



1
00:00:05,590 --> 00:00:02,550
station this is wtop radio how do you

2
00:00:09,509 --> 00:00:07,510
we've got you loud and clear welcome

3
00:00:12,629 --> 00:00:09,519
onboard the international space station

4
00:00:14,709 --> 00:00:12,639
wow this is really cool this has not

5
00:00:17,269 --> 00:00:14,719
been done before we are talking live

6
00:00:19,750 --> 00:00:17,279
here on wtop with the international

7
00:00:21,910 --> 00:00:19,760
space station and we say hello to

8
00:00:24,230 --> 00:00:21,920
commander terry verts now in command

9
00:00:26,230 --> 00:00:24,240
congratulations commander we are happy

10
00:00:30,150 --> 00:00:26,240
to hear that you are from maryland

11
00:00:34,630 --> 00:00:32,549
well thanks uh i appreciate it and i am

12
00:00:35,990 --> 00:00:34,640
a local uh born and raised in maryland

13
00:00:38,150 --> 00:00:36,000

and hello to all the folks down there in

14

00:00:40,470 --> 00:00:38,160

Maryland and DC and Virginia uh I've

15

00:00:41,830 --> 00:00:40,480

been watching we take a look whenever we

16

00:00:45,590 --> 00:00:41,840

have a pass and it looks like it's been

17

00:00:48,549 --> 00:00:45,600

a pretty cold and white winter so far

18

00:00:51,189 --> 00:00:48,559

we are watching you on NASA TV and we're

19

00:00:53,189 --> 00:00:51,199

streaming it on our website at wtop.com

20

00:00:55,189 --> 00:00:53,199

and it's a it's really wonderful to talk

21

00:00:58,150 --> 00:00:55,199

to you and also to a flight engineer

22

00:01:00,229 --> 00:00:58,160

Samantha Christo Ferretti who joins us

23

00:01:01,670 --> 00:01:00,239

she's an Italian astronaut welcome to

24

00:01:05,429 --> 00:01:01,680

you as well and thank you for talking

25

00:01:09,510 --> 00:01:07,510

yeah absolutely thanks for having us

26

00:01:11,990 --> 00:01:09,520

it's wonderful to be here great to hear

27

00:01:14,230 --> 00:01:12,000

from you both uh terry we know this is

28

00:01:17,109 --> 00:01:14,240

not your your first mission on the space

29

00:01:19,910 --> 00:01:17,119

station we want to know uh how has it

30

00:01:24,469 --> 00:01:19,920

changed over time does it get easier for

31

00:01:27,030 --> 00:01:25,270

well

32

00:01:28,550 --> 00:01:27,040

living here in space absolutely gets

33

00:01:30,149 --> 00:01:28,560

easier the first few weeks that you're

34

00:01:31,350 --> 00:01:30,159

here your body's still getting used to

35

00:01:33,270 --> 00:01:31,360

weightlessness

36

00:01:35,109 --> 00:01:33,280

you're still learning how to float and

37

00:01:36,230 --> 00:01:35,119

how to move around and you're learning

38

00:01:38,230 --> 00:01:36,240

the space station where things are

39

00:01:39,670 --> 00:01:38,240

located and so the first few weeks can

40

00:01:40,870 --> 00:01:39,680

can definitely be an adjustment period

41

00:01:42,469 --> 00:01:40,880

but then

42

00:01:43,830 --> 00:01:42,479

it seems like somewhere between the one

43

00:01:46,469 --> 00:01:43,840

and two month period you kind of hit

44

00:01:48,630 --> 00:01:46,479

your stride you are adapted you

45

00:01:49,910 --> 00:01:48,640

understand how to float and um there was

46

00:01:51,670 --> 00:01:49,920

one day i was actually trying to

47

00:01:53,190 --> 00:01:51,680

remember what gravity felt like it's

48

00:01:54,630 --> 00:01:53,200

weird that your body adjusts so

49

00:01:56,149 --> 00:01:54,640

completely to being weightless but it's

50

00:01:57,910 --> 00:01:56,159

pretty cool process

51
00:02:00,630 --> 00:01:57,920
we have a lot of questions especially

52
00:02:03,030 --> 00:02:00,640
from school kids who are listening in

53
00:02:05,350 --> 00:02:03,040
their classrooms this morning in fact

54
00:02:07,749 --> 00:02:05,360
mrs balzar's fifth grade class andrew

55
00:02:13,190 --> 00:02:07,759
asked how do you sleep at night if every

56
00:02:18,070 --> 00:02:15,910
well andrew that's a great question and

57
00:02:20,309 --> 00:02:18,080
luckily we don't have a window in our in

58
00:02:22,070 --> 00:02:20,319
our crew quarters where we sleep so we

59
00:02:23,589 --> 00:02:22,080
shut the door turn off the lights and in

60
00:02:25,830 --> 00:02:23,599
our small crew quarters where our

61
00:02:28,550 --> 00:02:25,840
sleeping bag is there's no light so your

62
00:02:30,630 --> 00:02:28,560
body uh just thinks it's dark and thinks

63
00:02:31,750 --> 00:02:30,640

it's time to sleep and i actually sleep

64

00:02:33,670 --> 00:02:31,760

really well

65

