



1
00:00:07,909 --> 00:00:03,830
station this is mission control are you

2
00:00:07,919 --> 00:00:12,629
ready for the event

3
00:00:18,790 --> 00:00:14,789
hey tom this is jared from 30 seconds to

4
00:00:23,029 --> 00:00:21,349
hey jared region loud and clear great to

5
00:00:24,470 --> 00:00:23,039
hear your voice welcome on board the

6
00:00:27,189 --> 00:00:24,480
space station

7
00:00:32,389 --> 00:00:27,199
thank you so much uh you look happy and

8
00:00:36,069 --> 00:00:34,630
yeah i feel to feel happy and healthy

9
00:00:38,069 --> 00:00:36,079
everybody's taking good care of us up

10
00:00:40,310 --> 00:00:38,079
here just finished a weight workout

11
00:00:42,389 --> 00:00:40,320
actually after a day of uh working on

12
00:00:44,470 --> 00:00:42,399
experiments so it's been a lot of fun

13
00:00:46,150 --> 00:00:44,480

so is it the end of your day right now

14

00:00:49,830 --> 00:00:46,160

the beginning of your day what's it like

15

00:00:55,110 --> 00:00:52,389

so right now it's mid-afternoon uh we're

16

00:00:57,350 --> 00:00:55,120

on greenwich mean time i woke up

17

00:00:58,950 --> 00:00:57,360

started after breakfast started doing a

18

00:01:01,750 --> 00:00:58,960

bunch of experiments in the japanese

19

00:01:03,270 --> 00:01:01,760

module the kibo and actually setting up

20

00:01:05,270 --> 00:01:03,280

a series of experiments that will be

21

00:01:07,590 --> 00:01:05,280

going on over the next couple of weeks

22

00:01:09,590 --> 00:01:07,600

uh had lunch uh continued on with the

23

00:01:11,590 --> 00:01:09,600

work in the laboratory i had a couple of

24

00:01:13,670 --> 00:01:11,600

workouts and here we are in the middle

25

00:01:15,590 --> 00:01:13,680

of the middle of the afternoon now

26

00:01:19,910 --> 00:01:15,600

it's interesting do you have to work out

27

00:01:24,390 --> 00:01:22,149

yeah as a matter of fact you do

28

00:01:26,149 --> 00:01:24,400

you know being in space in zero gravity

29

00:01:26,789 --> 00:01:26,159

where your body doesn't have to work at

30

00:01:28,710 --> 00:01:26,799

all

31

00:01:29,510 --> 00:01:28,720

to stand up to sit down or even to lie

32

00:01:31,670 --> 00:01:29,520

down

33

00:01:34,469 --> 00:01:31,680

me floating in space is more relaxing to

34

00:01:35,350 --> 00:01:34,479

the muscles than even lying in bed uh on

35

00:01:36,550 --> 00:01:35,360

earth

36

00:01:39,590 --> 00:01:36,560

since we don't feel the effects of

37

00:01:41,910 --> 00:01:39,600

gravity so we would we would turn into

38

00:01:43,990 --> 00:01:41,920

jellyfish probably if we we didn't work

39

00:01:45,749 --> 00:01:44,000

out we work out on a treadmill right

40

00:01:48,870 --> 00:01:45,759

here to the side of me is a cycle

41

00:01:51,109 --> 00:01:48,880

ergometer a stationary bike if you will

42

00:01:52,069 --> 00:01:51,119

and we have a great resistive exercise

43

00:01:54,550 --> 00:01:52,079

device

44

00:01:57,590 --> 00:01:54,560

we can lift up to 600 pounds i can't do

45

00:01:58,870 --> 00:01:57,600

that but uh one could and uh so we're

46

00:02:00,069 --> 00:01:58,880

working out the bones and the muscles to

47

00:02:02,149 --> 00:02:00,079

keep them all strong it's pretty

48

00:02:04,709 --> 00:02:02,159

important to be functional when we get

49

00:02:08,550 --> 00:02:04,719

back home so you sleep really well up

50

00:02:11,990 --> 00:02:10,070

oh you know it's probably different for

51
00:02:13,990 --> 00:02:12,000
different people um when i first got

52
00:02:16,470 --> 00:02:14,000
here i was so excited and uh so much

53
00:02:18,470 --> 00:02:16,480
that i wanted to do that um

54
00:02:19,830 --> 00:02:18,480
i did not sleep just great it's kind of

55
00:02:21,430 --> 00:02:19,840
like if you're really busy at work and

56
00:02:23,190 --> 00:02:21,440
you have deadlines or that kind of thing

57
00:02:25,030 --> 00:02:23,200
it's a little bit hard to sleep but as

58
