



1
00:00:04,870 --> 00:00:03,669
good afternoon and thanks for joining us

2
00:00:07,430 --> 00:00:04,880
for this special briefing with the

3
00:00:08,549 --> 00:00:07,440
expedition 36 crew one of the next crews

4
00:00:10,070 --> 00:00:08,559
headed to the international space

5
00:00:11,830 --> 00:00:10,080
station we're going to talk with them

6
00:00:18,070 --> 00:00:11,840
momentarily but next let's take a minute

7
00:00:22,630 --> 00:00:20,550
fyodor yurchikhin is a frequent flyer to

8
00:00:24,550 --> 00:00:22,640
space logging over a year in orbit

9
00:00:26,470 --> 00:00:24,560
during three space flights

10
00:00:28,470 --> 00:00:26,480
the five-time space walker is a father

11
00:00:31,509 --> 00:00:28,480
of two and enjoys reading science

12
00:00:34,069 --> 00:00:31,519
fiction collecting stamps and sports

13
00:00:36,709 --> 00:00:34,079

fyodor will become the station's 37th

14

00:00:41,750 --> 00:00:39,350

karen nyberg from binding minnesota was

15

00:00:42,830 --> 00:00:41,760

the 50th woman in space when she flew to

16

00:00:46,709 --> 00:00:42,840

space on

17

00:00:49,190 --> 00:00:46,719

sts-124 in 2008. karen is a mechanical

18

00:00:51,830 --> 00:00:49,200

engineer but also enjoys many creative

19

00:00:52,869 --> 00:00:51,840

hobbies including quilting sewing and

20

00:00:56,830 --> 00:00:52,879

painting

21

00:01:00,150 --> 00:00:56,840

she has one son and is also an avid

22

00:01:02,630 --> 00:01:00,160

runner from italy first-time flyer luca

23

00:01:05,109 --> 00:01:02,640

parmitano is an active scuba diver and

24

00:01:07,350 --> 00:01:05,119

enjoys snowboarding and skydiving

25

00:01:10,070 --> 00:01:07,360

parmitano a major in the italian air

26
00:01:12,710 --> 00:01:10,080
force has logged more than 2 000 hours

27
00:01:19,109 --> 00:01:12,720
flying time and has flown over 40 types

28
00:01:22,630 --> 00:01:21,190
all right great video and just a glimpse

29
00:01:23,990 --> 00:01:22,640
of some of the fascinating backgrounds

30
00:01:25,190 --> 00:01:24,000
of some of you so with that let's just

31
00:01:27,030 --> 00:01:25,200
go ahead and start introducing our

32
00:01:28,310 --> 00:01:27,040
guests we have nasa astronaut karen

33
00:01:29,990 --> 00:01:28,320
nyberg

34
00:01:31,510 --> 00:01:30,000
fyodor your chicken who will be the

35
00:01:33,510 --> 00:01:31,520
commander of the soyuz and also leading

36
00:01:34,950 --> 00:01:33,520
expedition 37 and from the european

37
00:01:36,870 --> 00:01:34,960
space agency

38
00:01:37,910 --> 00:01:36,880

luca parmitano hello thanks guys for

39

00:01:39,830 --> 00:01:37,920

joining us

40

00:01:41,510 --> 00:01:39,840

so let's just start by setting the stage

41

00:01:43,109 --> 00:01:41,520

for our audience

42

00:01:45,350 --> 00:01:43,119

we have a crew of three on orbit right

43

00:01:47,030 --> 00:01:45,360

now we've got another crew of three

44

00:01:48,389 --> 00:01:47,040

who's already in baikonur preparing for

45

00:01:49,510 --> 00:01:48,399

their launch next week to go to the

46

00:01:51,030 --> 00:01:49,520

space station

47

00:01:52,389 --> 00:01:51,040

and then you guys are in your last

48

00:01:54,550 --> 00:01:52,399

couple of weeks of training here in the

49

00:01:56,069 --> 00:01:54,560

united states then you'll be traveling

50

00:01:57,749 --> 00:01:56,079

overseas and getting ready for your

51
00:01:59,670 --> 00:01:57,759
launch uh just about two months from now

52
00:02:01,350 --> 00:01:59,680
on may 28th can you just start by

53
00:02:02,550 --> 00:02:01,360
telling us a little bit about what

54
00:02:04,230 --> 00:02:02,560
you're doing now what your training is

55
00:02:05,590 --> 00:02:04,240
like as a crew and also on a personal

56
00:02:06,950 --> 00:02:05,600
level what types of things you're doing

57
00:02:09,190 --> 00:02:06,960
at this point now that you're two months

58
00:02:10,790 --> 00:02:09,200
out from launch like you said we're

59
00:02:12,309 --> 00:02:10,800
heading out pretty soon fyodor leaves

60
00:02:13,830 --> 00:02:12,319
this week this is his last time in the

61
00:02:15,190 --> 00:02:13,840
us and then luca will be leaving in a

62
00:02:17,589 --> 00:02:15,200
couple weeks and then i leave in about a

63
00:02:19,030 --> 00:02:17,599

month so we're finishing up while fiora

64

00:02:20,869 --> 00:02:19,040

is here a lot of the crew activities are

65

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

emergency training and that type of

66

00:02:24,390 --> 00:02:22,879

thing and luke and i will get in our

67

00:02:27,110 --> 00:02:24,400

last nbl run

68

00:02:28,710 --> 00:02:27,120

spacewalking run on thursday and so it

69

00:02:30,309 --> 00:02:28,720

is a lot of finishing up that type of

70

00:02:32,710 --> 00:02:30,319

thing and doing our

71

00:02:33,589 --> 00:02:32,720

pre-launch medical exams and that type

72

00:02:36,390 --> 00:02:33,599

of thing

73

00:02:38,150 --> 00:02:36,400

and for me personally um getting things

74

00:02:39,670 --> 00:02:38,160

around the house in order the way that

75

00:02:41,270 --> 00:02:39,680

i'm you know i'd like them to be before

76
00:02:42,790 --> 00:02:41,280
i leave although we have great contact

77
00:02:44,630 --> 00:02:42,800
with the ground and with our families

78
00:02:46,229 --> 00:02:44,640
while we're in orbit so

79
00:02:47,670 --> 00:02:46,239
but i went out and picked a preschool

80
00:02:49,670 --> 00:02:47,680
for my son and things like that but

81
00:02:52,470 --> 00:02:49,680
he'll start next fall so a lot of little

82
00:02:53,830 --> 00:02:52,480
things like that that we're finishing up

83
00:02:56,710 --> 00:02:53,840
and

84
00:02:59,750 --> 00:02:56,720
like karen told me then it's my session

85
00:03:01,910 --> 00:02:59,760
here it's i done with every emergency

86
00:03:04,470 --> 00:03:01,920
training here i don't know what is more

87
00:03:09,670 --> 00:03:04,480
terrible emergency training or have a

88
00:03:15,430 --> 00:03:12,470

we are free and we understand about each

89

00:03:17,910 --> 00:03:15,440

emerging situation now unfortunately why

90

00:03:20,790 --> 00:03:17,920

because any time when i am in houston

91

00:03:23,990 --> 00:03:20,800

it's with love in my heart

92

00:03:26,630 --> 00:03:24,000

yes it's great time here it's great

93

00:03:27,750 --> 00:03:26,640

meetings with all my instructors since

94

00:03:31,110 --> 00:03:27,760

my first

95

00:03:32,390 --> 00:03:31,120

shuttle flight with new one and

96

00:03:34,949 --> 00:03:32,400

it's great time

97

00:03:37,030 --> 00:03:34,959

and everybody here is very warm very so

98

00:03:39,190 --> 00:03:37,040

very friendly very helpful et cetera et

99

00:03:41,750 --> 00:03:39,200

cetera et cetera so

100

00:03:43,509 --> 00:03:41,760

the crew i am ready with this crew and i

101
00:03:45,830 --> 00:03:43,519
hope the crew ready with me like with

102
00:03:50,869 --> 00:03:45,840
commander because i am very old and like

103
00:03:53,670 --> 00:03:50,879
old man sometimes i argue with everybody

104
00:03:56,229 --> 00:03:53,680
yes but we are lucky we are on straight

105
00:03:57,110 --> 00:03:56,239
and we are primed now for me

106
00:03:58,789 --> 00:03:57,120
thank you

107
00:04:01,110 --> 00:03:58,799
and look at anything you want to add

108
00:04:02,869 --> 00:04:01,120
as karen said we uh karen and i have a

109
00:04:05,110 --> 00:04:02,879
lot of training together in this final

110
00:04:06,789 --> 00:04:05,120
session uh here in houston so

111
00:04:09,110 --> 00:04:06,799
we get to spend a lot of time training

112
00:04:11,190 --> 00:04:09,120
together uh kind of uh

113
00:04:14,470 --> 00:04:11,200

refining um

114

00:04:16,870 --> 00:04:14,480

the details of our operations in orbit

115

00:04:18,710 --> 00:04:16,880

and then for me there's a lot of

116

00:04:20,870 --> 00:04:18,720

medical operations

117

00:04:22,390 --> 00:04:20,880

collecting data that will be used when i

118

00:04:25,189 --> 00:04:22,400

come back

119

00:04:28,150 --> 00:04:25,199

for for science and

120

00:04:30,629 --> 00:04:28,160

payloads operations

121

00:04:33,189 --> 00:04:30,639

to fix it in my mind before i go in

122

00:04:35,270 --> 00:04:33,199

space and hopefully it will help me not

123

00:04:36,550 --> 00:04:35,280

break anything which is one of my first

124

00:04:38,870 --> 00:04:36,560

goals

125

00:04:40,790 --> 00:04:38,880

since i'm a rookie so

126

00:04:41,909 --> 00:04:40,800

great well thanks uh with that we're

127

00:04:43,270 --> 00:04:41,919

just going to go ahead and start taking

128

00:04:45,510 --> 00:04:43,280

some questions from the folks who are

129

00:04:47,990 --> 00:04:45,520

here we have uh media representatives as

130

00:04:49,189 --> 00:04:48,000

well as some social media participants

131

00:04:50,550 --> 00:04:49,199

joining us here at the johnson space

132

00:04:52,629 --> 00:04:50,560

center today so just a reminder to

133

00:04:54,870 --> 00:04:52,639

please raise your hand and state your

134

00:04:56,629 --> 00:04:54,880

name and affiliation when the mic

135

00:04:58,790 --> 00:04:56,639

microphone comes to you i think gina

136

00:05:01,270 --> 00:04:58,800

cincer i have two questions luca you've

137

00:05:03,189 --> 00:05:01,280

got two challenging space walks on this

138

00:05:05,189 --> 00:05:03,199

mission tell me about the training and

139

00:05:07,270 --> 00:05:05,199

how prepared you are for any emergencies

140

00:05:09,350 --> 00:05:07,280

that might come up i'm particularly

141

00:05:11,909 --> 00:05:09,360

interested i know spacewalks are really

142

00:05:15,029 --> 00:05:11,919

hard on your hands so what what kind of

143

00:05:17,270 --> 00:05:15,039

advice have guys given you about that

144

00:05:19,270 --> 00:05:17,280

so um personally i think that any

145

00:05:20,790 --> 00:05:19,280

spacewalk is is challenging not

146

00:05:22,790 --> 00:05:20,800

specifically that the two that are

147

00:05:25,110 --> 00:05:22,800

planned in my increment but

148

00:05:26,950 --> 00:05:25,120

but any just because the environment is

149

00:05:28,390 --> 00:05:26,960

so so different from anything we know

150

00:05:30,790 --> 00:05:28,400

here on earth

151

00:05:33,749 --> 00:05:30,800

uh chris and i have been uh training

152

00:05:36,070 --> 00:05:33,759

together underwater uh preparing for uh

153

00:05:37,749 --> 00:05:36,080

the tasks that we will be will be doing

154

00:05:40,629 --> 00:05:37,759

the it

155

00:05:42,310 --> 00:05:40,639

a special challenge the fact that while

156

00:05:44,710 --> 00:05:42,320

uh previously

157

00:05:46,870 --> 00:05:44,720

uh during during the shuttle times evas

158

00:05:49,110 --> 00:05:46,880

were highly choreographed so everything

159

00:05:51,110 --> 00:05:49,120

was planned and choreographed and

160

00:05:54,469 --> 00:05:51,120

trained over and over again until every

161

00:05:55,350 --> 00:05:54,479

step was was perfect

162

00:05:57,270 --> 00:05:55,360

in

163

00:05:59,749 --> 00:05:57,280

on the station we don't have that luxury

164

00:06:01,830 --> 00:05:59,759

to train to change as much so we need to

165

00:06:03,590 --> 00:06:01,840

be a lot more flexible and as a matter

166

00:06:04,950 --> 00:06:03,600

of fact we will receive our procedures

167

00:06:07,110 --> 00:06:04,960

while we are in orbit and then we'll

168

00:06:09,990 --> 00:06:07,120

have time to study and

169

00:06:12,230 --> 00:06:10,000

brief each other what we're going to do

170

00:06:14,469 --> 00:06:12,240

preparing for emergency to actually is

171