00:02:35,910 --> 00:02:33,680

uh oftentimes it's a busy day so you

66

00:02:38,150 --> 00:02:35,920

don't get a large amount of sleep but

67

00:02:39,750 --> 00:02:38,160

when i am asleep i sleep very well

68

00:02:43,350 --> 00:02:39,760

thankfully because we close the windows

69

00:02:47,910 --> 00:02:45,509

as you can imagine we get a lot of

70

00:02:49,990 --> 00:02:47,920

questions about the food

71

00:02:53,030 --> 00:02:50,000

that you are eating i know that there

72

00:02:53,910 --> 00:02:53,040

are uh cargo supplies that that bring

73

00:03:11,270 --> 00:02:53,920

you

74

00:03:16,229 --> 00:03:13,350

terry and i are very different in terms

75

00:03:18,949 --> 00:03:16,239

of taste and the stuff we like to eat

76

00:03:20,949 --> 00:03:18,959

but up here we definitely both have been

77

00:03:23,030 --> 00:03:20,959

enjoying uh the few times that we have

78

00:03:25,830 --> 00:03:23,040

received fresh food and that really

79

00:03:27,910 --> 00:03:25,840

happens uh whenever there is a new cargo

80

00:03:30,390 --> 00:03:27,920

vehicle that comes up here so that

81

00:03:32,390 --> 00:03:30,400

happened um early in our mission when a

82

00:03:35,030 --> 00:03:32,400

progress vehicle came and then

83

00:03:37,190 --> 00:03:35,040

in last january we had a dragon arriving

84

00:03:38,789 --> 00:03:37,200

and then a progress again

85

00:03:40,470 --> 00:03:38,799

next week we'll have a soyuz although i

86

00:03:42,229 --> 00:03:40,480

don't think there's space for food in

87

00:03:44,630 --> 00:03:42,239

for fresh food in the soyuz but we'll

88

00:03:46,070 --> 00:03:44,640

definitely get some more fresh food

89

00:03:48,229 --> 00:03:46,080

coming up in the next weeks when the

90

00:03:50,550 --> 00:03:48,239

next dragon will come and and the reason

91

00:03:52,949 --> 00:03:50,560

is that we do not have a fridge we have

92

00:03:55,350 --> 00:03:52,959

a little um refrigerator up here but

93

00:03:58,949 --> 00:03:55,360

it's not enough to keep um to keep fresh

94

00:04:02,070 --> 00:03:58,959

food um you know for a long time so most

95

00:04:04,789 --> 00:04:02,080

of the food that we eat usually is uh

96

00:04:06,789 --> 00:04:04,799

thermally stabilized so that it can be

97

00:04:08,550 --> 00:04:06,799

shelf stable for a long time and we can

98

00:04:10,470 --> 00:04:08,560

keep it stored in here for months or

99

00:04:12,949 --> 00:04:10,480

even over a year

100

00:04:14,470 --> 00:04:12,959

or it's dehydrated and so we plug it

101
00:04:16,550 --> 00:04:14,480
into our water dispenser we plug the

102
00:04:19,189 --> 00:04:16,560
pouch into the water dispenser and

103
00:04:21,189 --> 00:04:19,199
magically uh with add in the water it

104
00:04:22,950 --> 00:04:21,199
turns into food that we would recognize

105
00:04:25,590 --> 00:04:22,960
and there is a great variety of food for

106
00:04:27,189 --> 00:04:25,600
all the tastes and flavors

107
00:04:29,510 --> 00:04:27,199
commander verts uh we have some

108
00:04:32,150 --> 00:04:29,520
questions from students at oakland mills

109
00:04:34,230 --> 00:04:32,160
middle school which i think is a

110
00:04:36,790 --> 00:04:34,240
familiar name to you

111
00:04:39,189 --> 00:04:36,800
one of the questions uh is

112
00:04:41,430 --> 00:04:39,199
from one of the kids who's asking about

113
00:04:42,870 --> 00:04:41,440

being away from your family for so long

114

00:04:44,950 --> 00:04:42,880

and i guess for both of you how do you

115

00:04:49,110 --> 00:04:44,960

deal with with being away and are you

116

00:04:53,430 --> 00:04:51,189

well that's a great question um yes

117

00:04:56,390 --> 00:04:53,440

oakland mills i'm a scorpion and

118

00:04:58,150 --> 00:04:56,400

graduated from there in 1985 uh had a

119

00:05:00,629 --> 00:04:58,160

great time there what an awesome place

120

00:05:02,070 --> 00:05:00,639

but it is probably the toughest thing is

121

00:05:03,990 --> 00:05:02,080

being separated from your family not

122

00:05:05,749 --> 00:05:04,000

only for the six months here that were

123

00:05:07,430 --> 00:05:05,759

in space but also for the several years

124

00:05:09,189 --> 00:05:07,440

beforehand that we were in training we

125

00:05:11,510 --> 00:05:09,199

were gone a lot and so

126

00:05:12,950 --> 00:05:11,520

it's tough uh they're the real heroes

127

00:05:14,230 --> 00:05:12,960

everybody sees the astronauts in space

128

00:05:16,150 --> 00:05:14,240

and wants to talk to us but it's the