00:02:27,110 --> 00:02:25,040
you progress as your body gets used to

59
00:02:29,270 --> 00:02:27,120
floating as well and not lying against a

60
00:02:31,190 --> 00:02:29,280
bed and your head's not against a pillow

61
00:02:33,270 --> 00:02:31,200
as you get used to that the sleep

62
00:02:36,309 --> 00:02:33,280
becomes just wonderful

63
00:02:37,830 --> 00:02:36,319

that's amazing and uh what about uh what

64

00:02:39,509 --> 00:02:37,840

about eating how often do you have to

65

00:02:43,910 --> 00:02:39,519

eat you have to eat extra calories while

66

00:02:48,150 --> 00:02:45,509

you know we we listen to our bodies and

67

00:02:50,150 --> 00:02:48,160

eat when we're hungry the uh we're told

68

00:02:51,750 --> 00:02:50,160

that we can lose weight if we don't work

69

00:02:53,270 --> 00:02:51,760

at it there's something about we don't

70

00:02:54,869 --> 00:02:53,280

quite understand it but something about

71

00:02:56,630 --> 00:02:54,879

living in zero gravity even though we

72

00:02:58,390 --> 00:02:56,640

are floating a lot of the time maybe

73

00:03:00,390 --> 00:02:58,400

it's all the workouts we do

74

00:03:02,070 --> 00:03:00,400

but we need more calories than we think

75

00:03:03,990 --> 00:03:02,080

we do and so we eat a good bit we have

76

00:03:05,110 --> 00:03:04,000

this pantry that's just stocked full of

77

00:03:06,949 --> 00:03:05,120

stuff

78

00:03:08,630 --> 00:03:06,959

we can eat whenever we have time and

79

00:03:09,509 --> 00:03:08,640

there is time set aside for each meal of

80

00:03:11,830 --> 00:03:09,519

the day

81

00:03:14,309 --> 00:03:11,840

so we work it in the food's great

82

00:03:16,790 --> 00:03:14,319

what about dreams what are your dreams

83

00:03:21,030 --> 00:03:16,800

like up there are they vivid uh are they

84

00:03:24,470 --> 00:03:22,390

you know i've talked to a lot of

85

00:03:27,270 --> 00:03:24,480

astronauts about that and

86

00:03:29,030 --> 00:03:27,280

my dreams have not changed but i

87

00:03:31,270 --> 00:03:29,040

understand a lot of astronauts have

88

00:03:33,670 --> 00:03:31,280

floating dreams that's typically the the

89

00:03:35,190 --> 00:03:33,680

most common kind that are different

90

00:03:37,110 --> 00:03:35,200

well i take that back i did have one

91

00:03:38,710 --> 00:03:37,120

floating dream i was outside of the

92

00:03:40,390 --> 00:03:38,720

space station

93

00:03:42,149 --> 00:03:40,400

not in a spacesuit floating around the

94

00:03:44,390 --> 00:03:42,159

outside and looking at it

95

00:03:46,070 --> 00:03:44,400

that was as a little bit

96

00:03:48,630 --> 00:03:46,080

exciting a little overly exciting at the

97

00:03:50,710 --> 00:03:48,640

time but uh when i had the dream but uh

98

00:03:56,470 --> 00:03:50,720

it was a lot of fun actually too

99

00:03:59,910 --> 00:03:58,229

you know it it actually does so you're

100

00:04:01,190 --> 00:03:59,920

looking at this module here and we're

101
00:04:03,429 --> 00:04:01,200
surrounded by

102
00:04:04,949 --> 00:04:03,439
outer space just on the on the sides

103
00:04:07,509 --> 00:04:04,959
here in the top and the bottom

104
00:04:09,030 --> 00:04:07,519
surrounded by outer space all around and

105
00:04:10,869 --> 00:04:09,040
you'd think it'd be kind of confining

106
00:04:14,149 --> 00:04:10,879
but the the space station is about the

107
00:04:15,910 --> 00:04:14,159
size of a five-bedroom house and you can

108
00:04:17,990 --> 00:04:15,920
you don't have to stand on the floor i

109
00:04:19,749 --> 00:04:18,000
can use the the wall as a floor i can be

110
00:04:21,749 --> 00:04:19,759
up on the ceiling so you actually have

111
00:04:23,510 --> 00:04:21,759
more space than you think you do

112
00:04:24,550 --> 00:04:23,520
it's easy to move around we can float by

113
00:04:26,629 --> 00:04:24,560

each other

114

00:04:28,469 --> 00:04:26,639

sometimes we move these racks up we

115

00:04:29,430 --> 00:04:28,479