00:06:16,870 --> 00:06:14,479

something we do all the time we we know

172

00:06:19,029 --> 00:06:16,880

our suits really well we have

173

00:06:21,590 --> 00:06:19,039

simulators where we can

174

00:06:23,909 --> 00:06:21,600

see what the responses of the suit are

175

00:06:26,629 --> 00:06:23,919

into an emergency and we train to

176
00:06:29,029 --> 00:06:26,639
respond to those and just by knowing the

177
00:06:30,309 --> 00:06:29,039
systems and what they let us do

178
00:06:31,909 --> 00:06:30,319
of course the ground will be there to

179
00:06:33,990 --> 00:06:31,919
support us

180
00:06:35,590 --> 00:06:34,000
one of the biggest challenge for a space

181
00:06:37,110 --> 00:06:35,600
for a spacewalk one of the greatest

182
00:06:39,830 --> 00:06:37,120
emergencies would be loss of contact

183
00:06:42,469 --> 00:06:39,840
with the station so tumbling in space we

184
00:06:43,749 --> 00:06:42,479
have a virtual reality simulator that is

185
00:06:45,270 --> 00:06:43,759
a

186
00:06:47,270 --> 00:06:45,280
it's very

187
00:06:48,710 --> 00:06:47,280
very realistic very challenging even

188
00:06:51,670 --> 00:06:48,720

though

189

00:06:53,749 --> 00:06:51,680

probably any of the kids of today's age

190

00:06:55,350 --> 00:06:53,759

playing with video games would find it a

191

00:06:57,110 --> 00:06:55,360

child's game but for me it's very

192

00:06:59,510 --> 00:06:57,120

challenging flying back to the station

193

00:07:01,749 --> 00:06:59,520

using the safer system

194

00:07:02,629 --> 00:07:01,759

but we have the capability to train for

195

00:07:04,710 --> 00:07:02,639

those

196

00:07:07,749 --> 00:07:04,720

and uh finally

197

00:07:10,550 --> 00:07:07,759

um i've been training uh underwater i've

198

00:07:12,550 --> 00:07:10,560

done in excess of 20 dives in the suit i

199

00:07:16,150 --> 00:07:12,560

think and yes it is it is very

200

00:07:18,550 --> 00:07:16,160

physically demanding uh my my only

201
00:07:20,550 --> 00:07:18,560
suggestion to anybody who is uh trying

202
00:07:23,670 --> 00:07:20,560
to to be assigned or would like to

203
00:07:25,990 --> 00:07:23,680
perform in the suit is to to work out to

204
00:07:28,469 --> 00:07:26,000
do to prepare physically

205
00:07:30,230 --> 00:07:28,479
by going to the gym and upper body

206
00:07:33,270 --> 00:07:30,240
strength of course we have to combine

207
00:07:35,110 --> 00:07:33,280
that with our uh

208
00:07:37,350 --> 00:07:35,120
strength capabilities and and also

209
00:07:40,070 --> 00:07:37,360
stamina so it means you have to train

210
00:07:42,550 --> 00:07:40,080
for long-running long-duration running

211
00:07:43,350 --> 00:07:42,560
and also for upper body strength so it's

212
00:07:45,749 --> 00:07:43,360
a very

213
00:07:48,790 --> 00:07:45,759

uh all-around training that we do in the

214

00:07:51,270 --> 00:07:48,800

gym okay quick follow-up um karen chris

215

00:07:53,350 --> 00:07:51,280

hadfield has pretty much set twitter

216

00:07:54,869 --> 00:07:53,360

fire while he's on the space station

217

00:07:57,029 --> 00:07:54,879

what are you going to do to follow up or

218

00:07:58,710 --> 00:07:57,039

to join in on what he's doing up there

219

00:08:00,230 --> 00:07:58,720

yeah what he's been doing is fantastic

220

00:08:02,629 --> 00:08:00,240

and reaching people around the world

221

00:08:03,990 --> 00:08:02,639

it's absolutely amazing

222

00:08:06,390 --> 00:08:04,000

i haven't decided yet whether i'll do

223

00:08:08,150 --> 00:08:06,400

twitter but i am

224

00:08:09,909 --> 00:08:08,160

i've been using pinterest for a couple

225

00:08:11,510 --> 00:08:09,919

years and absolutely love it because of

226

00:08:13,029 --> 00:08:11,520

my other hobbies and

227

00:08:15,430 --> 00:08:13,039

have actually started on my own personal

228

00:08:17,110 --> 00:08:15,440

account adding some space things and i

229

00:08:18,710 --> 00:08:17,120

think would be kind of neat to actually

230

00:08:20,070 --> 00:08:18,720

add on to that

231

00:08:21,990 --> 00:08:20,080

while i'm there

232

00:08:23,270 --> 00:08:22,000

if i can

233

00:08:25,350 --> 00:08:23,280

yeah and definitely we're going to do as

234

00:08:26,710 --> 00:08:25,360

much as we can to share to share what

235

00:08:29,350 --> 00:08:26,720

we're doing up there with the rest of

236

00:08:33,670 --> 00:08:31,270

get down with the german space agency

237

00:08:35,829 --> 00:08:33,680

and space exp association question for

238

00:08:37,350 --> 00:08:35,839

karen you flew already on a 14 day

239

00:08:39,269 --> 00:08:37,360

shuttle mission what are you looking for

240

00:08:41,110 --> 00:08:39,279

most on the long duration flight of

241

00:08:43,430 --> 00:08:41,120

almost six months

242

00:08:44,149 --> 00:08:43,440

i'm very much looking forward to living

243

00:08:50,790 --> 00:08:44,159

there

244

00:08:52,230 --> 00:08:50,800

it's a sprint your go go constantly

245

00:08:54,070 --> 00:08:52,240

and you don't have a lot of time to

246

00:08:56,150 --> 00:08:54,080

reflect on on what you're doing as

247

00:08:57,590 --> 00:08:56,160

you're doing it in fact there's a lot of

248

00:08:59,509 --> 00:08:57,600

that mission that i don't really

249

00:09:01,430 --> 00:08:59,519

remember and i look at pictures and i'm

250

00:09:03,509 --> 00:09:01,440

like oh yeah we did that and so i think

251
00:09:05,110 --> 00:09:03,519
with the longer period of time i'll have

252
00:09:07,350 --> 00:09:05,120
time to actually get it ingrained in my

253
00:09:08,949 --> 00:09:07,360
brain of where i am and what i'm doing

254
00:09:10,949 --> 00:09:08,959
and i won't need to go back and look at

255
00:09:12,949 --> 00:09:10,959
those pictures to remember what it is

256
00:09:14,630 --> 00:09:12,959
that i've done

257
00:09:16,790 --> 00:09:14,640
question for luca you already talked

258
00:09:19,030 --> 00:09:16,800
about the two evas what are the major

259
00:09:20,150 --> 00:09:19,040
tasks on these evas

260
00:09:22,790 --> 00:09:20,160
so we have

261
00:09:24,870 --> 00:09:22,800
we have several tasks um

262
00:09:25,750 --> 00:09:24,880
making a list here would be kind of long

263
00:09:28,070 --> 00:09:25,760

but

264

00:09:30,470 --> 00:09:28,080

i can say that one of the major one for

265

00:09:33,110 --> 00:09:30,480

the first tva would be setting the space

266

00:09:35,350 --> 00:09:33,120

station for the arrival of the russian

267

00:09:38,470 --> 00:09:35,360

module mlm and naoka

268

00:09:41,030 --> 00:09:38,480

uh i would describe that

269

00:09:42,949 --> 00:09:41,040

creating the environment for the mlm to

270

00:09:45,350 --> 00:09:42,959

be connected with power and data from

271

00:09:47,030 --> 00:09:45,360

the rest of the station in a way it's

272

00:09:49,590 --> 00:09:47,040

increasing the capability of the space

273

00:09:53,190 --> 00:09:51,670

we will be also um

274

00:09:55,590 --> 00:09:53,200

collecting retrieving some of the

275

00:09:57,430 --> 00:09:55,600

experiments that are outside right now

276

00:09:59,990 --> 00:09:57,440

they've been outside we will bring them

277

00:10:01,350 --> 00:10:00,000

inside so that they can uh

278

00:10:03,430 --> 00:10:01,360

be

279

00:10:05,590 --> 00:10:03,440

brought back to to earth and studied by

280

00:10:08,230 --> 00:10:05,600

engineers and scientists

281

00:10:09,990 --> 00:10:08,240

so again part everybody knows part of

282

00:10:11,509 --> 00:10:10,000

the station is uh

283

00:10:13,350 --> 00:10:11,519

one of the main job of the space station

284

00:10:15,910 --> 00:10:13,360

is create science so this is uh what

285

00:10:19,190 --> 00:10:15,920

we're doing we're going to do and then

286

00:10:21,269 --> 00:10:19,200

we will also be replacing substituting

287

00:10:23,509 --> 00:10:21,279

performing some maintenance to increase

288

00:10:26,630 --> 00:10:23,519

the longevity of the space station space

289

00:10:28,389 --> 00:10:26,640

is an incredibly harsh environment so

290

00:10:30,949 --> 00:10:28,399

we need to periodically

291

00:10:33,590 --> 00:10:30,959

perform maintenance activity to to make

292

00:10:35,509 --> 00:10:33,600

it better including installing a blanket

293

00:10:38,870 --> 00:10:35,519

thermal blankets in some specific parts

294

00:10:39,670 --> 00:10:38,880

of the station to protect it

295

00:10:41,269 --> 00:10:39,680

okay

296

00:10:43,430 --> 00:10:41,279

i have two questions first a general

297

00:10:45,590 --> 00:10:43,440

question for for anyone it's expected

298

00:10:46,949 --> 00:10:45,600

within the next couple weeks that

299

00:10:48,550 --> 00:10:46,959

a paper is going to be published with

300

00:10:50,310 --> 00:10:48,560

the initial results from the alpha

301
00:10:52,069 --> 00:10:50,320
magnetic spectrometer

302
00:10:54,710 --> 00:10:52,079
luca i know you mentioned it's important

303
00:10:56,470 --> 00:10:54,720
for the iss to be doing science i was

304
00:10:58,790 --> 00:10:56,480
hoping that someone might discuss the

305
00:11:00,790 --> 00:10:58,800
significance of that in terms of showing

306
00:11:02,310 --> 00:11:00,800
that the iss is doing good science

307
00:11:04,069 --> 00:11:02,320
because those results are expected to be

308
00:11:08,949 --> 00:11:04,079
pretty significant with respect to dark

309
00:11:12,230 --> 00:11:10,630
i think that

310
00:11:14,710 --> 00:11:12,240
when we think about the space station we

311
00:11:16,470 --> 00:11:14,720
need to focus on on three

312
00:11:17,509 --> 00:11:16,480
three main aspects of what we do in

313
00:11:20,069 --> 00:11:17,519

space

314

00:11:21,670 --> 00:11:20,079

science is certainly a huge part of what

315

00:11:23,990 --> 00:11:21,680

we do on the space station technology

316

00:11:26,310 --> 00:11:24,000

and exploration are the other two

317

00:11:28,150 --> 00:11:26,320

i personally uh from my personal point

318

00:11:31,590 --> 00:11:28,160

of view is exploration is incredibly

319

00:11:33,910 --> 00:11:31,600

exciting uh technology is obvious we we

320

00:11:35,590 --> 00:11:33,920

always

321

00:11:37,430 --> 00:11:35,600

experiment and test new technology on

322

00:11:40,069 --> 00:11:37,440

the space station in orbit science

323

00:11:42,949 --> 00:11:40,079

sometimes because of its nature

324

00:11:44,949 --> 00:11:42,959

can be overlooked and we shouldn't on

325

00:11:47,269 --> 00:11:44,959

the space station every week our

326

00:11:49,590 --> 00:11:47,279

astronauts perform over 30 weeks 30

327

00:11:52,870 --> 00:11:49,600

hours of science per week and out of

328

00:11:56,870 --> 00:11:55,910

thousands of papers and scientists are

329

00:11:59,350 --> 00:11:56,880

working

330

00:12:02,069 --> 00:11:59,360

constantly generating a new knowledge

331

00:12:04,870 --> 00:12:02,079

and now the ams is a is a unique uh

332

00:12:07,190 --> 00:12:04,880

unique machine and it's looking into the

333

00:12:09,590 --> 00:12:07,200

past if

334

00:12:12,150 --> 00:12:09,600

if you wanna if you want to think about

335

00:12:14,069 --> 00:12:12,160

it that way it's looking so far away uh

336

00:12:16,790 --> 00:12:14,079

collecting the very first

337

00:12:19,509 --> 00:12:16,800

particles that are that were generated

338

00:12:22,069 --> 00:12:19,519

and letting us understand how

339

00:12:25,190 --> 00:12:22,079

the universe is made up

340

00:12:29,190 --> 00:12:25,200

uh dark matters is one of the uh of the

341

00:12:31,030 --> 00:12:29,200

greatest mystery of uh of science and

342

00:12:32,790 --> 00:12:31,040

it's part of it's a frontier for