129

00:05:17,430 --> 00:05:16,160

families that provide us support that

130

00:05:19,749 --> 00:05:17,440

allow us to do this and they're the real

131

00:05:22,230 --> 00:05:19,759

heroes in that that's a great question

132

00:05:24,950 --> 00:05:22,240

commander vertz we have enjoyed

133

00:05:27,430 --> 00:05:24,960

the many pictures of uh

134

00:05:29,189 --> 00:05:27,440

the baseball fields that you have been

135

00:05:31,350 --> 00:05:29,199

sending back and so a number of folks

136

00:05:34,550 --> 00:05:31,360

that we know you are from maryland but i

137

00:05:40,710 --> 00:05:34,560

have been told to ask are you a nats fan

138

00:05:43,590 --> 00:05:42,150

samantha says she can answer that one

139

00:05:45,749 --> 00:05:43,600

she's a base she's become a baseball

140

00:05:47,510 --> 00:05:45,759

expert but i'll tell you what what i'm

141

00:05:48,870 --> 00:05:47,520

rooting for is for the orioles and the

142

00:05:50,870 --> 00:05:48,880

nationals to be playing at the end of

143

00:05:52,390 --> 00:05:50,880

october this year that's uh that what

144

00:05:54,230 --> 00:05:52,400

i'd really love to see is a game seven

145

00:05:56,550 --> 00:05:54,240

between those guys uh right around

146

00:05:58,710 --> 00:05:56,560

halloween time um and i with the

147

00:05:59,830 --> 00:05:58,720

nationals pitching staff this year it

148

00:06:01,590 --> 00:05:59,840

definitely looks like they may be

149

00:06:03,990 --> 00:06:01,600

playing late in october and with the

150

00:06:05,189 --> 00:06:04,000

orioles coming off that 96 win season

151

00:06:07,110 --> 00:06:05,199

you know they have a great shot at it

152

00:06:09,510 --> 00:06:07,120

too so of course when i grew up it was

153

00:06:10,950 --> 00:06:09,520

in the 70s and 80s and the orioles were

154

00:06:13,270 --> 00:06:10,960

going to the world series and playoffs

155

00:06:15,270 --> 00:06:13,280

all the time so i'm i'm a homegrown uh

156

00:06:17,029 --> 00:06:15,280

lifelong orioles fan for sure

157

00:06:18,870 --> 00:06:17,039

we've got a few questions for you guys

158

00:06:20,629 --> 00:06:18,880

uh by the way that was a good political

159

00:06:22,710 --> 00:06:20,639

answer not only a commander but a

160

00:06:25,430 --> 00:06:22,720

politician it's a great answer from the

161

00:06:27,990 --> 00:06:25,440

gun on aveem kindergarten class in the

162

00:06:29,830 --> 00:06:28,000

jewish primary day school kids are

163

00:06:31,670 --> 00:06:29,840

studying the solar system there in space

164

00:06:33,670 --> 00:06:31,680

exploration and they want to know i

165

00:06:36,469 --> 00:06:33,680

guess from each of you how long does it

166

00:06:37,990 --> 00:06:36,479

take to train to become an astronaut and

167

00:06:39,749 --> 00:06:38,000

tell us a little bit about what you're

168

00:06:46,629 --> 00:06:39,759

seeing up there how beautiful are the

169

00:06:51,990 --> 00:06:48,629

in a way you train all of your life to

170

00:06:53,749 --> 00:06:52,000

become an astronaut be because um before

171

00:06:56,150 --> 00:06:53,759

you can actually train to go to space

172

00:06:58,230 --> 00:06:56,160

you need to be selected as an astronaut

173

00:07:00,309 --> 00:06:58,240

by a space agency like nasa in the case

174

00:07:02,469 --> 00:07:00,319

of terry or the european space agency in

175

00:07:04,710 --> 00:07:02,479

my case and to be

176

00:07:06,710 --> 00:07:04,720

ready to be a valid candidate at some

177

00:07:08,550 --> 00:07:06,720

point of your career in your life you

178

00:07:10,629 --> 00:07:08,560

really have to start working at it when

179

00:07:12,230 --> 00:07:10,639

you are you know in in school already

180

00:07:14,469 --> 00:07:12,240

and you're learning your basic math and

181

00:07:17,589 --> 00:07:14,479

writing and and science and then you're

182

00:07:19,350 --> 00:07:17,599

going to college and um you know most

183

00:07:21,029 --> 00:07:19,360

astronauts have some kind of technical

184

00:07:23,510 --> 00:07:21,039

or scientific background many of us are

185

00:07:26,230 --> 00:07:23,520

military pilots um so you kind of start

186

00:07:28,230 --> 00:07:26,240

on your on your career and and you try

187

00:07:29,589 --> 00:07:28,240

to be really good at it and the key of

188

00:07:30,629 --> 00:07:29,599

course is to be passionate about what

189

00:07:32,230 --> 00:07:30,639

you do

190

00:07:34,469 --> 00:07:32,240