obstruct the area completely but we can

116

00:04:30,550 --> 00:04:29,440

still

117

00:04:32,629 --> 00:04:30,560

easily

118

00:04:34,790 --> 00:04:32,639

float on by so actually it feels quite

119

00:04:36,710 --> 00:04:34,800

spacious and we don't feel i don't feel

120

00:04:39,510 --> 00:04:36,720

confined at all

121

00:04:44,390 --> 00:04:39,520

wow that's amazing do you ever listen to

122

00:04:48,950 --> 00:04:47,350

i do uh during workouts is the most

123

00:04:50,150 --> 00:04:48,960

common time i think when people listen

124

00:04:51,270 --> 00:04:50,160

to music

125

00:04:52,950 --> 00:04:51,280

sometimes

126
00:04:54,550 --> 00:04:52,960
not me but others might listen to music

127
00:04:57,030 --> 00:04:54,560
while they're working on their laptop

128
00:04:58,790 --> 00:04:57,040
something like that so

129
00:05:01,110 --> 00:04:58,800
music's very much a part of our lives up

130
00:05:03,510 --> 00:05:01,120
here chris hadfield is a musician

131
00:05:06,070 --> 00:05:03,520
himself a performer and so he's been

132
00:05:07,670 --> 00:05:06,080
playing and recording some music up here

133
00:05:09,510 --> 00:05:07,680
but

134
00:05:11,189 --> 00:05:09,520
quite a few astronauts actually play

135
00:05:12,550 --> 00:05:11,199
instruments i play a little classical

136
00:05:14,550 --> 00:05:12,560
guitar myself

137
00:05:17,029 --> 00:05:14,560
but uh listening to music helps us get

138
00:05:18,469 --> 00:05:17,039

through the workouts and uh for some

139

00:05:19,510 --> 00:05:18,479

people might help them relax at night as

140

00:05:21,670 --> 00:05:19,520

well

141

00:05:23,510 --> 00:05:21,680

got it did you uh

142

00:05:26,150 --> 00:05:23,520

did you get the cd

143

00:05:27,110 --> 00:05:26,160

from a little band called 30 seconds to

144

00:05:28,790 --> 00:05:27,120

mars

145

00:05:31,350 --> 00:05:28,800

this song called up in here did you get

146

00:05:34,950 --> 00:05:31,360

that did it make it up there

147

00:05:34,960 --> 00:05:38,629

do you mean this cd

148

00:05:43,670 --> 00:05:40,550

uh it's now doing something it could

149

00:05:49,830 --> 00:05:45,830

that's incredible

150

00:05:51,510 --> 00:05:49,840

that's amazing the cd is flying up here

151

00:05:53,749 --> 00:05:51,520

very very cool that's well that's a

152

00:05:55,350 --> 00:05:53,759

that's a that's a moment of uh uh that

153

00:05:57,350 --> 00:05:55,360

we'll never forget right there thank you

154

00:05:59,029 --> 00:05:57,360

so much for spinning that around we've

155

00:06:02,309 --> 00:05:59,039

been wondering uh

156

00:06:03,510 --> 00:06:02,319

and thinking about that

157

00:06:05,430 --> 00:06:03,520

a lot

158

00:06:07,510 --> 00:06:05,440

that's great

159

00:06:09,350 --> 00:06:07,520

it's wonderful

160

00:06:14,150 --> 00:06:09,360

we found it surprising that you go yeah

161

00:06:19,590 --> 00:06:16,790

oh yeah we have uh we have that we have

162

00:06:21,670 --> 00:06:19,600

uh other devices you know just uh

163

00:06:23,830 --> 00:06:21,680

can listen to wave files that sort of

164

00:06:25,189 --> 00:06:23,840

thing but having a cd around is is very

165

00:06:26,870 --> 00:06:25,199

nice as well

166

00:06:28,390 --> 00:06:26,880

i actually wrote a little note to you

167

00:06:30,469 --> 00:06:28,400

guys i hope that you got it it was in

168

00:06:34,469 --> 00:06:30,479

the cd uh

169

00:06:39,830 --> 00:06:37,510

sure did dred uh it was very nice really

170

00:06:41,350 --> 00:06:39,840

appreciate it uh we pulled it out and

171

00:06:43,510 --> 00:06:41,360

read it after kevin had left he didn't

172

00:06:45,270 --> 00:06:43,520

have a chance to see it uh but chris

173

00:06:48,070 --> 00:06:45,280

hadfield had a chance to read it and

174

00:06:49,510 --> 00:06:48,080

roman romanenko our russian colleague

175

00:06:50,710 --> 00:06:49,520

and when three more come up we'll have a

176

00:06:53,430 --> 00:06:50,720

