:47:09,589 --> 00:47:08,240

table that's what i've really learned

1297

00:47:11,910 --> 00:47:09,599

through my experience in the army as

1298

00:47:13,510 --> 00:47:11,920

well as here at nasa

1299

00:47:15,589 --> 00:47:13,520

everybody has something to add to the

1300

00:47:16,710 --> 00:47:15,599

team and we're all part of a team even

1301

00:47:18,390 --> 00:47:16,720

though the three of us are going to

1302

00:47:19,270 --> 00:47:18,400

launch on this spacecraft here in a few

1303

00:47:20,950 --> 00:47:19,280

months

1304

00:47:22,390 --> 00:47:20,960

we really have a team of thousands of

1305

00:47:24,710 --> 00:47:22,400

people that have trained us that have

1306

00:47:26,230 --> 00:47:24,720

gotten the spacecraft ready

1307

00:47:28,230 --> 00:47:26,240

that will be working our missions from

1308

00:47:29,829 --> 00:47:28,240

mission controls all around the world

1309

00:47:31,829 --> 00:47:29,839

while we're up there and they're all

1310

00:47:33,190 --> 00:47:31,839

part of the team just like we are

1311

00:47:35,910 --> 00:47:33,200

and everybody i've gotten to work with

1312

00:47:37,510 --> 00:47:35,920

is extremely motivated and dedicated to

1313

00:47:38,549 --> 00:47:37,520

making our mission successful so it's

1314

00:47:40,150 --> 00:47:38,559

pretty neat when you work in an

1315

00:47:41,750 --> 00:47:40,160

environment like that

1316

00:47:44,069 --> 00:47:41,760

that everybody is kind of making sure

1317

00:47:45,430 --> 00:47:44,079

that we're going to get back home safely

1318

00:47:47,430 --> 00:47:45,440

to our families

1319

00:47:49,510 --> 00:47:47,440

and friends and everybody's kind of

1320

00:47:51,270 --> 00:47:49,520

dedicated to mission success so i've

1321

00:47:52,630 --> 00:47:51,280

been very lucky to work with amazing

1322

00:47:54,069 --> 00:47:52,640

people

1323

00:47:55,030 --> 00:47:54,079

i absolutely agree with

1324

00:47:57,990 --> 00:47:55,040

shane

1325

00:47:59,990 --> 00:47:58,000

to work with different people in

1326  
00:48:01,270 --> 00:48:00,000  
several countries it's a very exciting

1327  
00:48:03,589 --> 00:48:01,280  
opportunity

1328  
00:48:06,950 --> 00:48:03,599  
and also for me

1329  
00:48:08,710 --> 00:48:06,960  
because i never have fluent space and

1330  
00:48:11,270 --> 00:48:08,720  
flown

1331  
00:48:14,870 --> 00:48:12,630  
i never flew

1332  
00:48:17,430 --> 00:48:14,880  
faster than

1333  
00:48:22,630 --> 00:48:19,510  
20 kilometers

1334  
00:48:25,270 --> 00:48:22,640  
and it's a great opportunity to

1335  
00:48:25,990 --> 00:48:25,280  
to payload a vehicle

1336  
00:48:36,069 --> 00:48:26,000  
to

1337  
00:48:41,109 --> 00:48:36,079  
okay it's controlled by me

1338  
00:48:41,119 --> 00:48:44,870

with my crew members

1339

00:48:50,470 --> 00:48:46,390

i think we have time for a couple more

1340

00:48:54,150 --> 00:48:52,390

do we have any on social media haley

1341

00:48:55,990 --> 00:48:54,160

yeah so this is a very general one but i

1342

00:48:57,589 --> 00:48:56,000

think it's good obviously there's a lot

1343

00:49:00,230 --> 00:48:57,599

of training that goes into being an

1344

00:49:02,390 --> 00:49:00,240

astronaut and even back from uh this

1345

00:49:04,309 --> 00:49:02,400

person is really interested um how did

1346

00:49:05,750 --> 00:49:04,319

you motivate yourself to get through

1347

00:49:07,829 --> 00:49:05,760

school and all the classes you were

1348

00:49:09,990 --> 00:49:07,839

taking in college um did you have the

1349

00:49:12,230 --> 00:49:10,000

astronaut career in mind was that part

1350

00:49:14,710 --> 00:49:12,240

of what motivated you um

1351

00:49:16,549 --> 00:49:14,720

with all the classes you took in college

1352

00:49:18,390 --> 00:49:16,559

well i did want to be an astronaut since

1353