and then eventually one day you'll

191

00:07:36,390 --> 00:07:34,479

hopefully be a good candidate for to

192

00:07:37,830 --> 00:07:36,400

become an astronaut and then

193

00:07:39,430 --> 00:07:37,840

before you can actually come on the

194

00:07:41,510 --> 00:07:39,440

international space station you have to

195

00:07:43,350 --> 00:07:41,520

train specifically for several for

196

00:07:45,670 --> 00:07:43,360

several more years

197

00:07:48,230 --> 00:07:45,680

and in terms of what we see and what the

198

00:07:51,670 --> 00:07:48,240

view is up here um we are not really

199

00:07:54,070 --> 00:07:51,680

equipped for an astronomical observation

200

00:07:55,749 --> 00:07:54,080

uh the the big windows that we have that

201
00:07:58,230 --> 00:07:55,759
are on the cupola actually look down

202
00:07:59,990 --> 00:07:58,240
towards the earth so that's our our

203
00:08:01,830 --> 00:08:00,000
biggest uh

204
00:08:03,830 --> 00:08:01,840
you know spectacle the greatest views

205
00:08:04,950 --> 00:08:03,840
that we have are mainly from from the

206
00:08:07,029 --> 00:08:04,960
earth you know just seeing the

207
00:08:08,710 --> 00:08:07,039
continents and the oceans and the

208
00:08:10,710 --> 00:08:08,720
glaciers and the mountains and all the

209
00:08:12,550 --> 00:08:10,720
different colors and textures all of

210
00:08:15,110 --> 00:08:12,560
that is just it's just magnificent and

211
00:08:18,230 --> 00:08:15,120
it's ever-changing and always a surprise

212
00:08:20,230 --> 00:08:18,240
um of course we also do see the stars um

213
00:08:21,830 --> 00:08:20,240

and sometimes really beautiful beautiful

214

00:08:24,150 --> 00:08:21,840

phenomena like right now i was seeing

215

00:08:25,670 --> 00:08:24,160

one auroras now we're seeing the

216

00:08:27,270 --> 00:08:25,680

southern lights which are even more

217

00:08:29,189 --> 00:08:27,280

impressive that the northern lights that

218

00:08:31,270 --> 00:08:29,199

we used to see earlier they're like

219

00:08:33,670 --> 00:08:31,280

three-dimensional you almost like fly

220

00:08:35,190 --> 00:08:33,680

through them so it's just just beautiful

221

00:08:38,310 --> 00:08:35,200

and then of course as you mentioned

222

00:08:40,550 --> 00:08:38,320

before 16 times a day we're treated to

223

00:08:43,029 --> 00:08:40,560

probably the best show of nature which

224

00:08:44,949 --> 00:08:43,039

is uh the sunrise and the sunsets on the

225

00:08:47,110 --> 00:08:44,959

earth's horizon

226

00:08:48,470 --> 00:08:47,120

amazing uh several students have asked

227

00:08:51,670 --> 00:08:48,480

the question about

228

00:08:54,710 --> 00:08:51,680

your free time what do you do to uh to

229

00:08:57,030 --> 00:08:54,720

pass the time and and do you uh do you

230

00:09:01,990 --> 00:08:57,040

become concerned about hitting a wall in

231

00:09:05,509 --> 00:09:03,990

uh that's a good question and to be

232

00:09:06,949 --> 00:09:05,519

honest i think for our first four months

233

00:09:10,310 --> 00:09:06,959

here in space we haven't had a lot of

234

00:09:12,150 --> 00:09:10,320

free time the weekends are generally

235

00:09:13,269 --> 00:09:12,160

we don't have as much scheduled work but

236

00:09:16,230 --> 00:09:13,279

there seems like there's always

237

00:09:18,790 --> 00:09:16,240

something to do and yesterday two days

238

00:09:21,110 --> 00:09:18,800

ago our crewmates came back to earth on

239

00:09:23,750 --> 00:09:21,120

the soyuz and we

240

00:09:25,990 --> 00:09:23,760

had yesterday off as a as a data sleep

241

00:09:27,829 --> 00:09:26,000

shift to get our schedule back normal

242

00:09:30,470 --> 00:09:27,839

and that was really nice to have some

243

00:09:32,710 --> 00:09:30,480

time off make some phone calls home

244

00:09:34,310 --> 00:09:32,720

and go through some emails and just rest

245

00:09:36,870 --> 00:09:34,320

for a day but it seems like most days

246

00:09:38,150 --> 00:09:36,880

even on the weekends there is a there's

247

00:09:41,509 --> 00:09:38,160

you know there's always something to do

248

00:09:43,190 --> 00:09:41,519

so we try and pace ourselves and um six

249

00:09:45,829 --> 00:09:43,200

months seems to be a pretty good time

250

00:09:48,150 --> 00:09:45,839

folks are able to work at a really good

251
00:09:49,829 --> 00:09:48,160
pace for six months and then um there

252
00:09:51,430 --> 00:09:49,839
comes a time when it's you know it's

253
00:09:52,790 --> 00:09:51,440