chance to read it as well but it was

177

00:06:56,710 --> 00:06:53,440

very nice thank you well uh you know on

178

00:06:58,790 --> 00:06:56,720

behalf of me jared shannon and tomo from

179

00:07:02,230 --> 00:06:58,800

30 seconds to mars we're really

180

00:07:05,990 --> 00:07:02,240

so proud to uh have shared this with you

181

00:07:07,430 --> 00:07:06,000

guys uh here at nasa you you you teach

182

00:07:10,150 --> 00:07:07,440

us time and time again that the

183

00:07:12,629 --> 00:07:10,160

impossible is indeed impossible and and

184

00:07:15,510 --> 00:07:12,639

keep pushing on the limits of uh

185

00:07:17,670 --> 00:07:15,520

of uh of technology

186

00:07:19,510 --> 00:07:17,680

and uh it's just such an amazing and

187

00:07:20,790 --> 00:07:19,520

inspiring thing that you're all doing

188

00:07:23,270 --> 00:07:20,800

i'd love to ask you a couple of

189

00:07:28,150 --> 00:07:23,280

questions uh that we gathered from fans

190

00:07:33,830 --> 00:07:31,189

oh please that'd be great um what this

191

00:07:35,189 --> 00:07:33,840

is from at mars mummy uh that's the

192

00:07:41,350 --> 00:07:35,199

twitter handle what's your most

193

00:07:46,309 --> 00:07:44,070

that is really hard to say but i there's

194

00:07:47,670 --> 00:07:46,319

two that i think you know in you know 20

195

00:07:48,790 --> 00:07:47,680

years from now that i'll still be

196

00:07:51,909 --> 00:07:48,800

thinking about

197

00:07:53,189 --> 00:07:51,919

uh one was my last few seconds on my

198

00:07:54,869 --> 00:07:53,199

spacewalk

199

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

that i did when i was on the on a

200

00:07:59,189 --> 00:07:57,039

shuttle flight up here on a construction

201
00:08:00,950 --> 00:07:59,199
mission and it was my last few seconds

202
00:08:03,029 --> 00:08:00,960
on my last spacewalk and just looking

203
00:08:04,150 --> 00:08:03,039
down between my feet down at the earth

204
00:08:06,230 --> 00:08:04,160
and i believe i was looking at the

205
00:08:07,990 --> 00:08:06,240
kamchatka peninsula on the eastern coast

206
00:08:10,550 --> 00:08:08,000
of russia and looking at the mountains

207
00:08:12,390 --> 00:08:10,560
in the alpenglow and that was a

208
00:08:14,550 --> 00:08:12,400
spectacularly beautiful moment but a

209
00:08:15,909 --> 00:08:14,560
poignant one for me because i i didn't

210
00:08:17,430 --> 00:08:15,919
know if that would be the last spacewalk

211
00:08:20,150 --> 00:08:17,440
i'd ever do and as it turns out it

212
00:08:21,990 --> 00:08:20,160
probably was the other moment most of us

213
00:08:23,510 --> 00:08:22,000

share our best moments with a colleague

214

00:08:24,790 --> 00:08:23,520

and another moment was looking out the

215

00:08:26,550 --> 00:08:24,800

window

216

00:08:29,589 --> 00:08:26,560

looking at the east coast with a storm

217

00:08:31,189 --> 00:08:29,599

again at sunset there was uh lightning

218

00:08:33,589 --> 00:08:31,199

in the storm you could see greens and

219

00:08:35,509 --> 00:08:33,599

blues and yellows and oranges uh in the

220

00:08:37,190 --> 00:08:35,519

lightning but the lightning was buried

221

00:08:40,070 --> 00:08:37,200

in the clouds so it's just these tufts

222

00:08:42,949 --> 00:08:40,080

of of light scattered all around uh and

223

00:08:44,630 --> 00:08:42,959

it was just uh breathtaking i really

224

00:08:45,990 --> 00:08:44,640

felt at that moment almost like an alien

225

00:08:48,150 --> 00:08:46,000

looking down at earth seeing something

226

00:08:49,590 --> 00:08:48,160

that otherwise you just couldn't see so

227

00:08:51,110 --> 00:08:49,600

i'll certainly never forget that

228

00:08:53,269 --> 00:08:51,120

particularly because i was able to share

229

00:08:54,870 --> 00:08:53,279

it with one of my crewmates

230

00:08:57,110 --> 00:08:54,880

that sounds beautiful

231

00:08:59,350 --> 00:08:57,120

uh at elena

232

00:09:01,269 --> 00:08:59,360

