



1  
00:00:05,269 --> 00:00:02,950  
station this is houston are you ready

2  
00:00:12,709 --> 00:00:05,279  
for the event

3  
00:00:16,870 --> 00:00:14,789  
indiana state senate this is mission

4  
00:00:19,269 --> 00:00:16,880  
control in houston

5  
00:00:20,470 --> 00:00:19,279  
please call station for a voice check

6  
00:00:28,150 --> 00:00:20,480  
please

7  
00:00:34,630 --> 00:00:29,830  
station this is senator david long of

8  
00:00:39,110 --> 00:00:37,670  
senator long i have you loud and clear

9  
00:00:40,549 --> 00:00:39,120  
all the way from indiana to the

10  
00:00:51,670 --> 00:00:40,559  
international space station welcome

11  
00:01:09,990 --> 00:00:53,189  
great to be here commander ford thank

12  
00:01:15,030 --> 00:01:12,550  
well david i understand uh there's a

13  
00:01:16,550 --> 00:01:15,040

quite a little bit of a delay and i know

14

00:01:18,070 --> 00:01:16,560

you all have some questions i'll go

15

00:01:20,230 --> 00:01:18,080

ahead and say just a few words if i

16

00:01:22,070 --> 00:01:20,240

could first of all it is really great to

17

00:01:24,550 --> 00:01:22,080

have you aboard the international space

18

00:01:26,789 --> 00:01:24,560

station with me all the way from indiana

19

00:01:28,469 --> 00:01:26,799

um it was an honor to be on the senate

20

00:01:29,510 --> 00:01:28,479

floor with you there in the state house

21

00:01:31,109 --> 00:01:29,520

today

22

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

i understand it's a beautiful day in

23

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

indiana i really probably should be at a

24

00:01:37,030 --> 00:01:34,799

window trying to get a good picture i've

25

00:01:38,789 --> 00:01:37,040

had a lot of passes over the state

26

00:01:41,030 --> 00:01:38,799

lately that were unfruitful for me

27

00:01:42,469 --> 00:01:41,040

because of a lot of morning fog and

28

00:01:44,069 --> 00:01:42,479

clouds and snow

29

00:01:46,630 --> 00:01:44,079

but that's the that's what you get with

30

00:01:48,389 --> 00:01:46,640

the winter months anyway my heart is

31

00:01:50,630 --> 00:01:48,399

there of course

32

00:01:52,950 --> 00:01:50,640

i haven't been living in indiana since

33

00:01:54,710 --> 00:01:52,960

since i graduated from notre dame

34

00:01:57,030 --> 00:01:54,720

because i had a career as an air force

35

00:02:00,630 --> 00:01:57,040

officer and then of course i've been at

36

00:02:02,709 --> 00:02:00,640

nasa now for about 12 13 years but i

37

00:02:04,149 --> 00:02:02,719

come there often and my family's there i

38

00:02:05,830 --> 00:02:04,159

understand they're with you today in the

39

00:02:07,190 --> 00:02:05,840

state house and i really appreciate you

40

00:02:10,309 --> 00:02:07,200

having them

41

00:02:11,430 --> 00:02:10,319

there and taking good care of them today

42

00:02:12,869 --> 00:02:11,440

as you know

43

00:02:15,510 --> 00:02:12,879

some of you know my brother david who

44

00:02:17,350 --> 00:02:15,520

served alongside you and and he was uh

45

00:02:19,430 --> 00:02:17,360

just as i'm honored to speak with you

46

00:02:21,030 --> 00:02:19,440

today he was just so honored to serve

47

00:02:24,470 --> 00:02:21,040

and uh and that

48

00:02:26,390 --> 00:02:24,480

in that group uh he respected everybody

49

00:02:29,030 --> 00:02:26,400

and that worked worked in the state

50

00:02:31,270 --> 00:02:29,040

house with him and he just he just loved

51  
00:02:33,110 --> 00:02:31,280  
serving the people and it's just an

52  
00:02:35,830 --> 00:02:33,120  
honor for me to be able to speak with so

53  
00:02:38,390 --> 00:02:35,840  
many of his friends that are still there

54  
00:02:40,710 --> 00:02:38,400  
and people who know him and benefited

55  
00:02:42,630 --> 00:02:40,720  
from what david brought there

56  
00:02:45,990 --> 00:02:42,640  
so it's a it's a huge honor to be with

57  
00:02:48,470 --> 00:02:46,000  
you of course and uh it's also an honor

58  
00:02:50,309 --> 00:02:48,480  
i'm very proud of where i came from and

59  
00:02:53,270 --> 00:02:50,319  
