



1
00:00:05,110 --> 00:00:03,030
good afternoon i'm megan sumner from

2
00:00:07,190 --> 00:00:05,120
nasa public affairs and we are here at

3
00:00:08,549 --> 00:00:07,200
johnson space center

4
00:00:10,950 --> 00:00:08,559
thank you for joining us for the

5
00:00:13,110 --> 00:00:10,960
expedition 53 and 54 crew news

6
00:00:14,390 --> 00:00:13,120
conference they will be launching to the

7
00:00:16,630 --> 00:00:14,400
international space station from the

8
00:00:18,630 --> 00:00:16,640
baikonur cosmodrome in kazakhstan on

9
00:00:21,029 --> 00:00:18,640
september 13th on a five and a half

10
00:00:22,230 --> 00:00:21,039
month mission to space today's news

11
00:00:24,230 --> 00:00:22,240
conference will look at the work and

12
00:00:26,710 --> 00:00:24,240
research the research the crew will be

13
00:00:29,029 --> 00:00:26,720

doing for that half of the year

14

00:00:31,029 --> 00:00:29,039

to my right is nasa astronaut mark vande

15

00:00:33,350 --> 00:00:31,039

high who will be a flight engineer for

16

00:00:35,430 --> 00:00:33,360

expeditions 53 and 54.

17

00:00:37,830 --> 00:00:35,440

mark is a retired colonel in the us army

18

00:00:40,150 --> 00:00:37,840

and was selected as an astronaut in 2009

19

00:00:41,750 --> 00:00:40,160

he came to johnson space center to be a

20

00:00:43,830 --> 00:00:41,760

capsule communicator actually before

21

00:00:46,229 --> 00:00:43,840

being selected as an astronaut and then

22

00:00:48,709 --> 00:00:46,239

continued that job after his general

23

00:00:50,549 --> 00:00:48,719

astronaut training next we have nasa

24

00:00:51,990 --> 00:00:50,559

astronaut joe acaba

25

00:00:54,549 --> 00:00:52,000

joe will be a flight engineer for

26

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

expeditions 53 and 54. this will be

27

00:00:58,790 --> 00:00:56,640

joe's third trip to the space station

28

00:01:00,549 --> 00:00:58,800

and his second long-duration mission he

29

00:01:04,710 --> 00:01:00,559

flew aboard space shuttle to discovery

30

00:01:07,789 --> 00:01:04,720

on sts-119 in 2009 then expeditions 31

31

00:01:11,670 --> 00:01:07,799

and 32 in 2012. he's logged a total of

32

00:01:13,830 --> 00:01:11,680

138 days in space during his two flights

33

00:01:16,149 --> 00:01:13,840

finally we're happy to welcome veteran

34

00:01:18,230 --> 00:01:16,159

cosmonaut alexander misurkin for musk

35

00:01:21,910 --> 00:01:18,240

cosmos who will be the commander of

36

00:01:23,830 --> 00:01:21,920

soyuz spacecraft ms-06 he will serve as

37

00:01:26,149 --> 00:01:23,840

a flight engineer for expedition 53 and

38

00:01:28,710 --> 00:01:26,159

the commander of expedition 54. misurkin

39

00:01:32,149 --> 00:01:28,720

spent 166 days in space on his first

40

00:01:33,429 --> 00:01:32,159

flight as part of expedition 35 and 36.