time to go back to earth but we're not

254
00:09:54,870 --> 00:09:52,800
there i think we're definitely enjoying

255
00:09:56,070 --> 00:09:54,880
our our time here and it still feels

256
00:09:59,990 --> 00:09:56,080
like there's a lot we want to get done

257
00:10:04,630 --> 00:10:02,389
well that is just incredible information

258
00:10:06,630 --> 00:10:04,640
with uh commander terry verts in command

259
00:10:08,710 --> 00:10:06,640
of the space station from columbia

260
00:10:11,350 --> 00:10:08,720
maryland also with uh flight engineer

261
00:10:13,190 --> 00:10:11,360
samantha christo ferretti speaking to us

262
00:10:15,509 --> 00:10:13,200
aboard the international space station

263
00:10:17,110 --> 00:10:15,519

here on wtop

264

00:10:19,110 --> 00:10:17,120

thank you both for taking the time we

265

00:10:21,509 --> 00:10:19,120

really appreciate it this was an

266

00:10:23,030 --> 00:10:21,519

unprecedented opportunity for us and we

267

00:10:25,190 --> 00:10:23,040

appreciate the work that you're doing

268

00:10:26,389 --> 00:10:25,200

thank you very much thank you to both of

269

00:10:30,150 --> 00:10:26,399

you

270

00:10:31,590 --> 00:10:30,160

all and

271

00:10:37,030 --> 00:10:31,600

hopefully i'll be back to earth in time

272

00:10:41,829 --> 00:10:38,949

station this is houston acr that

273

00:10:44,069 --> 00:10:41,839

concludes the wtop radio portion of the

274

00:10:53,350 --> 00:10:44,079

event please stand by for a voice check

275

00:10:59,509 --> 00:10:55,269

station this is your news how do you

276

00:11:10,310 --> 00:11:01,430

we hear you it's a little bit soft but

277

00:11:15,509 --> 00:11:13,190

okay hi terry bongiorno samantha thank

278

00:11:16,550 --> 00:11:15,519

you very much for joining us on euro

279

00:11:18,710 --> 00:11:16,560

news

280

00:11:21,110 --> 00:11:18,720

i would like to start by asking how you

281

00:11:23,829 --> 00:11:21,120

feel about the other three crew members

282

00:11:25,990 --> 00:11:23,839

returning to earth as the next crew will

283

00:11:31,430 --> 00:11:26,000

arrive at the end of march do you feel a

284

00:11:35,829 --> 00:11:33,829

you know it was it was it was sad seeing

285

00:11:37,670 --> 00:11:35,839

those guys leave we were together for

286

00:11:38,389 --> 00:11:37,680

four months they're very good friends

287

00:11:40,069 --> 00:11:38,399

and

288

00:11:42,389 --> 00:11:40,079

um we really enjoyed our time together

289

00:11:43,750 --> 00:11:42,399

so it was sad seeing them leave we're

290

00:11:45,990 --> 00:11:43,760

not too lonely though we have me

291

00:11:47,910 --> 00:11:46,000

samantha and anton are together now

292

00:11:49,110 --> 00:11:47,920

and this is an interesting two week time

293

00:11:51,269 --> 00:11:49,120

where we'll have the space station

294

00:11:52,870 --> 00:11:51,279

ourselves before our next crew arrives

295

00:11:55,430 --> 00:11:52,880

but i do want to say happy birthday to

296

00:11:58,230 --> 00:11:55,440

sasha today's his birthday

297

00:12:06,150 --> 00:11:58,240

alexander samokutyaev happy birthday

298

00:12:09,430 --> 00:12:07,910

in the first to four months of your

299

00:12:12,389 --> 00:12:09,440

mission you have carried out some

300

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

scientific experiments samantha could

301
00:12:24,790 --> 00:12:14,560
you tell us more about this and explain

302
00:12:28,389 --> 00:12:26,949
yes of course scientific research is the

303
00:12:30,069 --> 00:12:28,399
main reason why

304
00:12:31,350 --> 00:12:30,079
why we are up here on the international

305
00:12:36,629 --> 00:12:31,360
space station

306
00:12:38,790 --> 00:12:36,639
laboratory that allows us to do research

307
00:12:41,269 --> 00:12:38,800
in this very special condition which is

308
00:12:43,030 --> 00:12:41,279
microgravity or weightlessness

309
00:12:45,269 --> 00:12:43,040
which is very intriguing in many

310
00:12:47,190 --> 00:12:45,279
scientific fields because

311
00:12:49,910 --> 00:12:47,200
by doing scientific observations in

312
00:12:52,550 --> 00:12:49,920
microgravity you can observe and measure

313
00:12:54,790 --> 00:12:52,560

and quantify phenomena that otherwise

314

00:12:56,949 --> 00:12:54,800

you would not be able maybe not even to

315

00:12:59,430 --> 00:12:56,959

notice and certainly not to study in

316

00:13:01,750 --> 00:12:59,440

detail in the effect in the presence of

317

00:13:04,230 --> 00:13:01,760

