



1
00:00:06,070 --> 00:00:03,270
station this is time.com how do you hear

2
00:00:06,080 --> 00:00:09,750
we have you loud and clear

3
00:00:15,030 --> 00:00:12,789
well thank you for being with us today

4
00:00:17,830 --> 00:00:15,040
and i wanted to just jump right in and

5
00:00:19,830 --> 00:00:17,840
ask you what time did you guys punch in

6
00:00:24,390 --> 00:00:19,840
for work this morning and what does the

7
00:00:29,750 --> 00:00:27,109
we started about 7 30 this morning and

8
00:00:31,589 --> 00:00:29,760
the rest of the day is various things

9
00:00:33,110 --> 00:00:31,599
you have science science i have some

10
00:00:34,709 --> 00:00:33,120
repairs to do

11
00:00:36,310 --> 00:00:34,719
what do you got today alex

12
00:00:37,590 --> 00:00:36,320
i had several science experiments

13
00:00:39,830 --> 00:00:37,600

already today

14

00:00:43,350 --> 00:00:39,840

and i think for the rest of the day we

15

00:00:45,750 --> 00:00:43,360

have a training event for the new cargo

16

00:00:47,190 --> 00:00:45,760

vehicle that we expect orbital that's

17

00:00:48,790 --> 00:00:47,200

coming in the next two weeks so we're

18

00:00:51,830 --> 00:00:48,800

going to actually use the station

19

00:00:53,670 --> 00:00:51,840

manipulator to do some practice grapple

20

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

with it and then in the evening i think

21

00:00:57,590 --> 00:00:55,199

i have a little bit more science

22

00:00:58,709 --> 00:00:57,600

experience so it's a quite a

23

00:01:02,549 --> 00:00:58,719

various

24

00:01:07,590 --> 00:01:02,559

well very day it's it's pretty nice

25

00:01:12,630 --> 00:01:09,270

yeah when you include the working out we

26

00:01:14,710 --> 00:01:12,640

have to do it's about a 12-hour day

27

00:01:16,870 --> 00:01:14,720

and reid this one's for you you've been

28

00:01:18,870 --> 00:01:16,880

a big presence on twitter and social

29

00:01:21,270 --> 00:01:18,880

media something in the astronauts of the

30

00:01:23,350 --> 00:01:21,280

apollo era never had to think about so

31

00:01:27,910 --> 00:01:23,360

how do you see the astronauts job

32

00:01:31,109 --> 00:01:29,429

well i think the astronauts have always

33

00:01:32,789 --> 00:01:31,119

wanted to share their journey with as

34

00:01:34,789 --> 00:01:32,799

many people as possible and i think

35

00:01:36,550 --> 00:01:34,799

apollo with the tools they had they did

36

00:01:38,230 --> 00:01:36,560

a phenomenal job

37

00:01:40,469 --> 00:01:38,240

we're just lucky to live in this day

38

00:01:42,870 --> 00:01:40,479

where you know i take a photograph with

39

00:01:44,469 --> 00:01:42,880

the uh with the camera and uh we just

40

00:01:46,389 --> 00:01:44,479

come back and we can email it straight

41

00:01:47,109 --> 00:01:46,399

into our twitter feeds and it just does

42

00:02:14,390 --> 00:01:47,119

a

43

00:02:16,630 --> 00:02:14,400

job of helping us keep in touch with our

44

00:02:19,830 --> 00:02:16,640

family so once a week we actually get to

45

00:02:21,510 --> 00:02:19,840

do a fairly short video conference so

46

00:02:23,510 --> 00:02:21,520

i've been talking to my wife and kids i

47

00:02:25,670 --> 00:02:23,520

even had one with my mom and dad so

48

00:02:27,670 --> 00:02:25,680

that's really been fantastic and that

49

00:02:29,990 --> 00:02:27,680

kind of support is really special for us

50

00:02:32,150 --> 00:02:30,000

up here and really really increases the

51
00:02:33,910 --> 00:02:32,160
morale on the weekends

52
00:02:39,030 --> 00:02:33,920
and are you able to email back and forth

53
00:02:42,710 --> 00:02:41,430
no we have the chance of emailing pretty

54
00:02:44,229 --> 00:02:42,720
much the whole day

55
00:02:47,190 --> 00:02:44,239
once in a while if we have two minutes

56
00:02:49,110 --> 00:02:47,200
between two experiments we can go to our

57
00:02:52,070 --> 00:02:49,120
computer stations and then just send an

58