343

00:12:34,790 --> 00:12:32,800

scientists so if we can break into that

344

00:12:36,790 --> 00:12:34,800

frontier uh the

345

00:12:38,470 --> 00:12:36,800

results for our understanding will be

346

00:12:40,150 --> 00:12:38,480

are still unimaginable because we just

347

00:12:42,790 --> 00:12:40,160

don't know what's happening

348

00:12:44,710 --> 00:12:42,800

uh in that sense if i don't think i i

349

00:12:45,910 --> 00:12:44,720

can highlight or stress enough the

350

00:12:48,069 --> 00:12:45,920

importance of

351

00:12:49,430 --> 00:12:48,079

the breaks that in science and in

352

00:12:50,829 --> 00:12:49,440

science and knowledge that come from

353

00:12:53,590 --> 00:12:50,839

what we do on the space

354

00:12:55,269 --> 00:12:53,600

station and a question for karen uh

355

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

dennis tito recently announced a plan to

356

00:12:58,310 --> 00:12:57,200

send a married couple to mars is that

357

00:12:59,910 --> 00:12:58,320

something you've discussed with your

358

00:13:03,430 --> 00:12:59,920

husband and is it something you two

359

00:13:07,430 --> 00:13:05,350

no we haven't discussed it

360

00:13:09,670 --> 00:13:07,440

per se

361

00:13:11,430 --> 00:13:09,680

obviously we have a son so

362

00:13:13,350 --> 00:13:11,440

if he couldn't go then there would be

363

00:13:17,750 --> 00:13:13,360

absolutely no way in the world

364

00:13:21,269 --> 00:13:18,829

and my

365

00:13:23,350 --> 00:13:21,279

friends you know a question like that is

366

00:13:25,110 --> 00:13:23,360

hard to answer until until the

367

00:13:28,150 --> 00:13:25,120

possibility you know is absolutely there

368

00:13:29,430 --> 00:13:28,160

to do it and so uh you know

369

00:13:31,190 --> 00:13:29,440

right now i'd have to say no i don't

370

00:13:33,350 --> 00:13:31,200

think we would do it but you never know

371

00:13:35,190 --> 00:13:33,360

when it gets down to the

372

00:13:36,470 --> 00:13:35,200

down to it and and people are actually

373

00:13:38,389 --> 00:13:36,480

doing it

374

00:13:40,150 --> 00:13:38,399

and depending on who can go with me

375

00:13:41,430 --> 00:13:40,160

it would make a big difference

376

00:13:43,269 --> 00:13:41,440

okay we're going to switch just for a

377

00:13:44,629 --> 00:13:43,279

moment we've had the invitation for

378

00:13:47,350 --> 00:13:44,639

people to be able to submit questions

379

00:13:48,870 --> 00:13:47,360

via twitter using the hashtag asknasa

380

00:13:50,310 --> 00:13:48,880

and amico carter i think he's got a

381

00:13:52,550 --> 00:13:50,320

question for us

382

00:13:55,670 --> 00:13:52,560

yes okay so we have a question here um

383

00:13:57,990 --> 00:13:55,680

comes to us on twitter from anthony what

384

00:13:59,829 --> 00:13:58,000

is the most common problem on an earth

385

00:14:07,670 --> 00:13:59,839

orbiting space station that astronauts

386

00:14:12,310 --> 00:14:09,590

the most common problem is what happens

387

00:14:13,110 --> 00:14:12,320

to our bodies with the lack of gravity

388

00:14:14,790 --> 00:14:13,120

and

389

00:14:16,710 --> 00:14:14,800

the fact that we

390

00:14:18,310 --> 00:14:16,720

lose bone mass and our hearts don't have

391

00:14:19,430 --> 00:14:18,320

to work quite as hard

392

00:14:22,949 --> 00:14:19,440

and

393

00:14:24,629 --> 00:14:22,959

the training then would be physical

394

00:14:26,710 --> 00:14:24,639

because we need to keep our bodies

395

00:14:29,350 --> 00:14:26,720

moving and make our body our bodies are

396

00:14:30,949 --> 00:14:29,360

very smart and as soon as the body

397

00:14:32,150 --> 00:14:30,959

realizes that we don't need those bones

398

00:14:34,310 --> 00:14:32,160

to hold us up

399

00:14:36,790 --> 00:14:34,320

the bones start to degrade and so we

400

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

need to use artificial means of

401
00:14:41,110 --> 00:14:39,199
well not artificial but exercising where

402
00:14:43,750 --> 00:14:41,120
we don't necessarily need to to survive

403
00:14:45,189 --> 00:14:43,760
on the station but to come back so i

404
00:14:47,269 --> 00:14:45,199
would say that's probably the most

405
00:14:49,509 --> 00:14:47,279
important that i see

406
00:14:50,949 --> 00:14:49,519
okay and one more question via twitter

407
00:14:52,230 --> 00:14:50,959
yeah we have another great one this one

408
00:14:55,430 --> 00:14:52,240
comes to us

409
00:14:57,350 --> 00:14:55,440
on a facebook it comes from c neues at

410
00:14:59,590 --> 00:14:57,360
any time the space station is staffed by

411
00:15:01,430 --> 00:14:59,600
citizens of several different countries

412
00:15:06,470 --> 00:15:01,440
how do you deal with each other's

413
00:15:10,150 --> 00:15:08,230

i think i could answer that since i'm a

414

00:15:12,710 --> 00:15:10,160

citizens of a different country living

415

00:15:14,710 --> 00:15:12,720

in a different country

416

00:15:17,030 --> 00:15:14,720

it's uh i think that

417

00:15:19,189 --> 00:15:17,040

uh the way we are selected and the way

418

00:15:20,870 --> 00:15:19,199

the program is moving forward

419

00:15:22,389 --> 00:15:20,880

we are

420

00:15:24,069 --> 00:15:22,399

we we just

421

00:15:26,550 --> 00:15:24,079

don't even think about those differences

422

00:15:28,310 --> 00:15:26,560

we are all we have a common back

423

00:15:31,110 --> 00:15:28,320

background and but mostly we have a

424

00:15:32,069 --> 00:15:31,120

common focus and and uh and goal

425

00:15:35,350 --> 00:15:32,079

we

426

00:15:36,150 --> 00:15:35,360

uh

427

00:15:41,829 --> 00:15:36,160

don't

428

00:15:43,829 --> 00:15:41,839

problems because we we realize that uh

429

00:15:45,590 --> 00:15:43,839

working and living together is is part

430

00:15:49,269 --> 00:15:45,600

of the environment and i think we were

431

00:15:50,470 --> 00:15:49,279

selected uh in our and and trained to

432

00:15:52,550 --> 00:15:50,480

work in

433

00:15:54,310 --> 00:15:52,560

in a multinational environment

434

00:15:55,670 --> 00:15:54,320

and

435

00:15:58,069 --> 00:15:55,680

i think we are the world champions of

436

00:15:59,269 --> 00:15:58,079

corporations when it comes to that

437

00:16:01,269 --> 00:15:59,279

all right and i believe

438

00:16:03,990 --> 00:16:01,279

i think the

439

00:16:05,509 --> 00:16:04,000

main role for crew international crew

440

00:16:07,829 --> 00:16:05,519

then the crew

441

00:16:10,470 --> 00:16:07,839

for me for example like commander which

442

00:16:12,389 --> 00:16:10,480

is station commander it's we don't have

443

00:16:14,550 --> 00:16:12,399

americans we don't have russians we

444

00:16:16,949 --> 00:16:14,560

don't have italians we have luka we have

445

00:16:19,269 --> 00:16:16,959

current we have further we have one crew

446

00:16:21,509 --> 00:16:19,279

member it's the first second one

447

00:16:23,990 --> 00:16:21,519

sometimes we use the language what kind

448

00:16:26,470 --> 00:16:24,000

of language we used and it's astronauts

449

00:16:27,910 --> 00:16:26,480

cosmonauts joke it's we used english and

450

00:16:30,230 --> 00:16:27,920

really what is their english it's

451
00:16:32,550 --> 00:16:30,240
russian and english it's mixed it's very

452
00:16:35,189 --> 00:16:32,560
terrible mixed very funny when we have

453
00:16:37,269 --> 00:16:35,199
for example t time it's t time on

454
00:16:39,829 --> 00:16:37,279
station it's very important that all

455
00:16:43,670 --> 00:16:39,839
crew are together and we may talk about

456
00:16:47,670 --> 00:16:43,680
our family about our daughters sons etc

457
00:16:51,829 --> 00:16:47,680
etc etc about news from station and it's

458
00:16:53,910 --> 00:16:51,839
very funny to hear like american

459
00:16:57,110 --> 00:16:53,920
used russian language and all russian

460
00:16:59,030 --> 00:16:57,120
news english languages we have one

461
00:17:01,749 --> 00:16:59,040
italian now and

462
00:17:02,829 --> 00:17:01,759
i hope after flight we may use italy

463
00:17:06,309 --> 00:17:02,839

thank

464

00:17:07,909 --> 00:17:06,319

back to this room and we have another

465

00:17:09,590 --> 00:17:07,919

question hi you spoke about the

466

00:17:12,549 --> 00:17:09,600

challenges of the things that happen in

467

00:17:13,750 --> 00:17:12,559

your bodies while you're in flight and i

468

00:17:15,990 --> 00:17:13,760

was wondering if you could talk a little

469

00:17:16,949 --> 00:17:16,000

bit about the experiments that you have

470

00:17:18,630 --> 00:17:16,959

chosen

471

00:17:20,949 --> 00:17:18,640

to participate in

472

00:17:23,189 --> 00:17:20,959

where you're monitoring in some way

473

00:17:25,829 --> 00:17:23,199

you're going to be sending some feedback

474

00:17:27,510 --> 00:17:25,839

on some of those changes

475

00:17:28,710 --> 00:17:27,520

one of the important things right now

476
00:17:30,710 --> 00:17:28,720
that we've discovered you've probably

477
00:17:33,750 --> 00:17:30,720
heard is we've seen a lot of astronauts

478
00:17:34,710 --> 00:17:33,760
come back with blurred eyesight

479
00:17:36,230 --> 00:17:34,720
and

480
00:17:38,789 --> 00:17:36,240
i've volunteered they're doing a new

481
00:17:40,070 --> 00:17:38,799
study now to really look deep into that

482
00:17:41,750 --> 00:17:40,080
and so

483
00:17:43,029 --> 00:17:41,760
i volunteered to to get into that

484
00:17:45,270 --> 00:17:43,039
because i think that's very important

485
00:17:47,669 --> 00:17:45,280
especially as we start traveling further

486
00:17:49,430 --> 00:17:47,679
out and spending more time away we we

487
00:17:51,510 --> 00:17:49,440
really can't afford to have the

488
00:17:53,669 --> 00:17:51,520

astronauts or the crew members come back

489

00:17:55,110 --> 00:17:53,679

with their eyesight decades so they're

490

00:17:56,870 --> 00:17:55,120

doing a lot of studying now to try and

491

00:17:58,230 --> 00:17:56,880

figure out what is the problem why

492

00:18:00,390 --> 00:17:58,240

that's happening and so we can figure

493

00:18:04,630 --> 00:18:00,400

out how to mitigate it we're also

494

00:18:06,710 --> 00:18:04,640

looking at i'm taking part as in a

495

00:18:08,470 --> 00:18:06,720

hip bone study where we're looking at

496

00:18:10,470 --> 00:18:08,480

this is like a preliminary one to look

497

00:18:12,470 --> 00:18:10,480

at if we can see how we can see

498

00:18:14,310 --> 00:18:12,480

structural changes in bones not just

499

00:18:16,789 --> 00:18:14,320

density changes but actual structural

500

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

changes we know that we lose density but

501
00:18:20,230 --> 00:18:18,880
we don't know if there's something

502
00:18:21,669 --> 00:18:20,240
happening in the bone where the bone

503
00:18:22,950 --> 00:18:21,679
actually looks different when we come

504
00:18:23,990 --> 00:18:22,960
back and so that's another one that

505
00:18:26,470 --> 00:18:24,000
we're doing so i think those are a

506
00:18:27,510 --> 00:18:26,480
couple of really important ones

507
00:18:29,110 --> 00:18:27,520
all right and i think we'll have another

508
00:18:31,510 --> 00:18:29,120
question here

509
00:18:33,669 --> 00:18:31,520
i'm jim oberg for nbc news

510
00:18:36,390 --> 00:18:33,679
and one of the purposes of course of the

511
00:18:39,029 --> 00:18:36,400
station also is to go beyond it can you

512
00:18:41,430 --> 00:18:39,039
comment to us relative to this 500-day

513
00:18:43,750 --> 00:18:41,440

mars mission proposal and other ideas

514

00:18:46,870 --> 00:18:43,760