underscored d cast says

233

00:09:07,430 --> 00:09:01,279

if you could choose to live either in

234

00:09:10,630 --> 00:09:08,870

you know i spent my whole life being

235

00:09:12,710 --> 00:09:10,640

curious about space

236

00:09:14,310 --> 00:09:12,720

and uh i'm i'm very lucky very

237

00:09:16,070 --> 00:09:14,320

privileged to have that curiosity

238

00:09:17,190 --> 00:09:16,080

satisfied there's always more to learn

239

00:09:19,590 --> 00:09:17,200

but

240

00:09:20,389 --> 00:09:19,600

uh as wonderful as it is as it is up

241

00:09:22,230 --> 00:09:20,399

here

242

00:09:23,829 --> 00:09:22,240

we all kind of agree we look back at the

243

00:09:25,030 --> 00:09:23,839

earth and we fall back in love with the

244

00:09:28,070 --> 00:09:25,040

earth again

245

00:09:29,990 --> 00:09:28,080

um and uh so yeah my my place is uh

246

00:09:31,990 --> 00:09:30,000

feeling the feeling the pool of gravity

247

00:09:33,990 --> 00:09:32,000

my feet on the ground uh not only

248

00:09:35,509 --> 00:09:34,000

because my family is is there my friends

249

00:09:36,949 --> 00:09:35,519

are there but you know that's where we

250

00:09:39,990 --> 00:09:36,959

came from and that's kind of where our

251
00:09:42,550 --> 00:09:40,000
bodies are are tuned to belong in a lot

252
00:09:44,150 --> 00:09:42,560
of ways uh it'll be a very exciting

253
00:09:45,509 --> 00:09:44,160
thing when people are able to leave the

254
00:09:47,190 --> 00:09:45,519
earth and go somewhere but i think we'll

255
00:09:49,829 --> 00:09:47,200
always long for the earth and look back

256
00:09:51,829 --> 00:09:49,839
at it with uh with wonderful memories

257
00:09:53,110 --> 00:09:51,839
and uh

258
00:09:55,670 --> 00:09:53,120
certainly the earth has taken very good

259
00:10:00,310 --> 00:09:55,680
care of us and getting us this far

260
00:10:05,190 --> 00:10:00,320
uh here's another uh question uh

261
00:10:06,790 --> 00:10:05,200
does the time this is by uh uh

262
00:10:08,470 --> 00:10:06,800
art system

263
00:10:10,470 --> 00:10:08,480

um

264

00:10:12,310 --> 00:10:10,480

happy you're in the iss is a long time

265

00:10:17,590 --> 00:10:12,320

how does the time go by for you is it is

266

00:10:21,750 --> 00:10:19,430

it's amazing jared

267

00:10:24,069 --> 00:10:21,760

the uh we have a saying up here that the

268

00:10:25,829 --> 00:10:24,079

the work week consists of a monday and a

269

00:10:27,829 --> 00:10:25,839

friday with only just a couple of hours

270

00:10:29,269 --> 00:10:27,839

in between it goes by so fast you

271

00:10:31,509 --> 00:10:29,279

wouldn't believe it

272

00:10:33,430 --> 00:10:31,519

mostly because every moment is

273

00:10:34,949 --> 00:10:33,440

interesting and exciting just you know

274

00:10:36,630 --> 00:10:34,959

it's it's exciting to talk to you it's

275

00:10:37,590 --> 00:10:36,640

exciting to float this microphone in

276

00:10:39,670 --> 00:10:37,600

front of me

277

00:10:42,470 --> 00:10:39,680

uh nothing ever gets old but mostly

278

00:10:44,630 --> 00:10:42,480

because we have meaningful uh very

279

00:10:46,389 --> 00:10:44,640

intense work to do in these in all of

280

00:10:48,310 --> 00:10:46,399

these laboratories and we're seeing

281

00:10:49,910 --> 00:10:48,320

amazing results every day we we don't

282

00:10:51,269 --> 00:10:49,920

understand them all but we relate them

283

00:10:53,030 --> 00:10:51,279

to the scientists on the ground who are

284

00:10:55,750 --> 00:10:53,040

figuring out what it all means

285

00:10:57,670 --> 00:10:55,760

um and it's just uh it's a whirlwind of

286

00:10:59,670 --> 00:10:57,680

activity that is intensely exciting and

287

00:11:00,389 --> 00:10:59,680

of course time just flies by when that

288

00:11:02,069 --> 00:11:00,399

happens

289

00:11:03,910 --> 00:11:02,079

what's one thing that you'd love to see

290

00:11:11,269 --> 00:11:03,920

happen in space that hasn't happened in