41

00:01:35,670 --> 00:01:33,439

the crew will talk a little bit about

42

00:01:37,749 --> 00:01:35,680

their upcoming mission and then we will

43

00:01:39,190 --> 00:01:37,759

take questions from the room and from

44

00:01:41,830 --> 00:01:39,200

the phone for them

45

00:01:43,270 --> 00:01:41,840

with that let me turn to mark vande high

46

00:01:44,550 --> 00:01:43,280

mark can you tell us about some of the

47

00:01:45,830 --> 00:01:44,560

major highlights for your upcoming

48

00:01:48,469 --> 00:01:45,840

mission

49

00:01:51,429 --> 00:01:48,479

sure we're going to be in a space from

50

00:01:53,830 --> 00:01:51,439

september 20 excuse me september 13th

51
00:01:55,190 --> 00:01:53,840
until about february 23rd and during

52
00:01:56,950 --> 00:01:55,200
that time

53
00:01:58,230 --> 00:01:56,960
the primary objective for us is doing

54
00:02:00,389 --> 00:01:58,240
lots of science

55
00:02:02,789 --> 00:02:00,399
both to help further nasa's exploration

56
00:02:05,190 --> 00:02:02,799
goals and to to serve the needs of the

57
00:02:06,630 --> 00:02:05,200
country now to help people on the ground

58
00:02:08,630 --> 00:02:06,640
with uh

59
00:02:10,630 --> 00:02:08,640
as a national laboratory

60
00:02:12,229 --> 00:02:10,640
uh we're gonna have several visiting

61
00:02:14,470 --> 00:02:12,239
vehicles both from

62
00:02:16,790 --> 00:02:14,480
uh we'll have cygnus vehicles and dragon

63
00:02:19,030 --> 00:02:16,800

vehicles uh during that time

64

00:02:20,470 --> 00:02:19,040

there's possibility of an eva but really

65

00:02:22,390 --> 00:02:20,480

because we're gonna be up there so long

66

00:02:25,430 --> 00:02:22,400

we're just ready for whatever

67

00:02:28,390 --> 00:02:25,440

the planners give us yes awesome thank

68

00:02:30,470 --> 00:02:28,400

you with that let's go to joe acaba now

69

00:02:31,990 --> 00:02:30,480

joe usually the training schedule is a

70

00:02:33,190 --> 00:02:32,000

couple of years but you were just

71

00:02:35,110 --> 00:02:33,200

assigned to this mission a couple of

72

00:02:36,229 --> 00:02:35,120

months ago so your training has been a

73

00:02:38,309 --> 00:02:36,239

little bit condensed even though you

74

00:02:39,910 --> 00:02:38,319

have been to the space station before so

75

00:02:42,390 --> 00:02:39,920

can you tell us a little bit about that

76

00:02:44,150 --> 00:02:42,400

schedule how it's going any challenges

77

00:02:46,309 --> 00:02:44,160

that you've faced yeah i got pretty

78

00:02:47,910 --> 00:02:46,319

lucky with a six-month training program

79

00:02:48,790 --> 00:02:47,920

i don't think anybody will argue with me

80

00:02:50,710 --> 00:02:48,800

but

81

00:02:51,589 --> 00:02:50,720

it's going really well i'm about halfway

82

00:02:53,670 --> 00:02:51,599

through

83

00:02:56,390 --> 00:02:53,680

uh luckily i'm flying with experienced

84

00:02:58,869 --> 00:02:56,400

and you know very capable crew members

85

00:03:01,030 --> 00:02:58,879

and before i started nasa and all the

86

00:03:02,949 --> 00:03:01,040

international partners got together they

87

00:03:05,190 --> 00:03:02,959

put together a really nice plan on

88

00:03:07,910 --> 00:03:05,200

what's required for me to be safe and

89

00:03:09,990 --> 00:03:07,920

then also to execute the mission so

90

00:03:12,229 --> 00:03:10,000

it's going great it's busy but fun

91

00:03:13,750 --> 00:03:12,239

awesome all right alexander can you tell

92

00:03:15,830 --> 00:03:13,760

us a little bit about the mission from

93

00:03:17,910 --> 00:03:15,840

your perspective

94

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

from my perspective we were at the

95

00:03:21,830 --> 00:03:20,800

beginning we were scheduled to fly in

96

00:03:23,589 --> 00:03:21,840

march

97

00:03:25,990 --> 00:03:23,599

after that

98

00:03:27,270 --> 00:03:26,000

something will was changed

99

00:03:29,430 --> 00:03:27,280

and

100

00:03:31,910 --> 00:03:29,440

now we're scheduled scheduled to fly as

101
00:03:33,430 --> 00:03:31,920
mark said in september we're talking

102
00:03:36,869 --> 00:03:33,440
about it

103
00:03:39,270 --> 00:03:36,879
a lot we're preparing a lot even i know

104
00:03:41,270 --> 00:03:39,280
that for mark and for joe now it's

105
00:03:43,830 --> 00:03:41,280
pretty tough schedule and

106
00:03:45,750 --> 00:03:43,840
they are very very busy but for me it's

107
00:03:49,830 --> 00:03:45,760
like

108
00:03:52,869 --> 00:03:49,840
have a distance you

109
00:03:54,789 --> 00:03:52,879
know where is your final line you're

110
00:03:56,630 --> 00:03:54,799
starting running running running and

111
00:03:59,350 --> 00:03:56,640
after that you say hey you know what we

112
00:04:02,149 --> 00:03:59,360
decided to add some more

113
00:04:05,509 --> 00:04:02,159

and now i just looking forward to work

114

00:04:07,830 --> 00:04:05,519

with these guys in a real space

115

00:04:10,070 --> 00:04:07,840

space program in real flight

116

00:04:11,670 --> 00:04:10,080

that's awesome it's great to hear that

117

00:04:13,350 --> 00:04:11,680

all right we'll now take some questions

118

00:04:15,350 --> 00:04:13,360

from the crew we'll start with questions

119

00:04:16,949 --> 00:04:15,360

here in the room at johnson space center

120

00:04:19,030 --> 00:04:16,959

then questions on the phone bridge and

121

00:04:21,110 --> 00:04:19,040

finally questions from social media if

122

00:04:22,629 --> 00:04:21,120

you have a question on social media you

123

00:04:24,870 --> 00:04:22,639

can submit it using

124

00:04:27,189 --> 00:04:24,880

ask nasa for those on the phone bridge

125

00:04:29,430 --> 00:04:27,199

please press star one if you have a

126

00:04:31,270 --> 00:04:29,440

question and star two to withdraw your

127

00:04:32,870 --> 00:04:31,280

question if it's already been answered

128

00:04:34,950 --> 00:04:32,880

here in the room we have reporters and

129

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

we also have some special guests with us

130

00:04:38,870 --> 00:04:36,880

we have educators from houston and

131

00:04:40,950 --> 00:04:38,880

dallas schools

132

00:04:42,710 --> 00:04:40,960

actually joe and mark both have some

133

00:04:44,469 --> 00:04:42,720

teaching experience mark was an

134

00:04:46,390 --> 00:04:44,479

assistant professor of physics at the

135

00:04:48,469 --> 00:04:46,400

united states miller military academy in

136

00:04:50,790 --> 00:04:48,479

west point and he plans to connect with

137

00:04:53,030 --> 00:04:50,800

physics teachers during his mission

138

00:04:55,189 --> 00:04:53,040

joe taught five years of middle and high

139

00:04:57,270 --> 00:04:55,199

school math and science in florida and

140

00:04:59,189 --> 00:04:57,280

we're excited that our local educators

141

00:05:01,270 --> 00:04:59,199

are here with us today and to really

142

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

show the um special emphasis of

143

00:05:04,710 --> 00:05:03,199

education especially for this crew

144

00:05:06,629 --> 00:05:04,720

you'll be allowed one question and a

145

00:05:08,790 --> 00:05:06,639

follow-up so as a reminder please state

146

00:05:11,990 --> 00:05:08,800

your name and who you're with when we

147

00:05:12,950 --> 00:05:12,000

call on you so we'll start here in the

148

00:05:16,469 --> 00:05:12,960

room

149

00:05:19,110 --> 00:05:16,479

reporters right there

150

00:05:20,950 --> 00:05:19,120

hi my name is catherine olger and i'm a

151
00:05:22,790 --> 00:05:20,960
teacher at sharpstown international in

152
00:05:24,950 --> 00:05:22,800
houston isd

153
00:05:26,870 --> 00:05:24,960
i'm asking a question on behalf of one

154
00:05:29,590 --> 00:05:26,880
of my seniors named ivan

155
00:05:31,110 --> 00:05:29,600
um he wants to know what obstacles you

156
00:05:32,710 --> 00:05:31,120
faced in your journey to becoming an

157
00:05:34,870 --> 00:05:32,720
astronaut and if you had the chance to

158
00:05:36,950 --> 00:05:34,880
do it all over again would you and what

159
00:05:38,790 --> 00:05:36,960
would you do differently

160
00:05:41,189 --> 00:05:38,800
that's a great question

161
00:05:43,350 --> 00:05:41,199
should i start sure okay

162
00:05:45,029 --> 00:05:43,360
so i would say the uh first obstacle to

163
00:05:46,310 --> 00:05:45,039

becoming an astronaut for me was uh

164

00:05:47,110 --> 00:05:46,320

believing it was something that i could

165

00:05:49,350 --> 00:05:47,120

do

166

00:05:50,550 --> 00:05:49,360

honestly uh

167

00:05:52,870 --> 00:05:50,560

i always thought of astronauts as

168

00:05:54,550 --> 00:05:52,880

superheroes and i put that

169

00:05:56,629 --> 00:05:54,560

becoming an astronaut in the same

170

00:05:58,550 --> 00:05:56,639

category as me becoming a professional

171

00:05:59,830 --> 00:05:58,560

football player or becoming spider-man

172

00:06:01,270 --> 00:05:59,840

you know just it was something that i

173

00:06:02,230 --> 00:06:01,280

just didn't think was possible

174

00:06:03,110 --> 00:06:02,240

um

175

00:06:04,870 --> 00:06:03,120

and

176
00:06:07,029 --> 00:06:04,880
thankfully my wife really encouraged me

177
00:06:09,270 --> 00:06:07,039
to go for it because

178
00:06:11,590 --> 00:06:09,280
uh you just gotta try and that's really

179
00:06:14,790 --> 00:06:11,600
a big lesson i think for all of us is is

180
00:06:15,909 --> 00:06:14,800
push away that self-doubt and uh

181
00:06:17,029 --> 00:06:15,919
go for it

182
00:06:18,629 --> 00:06:17,039
um

183
00:06:20,950 --> 00:06:18,639
and the next question i already forgot

184
00:06:22,550 --> 00:06:20,960
what was the other part um if you could

185
00:06:24,230 --> 00:06:22,560
do it all over again would you and what

186
00:06:26,150 --> 00:06:24,240
would you do differently

187
00:06:29,590 --> 00:06:26,160
i would absolutely do it again i would

188
00:06:35,350 --> 00:06:32,550

you'll be spiderman on orbit

189

00:06:40,070 --> 00:06:38,629

do joe or alexander want to answer

190

00:06:41,990 --> 00:06:40,080

you know mark made a good point it's

191

00:06:43,110 --> 00:06:42,000

believing that you can actually do

192

00:06:44,870 --> 00:06:43,120

something

193

00:06:45,990 --> 00:06:44,880

there's all kinds of obstacles that you

194

00:06:47,830 --> 00:06:46,000

have so

195

00:06:49,350 --> 00:06:47,840

you kind of just take it one step at a

196

00:06:50,790 --> 00:06:49,360

time and

197

00:06:53,110 --> 00:06:50,800

and i would just tell people pick

198

00:06:54,950 --> 00:06:53,120

something that you really love to do um

199

00:06:56,390 --> 00:06:54,960

because then it's not really like work

200

00:06:57,350 --> 00:06:56,400

and so

201
00:06:59,110 --> 00:06:57,360
you know there's a lot of different

202
00:07:01,749 --> 00:06:59,120
astronauts that we have in the office

203
00:07:03,749 --> 00:07:01,759
and we all have had our struggles but we

204
00:07:07,110 --> 00:07:03,759
all enjoy our professions and we love

205
00:07:10,469 --> 00:07:09,029
if you would like me also answer this

206
00:07:14,230 --> 00:07:10,479
question

207
00:07:17,749 --> 00:07:14,240
for me it was a dream a child dream

208
00:07:18,550 --> 00:07:17,759
when i was 12 years old i decided

209
00:07:23,189 --> 00:07:18,560
just

210
00:07:26,070 --> 00:07:23,199
the goal of my professional

211
00:07:27,029 --> 00:07:26,080
was coming up in my mind it was in the

212
00:07:28,469 --> 00:07:27,039
class

213
00:07:29,990 --> 00:07:28,479

i very

214

00:07:32,390 --> 00:07:30,000

helpful

215

00:07:33,749 --> 00:07:32,400

grateful to teacher who taught this

216

00:07:36,150 --> 00:07:33,759

class because

217

00:07:37,830 --> 00:07:36,160

when i understand realized i would like

218

00:07:41,189 --> 00:07:37,840

be a cosmonaut

219

00:07:44,790 --> 00:07:41,199

after that i came to my teacher and said

220

00:07:47,990 --> 00:07:44,800

natalia vladimir her name i i wanted to

221

00:07:52,469 --> 00:07:48,000

be a cosmonaut what i have to do

222

00:07:55,270 --> 00:07:52,479

and she was absolutely serious and

223

00:07:57,670 --> 00:07:55,280

she said she actually it was a

224

00:07:59,270 --> 00:07:57,680

brainstorm for her for 30 seconds but

225

00:08:02,309 --> 00:07:59,280

she gave a

226

00:08:03,990 --> 00:08:02,319

strategy plan for me for all for all my

227

00:08:05,350 --> 00:08:04,000

life which i

228

00:08:08,869 --> 00:08:05,360

performed

229

00:08:09,670 --> 00:08:08,879

after that i was so grateful to her

230

00:08:13,830 --> 00:08:09,680

and

231

00:08:17,110 --> 00:08:13,840

you have to do

232

00:08:18,790 --> 00:08:17,120

what you really like to do really on the

233

00:08:21,350 --> 00:08:18,800

bottom of your heart

234

00:08:24,230 --> 00:08:21,360

if you have something um

235

00:08:27,510 --> 00:08:24,240

wishes to do something you don't think

236

00:08:29,990 --> 00:08:27,520

think uh like probably

237

00:08:30,869 --> 00:08:30,000

i will not able to do that or somebody

238

00:08:33,829 --> 00:08:30,879

else

239

00:08:36,870 --> 00:08:33,839

who will born for this profession just

240

00:08:39,110 --> 00:08:36,880

go forward no doubts at all and you will

241

00:08:42,310 --> 00:08:39,120

reach success

242

00:08:44,070 --> 00:08:42,320

so that's the power of a school teacher

243

00:08:47,509 --> 00:08:44,080

that's what you guys do every day that's

244

00:08:49,430 --> 00:08:47,519

right exactly all right another question

245

00:08:51,430 --> 00:08:49,440

my name is marcie stanville and i'm a

246

00:08:53,910 --> 00:08:51,440

teacher at cevillatora middle school in

247

00:08:57,110 --> 00:08:53,920

pearland and i teach gifted and talented

248

00:08:59,509 --> 00:08:57,120

sixth graders um this question uh for

249

00:09:01,110 --> 00:08:59,519

you is this i know you guys spend a lot

250

00:09:02,710 --> 00:09:01,120

of time up there on the iss you're up

251
00:09:03,670 --> 00:09:02,720
there for what at least six months

252
00:09:05,430 --> 00:09:03,680
correct

253
00:09:09,030 --> 00:09:05,440
okay so what are the most important

254
00:09:11,269 --> 00:09:09,040
attributes and skills needed to live on

255
00:09:13,509 --> 00:09:11,279
the iss

256
00:09:15,350 --> 00:09:13,519
well i'd say one of them is

257
00:09:17,030 --> 00:09:15,360
getting along with others

258
00:09:18,389 --> 00:09:17,040
people always think about like mark said

259
00:09:20,790 --> 00:09:18,399
astronauts are

260
00:09:21,990 --> 00:09:20,800
people that are super smart but

261
00:09:23,829 --> 00:09:22,000
really today when we're looking at

262
00:09:25,269 --> 00:09:23,839
hiring astronauts we want people that

263
00:09:26,310 --> 00:09:25,279

are nice because we have to live

264

00:09:29,750 --> 00:09:26,320

together

265

00:09:30,630 --> 00:09:29,760

for six months in a five bedroom house

266

00:09:32,550 --> 00:09:30,640

um

267

00:09:34,630 --> 00:09:32,560

the soyuz is about

268

00:09:36,310 --> 00:09:34,640

this big so

269

00:09:38,550 --> 00:09:36,320

it's just getting along with each other

270

00:09:41,030 --> 00:09:38,560

so that's one of the uh one of the most

271

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

important attributes

272

00:09:45,030 --> 00:09:42,959

awesome thank you we have another

273

00:09:47,590 --> 00:09:45,040

question over here mark oh thank you

274

00:09:50,630 --> 00:09:47,600

very much uh mark caro for aviation week

275

00:09:52,790 --> 00:09:50,640

and uh this is from mark or joe but uh i

276
00:09:55,829 --> 00:09:52,800
think we're coming up on some

277
00:09:56,870 --> 00:09:55,839
uh dynamic months for a commercial crew

278
00:09:58,230 --> 00:09:56,880
um

279
00:10:00,550 --> 00:09:58,240
as we get into

280
00:10:03,350 --> 00:10:00,560
in especially into 2018 and i just

281
00:10:06,230 --> 00:10:03,360
wondered what you all have prepared

282
00:10:08,150 --> 00:10:06,240
to do to to advance the

283
00:10:10,630 --> 00:10:08,160
the project

284
00:10:13,829 --> 00:10:10,640
in terms of space walks or just

285
00:10:15,829 --> 00:10:13,839
anything inside the station or

286
00:10:18,230 --> 00:10:15,839
you're tracking the ida stuff

287
00:10:20,150 --> 00:10:18,240
yeah so you know a lot of this work has

288
00:10:21,590 --> 00:10:20,160

it's already started uh putting on the

289

00:10:24,710 --> 00:10:21,600

international

290

00:10:26,310 --> 00:10:24,720

adapters for the vehicles to come up

291

00:10:27,910 --> 00:10:26,320

a lot of the future spacewalks are

292

00:10:30,150 --> 00:10:27,920

looking at that as well and preparing