00:02:54,470 --> 00:02:52,080
email and receive so uh actually i feel

59
00:02:56,309 --> 00:02:54,480
more in touch with my family right now

60
00:02:58,070 --> 00:02:56,319
than i did during most of the training

61
00:03:00,630 --> 00:02:58,080
because my family lives in europe and

62
00:03:03,030 --> 00:03:00,640
the the time difference from houston is

63
00:03:04,790 --> 00:03:03,040

actually uh quite uncomfortable to have

64

00:03:07,030 --> 00:03:04,800

a telephone conversation because it's

65

00:03:09,990 --> 00:03:07,040

either deep early in the morning for one

66

00:03:13,190 --> 00:03:10,000

party so up here for me it's easier and

67

00:03:15,670 --> 00:03:13,200

that's remarkable i think

68

00:03:18,710 --> 00:03:15,680

this one's for alex congratulations on

69

00:03:20,550 --> 00:03:18,720

yesterday's world cup score and how well

70

00:03:25,509 --> 00:03:20,560

have you been able to follow germany's

71

00:03:29,670 --> 00:03:27,990

we were actually pretty lucky that most

72

00:03:32,070 --> 00:03:29,680

of the games happened during the evening

73

00:03:34,630 --> 00:03:32,080

hours that we had here so after our work

74

00:03:36,630 --> 00:03:34,640

was done we got uh some live feed

75

00:03:38,229 --> 00:03:36,640

actually from mission control in houston

76

00:03:39,670 --> 00:03:38,239

so that's never guaranteed and it only

77

00:03:41,750 --> 00:03:39,680

works when we had some bandwidth left

78

00:03:44,149 --> 00:03:41,760

but we were pretty lucky so most of the

79

00:03:46,630 --> 00:03:44,159

games of the us and germany we we saw

80

00:03:47,910 --> 00:03:46,640

live and that was of course a good treat

81

00:03:50,309 --> 00:03:47,920

for us

82

00:03:52,550 --> 00:03:50,319

and there were a lot of wows yesterday

83

00:03:55,350 --> 00:03:52,560

as you imagine

84

00:03:57,270 --> 00:03:55,360

i would imagine down on earth too

85

00:03:59,509 --> 00:03:57,280

speaking of the world cup steve it was

86

00:04:01,990 --> 00:03:59,519

mostly fun and games when germany beat

87

00:04:05,030 --> 00:04:02,000

the us in the first round but the recent

88

00:04:07,270 --> 00:04:05,040

u.s russian friction over ukraine is a

89

00:04:09,350 --> 00:04:07,280

far more serious matter and the other

90

00:04:11,830 --> 00:04:09,360

three members of your crew are russian

91

00:04:13,990 --> 00:04:11,840

cosmonauts does that kind of thing ever

92

00:04:18,069 --> 00:04:14,000

present a problem in the close quarters

93

00:04:22,629 --> 00:04:20,789

no it does not we've become good friends

94

00:04:24,310 --> 00:04:22,639

with our russian colleagues we've

95

00:04:26,469 --> 00:04:24,320

trained with them for a long time been

96

00:04:28,469 --> 00:04:26,479

up here with them for a long time and

97

00:04:31,510 --> 00:04:28,479

that kind of issues don't arise for us

98

00:04:33,189 --> 00:04:31,520

doesn't cause any kind of friction

99

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

and i imagine the fact that you look out

100

00:04:37,430 --> 00:04:35,280

the window and you see no borders

101
00:04:41,749 --> 00:04:37,440
visible from space makes it gives you a

102
00:04:46,469 --> 00:04:44,469
yes it does as alex pointed out we also

103
00:04:48,469 --> 00:04:46,479
watched the rush of the soccer games

104
00:04:50,310 --> 00:04:48,479
together so that kind of bonds us

105
00:04:52,870 --> 00:04:50,320
together too

106
00:04:54,790 --> 00:04:52,880
absolutely we've got a handful of

107
00:04:56,550 --> 00:04:54,800
questions from uh some of our readers

108
00:04:58,870 --> 00:04:56,560
this one comes from a young reader named

109
00:05:00,629 --> 00:04:58,880
luke who wants to know what do you miss

110
00:05:04,469 --> 00:05:00,639
most from earth again you're up there

111
00:05:09,029 --> 00:05:06,230
oh it's the simple things i think that

112
00:05:10,870 --> 00:05:09,039
you missed most and for me personally i

113
00:05:12,469 --> 00:05:10,880