00:49:19,750 --> 00:49:18,400

i was a little kid um i can't say that

1354

00:49:22,390 --> 00:49:19,760

all through my schooling i was thinking

1355

00:49:26,150 --> 00:49:24,309

so i made the decision to go to west

1356

00:49:28,790 --> 00:49:26,160

point uh the united states military

1357

00:49:30,870 --> 00:49:28,800

academy at west point to be an engineer

1358

00:49:31,910 --> 00:49:30,880

there so when i made that decision even

1359

00:49:33,910 --> 00:49:31,920

though i wanted to be an astronaut my

1360

00:49:35,589 --> 00:49:33,920

whole life i thought that that dream was

1361

00:49:37,030 --> 00:49:35,599

kind of gone at that point because i was

1362

00:49:38,790 --> 00:49:37,040

like you have to go in the army and

1363

00:49:40,230 --> 00:49:38,800

serve in the army and that was fine i

1364

00:49:41,430 --> 00:49:40,240

was fine with it

1365

00:49:43,349 --> 00:49:41,440

little did i know you could be in the

1366

00:49:44,790 --> 00:49:43,359

army and be an astronaut so

1367

00:49:47,430 --> 00:49:44,800

i did realize that

1368

00:49:49,270 --> 00:49:47,440

after graduating from college and

1369

00:49:50,790 --> 00:49:49,280

then the kind of that dream came back of

1370

00:49:52,790 --> 00:49:50,800

all right let me see if i can can do

1371

00:49:54,710 --> 00:49:52,800

this i needed some more education and

1372

00:49:55,750 --> 00:49:54,720

the army was generous enough to provide

1373

00:49:57,750 --> 00:49:55,760

me

1374

00:49:59,109 --> 00:49:57,760

with all my education with the masters

1375

00:50:00,950 --> 00:49:59,119

and bachelor's degree engineering

1376

00:50:03,109 --> 00:50:00,960

degrees and

1377

00:50:04,630 --> 00:50:03,119

that all played into helping me be a

1378

00:50:05,670 --> 00:50:04,640

viable candidate for the astronaut

1379

00:50:11,670 --> 00:50:05,680

program

1380

00:50:17,829 --> 00:50:14,150

of selected the ground helps us

1381

00:50:22,790 --> 00:50:20,069

also

1382

00:50:29,670 --> 00:50:24,950

experience from our life because on

1383

00:50:31,589 --> 00:50:29,680

board we are going to be not only um

1384

00:50:35,349 --> 00:50:31,599

researchers and

1385

00:50:35,359 --> 00:50:38,069

electricians

1386

00:50:38,079 --> 00:50:52,150

and

1387

00:50:52,160 --> 00:50:58,710

um

1388

00:51:03,990 --> 00:51:00,950

in terms of my education i'm an engineer

1389

00:51:05,670 --> 00:51:04,000

specializing in rocket building so all

1390

00:51:18,870 --> 00:51:05,680

of the knowledge that

1391

00:51:18,880 --> 00:51:34,630

um

1392

00:51:38,549 --> 00:51:36,630

and on top of that the experience that i

1393

00:51:40,309 --> 00:51:38,559

gained at the mission control center

1394

00:51:42,630 --> 00:51:40,319

allows me to better understand what is

1395

00:51:44,950 --> 00:51:42,640

happening at the space vehicle or the

1396

00:51:46,710 --> 00:51:44,960

space station which helps in turn to

1397

00:51:48,549 --> 00:51:46,720

make the right decision

1398

00:51:49,910 --> 00:51:48,559

in an urgent situation

1399

00:51:51,670 --> 00:51:49,920

and to follow up a little bit i think

1400

00:51:53,430 --> 00:51:51,680

they're i don't know what the they were

1401

00:51:55,990 --> 00:51:53,440

getting at with the question but

1402

00:51:57,430 --> 00:51:56,000

um i'll just add this in case it's part

1403

00:51:59,190 --> 00:51:57,440

of it um

1404

00:52:00,870 --> 00:51:59,200

you know all of us did engineering but

1405

00:52:02,710 --> 00:52:00,880

had an engineering or science or math

1406

00:52:04,870 --> 00:52:02,720

backgrounds and that's true for all the

1407

00:52:06,630 --> 00:52:04,880

astronauts and cosmonauts

1408

00:52:08,950 --> 00:52:06,640

but we're not folks that just got

1409

00:52:11,670 --> 00:52:08,960

average grades okay you had to do really

1410

00:52:13,109 --> 00:52:11,680