293

00:10:31,350 --> 00:10:30,160

those so for our mission in particular

294

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

you know at this time we don't know

295

00:10:35,110 --> 00:10:33,279

specifically uh what we'll be doing

296

00:10:36,389 --> 00:10:35,120

directly for that

297

00:10:37,190 --> 00:10:36,399

but you know the work we're doing up

298

00:10:39,190 --> 00:10:37,200

there

299

00:10:44,710 --> 00:10:39,200

is all in preparation for those vehicles

300

00:10:49,350 --> 00:10:47,030

robert perlman with collectspace.com uh

301
00:10:51,990 --> 00:10:49,360
just to follow up on that um with

302
00:10:55,350 --> 00:10:52,000
regards to both the potential arrival of

303
00:10:58,829 --> 00:10:55,360
the first crew dragon uh without a crew

304
00:11:01,110 --> 00:10:58,839
and the potential arrival of naca um the

305
00:11:02,949 --> 00:11:01,120
mlm uh

306
00:11:04,710 --> 00:11:02,959
if they're when you're working with this

307
00:11:06,710 --> 00:11:04,720
type of uncertainty that you don't know

308
00:11:07,990 --> 00:11:06,720
if it's coming or not how much effort do

309
00:11:10,069 --> 00:11:08,000
you put into

310
00:11:12,310 --> 00:11:10,079
training for that provision

311
00:11:14,069 --> 00:11:12,320
and how do you balance what you know

312
00:11:15,750 --> 00:11:14,079
you're going to do versus what you might

313
00:11:17,509 --> 00:11:15,760

do

314

00:11:18,710 --> 00:11:17,519

i can take that one so i think we really

315

00:11:20,790 --> 00:11:18,720

don't have a lot of decision making

316

00:11:22,150 --> 00:11:20,800

about it the planners look at the

317

00:11:23,430 --> 00:11:22,160

situation we're going to be faced with

318

00:11:24,310 --> 00:11:23,440

and they're making some good guesses

319

00:11:25,670 --> 00:11:24,320

about

320

00:11:27,190 --> 00:11:25,680

they need to be ready for these things

321

00:11:29,590 --> 00:11:27,200

for example

322

00:11:31,509 --> 00:11:29,600

you mentioned the mlm i just recently

323

00:11:33,509 --> 00:11:31,519

had four hours of training or so on the

324

00:11:34,550 --> 00:11:33,519

mlm when i was in russia

325

00:11:36,389 --> 00:11:34,560

so

326

00:11:37,990 --> 00:11:36,399

fortunately for us there are people that

327

00:11:39,590 --> 00:11:38,000

are managing the program and looking far

328

00:11:41,030 --> 00:11:39,600

enough into the future to make sure

329

00:11:42,470 --> 00:11:41,040

they're forecasting what our training

330

00:11:44,389 --> 00:11:42,480

needs are and then we're just getting

331

00:11:47,590 --> 00:11:44,399

trained on what our schedulers tell us

332

00:11:51,910 --> 00:11:49,030

a question

333

00:11:54,710 --> 00:11:51,920

yes uh eric berger with rs technica um

334

00:11:57,509 --> 00:11:54,720

hi uh just a question about expanding

335

00:11:59,030 --> 00:11:57,519

the number of u.s

336

00:12:00,150 --> 00:11:59,040

international crew members on station

337

00:12:02,310 --> 00:12:00,160

how will that

338

00:12:03,829 --> 00:12:02,320

allow you to expand activities on the

339

00:12:05,829 --> 00:12:03,839

station

340

00:12:06,790 --> 00:12:05,839

yeah i think it's going to make a a huge

341

00:12:08,150 --> 00:12:06,800

difference

342

00:12:11,110 --> 00:12:08,160

so right now

343

00:12:12,870 --> 00:12:11,120

having four usos crew members on board

344

00:12:14,389 --> 00:12:12,880

it gives you a lot more opportunities

345

00:12:16,069 --> 00:12:14,399

not only to maintain the space station

346

00:12:17,829 --> 00:12:16,079

but then do the science that really

347

00:12:19,990 --> 00:12:17,839

we're up there for and i think the

348

00:12:21,030 --> 00:12:20,000

number i heard is somewhere around 800

349

00:12:23,190 --> 00:12:21,040

more

350

00:12:24,870 --> 00:12:23,200

hours of utilization

351

00:12:25,910 --> 00:12:24,880

and so that's a big chunk of science

352

00:12:27,430 --> 00:12:25,920

that we're going to be able to do by

353

00:12:29,829 --> 00:12:27,440

adding an extra crew member so it's

354

00:12:32,069 --> 00:12:29,839

pretty cool

355

00:12:33,910 --> 00:12:32,079

hi sophie sanchez i write for cosmic

356

00:12:36,870 --> 00:12:33,920

chicago with chicago now i'm at a

357

00:12:38,550 --> 00:12:36,880

question as teachers or former teachers

358

00:12:39,829 --> 00:12:38,560

there's a lot of student science

359

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

payloads that are headed up i was

360

00:12:42,790 --> 00:12:41,760

wondering if you had a particular

361

00:12:43,750 --> 00:12:42,800

payload

362

00:12:45,430 --> 00:12:43,760

that you were

363

00:12:47,829 --> 00:12:45,440

excited to work on and what advice you

364

00:12:53,190 --> 00:12:47,839

had for students that would like to have

365

00:12:55,829 --> 00:12:54,310

i'll be honest with you i don't have a

366

00:12:58,069 --> 00:12:55,839

particular student science payload that

367

00:13:00,470 --> 00:12:58,079

i'm i'm that's coming to mind right now

368

00:13:01,670 --> 00:13:00,480

in fact uh one of the benefits

369

00:13:03,990 --> 00:13:01,680

of our

370

00:13:05,430 --> 00:13:04,000

science program becoming more efficient

371

00:13:07,350 --> 00:13:05,440

is that we're more becoming more

372

00:13:10,310 --> 00:13:07,360

responsive to the customers

373

00:13:11,910 --> 00:13:10,320

so we don't have a requirement for as

374

00:13:13,990 --> 00:13:11,920

much lead time to have the experiments

375

00:13:15,269 --> 00:13:14,000

ready so we actually haven't gotten the

376

00:13:16,949 --> 00:13:15,279

final list of the experiments we're

377

00:13:18,389 --> 00:13:16,959

going to get be working on and we're

378

00:13:20,550 --> 00:13:18,399

expecting to get that for the first time

379

00:13:22,150 --> 00:13:20,560

in june so

380

00:13:23,910 --> 00:13:22,160

and i would you know i would tell those

381

00:13:25,990 --> 00:13:23,920

students to dream big a lot of the

382

00:13:27,829 --> 00:13:26,000

science that we have going on

383

00:13:29,910 --> 00:13:27,839

um they discover things that they didn't

384

00:13:31,509 --> 00:13:29,920

even expect to discover so you kind of

385

00:13:32,790 --> 00:13:31,519

go in with the plan

386

00:13:34,790 --> 00:13:32,800

and you never know what's going to come

387

00:13:36,870 --> 00:13:34,800

out of it so for the kids that are

388

00:13:38,629 --> 00:13:36,880

putting these payloads together just

389

00:13:41,990 --> 00:13:38,639

think of crazy stuff that you want to

390

00:13:44,230 --> 00:13:42,000

know and see if it'll work up in space

391

00:13:46,230 --> 00:13:44,240

great all right next question

392

00:13:48,710 --> 00:13:46,240

hi i'm kathy heyman i teach at

393

00:13:51,829 --> 00:13:48,720

barbership middle school um okay so i

394

00:13:54,230 --> 00:13:51,839

teach middle school so this is for joe

395

00:13:55,990 --> 00:13:54,240

they want to know what is the

396

00:13:59,430 --> 00:13:56,000

funniest or weirdest thing that's

397

00:14:03,030 --> 00:13:59,440

happened to you when you're in space

398

00:14:05,910 --> 00:14:03,040

that's a great middle school question

399

00:14:07,110 --> 00:14:05,920

which is why i loved middle school

400

00:14:08,949 --> 00:14:07,120

and

401
00:14:10,629 --> 00:14:08,959
you know the one thing we uh you know we

402
00:14:11,750 --> 00:14:10,639
joke a lot about but you know kids

403
00:14:13,269 --> 00:14:11,760
always want to know how do you go to the

404
00:14:14,389 --> 00:14:13,279
bathroom in space

405
00:14:16,790 --> 00:14:14,399
and so

406
00:14:18,870 --> 00:14:16,800
that's weird it is weird going to the

407
00:14:20,790 --> 00:14:18,880
bathroom in space

408
00:14:22,470 --> 00:14:20,800
but when you look at it the engineering

409
00:14:24,710 --> 00:14:22,480
behind it is just

410
00:14:27,189 --> 00:14:24,720
incredible so you go from

411
00:14:28,069 --> 00:14:27,199
you know urinating

412
00:14:29,509 --> 00:14:28,079
and

413
00:14:31,750 --> 00:14:29,519

next thing you know you're drinking your

414

00:14:34,069 --> 00:14:31,760

reclaimed water so

415

00:14:35,829 --> 00:14:34,079

i think for a lot of kids that's weird

416

00:14:38,629 --> 00:14:35,839

but it's you know it's a technology we

417

00:14:41,189 --> 00:14:38,639

use on the iss but we can also use it um

418

00:14:43,590 --> 00:14:41,199

here on earth in very remote areas so

419

00:14:45,509 --> 00:14:43,600

i think um going to the bathroom and

420

00:14:47,430 --> 00:14:45,519

then drinking your own urine is kind of

421

00:14:50,550 --> 00:14:47,440

weird yep

422

00:14:52,550 --> 00:14:50,560

absolutely all right next question hi uh

423

00:14:55,670 --> 00:14:52,560

lisa marie cipolla reed academy for

424

00:14:58,069 --> 00:14:55,680

engineering and aldine isd um the square

425

00:15:00,069 --> 00:14:58,079

peg in a round hole is a famous example

426

00:15:02,150 --> 00:15:00,079

of astronauts finding a solution under

427

00:15:03,509 --> 00:15:02,160

pressure so i wanted to ask on behalf of

428

00:15:04,550 --> 00:15:03,519

my students do you have a story you

429

00:15:06,230 --> 00:15:04,560

could share

430

00:15:08,150 --> 00:15:06,240

about a time that you felt you were

431

00:15:10,069 --> 00:15:08,160

facing an impossible problem but ended

432

00:15:13,030 --> 00:15:10,079

up finding a solution preferably each of

433

00:15:14,470 --> 00:15:13,040

you if you could give a brief story

434

00:15:16,430 --> 00:15:14,480

wow

435

00:15:19,110 --> 00:15:16,440

i can start if you please yes

436

00:15:20,550 --> 00:15:19,120

[Laughter]

437

00:15:24,710 --> 00:15:20,560

if i

438

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

question not exactly you will please

439

00:15:29,269 --> 00:15:26,399

correct me

440

00:15:32,069 --> 00:15:29,279

when i was preparing for our third eva

441

00:15:34,550 --> 00:15:32,079

in last mission in previous mission

442

00:15:36,949 --> 00:15:34,560

it was some

443

00:15:38,150 --> 00:15:36,959

unpredictable task we

444

00:15:40,710 --> 00:15:38,160

lost some

445

00:15:44,150 --> 00:15:40,720

special cover on russian segment outside

446

00:15:46,389 --> 00:15:44,160

of russian segment and we have to

447

00:15:47,430 --> 00:15:46,399

find out all others

448

00:15:48,870 --> 00:15:47,440

this

449

00:15:52,829 --> 00:15:48,880

cover and

450

00:15:56,310 --> 00:15:52,839

screw it back if they also ready to be

451
00:15:57,829 --> 00:15:56,320
lost and for me it was decision how to

452
00:16:00,069 --> 00:15:57,839
fix the

453
00:16:02,230 --> 00:16:00,079
screwdriver because it's not special

454
00:16:04,310 --> 00:16:02,240
tool for extra vehicle activity it was

455
00:16:05,749 --> 00:16:04,320
just normal

456
00:16:07,670 --> 00:16:05,759
screwdriver

457
00:16:12,389 --> 00:16:07,680
and i thought

458
00:16:13,990 --> 00:16:12,399
all our equipment is attached to our um

459
00:16:15,990 --> 00:16:14,000
extra vehicle

460
00:16:18,470 --> 00:16:16,000
space suit

461
00:16:22,870 --> 00:16:18,480
and i i had to decide how to fix this

462
00:16:24,389 --> 00:16:22,880
device which was not specially preferred

463
00:16:25,829 --> 00:16:24,399

prepared for

464

00:16:27,030 --> 00:16:25,839

space work

465

00:16:30,150 --> 00:16:27,040

i think

466

00:16:33,670 --> 00:16:30,160

thought maybe i can use a velcro

467

00:16:35,910 --> 00:16:33,680

and put one side to this so a spacesuit

468

00:16:37,269 --> 00:16:35,920

another one to the screwdriver and keep

469

00:16:39,910 --> 00:16:37,279

it on myself

470

00:16:41,829 --> 00:16:39,920

and after they that i

471

00:16:44,949 --> 00:16:41,839

start thinking hold on

472

00:16:46,389 --> 00:16:44,959

the temperature is going plus minus 100

473

00:16:47,990 --> 00:16:46,399

degrees

474

00:16:50,949 --> 00:16:48,000

will it be

475

00:16:53,749 --> 00:16:50,959

flowing away and i will

476

00:16:56,069 --> 00:16:53,759

rotate with all my screwdriver and

477

00:17:01,189 --> 00:16:56,079

completely failed with this task

478

00:17:10,630 --> 00:17:06,549

like a pancake on the pan without oil

479

00:17:11,829 --> 00:17:10,640

actually it was a u.s equipment i will i

480

00:17:15,270 --> 00:17:11,839

won't

481

00:17:16,789 --> 00:17:15,280

i didn't want to spoil it as well

482

00:17:19,270 --> 00:17:16,799

and

483

00:17:21,750 --> 00:17:19,280

i had just make a right choice

484

00:17:22,949 --> 00:17:21,760

without any enough information at that

485

00:17:25,990 --> 00:17:22,959

time

486

00:17:27,909 --> 00:17:26,000

like uh sergey pavlovich kareliov it's a

487

00:17:29,029 --> 00:17:27,919

russian

488

00:17:31,190 --> 00:17:29,039

general

489

00:17:35,510 --> 00:17:31,200

constructor who

490

00:17:37,430 --> 00:17:35,520

build russian space program 50 years ago

491

00:17:39,270 --> 00:17:37,440

some sometimes when we were preparing

492

00:17:42,549 --> 00:17:39,280

for flighting to the moon

493

00:17:45,270 --> 00:17:42,559

and was very strong argue what kind of

494

00:17:48,150 --> 00:17:45,280

surface is on the moon is it hard or

495

00:17:50,390 --> 00:17:48,160

smooth or like some kind of else but the

496

00:17:54,310 --> 00:17:50,400

constructors should

497

00:17:55,750 --> 00:17:54,320

develop special device to for landing

498

00:18:01,029 --> 00:17:55,760

and he

499

00:18:03,029 --> 00:18:01,039

the moon is hard

500

00:18:05,029 --> 00:18:03,039

cry and sign it

501
00:18:07,270 --> 00:18:05,039
it was just taken decision

502
00:18:08,630 --> 00:18:07,280
for me of course i'm not

503
00:18:09,430 --> 00:18:08,640
as big as

504
00:18:10,710 --> 00:18:09,440
he

505
00:18:13,350 --> 00:18:10,720
but

506
00:18:16,470 --> 00:18:13,360
for me it was just taken decision i put

507
00:18:18,870 --> 00:18:16,480
this valkyrie and the hope i was right

508
00:18:20,150 --> 00:18:18,880
what do you think was i right or not it

509
00:18:21,029 --> 00:18:20,160
did is it

510
00:18:24,950 --> 00:18:21,039
uh

511
00:18:27,029 --> 00:18:24,960
flow away or still keeping with me

512
00:18:31,350 --> 00:18:27,039
what do you think physics teachers

513
00:18:36,230 --> 00:18:35,110

yeah it was almost like pancake without

514

00:18:38,310 --> 00:18:36,240

the oil

515

00:18:39,510 --> 00:18:38,320

but finally i was able to remove it

516

00:18:41,029 --> 00:18:39,520

after

517

00:18:41,830 --> 00:18:41,039

ava

518

00:18:45,430 --> 00:18:41,840

so

519

00:18:49,590 --> 00:18:45,440

if you don't do not have enough

520

00:18:52,470 --> 00:18:49,600

information to make a choice

521

00:18:56,390 --> 00:18:54,310

joey mark would you like to tell a

522

00:18:57,830 --> 00:18:56,400

challenge that you've find i got a story

523

00:19:00,789 --> 00:18:57,840

but it's got nothing to do with being an

524

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

astronaut it's great that's good

525

00:19:05,110 --> 00:19:02,400

okay so

526

00:19:07,270 --> 00:19:05,120

so i i was this is like 25 years ago i

527

00:19:09,350 --> 00:19:07,280

was in the army and i was supposed to

528

00:19:10,549 --> 00:19:09,360

clear a helicopter landing zone if you

529

00:19:12,470 --> 00:19:10,559

want to land a helicopter in a field

530

00:19:13,750 --> 00:19:12,480

there shouldn't be a street light for

531

00:19:15,590 --> 00:19:13,760

example sticking up in the middle of it

532

00:19:17,110 --> 00:19:15,600

or a telephone pole and sure enough i

533

00:19:19,190 --> 00:19:17,120

can't remember what type of pole it was

534

00:19:21,430 --> 00:19:19,200

but there was a pole there

535

00:19:22,710 --> 00:19:21,440

and i was an engineer officer so we got

536

00:19:24,950 --> 00:19:22,720

i spent a lot of time getting trained on

537

00:19:27,029 --> 00:19:24,960

use explosives to remove obstacles like

538

00:19:28,310 --> 00:19:27,039

something like that except in this

539

00:19:30,789 --> 00:19:28,320

operational environment we didn't get

540

00:19:32,070 --> 00:19:30,799

given any explosives

541

00:19:33,510 --> 00:19:32,080

so i didn't know what to do but

542

00:19:35,669 --> 00:19:33,520

fortunately for me there was an armored

543

00:19:37,510 --> 00:19:35,679

personnel carrier parked nearby i just

544

00:19:38,950 --> 00:19:37,520

knocked on the side a guy popped his

545

00:19:40,710 --> 00:19:38,960

head up and i said hey do you think he

546

00:19:42,150 --> 00:19:40,720

could push over that pole and he was

547

00:19:43,350 --> 00:19:42,160

super excited to give it a shot

548

00:19:44,789 --> 00:19:43,360

[Laughter]