what will be going on on the station in

515

00:18:49,029 --> 00:18:46,880

terms of life support system reliability

516

00:18:51,669 --> 00:18:49,039

that will contribute to someday

517

00:18:54,870 --> 00:18:51,679

being able to go 500 days or more

518

00:18:56,470 --> 00:18:54,880

without repair or without resupply into

519

00:18:58,549 --> 00:18:56,480

deep space so what are things going to

520

00:19:00,310 --> 00:18:58,559

be happening on your mission that will

521

00:19:01,830 --> 00:19:00,320

advance the day when we can finally

522

00:19:07,029 --> 00:19:01,840

decide we can

523

00:19:10,950 --> 00:19:08,070

now

524

00:19:14,150 --> 00:19:10,960

the historical we began uh with this

525

00:19:17,350 --> 00:19:14,160

station in iss station like isis station

526

00:19:19,990 --> 00:19:17,360

it's the maybe in 93 95 like this we had

527

00:19:22,230 --> 00:19:20,000

decision about build the station and we

528

00:19:25,190 --> 00:19:22,240

had experience with mr station and we

529

00:19:27,830 --> 00:19:25,200

continued this meal station to check how

530

00:19:30,070 --> 00:19:27,840

long the station can walk like this

531

00:19:32,070 --> 00:19:30,080

design worked in space and which station

532

00:19:35,510 --> 00:19:32,080

had 15 years

533

00:19:38,950 --> 00:19:35,520

continued now fgb for example the

534

00:19:41,590 --> 00:19:38,960

fgb is 15 years old

535

00:19:43,909 --> 00:19:41,600

it should be 50 yen years old and in my

536

00:19:46,150 --> 00:19:43,919

eva for example i should change with

537

00:19:47,990 --> 00:19:46,160

missouri can change the pump thermo

538

00:19:50,470 --> 00:19:48,000

control system pump

539

00:19:52,390 --> 00:19:50,480

because it's 15 years old now but it

540

00:19:56,870 --> 00:19:52,400

works perfect

541

00:19:59,270 --> 00:19:56,880

we should continue the iss and now every

542

00:20:03,029 --> 00:19:59,280

designers are sure that me we may

543

00:20:06,149 --> 00:20:03,039

continue the iss station 10 yes more

544

00:20:08,789 --> 00:20:06,159

so each data from each sensors each data

545

00:20:11,110 --> 00:20:08,799

from each computers each data from each

546

00:20:13,669 --> 00:20:11,120

equipment on station we have this data

547

00:20:16,310 --> 00:20:13,679

designers anytime check this

548

00:20:18,310 --> 00:20:16,320

the controllers anytime have this data

549

00:20:20,630 --> 00:20:18,320

and this experience look i told you

550

00:20:23,750 --> 00:20:20,640

about technological experience one

551

00:20:27,830 --> 00:20:23,760

off-road it's one off-road in station

552

00:20:30,310 --> 00:20:27,840

what what kind of data station gives us

553

00:20:33,190 --> 00:20:30,320

about oxygen and water recycling systems

554

00:20:35,110 --> 00:20:33,200

and carbon dioxide recycling

555

00:20:37,029 --> 00:20:35,120

are you going to be implementing any new

556

00:20:38,470 --> 00:20:37,039

hardware or just testing the stuff

557

00:20:39,830 --> 00:20:38,480

that's there already

558

00:20:41,909 --> 00:20:39,840

in our increment i think we'll just be

559

00:20:44,870 --> 00:20:41,919

continuing to use the systems that we

560

00:20:47,350 --> 00:20:44,880

have where we are recycling the water we

561

00:20:49,510 --> 00:20:47,360

are producing the oxygen um

562

00:20:50,789 --> 00:20:49,520

and those systems have been working very

563

00:20:52,390 --> 00:20:50,799

well and i'm sure there's going to be

564

00:20:53,909 --> 00:20:52,400

times when they break down and that's

565

00:20:54,950 --> 00:20:53,919

what when we learn

566

00:20:56,230 --> 00:20:54,960

and

567

00:20:58,230 --> 00:20:56,240

you know continue to study how to

568

00:21:00,470 --> 00:20:58,240

optimize them because certainly we need

569

00:21:03,190 --> 00:21:00,480

to be able to not you know be able to

570

00:21:05,190 --> 00:21:03,200

recycle and eventually bring in plants

571

00:21:06,789 --> 00:21:05,200

so we can absorb carbon dioxide produce

572

00:21:09,029 --> 00:21:06,799

oxygen that way as well for the long

573

00:21:11,510 --> 00:21:09,039

term so yeah and you should understand

574

00:21:13,909 --> 00:21:11,520

that we now have russian and american

575

00:21:15,350 --> 00:21:13,919

systems and we have backup system for

576
00:21:18,230 --> 00:21:15,360
each site too

577
00:21:19,669 --> 00:21:18,240
so it's three four times it's safe

578
00:21:21,190 --> 00:21:19,679
there is one piece of equipment that's

579
00:21:24,149 --> 00:21:21,200
coming up on the station with us and

580
00:21:26,230 --> 00:21:24,159
it's an o2 sensors for oxygen

581
00:21:29,270 --> 00:21:26,240
um that one will be

582
00:21:31,270 --> 00:21:29,280
will be used from now on so it's a new

583
00:21:32,710 --> 00:21:31,280
equipment it's an evolution of of all

584
00:21:35,510 --> 00:21:32,720
the equipment that we had on the station

585
00:21:37,350 --> 00:21:35,520
so the idea is that yes we we keep we

586
00:21:39,430 --> 00:21:37,360
keep testing and we keep evolving in our

587
00:21:41,029 --> 00:21:39,440
knowledge and in our equipment and one

588
00:21:42,549 --> 00:21:41,039

of the experiments that that will be on

589

00:21:45,029 --> 00:21:42,559

the station while we're up as a matter

590

00:21:47,029 --> 00:21:45,039

of fact is a is also another

591

00:21:48,070 --> 00:21:47,039

sensor for the control of the quality of

592

00:21:50,149 --> 00:21:48,080

the air

593

00:21:51,430 --> 00:21:50,159

and this specific sensor

594

00:21:53,590 --> 00:21:51,440

i'm talking about it because it's an

595

00:21:54,950 --> 00:21:53,600

italian experiment but

596

00:21:56,390 --> 00:21:54,960

it just

597

00:21:59,669 --> 00:21:56,400

happened to be on the station when i'm

598

00:22:01,350 --> 00:21:59,679

up and what it is it analyzes particles

599

00:22:03,430 --> 00:22:01,360

uh in order to understand what is the

600

00:22:05,510 --> 00:22:03,440

quality of the air repercussions are

601
00:22:07,029 --> 00:22:05,520
both for the space station where

602
00:22:09,029 --> 00:22:07,039
obviously to work in a healthy

603
00:22:11,430 --> 00:22:09,039
environment is important for astronauts

604
00:22:13,029 --> 00:22:11,440
especially for a long duration but even

605
00:22:15,110 --> 00:22:13,039
on the ground we could use

606
00:22:16,310 --> 00:22:15,120
the repercussion is that a small

607
00:22:18,310 --> 00:22:16,320
instrument that

608
00:22:19,430 --> 00:22:18,320
monitors the quality of the air is

609
00:22:21,510 --> 00:22:19,440
useful

610
00:22:22,310 --> 00:22:21,520
for control of environment even on the

611
00:22:23,830 --> 00:22:22,320
earth

612
00:22:25,270 --> 00:22:23,840
okay with that we're going to take a

613
00:22:26,630 --> 00:22:25,280

quick break from johnson space center

614

00:22:27,830 --> 00:22:26,640

and switch over to our friends at

615

00:22:31,110 --> 00:22:27,840

kennedy space center where they also

616

00:22:36,310 --> 00:22:33,669

um hi this is uh todd halverson of

617

00:22:38,310 --> 00:22:36,320

florida today and i have a question and

618

00:22:41,669 --> 00:22:38,320

then a follow if i could the first

619

00:22:43,909 --> 00:22:41,679

question is for fyodor and luca i am

620

00:22:47,750 --> 00:22:43,919

wondering if you could describe for us

621

00:22:49,669 --> 00:22:47,760

karen and her personality and what she

622

00:22:56,390 --> 00:22:49,679

is like to work with and then i have a

623

00:22:56,400 --> 00:23:02,230

nobody else could be

624

00:23:05,750 --> 00:23:04,470

i can start

625

00:23:08,950 --> 00:23:05,760

and

626

00:23:11,190 --> 00:23:08,960

met since the very first day that i that

627

00:23:12,870 --> 00:23:11,200

i moved here to johnson space center for

628

00:23:14,710 --> 00:23:12,880

the from the european astronaut center

629

00:23:15,590 --> 00:23:14,720

and we've been training together ever

630

00:23:16,549 --> 00:23:15,600

since

631

00:23:19,029 --> 00:23:16,559

and

632

00:23:21,430 --> 00:23:19,039

ever since the beginning uh karen is a

633

00:23:23,669 --> 00:23:21,440

flown astronaut a wonderful experience

634

00:23:24,630 --> 00:23:23,679

and the relationship between us is that

635

00:23:26,710 --> 00:23:24,640

of uh

636

00:23:28,789 --> 00:23:26,720

for me she's like a big sister the cool

637

00:23:31,590 --> 00:23:28,799

big sister that has done done it before

638

00:23:32,549 --> 00:23:31,600

and can uh teach me how to how to do it

639

00:23:35,110 --> 00:23:32,559

myself

640

00:23:36,950 --> 00:23:35,120

and um

641

00:23:39,510 --> 00:23:36,960

and it it feels like that we train

642

00:23:40,630 --> 00:23:39,520

together but also outside of the

643

00:23:42,230 --> 00:23:40,640

of the

644

00:23:43,830 --> 00:23:42,240

space training environment we we go

645

00:23:45,029 --> 00:23:43,840

running out together we go to the gym

646

00:23:46,789 --> 00:23:45,039

together and

647

00:23:48,630 --> 00:23:46,799

we share our experience she's a mother

648

00:23:50,630 --> 00:23:48,640

i'm a father we talk about our kids who

649

00:23:52,149 --> 00:23:50,640

happen to have the same to be the same

650

00:23:53,990 --> 00:23:52,159

age so uh

651

00:23:56,310 --> 00:23:54,000

it really it really is like that it's uh

652

00:23:58,310 --> 00:23:56,320

karen is the the cool big sister that

653

00:24:02,710 --> 00:23:58,320

every every guy would have would love to

654

00:24:07,990 --> 00:24:04,870

and we do have a follow-up

655

00:24:10,310 --> 00:24:08,000

yeah yeah i did thanks um this is uh for

656

00:24:12,950 --> 00:24:10,320

karen you're an avid runner and an

657

00:24:15,110 --> 00:24:12,960

accomplished uh marathoner i'm i'm

658

00:24:15,990 --> 00:24:15,120

wondering if you can uh tell me how you

659

00:24:18,549 --> 00:24:16,000

think

660

00:24:22,230 --> 00:24:18,559

that experience might serve you during

661

00:24:23,830 --> 00:24:22,240

your tour on the space station thanks

662

00:24:27,430 --> 00:24:23,840

yes i

663

00:24:29,110 --> 00:24:27,440

haven't run marathons recently but uh

664

00:24:31,909 --> 00:24:29,120

when i was not a mother and training for

665

00:24:33,430 --> 00:24:31,919

space flight i i did quite frequently

666

00:24:35,830 --> 00:24:33,440

and

667

00:24:37,190 --> 00:24:35,840

i think one thing marathons teach you is

668

00:24:38,630 --> 00:24:37,200

invariably when you're in the middle of

669

00:24:42,470 --> 00:24:38,640

a marathon usually around somewhere

670

00:24:44,549 --> 00:24:42,480

between mile 15 and 25

671

00:24:46,149 --> 00:24:44,559

there comes a point when you just

672

00:24:48,149 --> 00:24:46,159

you just can't stand it anymore and you

673

00:24:49,669 --> 00:24:48,159

want to quit really bad

674

00:24:52,070 --> 00:24:49,679

and uh

675

00:24:53,430 --> 00:24:52,080

i think uh and you find a way to power

676

00:24:55,590 --> 00:24:53,440

through it and in the end it turns out

677

00:24:57,029 --> 00:24:55,600

that you're so happy you didn't

678

00:24:58,950 --> 00:24:57,039

and there were a number of times where

679

00:25:01,269 --> 00:24:58,960

i'd walk at a water station drinking my

680

00:25:02,950 --> 00:25:01,279

water and i'm like i can't make one foot

681

00:25:05,110 --> 00:25:02,960

go in front of the other again you know

682

00:25:06,630 --> 00:25:05,120

but i did and i can imagine that when

683

00:25:08,070 --> 00:25:06,640

you're on space station for such a long

684

00:25:09,269 --> 00:25:08,080

period of time and you miss your family

685

00:25:10,149 --> 00:25:09,279

dearly

686