miss a shower a nice warm shower in the

114

00:05:14,629 --> 00:05:12,479

morning if we could get that going up

115

00:05:16,870 --> 00:05:14,639

here wow that would be something really

116

00:05:19,670 --> 00:05:16,880

really super but for now that's the

117

00:05:22,469 --> 00:05:19,680

number one thing i did see i did see on

118

00:05:25,590 --> 00:05:22,479

a tv show a couple days ago a family sat

119

00:05:26,629 --> 00:05:25,600

down and had a big pizza with a soda and

120

00:05:28,790 --> 00:05:26,639

man

121

00:05:30,870 --> 00:05:28,800

i was at that point i was missing pizza

122

00:05:34,390 --> 00:05:30,880

a little bit more than the uh than the

123

00:05:36,150 --> 00:05:34,400

shower but overall that's where we are

124

00:05:37,830 --> 00:05:36,160

we actually did get three pizza

125

00:05:40,550 --> 00:05:37,840

questions from readers so they were

126
00:05:43,270 --> 00:05:40,560
right on the money there um from some of

127
00:05:45,350 --> 00:05:43,280
our our photography fans who read time

128
00:05:47,670 --> 00:05:45,360
what cameras do you use and are there

129
00:05:49,670 --> 00:05:47,680
limitations on what cameras can be used

130
00:05:53,590 --> 00:05:49,680
in space can you just use an iphone to

131
00:05:57,670 --> 00:05:55,590
well you could take an iphone but of

132
00:05:59,110 --> 00:05:57,680
course what we see out the window is so

133
00:06:01,270 --> 00:05:59,120
beautiful that we need something with a

134
00:06:04,150 --> 00:06:01,280
little bit more resolution so we have

135
00:06:06,150 --> 00:06:04,160
like professional slr cameras all sorts

136
00:06:07,830 --> 00:06:06,160
of lenses sometimes like if you want to

137
00:06:10,070 --> 00:06:07,840
take a picture of a typhoon or a

138
00:06:12,070 --> 00:06:10,080

hurricane you need a wide-angle lens so

139

00:06:14,230 --> 00:06:12,080

and then if you want to take a picture

140

00:06:15,670 --> 00:06:14,240

of your hometown you have this huge 800

141

00:06:17,990 --> 00:06:15,680

millimeter lens that you can actually

142

00:06:20,309 --> 00:06:18,000

see houses individual houses and it's

143

00:06:21,909 --> 00:06:20,319

pretty amazing what you can do and also

144

00:06:24,070 --> 00:06:21,919

it's amazing to see what the cosmic

145

00:06:26,309 --> 00:06:24,080

radiation does like we really have to

146

00:06:28,390 --> 00:06:26,319

use up these cameras like they only last

147

00:06:30,309 --> 00:06:28,400

for half a year or a year and then the

148

00:06:31,670 --> 00:06:30,319

pixel damage through cosmic radiation is

149

00:06:33,830 --> 00:06:31,680

so big that we actually bring up new

150

00:06:37,029 --> 00:06:33,840

ones

151

00:06:38,469 --> 00:06:37,039

i imagine the view of the nighttime sky

152

00:06:40,230 --> 00:06:38,479

or it's always the nighttime sky of

153

00:06:44,950 --> 00:06:40,240

course is radically different with no

154

00:06:48,390 --> 00:06:46,150

that is true

155

00:06:50,309 --> 00:06:48,400

the stars do not twinkle up here they

156

00:06:54,390 --> 00:06:50,319

just are pinpoints when there's so many

157

00:06:59,990 --> 00:06:56,790

where do you go for privacy the station

158

00:07:02,870 --> 00:07:00,000

has as enough enough as much habitable

159

00:07:04,390 --> 00:07:02,880

space as i think at 747 and yet that's

160

00:07:06,150 --> 00:07:04,400

all the space you've got do you ever

161

00:07:10,390 --> 00:07:06,160

find that you need a place to retreat

162

00:07:14,309 --> 00:07:12,070

well i'd say you know working with these

163

00:07:16,230 --> 00:07:14,319

guys i'd almost say no it's uh it's

164

00:07:17,909 --> 00:07:16,240

always a good it's always good fun but

165

00:07:19,670 --> 00:07:17,919

we each actually do have we each

166

00:07:22,309 --> 00:07:19,680

actually have our own little bedroom

167

00:07:24,790 --> 00:07:22,319

it's about the size of a telephone booth

168

00:07:26,309 --> 00:07:24,800