549

00:19:46,310 --> 00:19:44,799

so he and it worked he just pushed it

550

00:19:46,950 --> 00:19:46,320

over and that helicopter landing zone

551

00:19:50,310 --> 00:19:46,960

was

552

00:19:54,789 --> 00:19:50,320

cleared wow good job awesome

553

00:20:00,549 --> 00:19:58,310

you're always a good story yeah whatever

554

00:20:02,870 --> 00:20:00,559

i mean up on orbit on my last mission we

555

00:20:05,270 --> 00:20:02,880

had something similar uh with the space

556

00:20:06,470 --> 00:20:05,280

walk where my crew members son yanaki

557

00:20:09,590 --> 00:20:06,480

were outside

558

00:20:12,390 --> 00:20:09,600

trying to remove a power box and on the

559

00:20:13,909 --> 00:20:12,400

first eva they just could not remove it

560

00:20:15,750 --> 00:20:13,919

so after attempting it over and over

561

00:20:18,470 --> 00:20:15,760

again they came back in

562

00:20:21,669 --> 00:20:18,480

and it was pretty cool on what mission

563

00:20:23,830 --> 00:20:21,679

control did here within 48 hours they

564

00:20:25,830 --> 00:20:23,840

came up with new tools that had not gone

565

00:20:28,390 --> 00:20:25,840

out before you probably saw the pictures

566

00:20:31,430 --> 00:20:28,400

of a toothbrush and so people were just

567

00:20:33,110 --> 00:20:31,440

creative on how can we fix the problem

568

00:20:35,110 --> 00:20:33,120

and again it's uh

569

00:20:36,710 --> 00:20:35,120

it's thinking big and not saying

570

00:20:37,669 --> 00:20:36,720

anything is impossible and let's try

571

00:20:39,510 --> 00:20:37,679

this so

572

00:20:41,590 --> 00:20:39,520

it was pretty neat having a day to put

573

00:20:43,430 --> 00:20:41,600

these weird tools together they went

574

00:20:44,630 --> 00:20:43,440

back out they used them and got rid of

575

00:20:46,549 --> 00:20:44,640

the box so

576

00:20:49,110 --> 00:20:46,559

it was a testament to all the work that

577

00:20:51,430 --> 00:20:49,120

people do here on the ground

578

00:20:52,470 --> 00:20:51,440

awesome great stories thank you next

579

00:20:54,549 --> 00:20:52,480

question

580

00:20:56,549 --> 00:20:54,559

uh hello juan de la garza with a space

581

00:20:58,870 --> 00:20:56,559

flight insider

582

00:21:00,310 --> 00:20:58,880

uh just wanted to ask in reference to

583

00:21:01,590 --> 00:21:00,320

the new budget that's been in place by

584

00:21:02,710 --> 00:21:01,600

our new commander-in-chief as you all

585

00:21:04,310 --> 00:21:02,720

know

586

00:21:05,990 --> 00:21:04,320

president donald trump

587

00:21:07,510 --> 00:21:06,000

how will that affect the continued

588

00:21:11,830 --> 00:21:07,520

service of the international space

589

00:21:14,149 --> 00:21:12,710

so

590

00:21:15,270 --> 00:21:14,159

from you know the good thing about being

591

00:21:16,710 --> 00:21:15,280

in training

592

00:21:19,029 --> 00:21:16,720

is that that's what we focus on is

593

00:21:20,789 --> 00:21:19,039

training so that's the good part

594

00:21:23,590 --> 00:21:20,799

but what i know from the budget is it

595

00:21:24,710 --> 00:21:23,600

was um it satisfies nasa's needs in the

596

00:21:26,390 --> 00:21:24,720

short term

597

00:21:28,470 --> 00:21:26,400

and in terms of keeping the space

598

00:21:30,230 --> 00:21:28,480

station through 2024

599

00:21:33,029 --> 00:21:30,240

we have that budget in place so i think

600

00:21:35,110 --> 00:21:33,039

we're looking pretty good right now

601
00:21:36,870 --> 00:21:35,120
all right next question hi i'm karen

602
00:21:38,549 --> 00:21:36,880
mcgarvey and i teach eighth grade

603
00:21:40,549 --> 00:21:38,559
science at league city intermediate very

604
00:21:42,149 --> 00:21:40,559
brave yeah thank you

605
00:21:43,669 --> 00:21:42,159
um and i do have some students that are

606
00:21:45,909 --> 00:21:43,679
quite sincere and wanting to become an

607
00:21:47,830 --> 00:21:45,919
astronaut and so some of their questions

608
00:21:49,350 --> 00:21:47,840
are they they know that in the past it's

609
00:21:51,590 --> 00:21:49,360
been very common for

610
00:21:53,350 --> 00:21:51,600
astronauts to have military backgrounds

611
00:21:55,830 --> 00:21:53,360
and they're wanting to know what what

612
00:21:58,630 --> 00:21:55,840
are the pros as of right now of still

613
00:22:00,710 --> 00:21:58,640

pursuing a military career and or do you

614

00:22:02,230 --> 00:22:00,720

think would be better just to maybe skip

615

00:22:03,110 --> 00:22:02,240

over that

616

00:22:09,270 --> 00:22:03,120

so

617

00:22:11,990 --> 00:22:09,280

enjoy being in the military and feel

618

00:22:13,669 --> 00:22:12,000

like and i'm really talking about

619

00:22:15,029 --> 00:22:13,679

being in a position where you're

620

00:22:16,549 --> 00:22:15,039

participating in something bigger than

621

00:22:17,590 --> 00:22:16,559

you are and it's really a service to

622

00:22:19,110 --> 00:22:17,600

your country

623

00:22:20,549 --> 00:22:19,120

that's the only time you should do that

624

00:22:22,310 --> 00:22:20,559

if the only reason you did that is

625

00:22:24,830 --> 00:22:22,320

because you're hoping to make you be an

626

00:22:29,029 --> 00:22:24,840

astronaut that's a bad decision

627

00:22:31,430 --> 00:22:29,039

um now from the perspective of having a

628

00:22:33,110 --> 00:22:31,440

lot of astronauts from the military

629

00:22:35,110 --> 00:22:33,120

you certainly as a military service

630

00:22:37,110 --> 00:22:35,120

member get a lot of experience working

631

00:22:38,789 --> 00:22:37,120

in teams in environments we have to look

632

00:22:40,149 --> 00:22:38,799

out for the well-being of each other

633

00:22:42,470 --> 00:22:40,159

those are all things that have a direct

634

00:22:43,669 --> 00:22:42,480

carry over to be being an astronaut

635

00:22:46,470 --> 00:22:43,679

um

636

00:22:48,070 --> 00:22:46,480

but astronauts we need nasa needs to

637

00:22:50,390 --> 00:22:48,080

pull astronauts from a wide variety of

638

00:22:52,390 --> 00:22:50,400

backgrounds and so like joe mentioned

639

00:22:55,430 --> 00:22:52,400

earlier it's really important to figure

640

00:22:57,110 --> 00:22:55,440

out what it is that you love and do it

641

00:22:58,630 --> 00:22:57,120

really passionately recognizing that you

642

00:23:01,029 --> 00:22:58,640

might hope to become an astronaut but

643

00:23:03,029 --> 00:23:01,039

the chances are so slim that you really

644

00:23:04,549 --> 00:23:03,039

shouldn't base your definition of

645

00:23:06,230 --> 00:23:04,559

success or failure for your life on

646

00:23:08,870 --> 00:23:06,240

getting that opportunity

647

00:23:10,870 --> 00:23:08,880

ideally in the in the path as you try to

648

00:23:12,390 --> 00:23:10,880

reach for that you'll have had a very

649

00:23:13,669 --> 00:23:12,400

happy life and done a lot of wonderful

650

00:23:15,430 --> 00:23:13,679

things that you're very proud of

651
00:23:17,510 --> 00:23:15,440
regardless of whether or not the result

652
00:23:18,549 --> 00:23:17,520
results in this job

653
00:23:19,909 --> 00:23:18,559
great

654
00:23:22,390 --> 00:23:19,919
all right now we'll take some questions

655
00:23:24,470 --> 00:23:22,400
from the phone bridge again please press

656
00:23:25,990 --> 00:23:24,480
star one if you have a question and star

657
00:23:28,149 --> 00:23:26,000
two to withdraw your question if it's

658
00:23:30,149 --> 00:23:28,159
already been answered we have a question

659
00:23:42,310 --> 00:23:30,159
from mark gotch from the historical

660
00:23:59,990 --> 00:23:44,470
all right i think mark dropped off bill

661
00:24:00,000 --> 00:24:06,950
how about sarah lewin

662
00:24:06,960 --> 00:24:10,149
they're all talking somewhere

663
00:24:13,750 --> 00:24:11,909

all right well we'll head over to social

664

00:24:16,149 --> 00:24:13,760

media questions and then we'll we'll try

665

00:24:17,909 --> 00:24:16,159

that again um we have haley here in the

666

00:24:19,590 --> 00:24:17,919

room to answer some questions from

667

00:24:21,190 --> 00:24:19,600

social media if you do have a question

668

00:24:23,430 --> 00:24:21,200

you can ask using

669

00:24:27,190 --> 00:24:23,440

ask nasa haley

670

00:24:29,669 --> 00:24:27,200

okay sabra on twitter is asking what is

671

00:24:31,350 --> 00:24:29,679

one thing you wished you had known as a

672

00:24:37,430 --> 00:24:31,360

young student that would have helped you

673

00:24:44,149 --> 00:24:40,180

how to communicate with social media

674

00:24:47,350 --> 00:24:44,159

[Laughter]