the effects of gravity on earth and some

318

00:13:07,590 --> 00:13:04,240

of those fields are human science of

319

00:13:11,269 --> 00:13:07,600

course biology um human physiology

320

00:13:13,269 --> 00:13:11,279

but also material science fluid physics

321

00:13:15,910 --> 00:13:13,279

and of course the space station is also

322

00:13:17,509 --> 00:13:15,920

a platform for some um experiments that

323

00:13:18,790 --> 00:13:17,519

are actually observations of the

324

00:13:20,389 --> 00:13:18,800

universe

325

00:13:22,230 --> 00:13:20,399

i've done a lot of

326

00:13:23,990 --> 00:13:22,240

things in the last few months so it's

327

00:13:25,110 --> 00:13:24,000

it's it's going to be difficult to name

328

00:13:27,269 --> 00:13:25,120

them all

329

00:13:29,350 --> 00:13:27,279

but i can mention the few things that i

330

00:13:31,590 --> 00:13:29,360

have been working on recently and i will

331

00:13:33,990 --> 00:13:31,600

be working on soon which are two

332

00:13:37,110 --> 00:13:34,000

european space agency experiments airway

333

00:13:38,710 --> 00:13:37,120

monitoring and triple looks and

334

00:13:40,230 --> 00:13:38,720

both of them actually have been a little

335

00:13:42,069 --> 00:13:40,240

bit troublesome

336

00:13:43,750 --> 00:13:42,079

and i actually like to say this because

337

00:13:45,350 --> 00:13:43,760

uh you know you don't want to give the

338

00:13:47,269 --> 00:13:45,360

impression that in science everything

339

00:13:49,430 --> 00:13:47,279

works right off the bat and immediately

340

00:13:51,189 --> 00:13:49,440

sometimes it is harder it takes several

341

00:13:53,350 --> 00:13:51,199

trials it takes a little bit of trial

342

00:13:55,269 --> 00:13:53,360

and error it takes adjustments it takes

343

00:13:57,350 --> 00:13:55,279

learning and that has definitely been

344

00:13:58,870 --> 00:13:57,360

the case for example on this experiment

345

00:14:00,870 --> 00:13:58,880

airway monitoring which is a very

346

00:14:03,670 --> 00:14:00,880

intriguing scientific protocol that for

347

00:14:06,550 --> 00:14:03,680

the first time is going to study how the

348

00:14:08,790 --> 00:14:06,560

gaseous exchange in the lungs is

349

00:14:12,150 --> 00:14:08,800

affected by both the weightlessness

350

00:14:13,990 --> 00:14:12,160

microgravity and even reduced pressure

351

00:14:16,310 --> 00:14:14,000

actually terry and i were locked up in

352

00:14:17,910 --> 00:14:16,320

the airlock for several hours at reduced

353

00:14:19,350 --> 00:14:17,920

pressure to to do some of those

354

00:14:21,829 --> 00:14:19,360

measurements

355

00:14:24,069 --> 00:14:21,839

and then one which is going to come up

356

00:14:26,150 --> 00:14:24,079

as soon as we have fixed some issues

357

00:14:28,710 --> 00:14:26,160

we're having with the biolab rack is

358

00:14:30,550 --> 00:14:28,720

triple looks which is another intriguing

359

00:14:33,509 --> 00:14:30,560

scientific protocol which is aimed at

360

00:14:35,509 --> 00:14:33,519

studying the effect of weightlessness on

361

00:14:38,790 --> 00:14:35,519

the immune system on the behavior of

362

00:14:40,870 --> 00:14:38,800

some specific immune cells that are

363

00:14:47,590 --> 00:14:40,880

involved whenever our body fights

364

00:14:51,750 --> 00:14:49,829

terry another goal of this mission was

365

00:14:54,389 --> 00:14:51,760

to prepare the station for the arrival

366

00:14:56,790 --> 00:14:54,399

of future private spaceships for now

367

00:14:59,590 --> 00:14:56,800

that will mean once again having direct

368

00:15:01,350 --> 00:14:59,600

access to space how important will it be

369

00:15:07,509 --> 00:15:01,360

having a partnership with private

370

00:15:11,430 --> 00:15:09,269

well it's it's been a big part of our

371

00:15:13,269 --> 00:15:11,440

mission so far both doing spacewalks and

372

00:15:15,269 --> 00:15:13,279

doing work inside

373

00:15:17,269 --> 00:15:15,279

to get ready for the future vehicles

374

00:15:20,790 --> 00:15:17,279

that will be coming to the space station

375

00:15:22,230 --> 00:15:20,800

and it's very important for nasa our

376

00:15:23,750 --> 00:15:22,240

way forward the way that we're going to

377

00:15:25,350 --> 00:15:23,760

launch astronauts from florida once

378

00:15:26,870 --> 00:15:25,360

again to the space station is going to

379

00:15:29,269 --> 00:15:26,880

be on

380

00:15:30,230 --> 00:15:29,279

both the boeing capsule and a spacex

381