well in whatever field you were pursuing

1411

00:52:14,710 --> 00:52:13,119

and that wasn't just in the classroom

1412

00:52:16,549 --> 00:52:14,720

it's also in your jobs when it went out

1413

00:52:17,589 --> 00:52:16,559

into the workplace so

1414

00:52:19,190 --> 00:52:17,599

if you're interested in this kind of

1415

00:52:21,589 --> 00:52:19,200

line of work you need to be doing really

1416

00:52:23,270 --> 00:52:21,599

well yeah and doing your best so that

1417

00:52:26,150 --> 00:52:23,280

others can see that and potentially

1418

00:52:29,910 --> 00:52:28,710

we have maybe one more from social media

1419

00:52:32,150 --> 00:52:29,920

yeah um

1420

00:52:34,150 --> 00:52:32,160

so this one is very specific but they've

1421

00:52:36,150 --> 00:52:34,160

heard a lot of astronauts mention it are

1422

00:52:37,829 --> 00:52:36,160

there certain smells you will miss about

1423

00:52:39,589 --> 00:52:37,839

the planet earth while you're in space

1424

00:52:40,950 --> 00:52:39,599

that's a good question yeah and i

1425

00:52:42,549 --> 00:52:40,960

thought about mentioning that earlier

1426  
00:52:43,349 --> 00:52:42,559  
when when jenny asked what i'm going to

1427  
00:52:45,510 --> 00:52:43,359  
miss

1428  
00:52:46,390 --> 00:52:45,520  
but yeah just the smells of earth and

1429  
00:52:49,430 --> 00:52:46,400  
kind of

1430  
00:52:50,950 --> 00:52:49,440  
fresh cut grass which i love and

1431  
00:52:53,109 --> 00:52:50,960  
you kind of miss that even being in the

1432  
00:52:54,309 --> 00:52:53,119  
mountains and smelling the mountain air

1433  
00:52:56,230 --> 00:52:54,319  
which we don't have around here but we

1434  
00:52:58,870 --> 00:52:56,240  
have that in the us and other places

1435  
00:53:01,109 --> 00:52:58,880  
around the earth but now i do think i'll

1436  
00:53:02,710 --> 00:53:01,119  
miss that um greatly because you're kind

1437  
00:53:04,309 --> 00:53:02,720  
of in a closed environment even though

1438  
00:53:06,309 --> 00:53:04,319

we have a nice air conditioning system

1439

00:53:08,309 --> 00:53:06,319

and circulation system it's kind of

1440

00:53:10,309 --> 00:53:08,319

smells like a gem all the time you know

1441

00:53:17,190 --> 00:53:10,319

instead of fresh smells like you're used

1442

00:53:20,069 --> 00:53:19,030

i really looking forward

1443

00:53:21,750 --> 00:53:20,079

for

1444

00:53:24,150 --> 00:53:21,760

cockpit smells

1445

00:53:25,349 --> 00:53:24,160

vehicle smells

1446

00:53:49,510 --> 00:53:25,359

i'm rookie and

1447

00:53:53,670 --> 00:53:52,230

when we last returned on the soyuz and

1448

00:53:54,790 --> 00:53:53,680

we opened the hatch of the descent

1449

00:53:57,670 --> 00:53:54,800

module

1450

00:53:59,510 --> 00:53:57,680

i felt the smell of the step the warm

1451  
00:54:03,030 --> 00:53:59,520  
grass and then i realized that that's

1452  
00:54:04,549 --> 00:54:03,040  
probably the smell that i missed most

1453  
00:54:06,390 --> 00:54:04,559  
well thank you gentlemen for being here

1454  
00:54:08,870 --> 00:54:06,400  
with us today and thank you everybody

1455  
00:54:10,390 --> 00:54:08,880  
for being part of the expedition 4950

1456  
00:54:13,589 --> 00:54:10,400  
crew news conference

1457  
00:54:15,589 --> 00:54:13,599  
you can follow shane on twitter at astro

1458  
00:54:16,870 --> 00:54:15,599  
underscore kimbrough

1459  
00:54:18,870 --> 00:54:16,880  
you can also

1460  
00:54:21,549 --> 00:54:18,880  
find out about the crew's flight

1461  
00:54:23,349 --> 00:54:21,559  
experiences on instagram by going to

1462  
00:54:24,870 --> 00:54:23,359  
instagram.com

1463  
00:54:26,230 --> 00:54:24,880

iss

1464

00:54:28,390 --> 00:54:26,240

and for more information about the

1465

00:54:32,390 --> 00:54:28,400

international space station please go to