so it can fit about you and we have two

169

00:07:29,270 --> 00:07:26,319

laptops in there to connect with the

170

00:07:31,430 --> 00:07:29,280

outside world but uh really it's pretty

171

00:07:33,990 --> 00:07:31,440

comfortable and we treat those with the

172

00:07:36,390 --> 00:07:34,000

with the highest level of respect so my

173

00:07:37,589 --> 00:07:36,400

bedroom is my room and uh and that's my

174

00:07:39,589 --> 00:07:37,599

little place to go if i need some

175

00:07:41,350 --> 00:07:39,599

privacy but to date i mean it's really

176

00:07:43,110 --> 00:07:41,360

just been a sleeping quarters most of

177

00:07:44,710 --> 00:07:43,120

the time we're out here socializing

178

00:07:46,230 --> 00:07:44,720

inviting our russian crew members down

179

00:07:48,070 --> 00:07:46,240

or heading down to see them

180

00:07:51,350 --> 00:07:48,080

in the evenings and really it's it's a

181

00:07:54,070 --> 00:07:51,360

good community living situation

182

00:07:55,909 --> 00:07:54,080

and speaking of sleeping do you dream

183

00:07:57,909 --> 00:07:55,919

differently in space is there something

184

00:08:00,150 --> 00:07:57,919

about the experience unconsciously

185

00:08:07,110 --> 00:08:00,160

knowing where you are that changes the

186

00:08:11,110 --> 00:08:08,710

actually i've been asked that question a

187

00:08:13,189 --> 00:08:11,120

lot and i in the first weeks i never

188

00:08:14,629 --> 00:08:13,199

remembered my dreams but i did have one

189

00:08:16,469 --> 00:08:14,639

dream that i remembered last week and

190

00:08:19,430 --> 00:08:16,479

that was actually with with reed

191

00:08:21,510 --> 00:08:19,440

launching on a rocket from canada to fly

192

00:08:23,350 --> 00:08:21,520

to baikonur from where we mounted that

193

00:08:25,189 --> 00:08:23,360

rocket onto a soyuz and then flew to

194

00:08:26,790 --> 00:08:25,199

space so i thought that was a pretty

195

00:08:28,550 --> 00:08:26,800

remarkable dream

196

00:08:30,469 --> 00:08:28,560

and one thing another thing that i

197

00:08:32,709 --> 00:08:30,479

noticed at night is actually that i

198

00:08:33,990 --> 00:08:32,719

sometimes i wake up at night and i don't

199

00:08:35,990 --> 00:08:34,000

know where up and down is of course

200

00:08:37,909 --> 00:08:36,000

there is no up and down and i believe

201
00:08:40,149 --> 00:08:37,919
that in that moment i think i'm head

202
00:08:41,589 --> 00:08:40,159
down or somewhere somewhere turn around

203
00:08:43,430 --> 00:08:41,599
but then i switch on the light and i

204
00:08:45,430 --> 00:08:43,440
realize that i'm actually completely

205
00:08:47,190 --> 00:08:45,440
normal so that happened to me quite a

206
00:08:48,870 --> 00:08:47,200
few times and i actually did hear that

207
00:08:51,910 --> 00:08:48,880
happens to to other people once in a

208
00:08:57,269 --> 00:08:54,710
and i'm sure there are lots of good days

209
00:08:59,190 --> 00:08:57,279
in space what's the toughest day you've

210
00:09:01,430 --> 00:08:59,200
had up there a day you were just happy

211
00:09:05,190 --> 00:09:01,440
to see come to an end and go to bed and

212
00:09:08,870 --> 00:09:07,269
there was a day where alex took some

213
00:09:10,949 --> 00:09:08,880

hair clippers

214

00:09:13,829 --> 00:09:10,959

and he stood a little too close to me

215

00:09:15,590 --> 00:09:13,839

and our commander dr steve swanson and i

216

00:09:18,710 --> 00:09:15,600

gotta say i was happy when that day came

217

00:09:22,630 --> 00:09:19,990

and you've got a few months for your

218

00:09:24,150 --> 00:09:22,640

hair to grow back so that's good

219

00:09:25,430 --> 00:09:24,160

and i guess this will be our final

220

00:09:27,190 --> 00:09:25,440

question

221

00:09:29,670 --> 00:09:27,200

i know you don't get a lot of free time

222

00:09:32,310 --> 00:09:29,680

but when you do have it how much of that

223

00:09:37,030 --> 00:09:32,320