675

00:24:48,630 --> 00:24:47,360

that's why he's our commander

676
00:24:50,390 --> 00:24:48,640
and i would say how to speak russian

677
00:24:52,630 --> 00:24:50,400
better

678
00:24:53,830 --> 00:24:52,640
how to speak in a foreign language

679
00:24:56,230 --> 00:24:53,840
that's great

680
00:24:58,390 --> 00:24:56,240
this is being asked on twitter

681
00:25:00,710 --> 00:24:58,400
miss joyce is asking on behalf of her

682
00:25:02,950 --> 00:25:00,720
sixth grade class

683
00:25:04,630 --> 00:25:02,960
would you be able to see pollution from

684
00:25:06,149 --> 00:25:04,640
space

685
00:25:08,710 --> 00:25:06,159
yes you can definitely

686
00:25:11,110 --> 00:25:08,720
see pollution when i was up last time

687
00:25:13,669 --> 00:25:11,120
we had the big forest fires going on in

688
00:25:15,510 --> 00:25:13,679

the kind of the colorado area and

689

00:25:18,230 --> 00:25:15,520

it was amazing to see

690

00:25:20,630 --> 00:25:18,240

how big of an area that the smoke will

691

00:25:21,669 --> 00:25:20,640

will travel from the source of the fire

692

00:25:24,149 --> 00:25:21,679

and so

693

00:25:26,470 --> 00:25:24,159

it is very easy to see that

694

00:25:28,789 --> 00:25:26,480

if there is some kind of a disaster

695

00:25:30,789 --> 00:25:28,799

event on earth we're notified so we can

696

00:25:32,390 --> 00:25:30,799

take pictures and help the folks on the

697

00:25:33,750 --> 00:25:32,400

ground you know battle that so you can

698

00:25:35,590 --> 00:25:33,760

definitely see

699

00:25:39,590 --> 00:25:35,600

the impact that humans have on the

700

00:25:44,950 --> 00:25:42,149

for right now from eddie on twitter and

701
00:25:49,029 --> 00:25:44,960
he is asking are you still eating out of

702
00:25:53,830 --> 00:25:52,070
we do i mean most of our food's not but

703
00:25:56,549 --> 00:25:53,840
there is some food that comes out some

704
00:25:58,710 --> 00:25:56,559
of the the jellies especially our

705
00:26:01,029 --> 00:25:58,720
our russian partners have that if you

706
00:26:04,310 --> 00:26:01,039
were to look at it it looks like a tube

707
00:26:06,710 --> 00:26:04,320
of toothpaste but it tastes really good

708
00:26:07,350 --> 00:26:06,720
so the food has really come a long way

709
00:26:09,029 --> 00:26:07,360
and

710
00:26:10,549 --> 00:26:09,039
it's not i think what you see in some of

711
00:26:12,230 --> 00:26:10,559
the older movies where

712
00:26:15,350 --> 00:26:12,240
you're eating you know meatloaf out of a

713
00:26:19,669 --> 00:26:17,590

house meatloaf out of a bag yeah instead

714

00:26:21,590 --> 00:26:19,679

of a bag now it's more freeze-dried and

715

00:26:23,990 --> 00:26:21,600

you put water in it and heat it up and

716

00:26:25,430 --> 00:26:24,000

it tastes good right that's good all

717

00:26:27,350 --> 00:26:25,440

right all right we're going to try the

718

00:26:28,950 --> 00:26:27,360

phone bridge again mark gotch are you on

719

00:26:31,750 --> 00:26:28,960

the line

720

00:26:33,029 --> 00:26:31,760

yes i am can you hear me yes we can hear

721

00:26:41,269 --> 00:26:33,039

you

722

00:26:44,070 --> 00:26:41,279

it's going to be a very important

723

00:26:46,310 --> 00:26:44,080

historical mission as i understand it

724

00:26:48,710 --> 00:26:46,320

this will be the first time

725

00:26:52,149 --> 00:26:48,720

that you will perform test flights on

726

00:26:53,750 --> 00:26:52,159

boeing's starliner and spacex's crew

727

00:26:57,110 --> 00:26:53,760

driving capsule

728

00:26:59,909 --> 00:26:57,120

can you tell me uh more of these tests

729

00:27:02,230 --> 00:26:59,919

now that the ida adapter

730

00:27:05,110 --> 00:27:02,240

docking adapter ring is in place

731

00:27:07,909 --> 00:27:05,120

and these these are going to be sent to

732

00:27:11,269 --> 00:27:07,919

you can you tell me the capsule type

733

00:27:13,430 --> 00:27:11,279

tests themselves more about them how far

734

00:27:16,870 --> 00:27:13,440

will they go away from the space station

735

00:27:18,870 --> 00:27:16,880

how many of you will be on board etc can

736

00:27:21,029 --> 00:27:18,880

you expand and tell me much more about

737

00:27:24,470 --> 00:27:21,039

these tests as this will be the first

738

00:27:28,470 --> 00:27:26,630

i don't know we're not having right so i

739

00:27:31,110 --> 00:27:28,480

think during the uh the time period that

740

00:27:32,389 --> 00:27:31,120

we're up there we're not anticipating uh

741

00:27:34,870 --> 00:27:32,399

any of those commercial vehicles

742

00:27:36,549 --> 00:27:34,880

arriving at that time so like mark said

743

00:27:38,149 --> 00:27:36,559

earlier we kind of train for what we

744

00:27:40,710 --> 00:27:38,159

anticipate so

745

00:27:42,389 --> 00:27:40,720

um not not thinking it's going to arrive

746

00:27:44,310 --> 00:27:42,399

before we come back in the february time

747

00:27:46,630 --> 00:27:44,320

frame unfortunately just can't answer a

748

00:27:47,590 --> 00:27:46,640

lot to that question all right

749

00:27:49,269 --> 00:27:47,600

thanks

750

00:27:53,029 --> 00:27:49,279

all right and do we have bill harwood

751
00:27:55,909 --> 00:27:54,950
yeah hi can you hear me now we can hear

752
00:28:00,830 --> 00:27:55,919
you

753
00:28:03,190 --> 00:28:00,840
question for uh for for alexander

754
00:28:05,190 --> 00:28:03,200
mcdurkin uh i've noticed that a few

755
00:28:09,029 --> 00:28:05,200
veteran cosmonauts had left the corps

756
00:28:10,630 --> 00:28:09,039
recently and i was i was wondering uh

757
00:28:12,470 --> 00:28:10,640
how all that's going is it simply a

758
00:28:13,909 --> 00:28:12,480
matter of their fewer fights and people

759
00:28:16,710 --> 00:28:13,919
didn't want to stay around or is this

760
00:28:24,950 --> 00:28:16,720
just a coincidence of timing and i have

761
00:28:31,430 --> 00:28:27,590
thanks so much for this question

762
00:28:33,510 --> 00:28:31,440
it's very funny for me to hear that i'm

763
00:28:36,070 --> 00:28:33,520

a veteran probably it's connected with

764

00:28:37,990 --> 00:28:36,080

not a lot of hair on my head

765

00:28:39,669 --> 00:28:38,000

because in the

766

00:28:41,909 --> 00:28:39,679

my first flight

767

00:28:44,710 --> 00:28:41,919

i had known that i was a

768

00:28:47,830 --> 00:28:44,720

youngest guy on iss station

769

00:28:50,630 --> 00:28:47,840

from there from that time when uh as i

770

00:28:53,110 --> 00:28:50,640

assessed this program was started

771

00:28:55,669 --> 00:28:53,120

and already i'm veterans

772

00:28:57,190 --> 00:28:55,679

thank you i'm not ready for that

773

00:28:59,990 --> 00:28:57,200

so far

774

00:29:03,430 --> 00:29:00,000

um actually

775

00:29:05,990 --> 00:29:04,710

everybody

776
00:29:09,430 --> 00:29:06,000
here and

777
00:29:11,510 --> 00:29:09,440
in russia the same we are growing we are

778
00:29:13,110 --> 00:29:11,520
growing like a professional like a

779
00:29:15,669 --> 00:29:13,120
person

780
00:29:17,269 --> 00:29:15,679
like step by step or every day

781
00:29:20,389 --> 00:29:17,279
and

782
00:29:23,110 --> 00:29:20,399
all of these cosmonauts

783
00:29:24,389 --> 00:29:23,120
i would actually say that they are

784
00:29:26,389 --> 00:29:24,399
veterans

785
00:29:28,630 --> 00:29:26,399
and they're much more professional than

786
00:29:30,630 --> 00:29:28,640
me but

787
00:29:32,470 --> 00:29:30,640
probably they decided

788
00:29:34,389 --> 00:29:32,480

that

789

00:29:37,350 --> 00:29:34,399

they already

790

00:29:38,389 --> 00:29:37,360

make enough light for themselves to

791

00:29:39,190 --> 00:29:38,399

space

792

00:29:41,350 --> 00:29:39,200

and

793

00:29:44,630 --> 00:29:41,360

there was not any possibility for them

794

00:29:47,190 --> 00:29:44,640

to work like a manager at the same time

795

00:29:49,669 --> 00:29:47,200

and it was that's why it was their

796

00:29:51,750 --> 00:29:49,679

choice from my perspective

797

00:29:53,510 --> 00:29:51,760

thank you so much

798

00:29:55,909 --> 00:29:53,520

thanks and you're fine a quick

799

00:29:58,070 --> 00:29:55,919

if i can for for both mark

800

00:29:59,669 --> 00:29:58,080

and joe uh for mark tell us a little bit

801
00:30:01,029 --> 00:29:59,679
about you know on a personal level what

802
00:30:03,029 --> 00:30:01,039
you're looking forward to about this

803
00:30:04,870 --> 00:30:03,039
flight and for and for joe what are you

804
00:30:08,870 --> 00:30:04,880
looking forward to getting a second

805
00:30:11,269 --> 00:30:08,880
chance at up in space thanks

806
00:30:13,430 --> 00:30:11,279
okay so from a personal level uh we've

807
00:30:17,110 --> 00:30:13,440
spent so much time

808
00:30:18,470 --> 00:30:17,120
preparing for this and i'd actually say

809
00:30:20,710 --> 00:30:18,480
joe's been preparing for this for the

810
00:30:23,669 --> 00:30:20,720
last year 13 years

811
00:30:25,430 --> 00:30:23,679
in some way or another but uh

812
00:30:26,870 --> 00:30:25,440
we've been training specifically for

813
00:30:29,190 --> 00:30:26,880

this upcoming launch

814

00:30:30,950 --> 00:30:29,200

for so long that uh i'm really looking

815

00:30:32,710 --> 00:30:30,960

forward to getting to work

816

00:30:34,310 --> 00:30:32,720

and i'm really excited to live with

817

00:30:35,830 --> 00:30:34,320

these gentlemen and the

818

00:30:37,430 --> 00:30:35,840

the the crew that's going to be there on

819

00:30:39,510 --> 00:30:37,440

the station when we arrive and the crew

820

00:30:41,190 --> 00:30:39,520

that we're going to receive later in our

821

00:30:43,190 --> 00:30:41,200

in our mission

822

00:30:45,830 --> 00:30:43,200

and frankly i'm really looking forward

823

00:30:49,669 --> 00:30:45,840

to seeing what the view is like

824

00:30:54,149 --> 00:30:51,990

hey bill it's uh it's always good to go

825

00:30:56,470 --> 00:30:54,159

back and what's really interesting about

826

00:30:57,909 --> 00:30:56,480

the long duration flights is that you

827

00:30:59,669 --> 00:30:57,919

don't know what's going to happen every

828

00:31:01,350 --> 00:30:59,679

day so every day is a challenge you

829

00:31:03,110 --> 00:31:01,360

don't know what's going to break

830

00:31:06,149 --> 00:31:03,120

um so i'm looking forward to seeing what

831

00:31:07,669 --> 00:31:06,159

the next increment brings up

832

00:31:08,950 --> 00:31:07,679

something else is that you know being an

833

00:31:10,630 --> 00:31:08,960

educator i think we're going to take

834

00:31:13,509 --> 00:31:10,640

this opportunity to do

835

00:31:15,430 --> 00:31:13,519

more educational educational outreach

836

00:31:17,590 --> 00:31:15,440

and the other cool part is that i'll be

837

00:31:18,389 --> 00:31:17,600

going in september to the february time

838

00:31:20,070 --> 00:31:18,399

frame

839

00:31:22,230 --> 00:31:20,080

and then we have another educator ricky

840

00:31:23,509 --> 00:31:22,240

arnold who's going right after me so we

841

00:31:24,870 --> 00:31:23,519

were just talking about this earlier

842

00:31:26,710 --> 00:31:24,880

it's almost a

843

00:31:28,470 --> 00:31:26,720

an entire school year of having

844

00:31:29,269 --> 00:31:28,480

educators in space so i think it's going

845

00:31:30,870 --> 00:31:29,279

to be

846

00:31:32,230 --> 00:31:30,880

a neat time for us to do outreach to

847

00:31:34,310 --> 00:31:32,240

work with teachers and also with

848

00:31:36,230 --> 00:31:34,320

students that will be very exciting

849

00:31:38,070 --> 00:31:36,240

thank you all right do we have more

850

00:31:39,830 --> 00:31:38,080

questions here in the room

851

00:31:41,430 --> 00:31:39,840

hi my name is eric peterson i'm a sixth

852

00:31:43,430 --> 00:31:41,440

grade science teacher at fowler middle

853

00:31:44,789 --> 00:31:43,440

school in frisco isd and my sixth

854

00:31:46,710 --> 00:31:44,799

graders sure de gupta wants to know if

855

00:31:50,149 --> 00:31:46,720

you can make any improvements to any

856

00:31:52,070 --> 00:31:50,159

simulation you've done what would it be

857

00:31:53,509 --> 00:31:52,080

improvements to a simulation first thing

858

00:31:55,750 --> 00:31:53,519

comes to mind is making the mbl more

859

00:31:56,750 --> 00:31:55,760

comfortable

860

00:31:58,549 --> 00:31:56,760

you kind of beat me to it

861

00:32:01,110 --> 00:31:58,559

[Laughter]