291

00:11:17,269 --> 00:11:14,550

if you mean as a nation of would love to

292

00:11:19,269 --> 00:11:17,279

get back outside of low earth orbit uh

293

00:11:21,670 --> 00:11:19,279

as low earth orbit is an important place

294

00:11:23,509 --> 00:11:21,680

to be to learn how to how to do space

295

00:11:25,670 --> 00:11:23,519

flight so you can we can mature as a

296

00:11:27,430 --> 00:11:25,680

space faring nation but

297

00:11:29,910 --> 00:11:27,440

regardless of the destination whether

298

00:11:32,230 --> 00:11:29,920

it's mars an asteroid or the moon

299

00:11:34,550 --> 00:11:32,240

i think everybody's looking forward to

300

00:11:37,110 --> 00:11:34,560

to uh getting back beyond that and

301
00:11:38,870 --> 00:11:37,120
seeing those photos and hearing

302
00:11:42,230 --> 00:11:38,880
the voice of the person that looks back

303
00:11:43,590 --> 00:11:42,240
and sees the earth as a sphere as a ball

304
00:11:45,670 --> 00:11:43,600
again

305
00:11:51,030 --> 00:11:45,680
that's an incredibly meaningful moment

306
00:11:55,269 --> 00:11:53,750
have you seen anything unexpected or

307
00:11:56,710 --> 00:11:55,279
strange

308
00:11:59,430 --> 00:11:56,720
out there what's the weirdest thing

309
00:12:03,430 --> 00:11:59,440
that's ever you've ever seen up there

310
00:12:07,430 --> 00:12:05,430
oh yeah yeah no there's there's the

311
00:12:09,829 --> 00:12:07,440
outside the window strange things in the

312
00:12:11,990 --> 00:12:09,839
ins and inside the cabin

313
00:12:14,949 --> 00:12:12,000

the aurora australis and the rory

314

00:12:16,629 --> 00:12:14,959

borealis are the two things that

315

00:12:18,230 --> 00:12:16,639

that really takes your breath away the

316

00:12:21,350 --> 00:12:18,240

first time you see it it looks very

317

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

alien uh just curtains of of this subtle

318

00:12:25,430 --> 00:12:23,600

faint green glow that that dance and

319

00:12:27,829 --> 00:12:25,440

move around as you

320

00:12:29,590 --> 00:12:27,839

come close to the poles in your orbit

321

00:12:31,990 --> 00:12:29,600

i saw a shooting star

322

00:12:33,110 --> 00:12:32,000

my first one actually and that was uh

323

00:12:34,550 --> 00:12:33,120

under me

324

00:12:36,069 --> 00:12:34,560

it's between you and the earth that you

325

00:12:37,110 --> 00:12:36,079

see it happen go through the atmosphere

326

00:12:38,870 --> 00:12:37,120

and usually you don't see anything

327

00:12:41,190 --> 00:12:38,880

moving except the slow motion of the

328

00:12:42,310 --> 00:12:41,200

earth going by so that that's striking

329

00:12:44,629 --> 00:12:42,320

to see that

330

00:12:46,389 --> 00:12:44,639

i think uh one of the strangest things

331

00:12:48,629 --> 00:12:46,399

it's a perception issue when you get up

332

00:12:51,190 --> 00:12:48,639

here uh your eyes aren't used to seeing

333

00:12:52,710 --> 00:12:51,200

the movements that you see here and when

334

00:12:54,790 --> 00:12:52,720

i first got up here a colleague a

335

00:12:57,430 --> 00:12:54,800

crewmate went flying by me and for a

336

00:12:59,590 --> 00:12:57,440

split second my brain said that's got to

337

00:13:01,350 --> 00:12:59,600

be a cat it's got to be a panther this

338

00:13:03,110 --> 00:13:01,360

big thing is just sliding by you like

339

00:13:05,110 --> 00:13:03,120

that and of course you see it you know

340

00:13:06,470 --> 00:13:05,120

what it is right away but the perception

341

00:13:07,910 --> 00:13:06,480

for a split second kind of makes your

342

00:13:10,470 --> 00:13:07,920

heart jump and you go what was that and

343

00:13:11,750 --> 00:13:10,480

you go oh it's just my crewmate

344

00:13:13,430 --> 00:13:11,760

so your perception gives you a lot of

345

00:13:15,110 --> 00:13:13,440

strange alien feelings when you're

346

00:13:17,990 --> 00:13:15,120

inside the cabin as well

347