do you spend simply enjoying the view of

224

00:09:40,790 --> 00:09:38,710

almost all of it that's one of our

225

00:09:42,949 --> 00:09:40,800

biggest free time events that we do up

226

00:09:44,470 --> 00:09:42,959

here and then of course we you always

227

00:09:46,389 --> 00:09:44,480

want to take a picture and share it so

228

00:09:47,910 --> 00:09:46,399

then we spend the other part trying to

229

00:09:49,430 --> 00:09:47,920

take process the pictures and get them

230

00:09:52,310 --> 00:09:49,440

down to everybody else so that's pretty

231

00:09:54,070 --> 00:09:52,320

much what we do with our free time

232

00:10:00,790 --> 00:09:54,080

terrific thank you so much

233

00:10:04,949 --> 00:10:03,430

all right we are joined live from space

234

00:10:07,430 --> 00:10:04,959

now and i only probably get to say that

235

00:10:10,230 --> 00:10:07,440

once in my life so i'm enjoying it live

236

00:10:12,870 --> 00:10:10,240

in space with astronaut reid wiseman

237

00:10:16,470 --> 00:10:12,880

reid how is the weather 250 miles above

238

00:10:19,990 --> 00:10:17,990

today i could actually say it's a little

239

00:10:22,470 --> 00:10:20,000

bit chilly in the u.s laboratory where

240

00:10:25,590 --> 00:10:22,480

i'm standing but in general our weather

241

00:10:26,949 --> 00:10:25,600

is perfectly constant about 72 degrees

242

00:10:29,670 --> 00:10:26,959

and maybe uh

243

00:10:34,069 --> 00:10:29,680

10 to 15 humidity so it pretty much

244

00:10:37,110 --> 00:10:35,590

all right well of course we get to speak

245

00:10:40,230 --> 00:10:37,120

with you today reid because you were our

246

00:10:42,630 --> 00:10:40,240

graduate of rpi just the third from that

247

00:10:44,230 --> 00:10:42,640

school i believe to make it into space

248

00:10:45,110 --> 00:10:44,240

and you honored that legacy three days

249

00:10:47,269 --> 00:10:45,120

ago

250

00:10:49,509 --> 00:10:47,279

snapping this photo we'll bring it up

251

00:10:51,190 --> 00:10:49,519

here of the city of troy and rpi there

252

00:10:54,389 --> 00:10:51,200

it is you must be so proud of your alma

253

00:10:59,190 --> 00:10:56,870

oh absolutely i mean that that school

254

00:11:01,670 --> 00:10:59,200

really that's where i grew up that

255

00:11:03,190 --> 00:11:01,680

school set the ground road for me for

256

00:11:05,590 --> 00:11:03,200

the rest of my life for my career in the

257

00:11:07,590 --> 00:11:05,600

navy and then also coming down to nasa

258

00:11:10,310 --> 00:11:07,600

so there are so many gifts i've had in

259

00:11:12,150 --> 00:11:10,320

my life and i really owe about 90 of

260

00:11:14,069 --> 00:11:12,160

them to the education and really the

261

00:11:17,350 --> 00:11:14,079

life education as well that i got at

262

00:11:17,360 --> 00:11:21,829

anybody you want to say hi to there reid

263

00:11:25,590 --> 00:11:23,829

uh i just pull this out real quick and i

264

00:11:28,710 --> 00:11:25,600

i think i should just say hi to to

265

00:11:30,630 --> 00:11:28,720

everybody at rpi i'm ready for hockey

266

00:11:32,710 --> 00:11:30,640

season to begin i wish i was going to

267

00:11:34,630 --> 00:11:32,720

stand in line at union at the union to

268

00:11:36,150 --> 00:11:34,640

buy some tickets but i think this year

269

00:11:39,670 --> 00:11:36,160

i'll just have to watch it on the on the

270

00:11:43,110 --> 00:11:41,910

oh my gosh that is amazing how how

271

00:11:45,030 --> 00:11:43,120

timely

272

00:11:47,110 --> 00:11:45,040

thank you for having it uh of course

273

00:11:49,190 --> 00:11:47,120

you're a twitter celebrity now if you're

274

00:11:50,949 --> 00:11:49,200

not aware folks reed is tweeting out

275

00:11:53,590 --> 00:11:50,959

space pictures to

276
00:11:56,069 --> 00:11:53,600
more than 150 000 followers and every

277
00:11:58,389 --> 00:11:56,079
day myself included we all get these

278
00:11:59,910 --> 00:11:58,399