862

00:32:02,710 --> 00:32:01,120

so we do uh you probably saw some of the

863

00:32:06,310 --> 00:32:02,720

photos where we do a lot of the training

864

00:32:07,350 --> 00:32:06,320

for spacewalks in a in a really big pool

865

00:32:10,630 --> 00:32:07,360

and

866

00:32:11,590 --> 00:32:10,640

it's about as good as you can get on

867

00:32:14,389 --> 00:32:11,600

earth but

868

00:32:15,909 --> 00:32:14,399

it would be nice to have a microgravity

869

00:32:17,190 --> 00:32:15,919

environment here on earth that you could

870

00:32:18,710 --> 00:32:17,200

train on

871

00:32:20,389 --> 00:32:18,720

that we don't have even though the pool

872

00:32:22,070 --> 00:32:20,399

is really really good

873

00:32:23,590 --> 00:32:22,080

the other thing is that again dealing

874

00:32:26,149 --> 00:32:23,600

with microgravity

875

00:32:28,470 --> 00:32:26,159

you can't train how to float

876

00:32:29,750 --> 00:32:28,480

in space and when you work in space

877

00:32:31,830 --> 00:32:29,760

the tools

878

00:32:34,149 --> 00:32:31,840

if you don't do something with them they

879

00:32:35,509 --> 00:32:34,159

will float away and so everything you

880

00:32:36,710 --> 00:32:35,519

have to do you have to think about okay

881

00:32:38,630 --> 00:32:36,720

i'm going to put this down on a piece of

882

00:32:40,710 --> 00:32:38,640

velcro i'm going to put this on a piece

883

00:32:42,149 --> 00:32:40,720

of tape and we just can't do that for

884

00:32:43,190 --> 00:32:42,159

long periods of time here so it'd be

885

00:32:45,590 --> 00:32:43,200

nice to

886

00:32:47,350 --> 00:32:45,600

to have a little microgravity button

887

00:32:49,350 --> 00:32:47,360

that we could push and watch things

888

00:32:50,310 --> 00:32:49,360

float around and and learn how to deal

889

00:32:52,549 --> 00:32:50,320

with that

890

00:32:53,830 --> 00:32:52,559

now what i would like to do is talk

891

00:32:56,389 --> 00:32:53,840

about a

892

00:32:58,470 --> 00:32:56,399

simulation that was really really good

893

00:33:00,389 --> 00:32:58,480

that i was excited about um one of the

894

00:33:01,830 --> 00:33:00,399

things we do in that virtual reality lab

895

00:33:03,990 --> 00:33:01,840

that i mentioned earlier

896

00:33:06,389 --> 00:33:04,000

is learn about mass handling

897

00:33:08,149 --> 00:33:06,399

and in the in the mbl when you move

898

00:33:10,070 --> 00:33:08,159

something including yourself there's

899

00:33:12,070 --> 00:33:10,080

water resistance all the time so you're

900

00:33:13,350 --> 00:33:12,080

even though from a physics perspective

901
00:33:14,630 --> 00:33:13,360
once you start something moving in space

902
00:33:16,630 --> 00:33:14,640
you're just it's going to keep moving

903
00:33:19,029 --> 00:33:16,640
you never get that experience in the mbl

904
00:33:21,110 --> 00:33:19,039
you always have to work to continue

905
00:33:22,070 --> 00:33:21,120
maintaining your momentum through the

906
00:33:24,070 --> 00:33:22,080
water

907
00:33:25,830 --> 00:33:24,080
but in this virtual reality lab i had

908
00:33:27,909 --> 00:33:25,840
what the computer was set up to simulate

909
00:33:29,590 --> 00:33:27,919
as being a thousand pound object

910
00:33:31,430 --> 00:33:29,600
and again i could see my hands i was

911
00:33:32,950 --> 00:33:31,440
holding onto handles and

912
00:33:35,750 --> 00:33:32,960
i couldn't see my hands i was seeing

913
00:33:37,190 --> 00:33:35,760

space and this in this object in space

914

00:33:38,870 --> 00:33:37,200

on the space station

915

00:33:41,269 --> 00:33:38,880

and i was trying to move it and i

916

00:33:43,190 --> 00:33:41,279

realized that once i got it to just move

917

00:33:44,310 --> 00:33:43,200

a little bit it would keep going and all

918

00:33:45,990 --> 00:33:44,320

i had to do was like i didn't have to

919

00:33:47,750 --> 00:33:46,000

keep holding it and squeezing it hard

920

00:33:49,430 --> 00:33:47,760

and keep dragging along i just had to

921

00:33:51,190 --> 00:33:49,440

put my fingers on it and just wait until

922

00:33:52,950 --> 00:33:51,200

i got to the right spot and then very

923

00:33:56,149 --> 00:33:52,960

gently stop it and then move it down i

924

00:34:00,230 --> 00:33:58,230

it was cool to see i've been there all

925

00:34:02,549 --> 00:34:00,240

right another question

926

00:34:05,990 --> 00:34:02,559

hi i'm linda limbaugh i teach sixth

927

00:34:08,149 --> 00:34:06,000

grade at hamilton middle school at hisd

928

00:34:10,389 --> 00:34:08,159

now when i lived in alaska i remember

929

00:34:12,710 --> 00:34:10,399

reading the anchorage daily news and

930

00:34:15,190 --> 00:34:12,720

sometimes the headlines for real life

931

00:34:18,069 --> 00:34:15,200

sounded like science fiction like the

932

00:34:20,069 --> 00:34:18,079

sunset for the year in barrow alaska so

933

00:34:22,230 --> 00:34:20,079

i'm curious for joe and alexander what

934

00:34:25,430 --> 00:34:22,240

kind of headlines would you have for the

935

00:34:29,829 --> 00:34:25,440

iss daily news for real life that might

936

00:34:33,190 --> 00:34:31,109

wow

937

00:34:37,030 --> 00:34:33,200

good question see i'm a geologist so i'm

938

00:34:40,149 --> 00:34:37,040

not the most creative guy out there um

939

00:34:42,230 --> 00:34:40,159

yeah could you

940

00:34:44,230 --> 00:34:42,240

trust one more to say this question for

941

00:34:45,990 --> 00:34:44,240

me so if you had to

942

00:34:47,510 --> 00:34:46,000

make a news

943

00:34:49,109 --> 00:34:47,520

headline

944

00:34:51,589 --> 00:34:49,119

on what's happening

945

00:34:55,190 --> 00:34:51,599

in space that seems

946

00:34:55,990 --> 00:34:55,200

unreal but is real okay i have an answer

947

00:34:57,990 --> 00:34:56,000

see

948

00:34:59,030 --> 00:34:58,000

that's why i always start with him

949

00:35:01,589 --> 00:34:59,040

thank you

950

00:35:06,390 --> 00:35:04,550

uh do you remember linda about these

951
00:35:08,630 --> 00:35:06,400
little pieces of cover which we were

952
00:35:11,750 --> 00:35:08,640
talking about

953
00:35:14,230 --> 00:35:11,760
a couple minutes before

954
00:35:15,430 --> 00:35:14,240
how we realized that we have some kind

955
00:35:17,990 --> 00:35:15,440
of problem

956
00:35:20,630 --> 00:35:18,000
further your chicken which is in space

957
00:35:22,710 --> 00:35:20,640
right now and and i

958
00:35:27,190 --> 00:35:22,720
we were preparing for our

959
00:35:28,150 --> 00:35:27,200
third way

960
00:35:30,790 --> 00:35:28,160
and

961
00:35:33,030 --> 00:35:30,800
we were in the docking compartment

962
00:35:44,470 --> 00:35:33,040
and

963
00:35:46,710 --> 00:35:44,480

which we don't usually use

964

00:35:49,030 --> 00:35:46,720

like a very strong

965

00:35:52,150 --> 00:35:49,040

decision of commander in this case we

966

00:35:54,150 --> 00:35:52,160

understand something happened and we

967

00:35:55,670 --> 00:35:54,160

stopped working and immediately running

968

00:35:57,030 --> 00:35:55,680

after

969

00:35:59,829 --> 00:35:57,040

to him

970

00:36:01,510 --> 00:35:59,839

and he showed us

971

00:36:02,550 --> 00:36:01,520

behind the

972

00:36:05,030 --> 00:36:02,560

our big

973

00:36:07,109 --> 00:36:05,040

window in the russian segment we saw

974

00:36:09,190 --> 00:36:07,119

something is flowing around

975

00:36:12,710 --> 00:36:09,200

not near to station

976

00:36:15,430 --> 00:36:12,720

but we understand it should not be

977

00:36:17,670 --> 00:36:15,440

actually i will i understood that moment

978

00:36:20,069 --> 00:36:17,680

that it's something which was

979

00:36:22,390 --> 00:36:20,079

separated from station i was not sure

980

00:36:25,349 --> 00:36:22,400

it's was it from russian segment from

981

00:36:28,710 --> 00:36:25,359

u.s segment but for me it's it was

982

00:36:30,870 --> 00:36:28,720

obviously it's uh something from us

983

00:36:33,349 --> 00:36:30,880

and my colleagues started making a

984

00:36:35,910 --> 00:36:33,359

picture of it i decided for what reason

985

00:36:36,950 --> 00:36:35,920

i need to take a third cameras and do

986

00:36:40,630 --> 00:36:36,960

the same

987

00:36:42,550 --> 00:36:40,640

let's flew to chris casey and say tell

988

00:36:43,990 --> 00:36:42,560

him that we have something flowing

989

00:36:44,950 --> 00:36:44,000

around us

990

00:36:48,150 --> 00:36:44,960

and

991

00:36:50,550 --> 00:36:48,160

came to him he said chris you know we

992

00:36:53,670 --> 00:36:50,560

have something around station uh take a

993

00:36:56,390 --> 00:36:53,680

look maybe it's yours he said oh

994

00:36:59,030 --> 00:36:56,400

take a picture as well

995

00:37:00,390 --> 00:36:59,040

i do not know who put this picture to

996

00:37:02,470 --> 00:37:00,400

internet

997

00:37:04,390 --> 00:37:02,480

but the next day

998

00:37:06,710 --> 00:37:04,400

there was some kind of highlight you say

999

00:37:11,910 --> 00:37:06,720

highlight right headline uh like there

1000

00:37:13,990 --> 00:37:11,920

is some uh huge ufo uf4

1001
00:37:15,910 --> 00:37:14,000
around the station international space

1002
00:37:18,870 --> 00:37:15,920
station flying

1003
00:37:24,150 --> 00:37:18,880
i think this one highlight was

1004
00:37:28,230 --> 00:37:26,230
thank you so much that's great all right

1005
00:37:30,950 --> 00:37:28,240
we have another question over here

1006
00:37:33,270 --> 00:37:30,960
yes this is santa handen from milby high

1007
00:37:35,430 --> 00:37:33,280
school in houston isd

1008
00:37:37,190 --> 00:37:35,440
since we have two physics teachers in

1009
00:37:39,510 --> 00:37:37,200
the

1010
00:37:43,349 --> 00:37:39,520
among you i have this question whenever

1011
00:37:45,510 --> 00:37:43,359
i teach ap physics and regular physics

1012
00:37:48,710 --> 00:37:45,520
when we study circular motion and talk

1013
00:37:50,870 --> 00:37:48,720

about the gravity simulated environment

1014

00:37:52,310 --> 00:37:50,880

my students ask me why they don't do

1015

00:37:54,150 --> 00:37:52,320

that it is

1016

00:37:56,390 --> 00:37:54,160

why they don't simulate a gravity

1017

00:37:57,829 --> 00:37:56,400

environment in the station

1018

00:37:59,910 --> 00:37:57,839

so

1019

00:38:02,310 --> 00:37:59,920

can you help me we actually i would say

1020

00:38:04,069 --> 00:38:02,320

the answer that is that we actually do

1021

00:38:06,069 --> 00:38:04,079

there are science experiments where we

1022

00:38:08,550 --> 00:38:06,079

can based on uh

1023

00:38:10,630 --> 00:38:08,560

circular motion we can simulate that

1024

00:38:12,310 --> 00:38:10,640

force towards the center of the circle

1025

00:38:13,750 --> 00:38:12,320

um as

1026

00:38:15,109 --> 00:38:13,760

some uh

1027

00:38:17,270 --> 00:38:15,119

and change the amount of it by how

1028

00:38:19,430 --> 00:38:17,280

quickly we're spinning a small object

1029

00:38:20,230 --> 00:38:19,440

so we can choose to have an experiment

1030

00:38:22,470 --> 00:38:20,240

done

1031

00:38:24,870 --> 00:38:22,480

where everything is floating or or an

1032

00:38:26,390 --> 00:38:24,880

experiment done where it's it's attached

1033

00:38:28,150 --> 00:38:26,400

to the outside of a circle and it's

1034

00:38:29,510 --> 00:38:28,160

spinning around and the faster that

1035

00:38:32,230 --> 00:38:29,520

thing spins the more it's going to feel

1036

00:38:34,150 --> 00:38:32,240

it's going to seem like a surface that's

1037

00:38:38,069 --> 00:38:34,160

uh whatever whatever amount of gravity

1038

00:38:41,510 --> 00:38:39,270

okay

1039

00:38:44,310 --> 00:38:41,520

so i think what my understanding is is

1040

00:38:47,510 --> 00:38:44,320

and i'm not an expert on this at all but

1041

00:38:49,430 --> 00:38:47,520

because as human beings um we recognize

1042

00:38:51,990 --> 00:38:49,440

when we're spinning it can be very

1043

00:38:53,990 --> 00:38:52,000

nauseating if it's not a really really

1044

00:38:55,990 --> 00:38:54,000

really big circle that we're on

1045

00:38:57,910 --> 00:38:56,000

so um until

1046

00:39:00,870 --> 00:38:57,920

i think the idea of having a space

1047

00:39:02,950 --> 00:39:00,880

station that's got a uh uh where we're

1048

00:39:05,270 --> 00:39:02,960

living on a large circle

1049

00:39:07,430 --> 00:39:05,280

and we can live on the surface like uh

1050

00:39:08,870 --> 00:39:07,440

on the earth would be great i just have

1051

00:39:10,470 --> 00:39:08,880

no idea how big it would have to be

1052

00:39:13,109 --> 00:39:10,480

before people would be able to tolerate

1053

00:39:16,470 --> 00:39:14,710

very interesting

1054

00:39:18,150 --> 00:39:16,480

my name is cameron mccall i'm a physics

1055