00:25:12,470 --> 00:25:10,159

that

687

00:25:13,990 --> 00:25:12,480

at times you probably wonder

688

00:25:15,350 --> 00:25:14,000

how in the world am i going to make it

689

00:25:17,750 --> 00:25:15,360

till tomorrow i want to give my son a

690

00:25:19,669 --> 00:25:17,760

hug you know but you'll power through it

691

00:25:21,990 --> 00:25:19,679

and i think that um

692

00:25:23,269 --> 00:25:22,000

i think that kind of correlates well and

693

00:25:25,990 --> 00:25:23,279

you find the strength to do what you

694

00:25:27,669 --> 00:25:26,000

need to do to get the job done

695

00:25:29,669 --> 00:25:27,679

really good words with that we're going

696

00:25:31,350 --> 00:25:29,679

to switch over now to the european space

697

00:25:36,470 --> 00:25:31,360

agency which also has some questions for

698

00:25:40,789 --> 00:25:38,549

hello this is julie here from the

699

00:25:42,870 --> 00:25:40,799

european astronaut center

700

00:25:44,549 --> 00:25:42,880

we have a few questions from luca that

701
00:25:47,750 --> 00:25:44,559
we have uh

702
00:25:49,510 --> 00:25:47,760
gathered on the social media

703
00:25:51,269 --> 00:25:49,520
the first one is from the irish space

704
00:25:54,070 --> 00:25:51,279
blog

705
00:25:56,630 --> 00:25:54,080
asking luca what are the main goals of

706
00:26:00,230 --> 00:25:56,640
your mission

707
00:26:01,350 --> 00:26:00,240
oh wow uh main goals so was that as i

708
00:26:04,630 --> 00:26:01,360
said before

709
00:26:07,110 --> 00:26:04,640
um we we i like to think that in my

710
00:26:09,269 --> 00:26:07,120
expedition we actually do

711
00:26:12,950 --> 00:26:09,279
that we do work on the three objectives

712
00:26:14,710 --> 00:26:12,960
of of technology science and exploration

713
00:26:16,630 --> 00:26:14,720

for technology

714

00:26:18,070 --> 00:26:16,640

we will be working

715

00:26:20,070 --> 00:26:18,080

for

716

00:26:23,510 --> 00:26:20,080

one of the very first times on the on

717

00:26:25,029 --> 00:26:23,520

the quick rendezvous same day rendezvous

718

00:26:26,870 --> 00:26:25,039

it's a new development it's something

719

00:26:29,430 --> 00:26:26,880

that until now it has not been done it

720

00:26:30,470 --> 00:26:29,440

will be done one time before we do but

721

00:26:32,310 --> 00:26:30,480

fiore and i will be the first

722

00:26:33,269 --> 00:26:32,320

international crew to work on it so i'd

723

00:26:34,950 --> 00:26:33,279

like to

724

00:26:36,390 --> 00:26:34,960

uh to think that that's a small

725

00:26:39,029 --> 00:26:36,400

contribution and it's one of the

726

00:26:40,470 --> 00:26:39,039

objectives i'd like to accomplish

727

00:26:41,990 --> 00:26:40,480

of course i'm looking forward to

728

00:26:44,470 --> 00:26:42,000

complete

729

00:26:47,269 --> 00:26:44,480

uh to perform all the tasks in my in my

730

00:26:49,510 --> 00:26:47,279

ebas that are planned now

731

00:26:50,950 --> 00:26:49,520

and uh certainly

732

00:26:53,110 --> 00:26:50,960

there is a there is something that's

733

00:26:56,870 --> 00:26:53,120

really this very much of my mind

734

00:26:58,870 --> 00:26:56,880

uh thirdly i would like to uh

735

00:27:01,830 --> 00:26:58,880

to comply with the with the requirements

736

00:27:03,269 --> 00:27:01,840

of the space station for uh the science

737

00:27:05,190 --> 00:27:03,279

that we do and

738

00:27:06,950 --> 00:27:05,200

again possibly not break any of the

739

00:27:08,549 --> 00:27:06,960

experiments

740

00:27:11,110 --> 00:27:08,559

and in the end probably

741

00:27:14,149 --> 00:27:11,120

the uh the biggest objective i have is

742

00:27:15,990 --> 00:27:14,159

to have fun and what i mean is that um

743

00:27:17,430 --> 00:27:16,000

coming from an operational environment

744

00:27:18,710 --> 00:27:17,440

that was a fighter pilot then a test

745

00:27:20,549 --> 00:27:18,720

pilot

746

00:27:23,269 --> 00:27:20,559

we do very cool jobs but sometimes we

747

00:27:25,510 --> 00:27:23,279

need to stop for five seconds and think

748

00:27:28,070 --> 00:27:25,520

what i'm doing is really is really great

749

00:27:29,909 --> 00:27:28,080

and it's a lot of fun and even even when

750

00:27:31,110 --> 00:27:29,919

it's hard we need to realize that there

751
00:27:33,029 --> 00:27:31,120
are a lot of people that would like to

752
00:27:38,310 --> 00:27:33,039
win our places and so

753
00:27:43,909 --> 00:27:41,510
another question from kierkos mimikos

754
00:27:47,510 --> 00:27:43,919
about how many experiments will you

755
00:27:49,750 --> 00:27:47,520
conduct during the your mission

756
00:27:50,870 --> 00:27:49,760
uh so at any time on the space station

757
00:27:54,070 --> 00:27:50,880
we have

758
00:27:56,310 --> 00:27:54,080
between 130 and 150 experiments that are

759
00:27:58,070 --> 00:27:56,320
that are running uh now the astronauts

760
00:27:59,590 --> 00:27:58,080
don't interact with all of them we

761
00:28:00,389 --> 00:27:59,600
interact about with two-thirds of them

762
00:28:03,909 --> 00:28:00,399
so

763
00:28:05,590 --> 00:28:03,919

probably about 100 experiments uh we

764

00:28:07,430 --> 00:28:05,600

uh

765

00:28:09,350 --> 00:28:07,440

with some experiments we we have a lot

766

00:28:11,510 --> 00:28:09,360

of interaction where we install them and

767

00:28:13,830 --> 00:28:11,520

control them and start them others we

768

00:28:16,789 --> 00:28:13,840

just uh make sure that the the power is

769

00:28:20,149 --> 00:28:16,799

running and so on and

770

00:28:21,990 --> 00:28:20,159

there are i volunteered in in all

771

00:28:24,789 --> 00:28:22,000

all of the physiology experiments in my

772

00:28:26,310 --> 00:28:24,799

increment i think there is in excess of

773

00:28:28,389 --> 00:28:26,320

10 or 15

774

00:28:30,230 --> 00:28:28,399

and those obviously require a lot of

775

00:28:32,389 --> 00:28:30,240

interaction from my part because i would

776

00:28:34,149 --> 00:28:32,399

be the the subject of the of the

777

00:28:35,590 --> 00:28:34,159

experiments so

778

00:28:38,230 --> 00:28:35,600

um

779

00:28:39,750 --> 00:28:38,240

that i would say that uh that completely

780

00:28:41,510 --> 00:28:39,760

answered the question so about 20 where

781

00:28:44,230 --> 00:28:41,520

i'm deeply involved about 100 that i

782

00:28:45,669 --> 00:28:44,240

will be interacting with and about 150

783

00:28:49,990 --> 00:28:45,679

that are running currently on the

784

00:28:54,230 --> 00:28:52,549

and about that anna kell is curious to

785

00:28:57,350 --> 00:28:54,240

know if you will be the if you will do

786

00:28:59,190 --> 00:28:57,360

the experiment with the fire

787

00:29:00,310 --> 00:28:59,200

with fire

788

00:29:02,389 --> 00:29:00,320

um

789

00:29:04,870 --> 00:29:02,399

hopefully uh

790

00:29:06,470 --> 00:29:04,880

hopefully we are talking about

791

00:29:08,710 --> 00:29:06,480

i think we are talking about combustion

792

00:29:10,230 --> 00:29:08,720

and yes there is a there is a combustion

793

00:29:11,590 --> 00:29:10,240

experiment that we're doing on the spec

794

00:29:12,470 --> 00:29:11,600

on the space station it's called green

795

00:29:13,750 --> 00:29:12,480

air

796

00:29:15,669 --> 00:29:13,760

and

797

00:29:17,190 --> 00:29:15,679

the it's not really fire what we're

798

00:29:18,549 --> 00:29:17,200

doing is we are

799

00:29:20,389 --> 00:29:18,559

studying

800

00:29:22,310 --> 00:29:20,399

how biofuels

801
00:29:25,269 --> 00:29:22,320
work

802
00:29:27,269 --> 00:29:25,279
and how we can decrease the amount of

803
00:29:29,750 --> 00:29:27,279
toxic substances that are generated

804
00:29:32,870 --> 00:29:29,760
during a combustion so the idea is to to

805
00:29:34,549 --> 00:29:32,880
have a simplified environment because we

806
00:29:36,870 --> 00:29:34,559
don't have the effect of the gravity on

807
00:29:39,029 --> 00:29:36,880
the on the space station and so

808
00:29:44,950 --> 00:29:39,039
yes we will be playing with fire

809
00:29:49,430 --> 00:29:47,590
another question from reiner krasken

810
00:29:51,430 --> 00:29:49,440
what are for you the pros and cons of

811
00:29:53,029 --> 00:29:51,440
the fast launch to docking procedure and

812
00:29:59,110 --> 00:29:53,039
that's also maybe a question to the

813
00:30:04,870 --> 00:30:01,830

but i think the question is about the

814

00:30:07,510 --> 00:30:04,880

short rendezvous one for orbits and

815

00:30:10,230 --> 00:30:07,520

longer than they were days yes and

816

00:30:12,710 --> 00:30:10,240

for me because it's now the uh the first

817

00:30:15,190 --> 00:30:12,720

of all it's the pavel screw

818

00:30:17,830 --> 00:30:15,200

bible vinogradov the launch it should be

819

00:30:20,549 --> 00:30:17,840

in end of march is the first

820

00:30:23,029 --> 00:30:20,559

this is the first uh flight when we

821

00:30:26,310 --> 00:30:23,039

should use the short rendezvous for

822

00:30:28,789 --> 00:30:26,320

robits for me it's more for crew it's

823

00:30:32,070 --> 00:30:28,799

more easier to do it and more helpful

824

00:30:34,630 --> 00:30:32,080

for crew because it's not two days in

825

00:30:37,269 --> 00:30:34,640

soyuz spacecraft because of spacecraft

826

00:30:39,269 --> 00:30:37,279

the volume it's not so big for it's it's

827

00:30:42,149 --> 00:30:39,279

enough for three people but the station

828

00:30:46,549 --> 00:30:42,159

it's more biggest more comfortable uh

829

00:30:49,110 --> 00:30:46,559

the three guys on the station will

830

00:30:51,990 --> 00:30:49,120

would like to meet us and have a news

831

00:30:56,230 --> 00:30:52,000

for us have something else for us yeah

832

00:30:58,789 --> 00:30:56,240

and uh for us now we wait uh pavel's

833

00:31:00,549 --> 00:30:58,799

flight and after fly our pavel slide we

834

00:31:02,870 --> 00:31:00,559

will have russian side will have

835

00:31:04,389 --> 00:31:02,880

decision about about

836

00:31:07,750 --> 00:31:04,399

our crew

837

00:31:10,070 --> 00:31:07,760

are ready for

838

00:31:12,789 --> 00:31:10,080

both of dockings

839

00:31:15,190 --> 00:31:12,799

we want it all together have a short

840

00:31:18,470 --> 00:31:15,200

flight rendezvous i asked karen the

841

00:31:21,830 --> 00:31:18,480

first and i asked luca when we began

842

00:31:24,950 --> 00:31:21,840

discussion about this i told about the

843

00:31:26,149 --> 00:31:24,960

plus and minus for both of these and

844

00:31:29,110 --> 00:31:26,159

after

845

00:31:31,669 --> 00:31:29,120

several trainings now in star city we

846

00:31:33,029 --> 00:31:31,679

understood each of us understood very

847

00:31:35,830 --> 00:31:33,039

nice the

848

00:31:39,269 --> 00:31:35,840

task everybody's task for a short flight

849

00:31:41,110 --> 00:31:39,279

and short run they will so for orbits i

850

00:31:43,669 --> 00:31:41,120

wanted to have a four bits because it

851
00:31:46,710 --> 00:31:43,679
will be the first time when the two

852
00:31:49,990 --> 00:31:46,720
foreign astronauts in the crew and we

853
00:31:52,549 --> 00:31:50,000
can do it this i am sure about luka like

854
00:31:54,549 --> 00:31:52,559
flight engineer i am very sure about

855
00:31:57,669 --> 00:31:54,559
karen and i would like to use current

856
00:32:00,950 --> 00:31:57,679
space experience in this time because i

857
00:32:03,029 --> 00:32:00,960
give just a little more options for here

858
00:32:05,909 --> 00:32:03,039
not like on procedure

859
00:32:13,750 --> 00:32:05,919
so we want it but the decision again

860
00:32:18,470 --> 00:32:16,230
another question from simon proud