beautiful beautiful spectacular shots of

279
00:12:01,509 --> 00:11:59,920
the earth and let's look at a few here

280
00:12:03,670 --> 00:12:01,519
uh reed we're looking at pictures of the

281
00:12:05,110 --> 00:12:03,680
northern lights you said you could you

282
00:12:07,750 --> 00:12:05,120
felt you could almost reach out and

283
00:12:10,310 --> 00:12:07,760
touch them and you seem so humbled by

284
00:12:11,509 --> 00:12:10,320
these views of the earth by these views

285
00:12:13,990 --> 00:12:11,519
of the earth

286
00:12:15,829 --> 00:12:14,000
well i had never seen the aurora before

287
00:12:17,110 --> 00:12:15,839
i came up to the space station

288
00:12:19,350 --> 00:12:17,120

unfortunately never got to see them with

289

00:12:21,590 --> 00:12:19,360

my own eyes on earth but up here it's

290

00:12:23,269 --> 00:12:21,600

just this amazing green light that kind

291

00:12:26,310 --> 00:12:23,279

of snakes its way through our upper

292

00:12:28,389 --> 00:12:26,320

atmosphere and we're only 250 miles up

293

00:12:29,829 --> 00:12:28,399

and it almost feels like you're flying

294

00:12:32,310 --> 00:12:29,839

through the aurora when you're on the

295

00:12:34,389 --> 00:12:32,320

space station it's incredibly dynamic

296

00:12:37,509 --> 00:12:34,399

very very beautiful sight to see from

297

00:12:40,470 --> 00:12:38,790

well it's just stunning to look at

298

00:12:43,190 --> 00:12:40,480

you're keeping up with current events

299

00:12:45,509 --> 00:12:43,200

too read some pictures of uh our recent

300

00:12:48,150 --> 00:12:45,519

hurricane arthur that we've got and

301
00:12:50,550 --> 00:12:48,160
we've also seen some shots of super

302
00:12:52,870 --> 00:12:50,560
typhoon nagori that's over japan right

303
00:12:54,470 --> 00:12:52,880
now what strikes you about a storm on

304
00:12:58,230 --> 00:12:54,480
earth when you're able to see it from

305
00:13:01,910 --> 00:13:00,069
oh i really the the development of the

306
00:13:03,750 --> 00:13:01,920
clouds the three-dimensional look of

307
00:13:06,550 --> 00:13:03,760
these storms from above being able to

308
00:13:09,910 --> 00:13:06,560
look at the eye of a hurricane uh that

309
00:13:11,590 --> 00:13:09,920
the eye of super typhoon niaguri was 65

310
00:13:13,509 --> 00:13:11,600
kilometers across

311
00:13:15,430 --> 00:13:13,519
my crewmate alex was letting us know

312
00:13:17,269 --> 00:13:15,440
that last night and from up here it just

313
00:13:18,710 --> 00:13:17,279

it looks tiny and when you really put it

314

00:13:20,870 --> 00:13:18,720

in your mind of how enormous these

315

00:13:23,670 --> 00:13:20,880

storms are and both of these storms

316

00:13:24,949 --> 00:13:23,680

impacted family members of mine my wife

317

00:13:26,870 --> 00:13:24,959

and my parents were on the east coast of

318

00:13:28,790 --> 00:13:26,880

the u.s when arthur hit and then my

319

00:13:31,190 --> 00:13:28,800

brother and his family were on okinawa

320

00:13:32,870 --> 00:13:31,200

when niagori came through so for me it

321

00:13:34,870 --> 00:13:32,880

was more than just looking at a weather

322

00:13:36,710 --> 00:13:34,880

system it was a real personal event and

323

00:13:38,550 --> 00:13:36,720

it was really nice to see these storms

324

00:13:39,910 --> 00:13:38,560

develop and also know that at least up

325

00:13:43,430 --> 00:13:39,920

to this point they didn't cause a whole

326

00:13:47,269 --> 00:13:45,189

you've also seen you've said before too

327

00:13:49,509 --> 00:13:47,279

that the the clouds turn

328

00:13:53,110 --> 00:13:49,519

a 2d view of earth into 3d what do you

329

00:13:57,509 --> 00:13:55,670

well when you look out from 250 miles up

330

00:14:00,470 --> 00:13:57,519

the earth is really just an almost

331

00:14:02,949 --> 00:14:00,480

perfect sphere with with one exception

332

00:14:05,269 --> 00:14:02,959

when the sun starts to set or rise and

333

00:14:07,189 --> 00:14:05,279