00:39:19,349 --> 00:39:18,160

teacher at scarborough high school in

1056

00:39:21,750 --> 00:39:19,359

hisd

1057

00:39:23,510 --> 00:39:21,760

um so my main question is

1058

00:39:25,589 --> 00:39:23,520

for the months leading up to the launch

1059

00:39:27,670 --> 00:39:25,599

what are some mental and physical

1060

00:39:32,630 --> 00:39:27,680

preparations and challenges that you all

1061

00:39:35,829 --> 00:39:34,470

well there's uh so

1062

00:39:37,109 --> 00:39:35,839

of course you have that last minute

1063

00:39:39,510 --> 00:39:37,119

training that you have to take care of

1064

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

so they keep us really really busy with

1065

00:39:42,230 --> 00:39:40,720

that but

1066

00:39:44,550 --> 00:39:42,240

when you start getting to the personal

1067

00:39:46,230 --> 00:39:44,560

side it's you know that's a lot of times

1068

00:39:47,990 --> 00:39:46,240

the hard part is

1069

00:39:49,670 --> 00:39:48,000

dealing with the family you know for us

1070

00:39:50,950 --> 00:39:49,680

we get to go up into space and we have a

1071

00:39:52,710 --> 00:39:50,960

great time and

1072

00:39:54,550 --> 00:39:52,720

it's you know we're living a dream but

1073

00:39:55,349 --> 00:39:54,560

it's your family that is here on earth

1074

00:39:56,390 --> 00:39:55,359

that

1075

00:39:57,750 --> 00:39:56,400

is really

1076

00:40:00,310 --> 00:39:57,760

you know they're suffering a lot more

1077

00:40:01,990 --> 00:40:00,320

than we are so i think dealing with that

1078

00:40:03,990 --> 00:40:02,000

emotional part of it

1079

00:40:05,829 --> 00:40:04,000

is it takes quite a bit of your time so

1080

00:40:07,430 --> 00:40:05,839

you're trying to focus on the mission

1081

00:40:08,950 --> 00:40:07,440

and do the technical but you also

1082

00:40:10,710 --> 00:40:08,960

realize that you have your family at

1083

00:40:12,150 --> 00:40:10,720

home that that you want to spend that

1084

00:40:14,069 --> 00:40:12,160

time with

1085

00:40:16,230 --> 00:40:14,079

i agree

1086

00:40:17,829 --> 00:40:16,240

thank you hi my name is lauren baird and

1087

00:40:20,550 --> 00:40:17,839

i teach physics and engineering at

1088

00:40:21,990 --> 00:40:20,560

energy institute in hisd and i was just

1089

00:40:23,829 --> 00:40:22,000

wondering what kind of experiments are

1090

00:40:25,349 --> 00:40:23,839

currently being done on the

1091

00:40:29,349 --> 00:40:25,359

international space station and which

1092

00:40:32,230 --> 00:40:31,030

um

1093

00:40:33,990 --> 00:40:32,240

so i

1094

00:40:35,349 --> 00:40:34,000

there's i'm excited about the experience

1095

00:40:38,230 --> 00:40:35,359

where we're actually part of the

1096

00:40:40,630 --> 00:40:38,240

experiment ourselves there's a lot of uh

1097

00:40:43,349 --> 00:40:41,750

we had to sign up for a lot of

1098

00:40:45,190 --> 00:40:43,359

experiments

1099

00:40:47,430 --> 00:40:45,200

i just learned

1100

00:40:48,470 --> 00:40:47,440

again i don't really know the set list

1101

00:40:50,950 --> 00:40:48,480

of experiments that are going to be

1102

00:40:53,670 --> 00:40:50,960

available but i just yesterday got

1103

00:40:56,550 --> 00:40:53,680

trained on the combustion facility

1104

00:40:57,910 --> 00:40:56,560

we're learning about how

1105

00:41:01,589 --> 00:40:57,920

we're getting a better model of how

1106

00:41:03,670 --> 00:41:01,599

combustion works by taking out that

1107

00:41:05,910 --> 00:41:03,680

independent variable of gravity

1108

00:41:07,349 --> 00:41:05,920

and hopefully that'll result in more

1109

00:41:10,309 --> 00:41:07,359

efficient uh

1110

00:41:12,710 --> 00:41:10,319

ways to burn fuels or better fuels

1111

00:41:14,470 --> 00:41:12,720

but uh i certainly thought it was a very

1112

00:41:15,750 --> 00:41:14,480

very well engineered facility i was

1113

00:41:17,349 --> 00:41:15,760

really impressed with how it was put

1114

00:41:18,790 --> 00:41:17,359

together and how

1115

00:41:20,630 --> 00:41:18,800

it was really set up to be maintained

1116

00:41:22,550 --> 00:41:20,640

fairly easily

1117

00:41:24,069 --> 00:41:22,560

and if i can just add we uh

1118

00:41:25,430 --> 00:41:24,079

we learned about this app so i'm going

1119

00:41:27,670 --> 00:41:25,440

to put a plug in

1120

00:41:29,430 --> 00:41:27,680

to a nasa app because it is pretty cool

1121

00:41:32,150 --> 00:41:29,440

and if i say wrong correct me but i

1122

00:41:33,349 --> 00:41:32,160

think it's a space station research

1123

00:41:35,750 --> 00:41:33,359

explorer

1124

00:41:37,109 --> 00:41:35,760

and it's it's pretty cool because you

1125

00:41:38,710 --> 00:41:37,119

can go through

1126

00:41:40,150 --> 00:41:38,720

and if you're interested in biology you

1127

00:41:42,390 --> 00:41:40,160

can look in that area if you want to

1128

00:41:44,630 --> 00:41:42,400

look at you know fire and how that works

1129

00:41:46,069 --> 00:41:44,640

and what experiments uh nasa has done

1130

00:41:47,510 --> 00:41:46,079

all of that is there

1131

00:41:49,430 --> 00:41:47,520

and when you look at the amount of

1132

00:41:50,710 --> 00:41:49,440

science that we've done that we've done

1133

00:41:52,710 --> 00:41:50,720

it's pretty impressive so i would

1134

00:41:55,270 --> 00:41:52,720

recommend especially for students

1135

00:41:57,349 --> 00:41:55,280

to pull that thing up it's um it's not

1136

00:41:58,550 --> 00:41:57,359

boring it's actually pretty cool and i

1137

00:42:01,270 --> 00:41:58,560

think there's a lot to learn from going

1138

00:42:04,630 --> 00:42:02,870

that's great yeah the crew will have

1139

00:42:07,750 --> 00:42:04,640

hundreds of experiments during their

1140

00:42:09,589 --> 00:42:07,760

mission all different disciplines um and

1141

00:42:11,430 --> 00:42:09,599

the app is perfect you can learn more

1142

00:42:13,349 --> 00:42:11,440

about it also on the iss research

1143

00:42:14,950 --> 00:42:13,359

website and they have a twitter as well

1144

00:42:16,710 --> 00:42:14,960

that they post updates of the

1145

00:42:19,349 --> 00:42:16,720

experiments the crew is doing every

1146

00:42:20,950 --> 00:42:19,359

single day so yeah

1147

00:42:30,150 --> 00:42:20,960

we have another question

1148

00:42:33,430 --> 00:42:31,910

the obvious of friends and family uh

1149

00:42:35,109 --> 00:42:33,440

what's one thing you'll miss most about

1150

00:42:36,390 --> 00:42:35,119

uh being here is like ice cream candy

1151

00:42:37,510 --> 00:42:36,400

bars driving just something like that

1152

00:42:39,510 --> 00:42:37,520

you can think of that you'll miss on a

1153

00:42:40,630 --> 00:42:39,520

daily basis

1154

00:42:42,390 --> 00:42:40,640

for me i think it would probably be

1155

00:42:44,550 --> 00:42:42,400

sunshine

1156

00:42:47,030 --> 00:42:44,560

quite honestly you'll get a lot of sun

1157

00:42:49,030 --> 00:42:47,040

it's just a little bit different

1158

00:42:50,710 --> 00:42:49,040

but really i think that is uh

1159

00:42:52,710 --> 00:42:50,720

and you know sasha may say something

1160

00:42:54,069 --> 00:42:52,720

similar is that

1161

00:42:56,150 --> 00:42:54,079

it's pretty comfortable living on the

1162

00:42:57,670 --> 00:42:56,160

iss we have kind of the

1163

00:42:59,109 --> 00:42:57,680

normal comforts that you have here the

1164

00:43:00,309 --> 00:42:59,119

food is pretty good but the one thing

1165

00:43:02,069 --> 00:43:00,319

you don't get

1166

00:43:03,910 --> 00:43:02,079

is the weather you know what mark is

1167

00:43:06,550 --> 00:43:03,920

saying is that you know we see the sun

1168

00:43:08,790 --> 00:43:06,560

come up and down you know lives 15 16

1169

00:43:10,550 --> 00:43:08,800

times a day and you see all that but

1170

00:43:12,870 --> 00:43:10,560

you don't get that wind and when you get

1171

00:43:14,230 --> 00:43:12,880

out of that capsule after a few months

1172

00:43:16,870 --> 00:43:14,240

on the iss

1173

00:43:19,190 --> 00:43:16,880

just feeling you know the wind smelling

1174

00:43:24,950 --> 00:43:19,200

the grass all of that you know we just

1175

00:43:32,150 --> 00:43:28,630

i definitely agree with joe and um

1176
00:43:34,309 --> 00:43:32,160
what i can add if by talking about some

1177
00:43:36,470 --> 00:43:34,319
little things according our

1178
00:43:37,270 --> 00:43:36,480
normal life

1179
00:43:41,030 --> 00:43:37,280
you

1180
00:43:43,829 --> 00:43:41,040
very very missing uh pillow and some

1181
00:43:44,710 --> 00:43:43,839
feeling that you have a

1182
00:43:46,630 --> 00:43:44,720
bed

1183
00:43:48,630 --> 00:43:46,640
when you're trying to sleep

1184
00:43:51,670 --> 00:43:48,640
because you are flying inside of

1185
00:43:53,349 --> 00:43:51,680
sleeping bag and you just fly keep still

1186
00:43:55,510 --> 00:43:53,359
flying

1187
00:43:59,030 --> 00:43:55,520
for me it was and of course unusually

1188
00:43:59,990 --> 00:43:59,040

and i will i was trying to keep such

1189

00:44:02,950 --> 00:44:00,000

pose

1190

00:44:06,550 --> 00:44:02,960

to feel at least a wall

1191

00:44:09,430 --> 00:44:06,560

to which my sleeping bag was attached

1192

00:44:10,870 --> 00:44:09,440

my commander used uh some special

1193

00:44:14,309 --> 00:44:10,880

fur saks

1194

00:44:15,670 --> 00:44:14,319

uh which made russia provide we call it

1195

00:44:17,030 --> 00:44:15,680

unchatta

1196

00:44:20,069 --> 00:44:17,040

and he

1197

00:44:22,790 --> 00:44:20,079

take one of them

1198

00:44:27,349 --> 00:44:22,800

inside out yeah put it inside out put

1199

00:44:31,109 --> 00:44:27,359

one second one inside it was like a

1200

00:44:33,670 --> 00:44:31,119

christmas sucks pre this side and four

1201

00:44:37,430 --> 00:44:33,680

outside give it to me i say for what

1202

00:44:39,670 --> 00:44:37,440

reason this is a pillow it was flowing

1203

00:44:42,069 --> 00:44:39,680

behind my head and sometimes when you

1204

00:44:43,589 --> 00:44:42,079

touch it or you really thank you pile

1205

00:44:45,670 --> 00:44:43,599

vladimir she's

1206

00:44:48,230 --> 00:44:45,680

very comfortable

1207

00:44:51,510 --> 00:44:48,240

some normal yeah i definitely agree that

1208

00:44:52,470 --> 00:44:51,520

our space foot very tasty but anyway

1209

00:44:57,109 --> 00:44:52,480

some

1210

00:44:58,390 --> 00:44:57,119

home

1211

00:45:01,430 --> 00:44:58,400

food

1212

00:45:03,589 --> 00:45:01,440

of course your

1213

00:45:04,550 --> 00:45:03,599

relatives

1214

00:45:05,750 --> 00:45:04,560

and

1215

00:45:08,870 --> 00:45:05,760

just

1216

00:45:11,430 --> 00:45:08,880

little things which we have every day

1217

00:45:13,510 --> 00:45:11,440

and we didn't don't

1218

00:45:15,030 --> 00:45:13,520

understand how it's important for us

1219

00:45:18,710 --> 00:45:15,040

until we

1220

00:45:19,829 --> 00:45:18,720

lost them even for a while

1221

00:45:21,829 --> 00:45:19,839

all right do we have a couple more

1222

00:45:23,990 --> 00:45:21,839

questions from social media

1223

00:45:26,470 --> 00:45:24,000

yes patrick is wondering

1224

00:45:29,030 --> 00:45:26,480

what advancements have been made during

1225

00:45:31,430 --> 00:45:29,040

the past years that put your mind at

1226

00:45:36,069 --> 00:45:31,440

ease that put your mind at ease or make

1227

00:45:39,910 --> 00:45:38,309

they got an espresso machine up there 3d

1228

00:45:43,670 --> 00:45:39,920

printer

1229

00:45:46,790 --> 00:45:43,680

yes more fun maybe i don't know

1230

00:45:48,150 --> 00:45:46,800

that's awesome yeah you're right

1231

00:45:50,390 --> 00:45:48,160

you know a lot of the advancements we

1232

00:45:52,790 --> 00:45:50,400

look at you know a lot of them are

1233

00:45:55,109 --> 00:45:52,800

kind of more you know science-based you

1234

00:45:57,109 --> 00:45:55,119

know looking at you know human health

1235

00:45:58,710 --> 00:45:57,119

coming up with drugs that will you know

1236

00:46:00,630 --> 00:45:58,720

help us as we get older dealing with the

1237

00:46:03,270 --> 00:46:00,640

bones and things like that so

1238

00:46:04,230 --> 00:46:03,280

while it's probably not fun like a 3d

1239

00:46:05,829 --> 00:46:04,240

printer

1240

00:46:07,670 --> 00:46:05,839

i think for those that

1241

00:46:09,990 --> 00:46:07,680

need some of those discoveries it you

1242

00:46:11,190 --> 00:46:10,000

know for them i'm sure it's uh it's very

1243

00:46:12,309 --> 00:46:11,200

very fun

1244

00:46:15,510 --> 00:46:12,319

do you mind if i add something to that

1245

00:46:17,510 --> 00:46:15,520

too so um from a work perspective you

1246

00:46:19,430 --> 00:46:17,520

can imagine the ground team