00:15:32,230 --> 00:15:30,240

capsule

382

00:15:34,069 --> 00:15:32,240

starting sometime in the next probably

383

00:15:35,910 --> 00:15:34,079

two years and we're really looking

384

00:15:37,910 --> 00:15:35,920

forward to that it's it's a important

385

00:15:39,670 --> 00:15:37,920

part of the space station program it's

386

00:15:41,350 --> 00:15:39,680

an important logistical

387

00:15:43,910 --> 00:15:41,360

thing that needs to be solved in order

388

00:15:50,150 --> 00:15:43,920

to get people to the station and back so

389

00:15:54,949 --> 00:15:52,230

and what comes after the international

390

00:15:57,189 --> 00:15:54,959

space station once its mission is over

391

00:16:01,509 --> 00:15:57,199

how do we ensure the presence of humans

392

00:16:04,389 --> 00:16:03,430

well that's a great question

393

00:16:08,150 --> 00:16:04,399

the

394

00:16:10,550 --> 00:16:08,160

plan that nasa has is to build a rocket

395

00:16:11,990 --> 00:16:10,560

called sls which is a heavy lift rocket

396

00:16:13,910 --> 00:16:12,000

it's something that is that is much

397

00:16:16,150 --> 00:16:13,920

bigger than what we have today and it

398

00:16:19,350 --> 00:16:16,160

will be able to launch the orion capsule

399

00:16:21,590 --> 00:16:19,360

with humans on board as well as landers

400

00:16:24,310 --> 00:16:21,600

or other uh components

401
00:16:26,949 --> 00:16:24,320
to be to destinations beyond earth orbit

402
00:16:28,389 --> 00:16:26,959
right now we only can fly in earth orbit

403
00:16:30,230 --> 00:16:28,399
that's the farthest that we can go and

404
00:16:32,069 --> 00:16:30,240
this new system that we're building is

405
00:16:33,590 --> 00:16:32,079
going to allow us to go beyond and

406
00:16:36,310 --> 00:16:33,600
hopefully take humans into the solar

407
00:16:37,990 --> 00:16:36,320
system to explore so the moon mars

408
00:16:39,990 --> 00:16:38,000
asteroids there's a lot of destinations

409
00:16:42,310 --> 00:16:40,000
that we could go to and we're building

410
00:16:49,509 --> 00:16:42,320
these building block components in order

411
00:16:54,150 --> 00:16:52,069
samantha according to a recent survey

412
00:16:56,710 --> 00:16:54,160
based on research on internet

413
00:16:59,189 --> 00:16:56,720

you are the most popular italian woman

414

00:17:01,749 --> 00:16:59,199

in the world ahead of monica bellucci

415

00:17:03,990 --> 00:17:01,759

and laura pausini does it mean that

416

00:17:11,029 --> 00:17:04,000

science may be more attractive than

417

00:17:14,630 --> 00:17:12,949

well

418

00:17:17,270 --> 00:17:14,640

i'm not sure that that was a service

419

00:17:20,069 --> 00:17:17,280

conducted according to the

420

00:17:21,029 --> 00:17:20,079

most scientific and statistical criteria

421

00:17:22,949 --> 00:17:21,039

but

422

00:17:25,510 --> 00:17:22,959

just to take it for for the fun that i

423

00:17:27,429 --> 00:17:25,520

i'm sure it was meant to be um

424

00:17:30,630 --> 00:17:27,439

i'm certainly happy that

425

00:17:33,110 --> 00:17:30,640

a person like me who is uh really nobody

426

00:17:34,710 --> 00:17:33,120

as a person but uh has the privilege of

427

00:17:37,590 --> 00:17:34,720

being the representative of something

428

00:17:39,350 --> 00:17:37,600

really special which is uh um

429

00:17:42,230 --> 00:17:39,360

you know the the space station program

430

00:17:43,510 --> 00:17:42,240

having this incredible uh technological

431

00:17:45,430 --> 00:17:43,520

scientific

432

00:17:47,350 --> 00:17:45,440

achievement which is really a testament

433

00:17:49,909 --> 00:17:47,360

of what humanity can achieve when we

434

00:17:52,230 --> 00:17:49,919

decide to work together and put together

435

00:17:55,029 --> 00:17:52,240

our best minds all over the world to do

436

00:17:56,870 --> 00:17:55,039

something which is really amazing and uh

437

00:17:58,549 --> 00:17:56,880

and of course it's it's a testament to

438

00:18:00,549 --> 00:17:58,559

the the scientific research that is

439

00:18:03,669 --> 00:18:00,559

conducted here and all the technological

440

00:18:05,110 --> 00:18:03,679

development which is uh really just uh

441

00:18:07,270 --> 00:18:05,120

you know

442

00:18:08,870 --> 00:18:07,280

ensuring that we um do all the steps

443

00:18:11,350 --> 00:18:08,880

that are necessary for further

444

00:18:14,470 --> 00:18:11,360

exploration in the future so in uh in

445

00:18:16,549 --> 00:18:14,480