861
00:32:20,950 --> 00:32:18,480
um obviously the um one important place

862
00:32:23,029 --> 00:32:20,960
on the space station is the cupola and

863
00:32:24,870 --> 00:32:23,039

uh luca is there a place on earth that

864

00:32:28,630 --> 00:32:24,880

you particularly look forward to to

865

00:32:32,710 --> 00:32:30,789

i've been uh i've been lucky enough in

866

00:32:34,149 --> 00:32:32,720

my in my work experience and my

867

00:32:35,990 --> 00:32:34,159

professional experience to live in many

868

00:32:37,190 --> 00:32:36,000

different places i was born in sicily

869

00:32:38,230 --> 00:32:37,200

but then i

870

00:32:45,990 --> 00:32:38,240

i

871

00:32:48,549 --> 00:32:46,000

um

872

00:32:51,430 --> 00:32:48,559

i moved to naples for the academy

873

00:32:53,430 --> 00:32:51,440

i went to wichita falls for

874

00:32:54,630 --> 00:32:53,440

battle training then back to italy near

875

00:32:55,350 --> 00:32:54,640

forja for

876

00:32:56,950 --> 00:32:55,360

my

877

00:32:59,430 --> 00:32:56,960

college experience

878

00:33:02,710 --> 00:32:59,440

and then rome has a test pilot friends

879

00:33:04,950 --> 00:33:02,720

for school germany now in houston so

880

00:33:08,310 --> 00:33:04,960

i have a list of places where i lived

881

00:33:09,909 --> 00:33:08,320

that that i've i'm attached

882

00:33:11,909 --> 00:33:09,919

because i lived there and i have a

883

00:33:13,990 --> 00:33:11,919

special relationship with each and every

884

00:33:15,750 --> 00:33:14,000

of those places so i would like to i

885

00:33:17,350 --> 00:33:15,760

would like to have a good site from from

886

00:33:23,190 --> 00:33:17,360

space on and

887

00:33:28,789 --> 00:33:26,070

another question from robert souza

888

00:33:30,870 --> 00:33:28,799

about there's been so many flights now

889

00:33:31,830 --> 00:33:30,880

it's uh you're flying every three months

890

00:33:33,830 --> 00:33:31,840

and

891

00:33:36,230 --> 00:33:33,840

for you luca do you consider your flight

892

00:33:37,590 --> 00:33:36,240

as a routine operation

893

00:33:39,110 --> 00:33:37,600

routine

894

00:33:40,789 --> 00:33:39,120

that's a that's an interesting point of

895

00:33:42,789 --> 00:33:40,799

view i i don't think there is anything

896

00:33:43,669 --> 00:33:42,799

routine about space

897

00:33:48,789 --> 00:33:43,679

that

898

00:33:50,630 --> 00:33:48,799

are very are very good and they they

899

00:33:53,269 --> 00:33:50,640

make something extremely complicated

900

00:33:55,190 --> 00:33:53,279

like space flight look easy

901
00:33:56,950 --> 00:33:55,200
but that doesn't make it easy they make

902
00:33:58,470 --> 00:33:56,960
it look easy so

903
00:34:01,029 --> 00:33:58,480
there's nothing routine about space

904
00:34:03,269 --> 00:34:01,039
flight every every every every launch is

905
00:34:05,750 --> 00:34:03,279
a is a test is an experiment

906
00:34:07,909 --> 00:34:05,760
every every day is a challenge

907
00:34:10,149 --> 00:34:07,919
every every day on the space station we

908
00:34:13,109 --> 00:34:10,159
need to support the life of six people

909
00:34:14,470 --> 00:34:13,119
uh completely isolated from from earth

910
00:34:16,230 --> 00:34:14,480
so

911
00:34:20,950 --> 00:34:16,240
quickly no there's nothing routine about

912
00:34:25,750 --> 00:34:22,629
thank you and the last question from

913
00:34:27,589 --> 00:34:25,760

from isa from joachim batist on your

914

00:34:29,349 --> 00:34:27,599

personal side on the personal side do

915

00:34:31,190 --> 00:34:29,359

you have specific goals

916

00:34:32,950 --> 00:34:31,200

that you want to achieve during your

917

00:34:35,990 --> 00:34:32,960

mission

918

00:34:36,869 --> 00:34:36,000

a specific goal um well

919

00:34:38,869 --> 00:34:36,879

uh

920

00:34:40,230 --> 00:34:38,879

i i didn't put down the numbers of what

921

00:34:41,829 --> 00:34:40,240

i want to do but

922

00:34:43,349 --> 00:34:41,839

uh if there's one thing that i would

923

00:34:45,909 --> 00:34:43,359

like to do that i think

924

00:34:48,790 --> 00:34:45,919

is not done enough is to bring people

925

00:34:51,349 --> 00:34:48,800

inside the space station and what i mean

926
00:34:53,750 --> 00:34:51,359
with that is that i think we have a lot

927
00:34:56,069 --> 00:34:53,760
of wonderful pictures from orbit of

928
00:34:58,069 --> 00:34:56,079
places on the ground beautiful pictures

929
00:35:00,230 --> 00:34:58,079
i would like to to take more pictures of

930
00:35:03,030 --> 00:35:00,240
what we do on the space station and

931
00:35:05,349 --> 00:35:03,040
and let people fly with us on the space

932
00:35:07,990 --> 00:35:05,359
station and share that experience i

933
00:35:10,470 --> 00:35:08,000
i i always say that one of the best

934
00:35:11,670 --> 00:35:10,480
parts of my job is the people and we

935
00:35:13,349 --> 00:35:11,680
would like to bring all those people

936
00:35:15,670 --> 00:35:13,359
that work for us and with us on the

937
00:35:17,349 --> 00:35:15,680
station but we can't so maybe

938
00:35:19,190 --> 00:35:17,359

there will be a little bit of space for

939

00:35:21,270 --> 00:35:19,200

them

940

00:35:24,710 --> 00:35:21,280

through pictures and through videos of

941

00:35:27,750 --> 00:35:26,310

okay and i believe that was our last

942

00:35:29,510 --> 00:35:27,760

question from the european space agency

943

00:35:31,430 --> 00:35:29,520

thanks we're going to switch back here

944

00:35:33,109 --> 00:35:31,440

to the johnson space center and take

945

00:35:35,190 --> 00:35:33,119

questions from the audience again if you

946

00:35:36,310 --> 00:35:35,200

have a question please raise your hand i

947

00:35:37,750 --> 00:35:36,320

believe we have one in the back if you

948

00:35:41,589 --> 00:35:37,760

can just wait for the microphone to get

949

00:35:47,589 --> 00:35:45,750

hi um i had a question um i'm i'm

950

00:35:51,030 --> 00:35:47,599

very curious about

951
00:35:52,550 --> 00:35:51,040
when like you actually go up into space

952
00:35:54,950 --> 00:35:52,560
what's the one thing that like you

953
00:35:56,470 --> 00:35:54,960
remember from your training

954
00:35:58,950 --> 00:35:56,480
where like you really say well i'm

955
00:36:00,150 --> 00:35:58,960
really i'm really glad that

956
00:36:01,829 --> 00:36:00,160
that like i

957
00:36:05,270 --> 00:36:01,839
i went

958
00:36:07,109 --> 00:36:05,280
through that in the training

959
00:36:09,030 --> 00:36:07,119
i think

960
00:36:11,030 --> 00:36:09,040
when that comes into play is a time we

961
00:36:13,270 --> 00:36:11,040
don't want to happen

962
00:36:14,550 --> 00:36:13,280
for emergencies

963
00:36:16,470 --> 00:36:14,560

if we have there are three main

964

00:36:18,069 --> 00:36:16,480

emergencies we can have that are pretty

965

00:36:19,670 --> 00:36:18,079

bad that could result in us going in our

966

00:36:22,230 --> 00:36:19,680

soyuz and coming home and that's a

967

00:36:24,550 --> 00:36:22,240

depress of a space station or a bad fire

968

00:36:27,430 --> 00:36:24,560

or um ammonia leak from the external

969

00:36:29,349 --> 00:36:27,440

radio that is on the u.s side and

970

00:36:32,069 --> 00:36:29,359

we train a lot for that because that is

971

00:36:34,550 --> 00:36:32,079

a case where if something happens

972

00:36:37,190 --> 00:36:34,560

we need to be able to react very very

973

00:36:38,550 --> 00:36:37,200

quickly and

974

00:36:39,990 --> 00:36:38,560

you know we don't obviously don't expect

975

00:36:40,710 --> 00:36:40,000

that to happen and we hope it doesn't

976
00:36:42,870 --> 00:36:40,720
but

977
00:36:44,150 --> 00:36:42,880
if someday in the future something like

978
00:36:45,589 --> 00:36:44,160
that happened i think that would be the

979
00:36:48,150 --> 00:36:45,599
point where people would be saying i'm

980
00:36:51,270 --> 00:36:48,160
really glad we spent the time on this

981
00:36:53,030 --> 00:36:51,280
and learned how to do this on the ground

982
00:36:55,510 --> 00:36:53,040
okay i believe we have another question

983
00:36:57,430 --> 00:36:55,520
over here yes hi i'm one of the social

984
00:36:58,710 --> 00:36:57,440
media people that was invited to come to

985
00:37:00,390 --> 00:36:58,720
the social thing and i want to thank

986
00:37:02,230 --> 00:37:00,400
nasa for that opportunity and i also

987
00:37:04,870 --> 00:37:02,240
want to explain that i found out about

988
00:37:07,190 --> 00:37:04,880

this through third rock radio which is a

989

00:37:08,390 --> 00:37:07,200

great internet radio station that is

990

00:37:09,589 --> 00:37:08,400

powered by nasa

991

00:37:10,790 --> 00:37:09,599

my question for you is sort of a

992

00:37:12,630 --> 00:37:10,800

personal one

993

00:37:15,030 --> 00:37:12,640

in the sense that all the people here

994

00:37:16,630 --> 00:37:15,040

consider y'all just complete heroes to

995

00:37:18,550 --> 00:37:16,640

us i mean we're in awe of what you do

996

00:37:29,190 --> 00:37:18,560

and what you have already accomplished

997

00:37:35,109 --> 00:37:31,349

the question it's very easy because for

998

00:37:36,310 --> 00:37:35,119

me the hero number one for each time

999

00:37:39,349 --> 00:37:36,320

any year

1000

00:37:41,430 --> 00:37:39,359

any century it's yuri gagarin first man

1001
00:37:44,230 --> 00:37:41,440
who flown to space for what reason

1002
00:37:47,349 --> 00:37:44,240
because when i grow when i was

1003
00:37:49,910 --> 00:37:47,359
a young boy since this time i hear only

1004
00:37:52,390 --> 00:37:49,920
gagarin gagarin gagarin about this in

1005
00:37:54,550 --> 00:37:52,400
when we played to them and who somebody

1006
00:37:57,510 --> 00:37:54,560
win it was gagarin and when i was too

1007
00:37:59,430 --> 00:37:57,520
small boy the i thought the gagarin is

1008
00:38:01,829 --> 00:37:59,440
like title

1009
00:38:03,750 --> 00:38:01,839
it's not the name only in school i

1010
00:38:05,349 --> 00:38:03,760
understand it's real no not in school

1011
00:38:07,750 --> 00:38:05,359
maybe before the elementary school

1012
00:38:10,470 --> 00:38:07,760
understand this is real men who flown

1013
00:38:12,310 --> 00:38:10,480

the space and then uh since these years

1014

00:38:15,910 --> 00:38:12,320

are interesting about

1015

00:38:18,310 --> 00:38:15,920

space program of course tito second one

1016

00:38:19,990 --> 00:38:18,320

leona for the first moment tirisco one

1017

00:38:23,190 --> 00:38:20,000

nail armstrong

1018

00:38:24,710 --> 00:38:23,200

great is the the program apollo program

1019

00:38:27,430 --> 00:38:24,720

and the walking

1020

00:38:28,710 --> 00:38:27,440

on the moon etc etc etc so since my

1021

00:38:32,310 --> 00:38:28,720

youngest

1022

00:38:35,510 --> 00:38:32,320

age the all astronauts cosmonauts it was

1023

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

my hero but number one it was gagarin

1024

00:38:40,310 --> 00:38:38,320

and i am very lucky boy because the

1025

00:38:42,790 --> 00:38:40,320

dream is done and dream my dream is

1026

00:38:44,870 --> 00:38:42,800

continued thank you

1027

00:38:48,230 --> 00:38:44,880

all right look i can

1028

00:38:50,870 --> 00:38:48,240

i certainly don't feel like a hero and

1029

00:38:54,470 --> 00:38:50,880

i think that yes sorry yes of course i

1030

00:38:54,480 --> 00:38:57,750

sorry about this

1031

00:39:03,430 --> 00:38:58,829

thank

1032

00:39:06,390 --> 00:39:04,470

so

1033

00:39:08,950 --> 00:39:06,400

to answer the question uh

1034

00:39:10,630 --> 00:39:08,960

quite the opposite i i would like to to