00:13:18,710 --> 00:13:18,000

wow if so is there an up and down for

348

00:13:25,110 --> 00:13:18,720

you

349

00:13:26,470 --> 00:13:25,120

familiar with the equipment and the

350

00:13:31,110 --> 00:13:26,480

inside of the

351

00:13:34,069 --> 00:13:32,389

there are parts of the space station

352

00:13:35,590 --> 00:13:34,079

where there is no up and down you it's

353

00:13:38,069 --> 00:13:35,600

kind of like you're a hamster inside of

354

00:13:39,189 --> 00:13:38,079

a little tunnel but places like this you

355

00:13:41,350 --> 00:13:39,199

know it might look to you like there

356

00:13:42,710 --> 00:13:41,360

isn't up and down but i've got a the

357

00:13:45,910 --> 00:13:42,720

galley right behind me that's on the

358

00:13:47,910 --> 00:13:45,920

ceiling and the longer you spend up here

359

00:13:49,829 --> 00:13:47,920

the less you care

360

00:13:52,069 --> 00:13:49,839

what the name of the surface is they're

361

00:13:54,230 --> 00:13:52,079

all the same my feet might be on what we

362

00:13:55,829 --> 00:13:54,240

call the deck right now but it could be

363

00:13:57,829 --> 00:13:55,839

a ceiling it could be a

364

00:13:59,750 --> 00:13:57,839

wall it could be anything

365

00:14:01,350 --> 00:13:59,760

really and as you adapt you get used to

366

00:14:04,150 --> 00:14:01,360

that and you can just spin around and

367

00:14:15,990 --> 00:14:04,160

and orient yourself very easily so it's

368

00:14:19,189 --> 00:14:17,829

actually i'm not upside down the camera

369

00:14:21,350 --> 00:14:19,199

is upside down now the camera is

370

00:14:22,629 --> 00:14:21,360

attached to the ceiling okay all right

371

00:14:24,230 --> 00:14:22,639

i'm on the floor

372

00:14:26,389 --> 00:14:24,240

so as you get adapted you find that out

373

00:14:28,629 --> 00:14:26,399

right away

374

00:14:30,870 --> 00:14:28,639

uh there's a question have you ever

375

00:14:38,870 --> 00:14:30,880

danced in space and will you show us

376

00:14:44,790 --> 00:14:41,670

okay the answer to the first one is no i

377

00:14:46,389 --> 00:14:44,800

have not danced in space and therefore i

378

00:14:47,829 --> 00:14:46,399

can't show you any dance that i would do

379

00:14:49,189 --> 00:14:47,839

but there are certain things you can do

380

00:14:49,990 --> 00:14:49,199

in space

381

00:14:52,949 --> 00:14:50,000

that

382

00:14:54,470 --> 00:14:52,959

dancers cannot do on the ground

383

00:14:55,750 --> 00:14:54,480

it's not fair because i don't have to

384

00:15:06,949 --> 00:14:55,760

deal with gravity but it's something

385

00:15:11,030 --> 00:15:09,110

and being scientists we

386

00:15:13,670 --> 00:15:11,040

we love the demonstrations of angular

387

00:15:15,990 --> 00:15:13,680

momentum as well so

388

00:15:17,030 --> 00:15:16,000

that's always fun to do that's great

389

00:15:19,430 --> 00:15:17,040

wonderful

390

00:15:21,990 --> 00:15:19,440

uh do you often hit your head in

391

00:15:26,230 --> 00:15:22,000

space that's a question from uh

392

00:15:30,310 --> 00:15:27,990

that is a great question and the answer

393

00:15:32,230 --> 00:15:30,320

is yes unfortunately especially when you

394

00:15:34,550 --> 00:15:32,240

first get here and then it's probably

395

00:15:36,470 --> 00:15:34,560

like a skier or a toddler learning to

396

00:15:37,829 --> 00:15:36,480

walk uh the more confidence you get the

397

00:15:40,150 --> 00:15:37,839

faster you go and then you have to learn

398

00:15:41,670 --> 00:15:40,160

your lessons all over again

399

00:15:43,590 --> 00:15:41,680

so i don't i don't whack my head on

400

00:15:45,189 --> 00:15:43,600

hatches anymore but

401
00:15:46,629 --> 00:15:45,199
you know you get busy you lift your head

402
00:15:49,030 --> 00:15:46,639
up and you might hit a laptop you see

403
00:15:50,790 --> 00:15:49,040
things all around us so yeah your head

404
00:15:52,470 --> 00:15:50,800
gets used to getting bumped quite a bit