that sense of course i i am happy that

446

00:18:19,110 --> 00:18:16,559

about the outcome of this survey of

447

00:18:25,029 --> 00:18:19,120

which again i i'm sure it was meant in

448

00:18:29,990 --> 00:18:27,190

okay just a quick question sent in by

449

00:18:32,070 --> 00:18:30,000

our social media followers in around two

450

00:18:33,909 --> 00:18:32,080

months you will come back to earth what

451
00:18:42,230 --> 00:18:33,919
did you guys miss the most during your

452
00:18:44,789 --> 00:18:43,350
well

453
00:18:46,950 --> 00:18:44,799
that's a great question

454
00:18:48,950 --> 00:18:46,960
living here is is very pleasant we have

455
00:18:50,310 --> 00:18:48,960
everything that we need the food is good

456
00:18:52,789 --> 00:18:50,320
we have we're here with good friends and

457
00:18:54,310 --> 00:18:52,799
so life here in space is pretty good um

458
00:18:55,909 --> 00:18:54,320
the thing i think we miss the most is

459
00:18:57,430 --> 00:18:55,919
people you know missing our families on

460
00:18:58,789 --> 00:18:57,440
earth missing our friends getting back

461
00:18:59,990 --> 00:18:58,799
to see folks

462
00:19:01,830 --> 00:19:00,000
that's the thing that you really miss

463
00:19:02,789 --> 00:19:01,840

more than anything another thing that

464

00:19:04,549 --> 00:19:02,799

i'll throw out there we were just

465

00:19:06,310 --> 00:19:04,559

talking about this is weather we don't

466

00:19:08,789 --> 00:19:06,320

have weather here we were just talking

467

00:19:09,909 --> 00:19:08,799

about rain and and snow and what it's

468

00:19:11,510 --> 00:19:09,919

like to have on earth so that is

469

00:19:13,190 --> 00:19:11,520

something that i miss and i'm looking

470

00:19:14,870 --> 00:19:13,200

forward to experiencing a little bit of

471

00:19:17,830 --> 00:19:14,880

weather hopefully a lot of sun and

472

00:19:19,110 --> 00:19:17,840

warmth but you know other other rain and

473

00:19:25,830 --> 00:19:19,120

snow and that kind of stuff is something

474

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

okay to finish i would like to ask how

475

00:19:32,230 --> 00:19:29,919

you remember on the station actor

476
00:19:35,110 --> 00:19:32,240
leonard nimoy and was your interest in

477
00:19:44,310 --> 00:19:35,120
space inspired by star trek and mr spock

478
00:19:52,230 --> 00:19:45,830
what can i have to ask you to say that

479
00:19:58,310 --> 00:19:56,150
i would like uh to ask how you remember

480
00:20:00,789 --> 00:19:58,320
you remembered on the station actor

481
00:20:06,710 --> 00:20:00,799
leonard nimoy and was your interest in

482
00:20:12,470 --> 00:20:07,830
okay

483
00:20:14,310 --> 00:20:12,480
the question um definitely i was a as a

484
00:20:17,590 --> 00:20:14,320
big tracker growing up

485
00:20:20,950 --> 00:20:17,600
i was really really really a big fan

486
00:20:23,750 --> 00:20:20,960
and i do think that it has played a part

487
00:20:26,390 --> 00:20:23,760
in in helping to in helping me to to

488
00:20:28,230 --> 00:20:26,400

show me this path to to help me become

489

00:20:30,230 --> 00:20:28,240

aware that this is what i wanted to do

490

00:20:32,310 --> 00:20:30,240

um you know become an astronaut travel

491

00:20:35,190 --> 00:20:32,320

to space and and play a little bit my

492

00:20:37,110 --> 00:20:35,200

part in uh in this human adventure of

493

00:20:39,590 --> 00:20:37,120

of space exploration which is just you

494

00:20:42,549 --> 00:20:39,600

know one long journey and and and one

495

00:20:45,669 --> 00:20:42,559

day maybe or you know i believe so a

496

00:20:49,110 --> 00:20:45,679

star trek reality will uh will be will

497

00:20:50,710 --> 00:20:49,120

be will become true so um i

498

00:20:52,950 --> 00:20:50,720

i really felt like

499

00:20:59,990 --> 00:20:52,960

i had an obligation to to honor leonard

500

00:21:04,630 --> 00:21:02,070

thank you very much for having been with

501
00:21:07,110 --> 00:21:04,640
us enjoy the rest of your mission and

502
00:21:11,830 --> 00:21:07,120
just as mr spock would have said live

503
00:21:15,029 --> 00:21:13,430
thank you very much i appreciate that

504
00:21:16,870 --> 00:21:15,039
and hello to all the folks down there in

505
00:21:18,070 --> 00:21:16,880
europe we just had a beautiful passover

506
00:21:20,630 --> 00:21:18,080
europe this morning it looked like a

507
00:21:21,909 --> 00:21:20,640
sunny day in a lot of places and and

508
00:21:27,190 --> 00:21:21,919
we'll see you back on earth in a few