you can see the sunlight kind of coming

334

00:14:09,030 --> 00:14:07,199

from almost from underneath the clouds

335

00:14:10,550 --> 00:14:09,040

it just lifts the clouds up off of the

336

00:14:12,069 --> 00:14:10,560

ocean or off of the continents that

337

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

they're over and it gives you this

338

00:14:16,790 --> 00:14:14,800

spectacular 3d feeling that it's really

339

00:14:19,110 --> 00:14:16,800

the only time you feel that up here and

340

00:14:20,629 --> 00:14:19,120

it's really really crystal clear and

341

00:14:22,310 --> 00:14:20,639

it's hard to show it in the photos i

342

00:14:25,990 --> 00:14:22,320

think i've captured it once or twice but

343

00:14:29,509 --> 00:14:28,230

i'm sure it's just best to see it from

344

00:14:31,269 --> 00:14:29,519

up there what can you tell us about

345

00:14:35,269 --> 00:14:31,279

expedition 40 what sorts of uh science

346

00:14:39,509 --> 00:14:37,110

well we've we've been going for about a

347

00:14:41,829 --> 00:14:39,519

month and a half now and i would say uh

348

00:14:44,949 --> 00:14:41,839

at least 50 to 60 of our days are based

349

00:14:46,870 --> 00:14:44,959

on science right now i'm i'm burning a

350

00:14:48,790 --> 00:14:46,880

lot of stuff but we have a bunch of very

351

00:14:51,030 --> 00:14:48,800

small fuel samples and we're burning

352

00:14:53,189 --> 00:14:51,040

them here in microgravity just to see if

353

00:14:54,870 --> 00:14:53,199

we change the oxygen how do these flames

354

00:14:56,629 --> 00:14:54,880

change and how does the suppression of

355

00:14:58,470 --> 00:14:56,639

these flames change when we're up here

356

00:15:00,230 --> 00:14:58,480

in space and some really exciting uh

357

00:15:02,470 --> 00:15:00,240

results my crewmates have been working

358

00:15:05,509 --> 00:15:02,480

on some capillary flow experiments

359

00:15:07,670 --> 00:15:05,519

looking at fuel in tanks and how uh

360

00:15:10,230 --> 00:15:07,680

zero-g or microgravity environment

361

00:15:12,550 --> 00:15:10,240

changes the way water works it's amazing

362

00:15:13,829 --> 00:15:12,560

to watch water just creep all over if

363

00:15:15,750 --> 00:15:13,839

you get some on your hand it'll just

364

00:15:18,069 --> 00:15:15,760

creep up your arm very different than

365

00:15:19,350 --> 00:15:18,079

down on earth and of course our bodies

366

00:15:21,350 --> 00:15:19,360

are

367

00:15:24,230 --> 00:15:21,360

huge laboratories up here so we've been

368

00:15:26,949 --> 00:15:24,240

doing ultrasounds of leg muscles

369

00:15:28,949 --> 00:15:26,959

ultrasounds of our hearts our eyes

370

00:15:32,230 --> 00:15:28,959

so really tons of work tons of work

371

00:15:36,870 --> 00:15:33,829

important work too but i also understand

372

00:15:39,509 --> 00:15:36,880

there's time for fun we are reading some

373

00:15:41,990 --> 00:15:39,519

tweets about how you like to watch world

374

00:15:43,590 --> 00:15:42,000

cup soccer while hanging from the

375

00:15:45,269 --> 00:15:43,600

ceiling and i also understand you had to

376

00:15:48,870 --> 00:15:45,279

shave your head was that a bet that you

377

00:15:52,790 --> 00:15:51,430

yeah it was a tragic germany versus usa

378

00:15:55,590 --> 00:15:52,800

game and my crewmates right here

379

00:15:57,350 --> 00:15:55,600

laughing at me from behind the camera um

380

00:15:59,189 --> 00:15:57,360

but that you know it was great crew

381

00:16:01,350 --> 00:15:59,199

camaraderie and i'm really glad we did

382

00:16:02,629 --> 00:16:01,360

it in fact i like the new uh haircut i

383

00:16:04,629 --> 00:16:02,639

think i'm gonna keep it this way for the

384

00:16:07,269 --> 00:16:04,639

rest of the mission very low maintenance

385

00:16:08,870 --> 00:16:07,279

very easy up here and really watching

386

00:16:10,310 --> 00:16:08,880

world cup has been the thing that's

387