1247

00:46:20,950 --> 00:46:19,440

is an expert at getting all these tasks

1248

00:46:22,390 --> 00:46:20,960

done and they have to communicate those

1249

00:46:23,910 --> 00:46:22,400

procedures to us

1250

00:46:26,069 --> 00:46:23,920

and if anybody's putting something

1251
00:46:27,270 --> 00:46:26,079
together from ikea i guess is it just

1252
00:46:28,870 --> 00:46:27,280
pictures

1253
00:46:30,230 --> 00:46:28,880
anyway forget that

1254
00:46:31,829 --> 00:46:30,240
well but it kind of leads into it

1255
00:46:32,870 --> 00:46:31,839
because uh

1256
00:46:34,950 --> 00:46:32,880
sometimes it's really hard to

1257
00:46:37,430 --> 00:46:34,960
communicate something that is very

1258
00:46:38,950 --> 00:46:37,440
simple and lately we've been embedding

1259
00:46:40,630 --> 00:46:38,960
more and more frequently videos into the

1260
00:46:41,510 --> 00:46:40,640
procedures so that's a development

1261
00:46:44,550 --> 00:46:41,520
that's

1262
00:46:47,430 --> 00:46:45,589
all right

1263
00:46:49,430 --> 00:46:47,440

and we have one more from a sixth grade

1264

00:46:53,030 --> 00:46:49,440

class um

1265

00:46:54,870 --> 00:46:53,040

in ontario and they are wondering um

1266

00:46:57,829 --> 00:46:54,880

what do you do for fun when you are in

1267

00:47:01,030 --> 00:46:57,839

space

1268

00:47:03,829 --> 00:47:01,040

you want to start i'll see you okay

1269

00:47:06,069 --> 00:47:03,839

so being in space just being there is

1270

00:47:08,230 --> 00:47:06,079

fun like we were talking about earlier

1271

00:47:11,349 --> 00:47:08,240

uh you know being spider-man or superman

1272

00:47:13,670 --> 00:47:11,359

flying around is the coolest thing ever

1273

00:47:15,589 --> 00:47:13,680

so you never get tired of that

1274

00:47:16,790 --> 00:47:15,599

microgravity environment every morning i

1275

00:47:19,109 --> 00:47:16,800

would wake up

1276
00:47:21,430 --> 00:47:19,119
and float out of my my crew quarters and

1277
00:47:22,549 --> 00:47:21,440
it was just this weird feeling just to

1278
00:47:24,710 --> 00:47:22,559
push yourself

1279
00:47:26,710 --> 00:47:24,720
across the lab

1280
00:47:29,190 --> 00:47:26,720
so that's that's a whole lot of fun and

1281
00:47:31,030 --> 00:47:29,200
very relaxing looking out the window you

1282
00:47:32,309 --> 00:47:31,040
have a view you can't get anywhere else

1283
00:47:33,990 --> 00:47:32,319
on earth so

1284
00:47:35,750 --> 00:47:34,000
i don't think we ever get tired of that

1285
00:47:38,309 --> 00:47:35,760
but we also have

1286
00:47:39,109 --> 00:47:38,319
you know the usual we watch movies you

1287
00:47:41,109 --> 00:47:39,119
have

1288
00:47:42,630 --> 00:47:41,119

a telephone you can call your family and

1289

00:47:44,309 --> 00:47:42,640

friends

1290

00:47:45,430 --> 00:47:44,319

but just living up there every day is

1291

00:47:48,710 --> 00:47:45,440

pretty fun

1292

00:47:50,069 --> 00:47:48,720

definitely agree with joy and

1293

00:47:53,750 --> 00:47:50,079

according to the

1294

00:47:56,309 --> 00:47:54,790

when i

1295

00:47:59,589 --> 00:47:56,319

came to station

1296

00:48:00,950 --> 00:47:59,599

and have some motion sickness and my

1297

00:48:03,990 --> 00:48:00,960

cremates

1298

00:48:04,950 --> 00:48:04,000

prepared my sleeping bag let me just

1299

00:48:06,390 --> 00:48:04,960

sleep

1300

00:48:08,150 --> 00:48:06,400

when i wake up

1301
00:48:10,630 --> 00:48:08,160
our commander

1302
00:48:12,470 --> 00:48:10,640
chris hatfield

1303
00:48:15,270 --> 00:48:12,480
say hello sasha

1304
00:48:17,750 --> 00:48:15,280
follow me i will show you something

1305
00:48:21,109 --> 00:48:17,760
we came to the cupola

1306
00:48:22,150 --> 00:48:21,119
and we were i would say this really i

1307
00:48:23,349 --> 00:48:22,160
would say

1308
00:48:24,230 --> 00:48:23,359
just

1309
00:48:25,589 --> 00:48:24,240
like

1310
00:48:27,109 --> 00:48:25,599
bird on the

1311
00:48:30,069 --> 00:48:27,119
wired

1312
00:48:32,230 --> 00:48:30,079
and looking at the earth

1313
00:48:33,430 --> 00:48:32,240

and it was a quiet

1314

00:48:36,630 --> 00:48:33,440

and i was

1315

00:48:38,309 --> 00:48:36,640

very quiet speaking with myself

1316

00:48:40,230 --> 00:48:38,319

i can't believe

1317

00:48:43,190 --> 00:48:40,240

i'm here

1318

00:48:46,309 --> 00:48:43,200

and he it was not his first flight and

1319

00:48:49,109 --> 00:48:46,319

uh he already spent some few months for

1320

00:48:49,829 --> 00:48:49,119

this particular flight start talking

1321

00:48:55,349 --> 00:48:49,839

with

1322

00:48:58,630 --> 00:48:55,359

me uh i can't believe too

1323

00:49:00,390 --> 00:48:58,640

it's so amazing so amazing um view of

1324

00:49:03,030 --> 00:49:00,400

our planet

1325

00:49:06,390 --> 00:49:03,040

uh even if we have very tough schedule

1326

00:49:09,190 --> 00:49:06,400

there for work i decided for relax

1327

00:49:11,910 --> 00:49:09,200

somehow i need uh

1328

00:49:13,990 --> 00:49:11,920

i need somehow to relax and i decided to

1329

00:49:15,109 --> 00:49:14,000

make a

1330

00:49:16,390 --> 00:49:15,119

evening

1331

00:49:18,870 --> 00:49:16,400

walk

1332

00:49:20,390 --> 00:49:18,880

i mean meaning looking the earth

1333

00:49:22,150 --> 00:49:20,400

usually when you take a look at the

1334

00:49:24,870 --> 00:49:22,160

earth and you see you see it's so

1335

00:49:27,510 --> 00:49:24,880

beautiful you try to keep the

1336

00:49:29,349 --> 00:49:27,520

camera trying to make a picture you see

1337

00:49:31,990 --> 00:49:29,359

that picture is not so good as you can

1338

00:49:33,589 --> 00:49:32,000

see by your eyes trying to do something

1339

00:49:35,670 --> 00:49:33,599

with the settings

1340

00:49:37,589 --> 00:49:35,680

and in this proper process you are not

1341

00:49:41,109 --> 00:49:37,599

relaxing you just keep going with the

1342

00:49:45,030 --> 00:49:41,119

work i decided no before i am going to

1343

00:49:46,230 --> 00:49:45,040

to the bed sleeping bag uh i'm i'm just

1344

00:49:48,390 --> 00:49:46,240

relaxing

1345

00:49:50,470 --> 00:49:48,400

and came to the cupola see something

1346

00:49:51,349 --> 00:49:50,480

beautiful and say oh i i need to take a

1347

00:49:55,030 --> 00:49:51,359

picture

1348

00:49:58,870 --> 00:49:56,069

just

1349

00:50:00,950 --> 00:49:58,880

take a look and relax

1350

00:50:02,950 --> 00:50:00,960

and one more thing i could

1351
00:50:06,069 --> 00:50:02,960
accept the view

1352
00:50:11,829 --> 00:50:09,910
once i was asking to make a picture of a

1353
00:50:13,910 --> 00:50:11,839
drop of water

1354
00:50:15,910 --> 00:50:13,920
which should be frozen

1355
00:50:18,790 --> 00:50:15,920
which shape it will be there are a lot

1356
00:50:20,390 --> 00:50:18,800
of physical teachers what do you think

1357
00:50:23,670 --> 00:50:20,400
if water is

1358
00:50:24,790 --> 00:50:23,680
liquid it's everybody knows in 0g it

1359
00:50:26,870 --> 00:50:24,800
will be

1360
00:50:28,710 --> 00:50:26,880
just a sphere

1361
00:50:29,829 --> 00:50:28,720
but if we

1362
00:50:31,829 --> 00:50:29,839
froze it

1363
00:50:36,150 --> 00:50:31,839

what kind of shape it will be what do

1364

00:50:42,790 --> 00:50:38,790

you stumped them

1365

00:50:44,069 --> 00:50:42,800

sorry okay i will answer um

1366

00:50:46,150 --> 00:50:44,079

now your teachers know what it's like

1367

00:50:49,750 --> 00:50:46,160

when you ask the question

1368

00:50:53,670 --> 00:50:51,270

at the beginning i said

1369

00:50:57,589 --> 00:50:53,680

what is the what is in the interest to

1370

00:50:59,030 --> 00:50:57,599

do that of course it will still uh be uh

1371

00:51:01,589 --> 00:50:59,040

sphere

1372

00:51:03,270 --> 00:51:01,599

but when i did this picture it was

1373

00:51:05,030 --> 00:51:03,280

interesting for me to realize it's not

1374

00:51:06,710 --> 00:51:05,040

exactly a

1375

00:51:07,589 --> 00:51:06,720

sphere it has

1376
00:51:08,790 --> 00:51:07,599
some

1377
00:51:10,470 --> 00:51:08,800
surfaces

1378
00:51:13,190 --> 00:51:10,480
it was like

1379
00:51:16,950 --> 00:51:13,200
hectic crystallizes here it was not a

1380
00:51:19,430 --> 00:51:16,960
like a square but still it was not a

1381
00:51:21,109 --> 00:51:19,440
round thing it will have some kind of

1382
00:51:23,430 --> 00:51:21,119
surfaces

1383
00:51:25,750 --> 00:51:23,440
and i i thought it was connected with

1384
00:51:27,109 --> 00:51:25,760
some little pieces of something inside

1385
00:51:29,349 --> 00:51:27,119
water which

1386
00:51:32,230 --> 00:51:29,359
tried to make a crystal

1387
00:51:35,750 --> 00:51:32,240
it was very funny to me to realize that

1388
00:51:37,510 --> 00:51:35,760

and you may ask your student

1389

00:51:41,030 --> 00:51:37,520

how to

1390

00:51:43,190 --> 00:51:41,040

froze this drop of water in space

1391

00:51:44,470 --> 00:51:43,200

because there are a lot of

1392

00:51:47,829 --> 00:51:44,480

flowing

1393

00:51:50,870 --> 00:51:47,839

even if you have some drop of water how

1394

00:51:53,030 --> 00:51:50,880

to fix it in the refrigerator

1395

00:51:57,270 --> 00:51:53,040

it's very nice nice for a task for

1396

00:51:59,990 --> 00:51:58,549

thank you

1397

00:52:02,150 --> 00:52:00,000

all right we have time for one more

1398

00:52:04,069 --> 00:52:02,160

question let's go back to the phone

1399

00:52:06,870 --> 00:52:04,079

bridge mark gotch with historical

1400

00:52:07,829 --> 00:52:06,880

aerospace news media

1401

00:52:09,990 --> 00:52:07,839

yes

1402

00:52:12,309 --> 00:52:10,000

gentlemen again

1403

00:52:14,870 --> 00:52:12,319

i want to say this also mark it's your

1404

00:52:17,190 --> 00:52:14,880

first mission as i understand it up to

1405

00:52:19,510 --> 00:52:17,200

the iss i hope it goes very well for you

1406

00:52:21,510 --> 00:52:19,520

i'm sure you must be very excited and

1407

00:52:24,710 --> 00:52:21,520

also when it comes to the bigelow

1408

00:52:27,829 --> 00:52:24,720

expandable uh uh

1409

00:52:29,510 --> 00:52:27,839

crew transport module

1410

00:52:31,589 --> 00:52:29,520

will you be doing any different

1411

00:52:33,910 --> 00:52:31,599

experiments with it since it's been up

1412

00:52:35,589 --> 00:52:33,920

there it's been fully inflated now will

1413

00:52:37,750 --> 00:52:35,599

you be doing something different with it

1414

00:52:39,349 --> 00:52:37,760

on this mission when all three of you go

1415

00:52:41,030 --> 00:52:39,359

up

1416

00:52:42,870 --> 00:52:41,040

i'm not tracking anything specific do

1417

00:52:45,270 --> 00:52:42,880

you know are you aware no i mean they're

1418

00:52:47,270 --> 00:52:45,280

still looking at the properties of of

1419

00:52:48,390 --> 00:52:47,280

the module and how it's behaving up

1420

00:52:50,870 --> 00:52:48,400

there and

1421

00:52:53,270 --> 00:52:50,880

um looking at how we might use that type

1422

00:52:54,390 --> 00:52:53,280

of technology in the future

1423

00:52:55,829 --> 00:52:54,400

but you know i don't think we have

1424

00:52:59,190 --> 00:52:55,839

anything i haven't had any training on

1425

00:53:02,950 --> 00:53:01,430

all right well we're really excited for

1426

00:53:05,030 --> 00:53:02,960

you guys we're excited to see you up

1427

00:53:06,790 --> 00:53:05,040

there and to track your mission and keep

1428

00:53:09,030 --> 00:53:06,800

up with all the great work that you'll

1429

00:53:10,630 --> 00:53:09,040

be doing and i want to thank you guys

1430

00:53:11,750 --> 00:53:10,640

especially for being with us today and

1431

00:53:13,349 --> 00:53:11,760

sharing your mission and your

1432

00:53:14,710 --> 00:53:13,359

experiences

1433

00:53:16,870 --> 00:53:14,720

and everybody here in the room thank you

1434

00:53:18,390 --> 00:53:16,880

so much for being here and asking your

1435

00:53:20,230 --> 00:53:18,400

wonderful questions

1436

00:53:22,309 --> 00:53:20,240

and just for being part of the crew news

1437

00:53:24,069 --> 00:53:22,319

conference you can follow mark during

1438

00:53:27,750 --> 00:53:24,079

the mission on social media he will be

1439

00:53:29,829 --> 00:53:27,760

tweeting from at astro underscore sabo

1440

00:53:31,109 --> 00:53:29,839

s-a-b-o-t

1441

00:53:32,549 --> 00:53:31,119

and you can also follow the

1442

00:53:34,390 --> 00:53:32,559

international space station updates from

1443

00:53:36,470 --> 00:53:34,400

their mission and updates from things

1444

00:53:38,630 --> 00:53:36,480

that are happening in space every day on

1445

00:53:40,150 --> 00:53:38,640

twitter instagram and facebook and for

1446

00:53:43,430 --> 00:53:40,160

more information on the space station

1447

00:53:47,510 --> 00:53:43,440

you can visit wwe