405
00:15:55,030 --> 00:15:52,480
and the the more experience you get the

406
00:15:57,829 --> 00:15:55,040
more you learn to look behind you before

407
00:15:59,829 --> 00:15:57,839
you start to move around too much

408
00:16:01,749 --> 00:15:59,839
um

409
00:16:03,430 --> 00:16:01,759
we have one minute left so just a couple

410
00:16:05,590 --> 00:16:03,440
more quick questions

411
00:16:07,269 --> 00:16:05,600
being up in space does it make you think

412
00:16:08,710 --> 00:16:07,279
about

413
00:16:12,949 --> 00:16:08,720

humanity

414

00:16:17,350 --> 00:16:15,509

absolutely because the world is so

415

00:16:19,110 --> 00:16:17,360

beautiful from what we see but we don't

416

00:16:21,430 --> 00:16:19,120

see

417

00:16:23,509 --> 00:16:21,440

the activity of the humans down there we

418

00:16:25,749 --> 00:16:23,519

read about it and

419

00:16:27,990 --> 00:16:25,759

it's all astronauts say this you see the

420

00:16:28,870 --> 00:16:28,000

earth there's no borders

421

00:16:31,030 --> 00:16:28,880

there

422

00:16:33,030 --> 00:16:31,040

the atmosphere is only just about an

423

00:16:34,870 --> 00:16:33,040

inch thick if you hold your hand out and

424

00:16:37,189 --> 00:16:34,880

do your fingers like that so it's the

425

00:16:39,269 --> 00:16:37,199

earth is an incredibly fragile precious

426

00:16:41,509 --> 00:16:39,279

place where the humans live

427

00:16:43,430 --> 00:16:41,519

and uh so it's it

428

00:16:46,710 --> 00:16:43,440

gives you a lot of love for not only the

429

00:16:49,430 --> 00:16:46,720

planet but for the humans on it and uh

430

00:16:51,350 --> 00:16:49,440

you wish sometimes i wish we could

431

00:16:53,670 --> 00:16:51,360

behave better sometimes down there but

432

00:16:55,189 --> 00:16:53,680

ultimately it gives you a lot of

433

00:16:56,949 --> 00:16:55,199

a thrill and a lot of confidence in the

434

00:16:59,189 --> 00:16:56,959

future of the human race

435

00:17:01,430 --> 00:16:59,199

well our band is called 30 seconds to

436

00:17:07,990 --> 00:17:01,440

mars and someone wants to know if we'll

437

00:17:12,230 --> 00:17:10,390

oh i think it's there's no question at

438

00:17:13,669 --> 00:17:12,240

all the question is when

439

00:17:15,270 --> 00:17:13,679

mars is

440

00:17:17,510 --> 00:17:15,280

kind of a sister or a brother to the

441

00:17:18,390 --> 00:17:17,520

planet earth along with venus a lot to

442

00:17:20,470 --> 00:17:18,400

learn there

443

00:17:22,710 --> 00:17:20,480

and that seems to be a logical place for

444

00:17:24,549 --> 00:17:22,720

humans to go someday so i think there's

445

00:17:26,150 --> 00:17:24,559

no question we will be

446

00:17:27,990 --> 00:17:26,160

well maybe you can make a dream come

447

00:17:30,390 --> 00:17:28,000

true and just say our band name from

448

00:17:34,230 --> 00:17:30,400

space one time so we can have it blasted

449

00:17:38,470 --> 00:17:37,029

well jared and shannon natomo of 30

450

00:17:41,029 --> 00:17:38,480

seconds tomorrow's great talking to you

451
00:17:43,270 --> 00:17:41,039
today welcome on board the space station

452
00:17:45,110 --> 00:17:43,280
and uh really enjoyed having a few

453
00:17:46,710 --> 00:17:45,120
moments with you thank you

454
00:17:48,950 --> 00:17:46,720
you've made a dream come true all you

455
00:17:51,029 --> 00:17:48,960
guys here so nasa thank you

456
00:17:56,470 --> 00:17:51,039
we love you guys we'll see you see you

457
00:17:56,480 --> 00:18:00,789
we'll see you next time thanks very much

458
00:18:05,750 --> 00:18:03,590
we're all waving to you and and smiling

459
00:18:08,789 --> 00:18:05,760
uh uh ear to ear this has been a

460
00:18:14,230 --> 00:18:08,799
pleasure uh and uh we'll see you another

461
00:18:18,230 --> 00:18:15,830
thank you very much yeah you all travel

462
00:18:20,070 --> 00:18:18,240
safely too

463
00:18:21,590 --> 00:18:20,080

spacious is a mission control houston