1035

00:39:11,430 --> 00:39:10,640

to send this message to all the people

1036

00:39:16,950 --> 00:39:11,440

there

1037

00:39:18,950 --> 00:39:16,960

the future generations that astronauts

1038

00:39:20,790 --> 00:39:18,960

in my again humble opinion are very

1039

00:39:22,550 --> 00:39:20,800

normal people i consider myself a very

1040

00:39:24,470 --> 00:39:22,560

very normal person

1041

00:39:26,470 --> 00:39:24,480

now what what we do happen to be

1042

00:39:28,630 --> 00:39:26,480

extraordinary and there's no doubt about

1043

00:39:32,630 --> 00:39:28,640

that i feel privileged

1044

00:39:35,270 --> 00:39:34,069

and i think they were asking who your

1045

00:39:37,990 --> 00:39:35,280

hero is

1046

00:39:43,589 --> 00:39:40,870

if i had to to mention one person i'd

1047

00:39:45,670 --> 00:39:43,599

probably think about my dad

1048

00:39:48,150 --> 00:39:45,680

he

1049

00:39:51,349 --> 00:39:48,160

or my parents just not one person but my

1050

00:39:53,750 --> 00:39:51,359

parents uh because

1051

00:39:56,310 --> 00:39:53,760

if they if i'm here today it's through

1052

00:39:58,310 --> 00:39:56,320

all through all day and they taught me

1053

00:39:59,589 --> 00:39:58,320

uh when i was a kid and so

1054

00:40:01,750 --> 00:39:59,599

uh i

1055

00:40:04,230 --> 00:40:01,760

it's a very good italian i stay with my

1056

00:40:04,240 --> 00:40:11,990

my hair is luca parmitano

1057

00:40:15,670 --> 00:40:13,750

yes

1058

00:40:17,349 --> 00:40:15,680

a lot a lot of people like

1059

00:40:19,109 --> 00:40:17,359

um

1060

00:40:21,589 --> 00:40:19,119

growing up

1061

00:40:22,710 --> 00:40:21,599

i think i've i grew up in a stage in an

1062

00:40:24,390 --> 00:40:22,720

age where

1063

00:40:25,910 --> 00:40:24,400

being a girl wasn't

1064

00:40:27,670 --> 00:40:25,920

it was okay to do anything you wanted to

1065

00:40:29,349 --> 00:40:27,680

as a girl but i know before that it was

1066

00:40:31,270 --> 00:40:29,359

not necessarily

1067

00:40:33,030 --> 00:40:31,280

and a lot of the

1068

00:40:35,589 --> 00:40:33,040

the scientists and engineers and

1069

00:40:37,990 --> 00:40:35,599

astronaut females that came before me

1070

00:40:40,150 --> 00:40:38,000

that set the stage for it being a

1071

00:40:41,990 --> 00:40:40,160

possibility for me

1072

00:40:43,750 --> 00:40:42,000

it's pretty incredible

1073

00:40:45,990 --> 00:40:43,760

what some of those women probably had to

1074

00:40:47,109 --> 00:40:46,000

go through to make it make it easy and

1075

00:40:51,030 --> 00:40:47,119

make it

1076

00:40:54,390 --> 00:40:51,040

no question that i was able to do it

1077

00:40:56,550 --> 00:40:54,400

but i may answer this excuse me about uh

1078

00:41:00,950 --> 00:40:56,560

karen's hero unfortunately it's not

1079

00:41:04,950 --> 00:41:02,309

his son

1080

00:41:09,109 --> 00:41:04,960

only he may argue with him with karen

1081

00:41:12,710 --> 00:41:09,119

and karen don't have any time argue for

1082

00:41:16,470 --> 00:41:14,069

okay we have another question from the

1083

00:41:18,309 --> 00:41:16,480

back hi i'm michelle lewis i was curious

1084

00:41:19,990 --> 00:41:18,319

since you can take all of your

1085

00:41:21,829 --> 00:41:20,000

personal items like all of your music

1086

00:41:23,750 --> 00:41:21,839

and your photos and any books you want

1087

00:41:25,670 --> 00:41:23,760

to read on a phone

1088

00:41:27,109 --> 00:41:25,680

um are there any personal items that you

1089

00:41:29,430 --> 00:41:27,119

would want to take any little sort of

1090

00:41:32,630 --> 00:41:29,440

trinkets or good luck charms anything

1091

00:41:35,109 --> 00:41:32,640

that's like tangible that you could feel

1092

00:41:37,349 --> 00:41:35,119

i plan on taking i asked everybody in my

1093

00:41:38,950 --> 00:41:37,359

family for a little trinket ring

1094

00:41:40,309 --> 00:41:38,960

something like that and i have some

1095

00:41:41,589 --> 00:41:40,319

jewelry that belonged to my late

1096

00:41:42,630 --> 00:41:41,599

grandmothers

1097

00:41:43,829 --> 00:41:42,640

which will mean a lot to me to get

1098

00:41:44,790 --> 00:41:43,839

pictures of them to get back to my

1099

00:41:46,069 --> 00:41:44,800

parents

1100

00:41:48,790 --> 00:41:46,079

and

1101
00:41:49,670 --> 00:41:48,800
i plan on bringing a lot of pictures

1102
00:41:52,309 --> 00:41:49,680
and

1103
00:41:54,550 --> 00:41:52,319
a couple little toys that my son likes

1104
00:41:55,750 --> 00:41:54,560
that i can um have there with me

1105
00:41:58,069 --> 00:41:55,760
and

1106
00:41:59,589 --> 00:41:58,079
also i hope to have um

1107
00:42:02,710 --> 00:41:59,599
piano music uplink so i can play the

1108
00:42:05,670 --> 00:42:02,720
keyboard when i'm there just for fun and

1109
00:42:07,349 --> 00:42:05,680
just a lot of things like that

1110
00:42:09,829 --> 00:42:07,359
for me

1111
00:42:12,150 --> 00:42:09,839
if the pictures and in my flight with me

1112
00:42:15,270 --> 00:42:12,160
the my family pictures of course my

1113
00:42:16,390 --> 00:42:15,280

parents my friends each time with me and

1114

00:42:18,390 --> 00:42:16,400

unfortunately

1115

00:42:20,069 --> 00:42:18,400

i checked the pictures and my daughter

1116

00:42:22,550 --> 00:42:20,079

sits growing these pictures each

1117

00:42:24,790 --> 00:42:22,560

flight's biggest and biggest my wife

1118

00:42:27,349 --> 00:42:24,800

each time it's very nice very beautiful

1119

00:42:29,829 --> 00:42:27,359

beautiful and the same for me about one

1120

00:42:32,790 --> 00:42:29,839

toys it's very special it's more small

1121

00:42:34,710 --> 00:42:32,800

toys it's the dog he flown three times

1122

00:42:39,190 --> 00:42:34,720

in space i hope he continued his

1123

00:42:42,309 --> 00:42:41,190

i'm certainly taking pictures of my

1124

00:42:45,109 --> 00:42:42,319

daughters

1125

00:42:47,990 --> 00:42:45,119

and my wife uh also my ring my wedding

1126

00:42:50,069 --> 00:42:48,000

ring that i i'm always wearing uh

1127

00:42:51,910 --> 00:42:50,079

and then some some souvenirs small very

1128

00:42:54,150 --> 00:42:51,920

small thing we don't have a lot of space

1129

00:42:55,750 --> 00:42:54,160

for for personal items so

1130

00:42:57,750 --> 00:42:55,760

uh some

1131

00:42:59,750 --> 00:42:57,760

some small souvenirs

1132

00:43:02,069 --> 00:42:59,760

that i that i like to give out i don't

1133

00:43:03,990 --> 00:43:02,079

collect anything so i'm not really

1134

00:43:05,990 --> 00:43:04,000

taking anything for myself but i like to

1135

00:43:07,910 --> 00:43:06,000

be able to give out some some presents

1136

00:43:10,230 --> 00:43:07,920

some something small to to people that

1137

00:43:13,510 --> 00:43:10,240

uh that i love and and i like again to

1138

00:43:14,550 --> 00:43:13,520

share my experience with okay in the few

1139

00:43:15,910 --> 00:43:14,560

minutes that we have left we're going to

1140

00:43:17,750 --> 00:43:15,920

switch over to the phone bridge where we

1141

00:43:21,670 --> 00:43:17,760

have a couple of other reporters tying

1142

00:43:23,510 --> 00:43:21,680

in uh kevin with wday tv in fargo north

1143

00:43:25,910 --> 00:43:23,520

dakota

1144

00:43:27,430 --> 00:43:25,920

hi a question for karen and a lot of

1145

00:43:29,430 --> 00:43:27,440

astronauts have to do this but how

1146

00:43:32,950 --> 00:43:29,440

mentally do you prepare yourself to just

1147

00:43:34,870 --> 00:43:32,960

be away from your family and um also in

1148

00:43:36,710 --> 00:43:34,880

case i don't get to ask um are you

1149

00:43:38,630 --> 00:43:36,720

actually bringing anything for your

1150

00:43:41,349 --> 00:43:38,640

crafting and quilting hobby

1151

00:43:42,870 --> 00:43:41,359

hey kevin how are you um

1152

00:43:44,309 --> 00:43:42,880

i don't know if you can really mentally

1153

00:43:47,190 --> 00:43:44,319

prepare yourself to be away from your

1154

00:43:48,230 --> 00:43:47,200

family i think it it you just go with

1155

00:43:49,349 --> 00:43:48,240

the flow

1156

00:43:51,589 --> 00:43:49,359

and

1157

00:43:53,589 --> 00:43:51,599

make sure that things are in the order

1158

00:43:54,790 --> 00:43:53,599

that you would like things to be when

1159

00:43:56,550 --> 00:43:54,800

you leave and

1160

00:43:58,710 --> 00:43:56,560

and then

1161

00:44:00,309 --> 00:43:58,720

uh just do it and

1162

00:44:01,510 --> 00:44:00,319

keep in communication with them when

1163

00:44:03,190 --> 00:44:01,520

you're gone

1164

00:44:05,349 --> 00:44:03,200
so i honestly don't think you can

1165

00:44:07,430 --> 00:44:05,359
mentally prepare yourself for that

1166

00:44:08,870 --> 00:44:07,440
and so i mean i'll do what i can but

1167

00:44:09,910 --> 00:44:08,880
it's it's going to be hard when the time

1168

00:44:11,430 --> 00:44:09,920
comes and it's going to be hard to be

1169

00:44:12,790 --> 00:44:11,440
away from them but i'm not sure you can

1170

00:44:16,390 --> 00:44:12,800
prepare yourself

1171

00:44:18,150 --> 00:44:16,400
i am taking some things um i do like um

1172

00:44:19,109 --> 00:44:18,160
in my downtime i don't watch a lot of

1173

00:44:21,589 --> 00:44:19,119
movies

1174

00:44:22,710 --> 00:44:21,599
um or things like that when i

1175

00:44:27,670 --> 00:44:22,720
to

1176

00:44:29,270 --> 00:44:27,680

draw and do things like that and so i

1177

00:44:30,630 --> 00:44:29,280

brought a sketch pad some pencils that i

1178

00:44:33,109 --> 00:44:30,640

can hopefully do a little bit of

1179

00:44:34,630 --> 00:44:33,119

sketching and i brought a little bit of

1180

00:44:35,829 --> 00:44:34,640

fabric and needle and thread and i have

1181

00:44:37,430 --> 00:44:35,839

no clue yet what i'm going to do with it

1182

00:44:39,510 --> 00:44:37,440

but i'll come up with something

1183

00:44:41,270 --> 00:44:39,520

hopefully and it'll in my downtime i

1184

00:44:42,309 --> 00:44:41,280

mean a lot of the downtime you know i'm

1185

00:44:43,670 --> 00:44:42,319

going to want to spend looking out the

1186

00:44:45,510 --> 00:44:43,680

window and taking pictures and things

1187

00:44:47,589 --> 00:44:45,520

like that but i'm sure there will be

1188

00:44:49,910 --> 00:44:47,599

quiet evenings where i just kind of want

1189

00:44:51,990 --> 00:44:49,920

to be by myself and do and do things

1190

00:44:54,390 --> 00:44:52,000

that are comfortable with me of

1191

00:44:56,550 --> 00:44:54,400

types of things i do here on earth

1192

00:45:02,630 --> 00:44:56,560

okay next is hannah james with the daily

1193

00:45:07,270 --> 00:45:04,870

hi there karen uh i have a question for

1194

00:45:09,030 --> 00:45:07,280

you um especially regarding um

1195

00:45:10,950 --> 00:45:09,040

university of texas um i'm from the

1196

00:45:13,270 --> 00:45:10,960

daily tech at ut and i was kind of

1197

00:45:14,710 --> 00:45:13,280

curious as to how your experiences in

1198

00:45:18,069 --> 00:45:14,720

graduate school

1199

00:45:20,470 --> 00:45:18,079

affected your career as an astronaut

1200

00:45:21,990 --> 00:45:20,480

yes i spent four years at the university

1201
00:45:24,230 --> 00:45:22,000
of texas at austin doing graduate work

1202
00:45:25,349 --> 00:45:24,240
and i actually worked on

1203
00:46:21,990 --> 00:45:25,359
a

1204
00:46:23,589 --> 00:46:22,000
picture of my hometown i'm not sure

1205
00:46:25,190 --> 00:46:23,599
we'll actually see my hometown but

1206
00:46:27,430 --> 00:46:25,200
hopefully we'll see the lakes around it

1207
00:46:28,950 --> 00:46:27,440
it's a very small town in minnesota and