00:16:12,310 --> 00:16:10,320

brought our crew together at least for

388

00:16:14,150 --> 00:16:12,320

the first month up here uh we have three

389

00:16:16,230 --> 00:16:14,160

russian crewmates one german and two

390

00:16:18,069 --> 00:16:16,240

americans and every time there's a world

391

00:16:19,749 --> 00:16:18,079

cup game on we crowd around this little

392

00:16:21,590 --> 00:16:19,759

satellite uplink that we have and we

393

00:16:23,670 --> 00:16:21,600

watch the play so it was great to see

394

00:16:25,829 --> 00:16:23,680

germany brazil last night especially

395

00:16:29,509 --> 00:16:25,839

having my crewmate alex up here it was a

396

00:16:32,550 --> 00:16:30,870

reid we're starting to come to a close

397

00:16:34,150 --> 00:16:32,560

here in our limited time i want to draw

398

00:16:36,230 --> 00:16:34,160

our attention to this one picture

399

00:16:38,470 --> 00:16:36,240

sometimes you write almost poetically on

400

00:16:41,430 --> 00:16:38,480

twitter and you took this shot that

401
00:16:43,670 --> 00:16:41,440
we're going to see of one single die uh

402
00:16:46,069 --> 00:16:43,680
from a pair of dice kind of floating in

403
00:16:47,990 --> 00:16:46,079
the air over earth suspended in space it

404
00:16:50,389 --> 00:16:48,000
seems so metaphorically beautiful almost

405
00:16:51,749 --> 00:16:50,399
to say that in the end our lives on

406
00:16:55,670 --> 00:16:51,759
earth are little more than a roll of the

407
00:16:59,749 --> 00:16:57,430
oh i certainly hope there's more to it i

408
00:17:01,910 --> 00:16:59,759
think you make your own luck and if you

409
00:17:03,030 --> 00:17:01,920
work hard and you just try to be overall

410
00:17:05,829 --> 00:17:03,040
good person that you're going to have a

411
00:17:07,270 --> 00:17:05,839
great path i'd say i really love that

412
00:17:08,949 --> 00:17:07,280
photo because

413
00:17:11,510 --> 00:17:08,959

here's this beautiful earth and there's

414

00:17:12,949 --> 00:17:11,520

this completely out of place object just

415

00:17:15,669 --> 00:17:12,959

floating there and it's a it's a

416

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

human-made object i think that's why so

417

00:17:19,669 --> 00:17:17,280

many people kind of relate to this it's

418

00:17:21,510 --> 00:17:19,679

a simple little die and it looks so

419

00:17:23,750 --> 00:17:21,520

foreign in this place and that's how we

420

00:17:25,590 --> 00:17:23,760

feel up here we we love living and

421

00:17:27,270 --> 00:17:25,600

working up here but it's a completely

422

00:17:28,870 --> 00:17:27,280

foreign environment it's really amazing

423

00:17:32,630 --> 00:17:28,880

to get to live and work in the

424

00:17:34,390 --> 00:17:32,640

international space station

425

00:17:35,510 --> 00:17:34,400

that's so cool it's so beautiful

426

00:17:37,350 --> 00:17:35,520

everything you've done of course i want

427

00:17:39,110 --> 00:17:37,360

to leave it on one final shot here that

428

00:17:41,590 --> 00:17:39,120

you took since uh you're such a twitter

429

00:17:44,549 --> 00:17:41,600

celebrity now uh your message from june

430

00:17:46,070 --> 00:17:44,559

19th uh you've been up there at that

431

00:17:48,630 --> 00:17:46,080

time just about three weeks when you

432

00:17:50,870 --> 00:17:48,640

posted this picture uh beautiful view of

433

00:17:54,549 --> 00:17:50,880

the ocean and i believe what you said

434

00:17:56,470 --> 00:17:54,559

was uh i will never tire of this view we

435

00:17:57,909 --> 00:17:56,480

can roll that picture up now it really

436

00:18:03,830 --> 00:17:57,919

is stunning everything that you get to

437

00:18:09,270 --> 00:18:05,029

great talking to you thanks for your

438

00:18:13,029 --> 00:18:11,430

all right rpi grad reid wiseman live

439

00:18:15,029 --> 00:18:13,039

from space on the international space

440

00:18:21,909 --> 00:18:15,039

station reed thank you much and keep