1208
00:46:31,030 --> 00:46:28,960
on my shuttle flight there were a couple

1209
00:46:32,950 --> 00:46:31,040
opportunities where i wasn't busy and we

1210
00:46:34,069 --> 00:46:32,960
were happen to be flying over the town

1211
00:46:35,990 --> 00:46:34,079
in the middle of the day but then it was

1212
00:46:38,230 --> 00:46:36,000
cloudy and so i'm hoping over a

1213
00:46:41,589 --> 00:46:38,240

six-month period of time i'll be able to

1214

00:46:43,750 --> 00:46:41,599

get a couple pictures of that area

1215

00:46:44,870 --> 00:46:43,760

you know so the people in that area can

1216

00:46:46,790 --> 00:46:44,880

can see

1217

00:46:48,309 --> 00:46:46,800

from uh from space and i think it'll be

1218

00:46:49,349 --> 00:46:48,319

special for me to get some pictures of

1219

00:46:50,790 --> 00:46:49,359

that

1220

00:46:53,430 --> 00:46:50,800

and for me

1221

00:46:56,069 --> 00:46:53,440

the first of all i am russian so sorry

1222

00:46:58,630 --> 00:46:56,079

uh for for karen because karen cannot be

1223

00:47:01,670 --> 00:46:58,640

the veteran

1224

00:47:04,069 --> 00:47:01,680

it's impossible yes very experienced

1225

00:47:05,190 --> 00:47:04,079

woman but it's not better

1226

00:47:08,390 --> 00:47:05,200

okay

1227

00:47:10,630 --> 00:47:08,400

it's it's possible to me and for me

1228

00:47:13,589 --> 00:47:10,640

this is very interesting

1229

00:47:14,470 --> 00:47:13,599

uh after so many times in space what

1230

00:47:17,349 --> 00:47:14,480

else

1231

00:47:19,270 --> 00:47:17,359

the uh look i told you than each

1232

00:47:22,150 --> 00:47:19,280

space flight it's a new each space

1233

00:47:24,069 --> 00:47:22,160

flight cannot be routine space lights

1234

00:47:26,470 --> 00:47:24,079

for me

1235

00:47:28,390 --> 00:47:26,480

i hope we will have

1236

00:47:30,950 --> 00:47:28,400

we don't have we would not have of

1237

00:47:33,910 --> 00:47:30,960

nominal situation on space and for me

1238

00:47:36,150 --> 00:47:33,920

the very important now it's three way in

1239

00:47:38,230 --> 00:47:36,160

my role it's exactly three

1240

00:47:40,390 --> 00:47:38,240

it should it could be the possibility

1241

00:47:43,990 --> 00:47:40,400

it's one or two more

1242

00:47:46,710 --> 00:47:44,000

so i am ready for this va i wanted to

1243

00:47:49,670 --> 00:47:46,720

have the time and uh

1244

00:47:53,190 --> 00:47:49,680

check how the f planet again looks with

1245

00:47:55,910 --> 00:47:53,200

open eyes through helm not through

1246

00:47:57,589 --> 00:47:55,920

eliminator it's great time for me many

1247

00:48:00,150 --> 00:47:57,599

interesting because i take a lot of

1248

00:48:03,190 --> 00:48:00,160

pictures and have so many photo

1249

00:48:04,710 --> 00:48:03,200

exhibitions but i never

1250

00:48:07,349 --> 00:48:04,720

take the

1251
00:48:09,349 --> 00:48:07,359
for example the great wall because any

1252
00:48:12,549 --> 00:48:09,359
time in my flights in all three flights

1253
00:48:14,710 --> 00:48:12,559
it was the clouds in this place i only

1254
00:48:16,870 --> 00:48:14,720
once take the picture with machu picchu

1255
00:48:20,309 --> 00:48:16,880
for example this is my rule because i

1256
00:48:22,470 --> 00:48:20,319
have so many pictures and one more what

1257
00:48:25,430 --> 00:48:22,480
i would

1258
00:48:27,030 --> 00:48:25,440
would like to have from each flight

1259
00:48:30,870 --> 00:48:27,040
after flights

1260
00:48:33,510 --> 00:48:30,880
in end of flight i told guys if we after

1261
00:48:35,430 --> 00:48:33,520
flight say hello each other

1262
00:48:38,470 --> 00:48:35,440
it's great flight

1263
00:48:41,670 --> 00:48:38,480

before this i had great flight i hope

1264

00:48:45,190 --> 00:48:41,680

after our flight each of us anytime we

1265

00:48:47,190 --> 00:48:45,200

say hello we glad to see you again

1266

00:48:49,190 --> 00:48:47,200

thank you

1267

00:48:50,950 --> 00:48:49,200

great we're going to switch back to uh

1268

00:48:53,030 --> 00:48:50,960

taking a few more questions via twitter

1269

00:48:54,470 --> 00:48:53,040

again that was the hashtag ask nasa and

1270

00:48:55,990 --> 00:48:54,480

amiko i think you have another question

1271

00:48:58,069 --> 00:48:56,000

yeah we have a good uh follow-on

1272

00:49:00,950 --> 00:48:58,079

question to the uh the question about

1273

00:49:03,510 --> 00:49:00,960

photos of the earth this one comes on

1274

00:49:05,589 --> 00:49:03,520

twitter from sif what are the specs on

1275

00:49:08,150 --> 00:49:05,599

the cameras that you will use to capture

1276

00:49:15,430 --> 00:49:08,160

the earth and talk a little about your

1277

00:49:20,950 --> 00:49:17,829

yeah training thank you very much

1278

00:49:24,309 --> 00:49:20,960

i have great great great crew it's

1279

00:49:28,150 --> 00:49:24,319

brilliant luca smart current

1280

00:49:31,190 --> 00:49:28,160

i may answer you because most of time

1281

00:49:33,589 --> 00:49:31,200

the people ask about the cameras and

1282

00:49:36,150 --> 00:49:33,599

think the camera it's it's unique

1283

00:49:38,230 --> 00:49:36,160

cameras but only for several tests we

1284

00:49:40,150 --> 00:49:38,240

have unique camera for most of pictures

1285

00:49:42,390 --> 00:49:40,160

we use the

1286

00:49:44,390 --> 00:49:42,400

usual digital cameras it's

1287

00:49:47,670 --> 00:49:44,400

built nikon sometimes

1288

00:49:50,150 --> 00:49:47,680

different one yes now on american

1289

00:49:51,030 --> 00:49:50,160

segment we have very nice ired camera

1290

00:49:53,510 --> 00:49:51,040

and

1291

00:49:54,470 --> 00:49:53,520

i think the first crew who used this it

1292

00:49:57,430 --> 00:49:54,480

was

1293

00:50:00,069 --> 00:49:57,440

many great peoples did it by

1294

00:50:03,270 --> 00:50:00,079

don petit in this flight yes and we

1295

00:50:06,390 --> 00:50:03,280

continued we starting uh training with

1296

00:50:09,750 --> 00:50:06,400

these cameras irat digital camera and

1297

00:50:12,549 --> 00:50:09,760

usual digital cameras and the problem

1298

00:50:15,030 --> 00:50:12,559

only the one you should very fast change

1299

00:50:17,109 --> 00:50:15,040

the uh our lens because we have

1300

00:50:21,030 --> 00:50:17,119

different lengths we have from 14

1301

00:50:24,630 --> 00:50:21,040

millimeters to 100 200 100

1302

00:50:27,190 --> 00:50:24,640

12 12 1200 millimeters length

1303

00:50:29,349 --> 00:50:27,200

or you should use several cameras now

1304

00:50:31,190 --> 00:50:29,359

the cameras it's a lot of on

1305

00:50:33,829 --> 00:50:31,200

i think it's maybe

1306

00:50:36,549 --> 00:50:33,839

for both segments more than 20

1307

00:50:40,870 --> 00:50:36,559

each of us may use several cameras but

1308

00:50:41,750 --> 00:50:40,880

it's usual cameras it's not so unique

1309

00:50:43,109 --> 00:50:41,760

okay

1310

00:50:45,109 --> 00:50:43,119

we can take one more

1311

00:50:47,270 --> 00:50:45,119

we have another one this one is uh has

1312

00:50:48,390 --> 00:50:47,280

to do more with the trip to space

1313

00:50:51,030 --> 00:50:48,400

station

1314

00:50:53,430 --> 00:50:51,040

and it comes to us on twitter from whim

1315

00:50:55,670 --> 00:50:53,440

how do you feel about a possible shorter

1316

00:50:57,190 --> 00:50:55,680

six-hour flight to the iss and wouldn't

1317

00:50:59,990 --> 00:50:57,200

you prefer the scenic route over the

1318

00:51:04,630 --> 00:51:02,230

i personally would would kind of like to

1319

00:51:06,309 --> 00:51:04,640

do the short rendezvous because of the

1320

00:51:08,790 --> 00:51:06,319

reasons like fyodor said it's a small

1321

00:51:11,190 --> 00:51:08,800

vehicle and i just would like to get

1322

00:51:13,829 --> 00:51:11,200

where i'm going uh the facilities and

1323

00:51:16,470 --> 00:51:13,839

the soyuz aren't as as comfortable as as

1324

00:51:19,190 --> 00:51:16,480

what it is um on space station

1325

00:51:20,829 --> 00:51:19,200

and uh so so i'm all for for just

1326

00:51:23,510 --> 00:51:20,839

getting there and i also think

1327

00:51:25,349 --> 00:51:23,520

um you can

1328

00:51:26,790 --> 00:51:25,359

kind of accumulate fatigue over a couple

1329

00:51:28,309 --> 00:51:26,800

days even though you're mostly resting

1330

00:51:29,190 --> 00:51:28,319

you're not going to probably sleep very

1331

00:51:30,710 --> 00:51:29,200

well

1332

00:51:32,230 --> 00:51:30,720

in the soyuz the first couple nights my

1333

00:51:33,430 --> 00:51:32,240

experience on shuttle is i didn't sleep

1334

00:51:36,549 --> 00:51:33,440

very well the first couple nights it

1335

00:51:37,829 --> 00:51:36,559

took a while and so to me you know we're

1336

00:51:39,990 --> 00:51:37,839

probably going to have a pretty long

1337

00:51:42,630 --> 00:51:40,000

first day anyway so we could just as

1338

00:51:44,390 --> 00:51:42,640

well use the time when we're well rested

1339

00:51:46,230 --> 00:51:44,400

our adrenaline is high

1340

00:51:47,430 --> 00:51:46,240

and and get the job done and get there

1341

00:51:49,990 --> 00:51:47,440

and then we can

1342

00:51:51,349 --> 00:51:50,000

and relax and and if we don't sleep very

1343

00:51:53,430 --> 00:51:51,359

well the first couple nights on space

1344

00:51:55,829 --> 00:51:53,440

station well then we still don't have

1345

00:51:57,510 --> 00:51:55,839

the very dynamic phase of rendezvous um

1346

00:51:59,510 --> 00:51:57,520

left to go

1347

00:52:02,150 --> 00:51:59,520

one more one more thing that i can

1348

00:52:04,470 --> 00:52:02,160

think of is that

1349

00:52:07,190 --> 00:52:04,480

being in space in a zero in a in a zero

1350

00:52:08,950 --> 00:52:07,200

g environment requires some adaptation

1351
00:52:10,950 --> 00:52:08,960
but that attach adaptation will be

1352
00:52:12,470 --> 00:52:10,960
different inside the soyuz or inside the

1353
00:52:14,870 --> 00:52:12,480
space station because the space station

1354
00:52:16,870 --> 00:52:14,880
is a much bigger volume and it's also

1355
00:52:18,950 --> 00:52:16,880
more provocative for

1356
00:52:21,510 --> 00:52:18,960
motion sickness because of the

1357
00:52:23,190 --> 00:52:21,520
special disorientation so i much rather

1358
00:52:26,470 --> 00:52:23,200
get there as fast as i can gain those

1359
00:52:30,630 --> 00:52:26,480
again two days where i can i can adapt

1360
00:52:32,069 --> 00:52:30,640
and have a more effective space flight

1361
00:52:34,549 --> 00:52:32,079
okay that's all the time that we have

1362
00:52:36,309 --> 00:52:34,559
for today a reminder that karen will be

1363
00:52:37,510 --> 00:52:36,319

available for more questions later today

1364

00:52:39,030 --> 00:52:37,520

about some of the hobbies and crafts

1365

00:52:40,790 --> 00:52:39,040

that she's planning on orbit we'll be

1366

00:52:43,030 --> 00:52:40,800

having a tweet chat with martha stewart

1367

00:52:44,390 --> 00:52:43,040

living that's at 3 30 p.m central time

1368

00:52:46,870 --> 00:52:44,400

and you can participate in that using

1369

00:52:48,790 --> 00:52:46,880

the hashtag spacecrafts and also

1370

00:52:49,910 --> 00:52:48,800

obviously follow along with the mission

1371

00:52:51,309 --> 00:52:49,920

on our

1372

00:52:53,510 --> 00:52:51,319

our website

1373

00:52:56,069 --> 00:52:53,520

www.nasa.gov our facebook and also

1374

00:52:57,349 --> 00:52:56,079

twitter nasa underscore astronauts thank

1375

00:52:59,430 --> 00:52:57,359

you all for joining us both in the

1376

00:53:02,069 --> 00:52:59,440

twitterverse nasa tv and our audience