i'm also obviously very proud of where i

60  
00:02:57,270 --> 00:02:53,280  
am right now this is an amazing facility

61  
00:02:58,949 --> 00:02:57,280  
we have in space uh not that many people

62  
00:03:00,390 --> 00:02:58,959  
you know really understand what we're

63  
00:03:03,030 --> 00:03:00,400

all about here

64

00:03:05,270 --> 00:03:03,040

we have about 150 experiments going on

65

00:03:08,070 --> 00:03:05,280

right now some of them inside the space

66

00:03:10,229 --> 00:03:08,080

station that i work with every day and

67

00:03:11,589 --> 00:03:10,239

as a crew member and many of them

68

00:03:13,750 --> 00:03:11,599

outside the space station that the

69

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

ground controllers in houston are taking

70

00:03:18,309 --> 00:03:15,840

care of that we're not even aware of and

71

00:03:20,070 --> 00:03:18,319

it's just there are uh experiments right

72

00:03:22,869 --> 00:03:20,080

outside my window right now gathering

73

00:03:23,830 --> 00:03:22,879

data about the universe uh some of them

74

00:03:25,589 --> 00:03:23,840

uh

75

00:03:27,190 --> 00:03:25,599

alphabetically alpha magnetic

76

00:03:29,190 --> 00:03:27,200

spectrometer things about like dark

77

00:03:32,550 --> 00:03:29,200

matter and stuff that's really abstract

78

00:03:34,789 --> 00:03:32,560

other things on board like working with

79

00:03:36,470 --> 00:03:34,799

with medical issues and stuff for the

80

00:03:38,789 --> 00:03:36,480

people on planet earth so it's really an

81

00:03:41,910 --> 00:03:38,799

important facility uh one of the things

82

00:03:44,390 --> 00:03:41,920

i'm most proud about is that it's also a

83

00:03:47,990 --> 00:03:44,400

work done by an international group in

84

00:03:50,630 --> 00:03:48,000

cooperation it is the one facility

85

00:03:51,750 --> 00:03:50,640

on the planet where some countries came

86

00:03:53,350 --> 00:03:51,760

together

87

00:03:55,750 --> 00:03:53,360

countries sometimes with even very

88

00:03:57,670 --> 00:03:55,760

different interests 15 of the most

89

00:03:59,830 --> 00:03:57,680

affluent countries countries who had a

90

00:04:02,550 --> 00:03:59,840

lot to offer came together and thought

91

00:04:04,070 --> 00:04:02,560

about humankind a hundred years from now

92

00:04:06,309 --> 00:04:04,080

and what we could do now to make a

93

00:04:08,470 --> 00:04:06,319

difference in the future and i have

94

00:04:10,789 --> 00:04:08,480

russian cosmonaut crewmates

95

00:04:12,789 --> 00:04:10,799

just literally 50 feet from me right now

96

00:04:14,869 --> 00:04:12,799

who i rode up and down with to get to

97

00:04:16,710 --> 00:04:14,879

the space station i'm in a japanese

98

00:04:19,189 --> 00:04:16,720

module right now

99

00:04:21,110 --> 00:04:19,199

i was introduced to you by a canadian

100

00:04:22,230 --> 00:04:21,120

capcom that i was talking to just before

101  
00:04:24,870 --> 00:04:22,240  
i came on and it's truly an

102  
00:04:26,469 --> 00:04:24,880  
international effort and it really is uh

103  
00:04:27,670 --> 00:04:26,479  
i think that it's going to make a

104  
00:04:29,909 --> 00:04:27,680  
difference

105  
00:04:32,070 --> 00:04:29,919  
in the future of the planet that's

106  
00:04:33,990 --> 00:04:32,080  
really a program for the planet i think

107  
00:04:35,990 --> 00:04:34,000  
if you will another thing that's really

108  
00:04:38,469 --> 00:04:36,000  
cool about it is

109  
00:04:40,150 --> 00:04:38,479  
90 percent of the world's population if

110  
00:04:41,350 --> 00:04:40,160  
they know when to look

111  
00:04:43,270 --> 00:04:41,360  
they can

112  
00:04:45,110 --> 00:04:43,280  
go out in the evening or the morning and

113  
00:04:47,030 --> 00:04:45,120

look in the sky and see their space

114

00:04:49,909 --> 00:04:47,040

station fly over so it's really a space

115

00:04:51,430 --> 00:04:49,919

station serving them and visible to them

116

00:04:52,790 --> 00:04:51,440

and i just think it's just a really

117

00:04:55,110 --> 00:04:52,800

really cool thing

118

00:04:56,550 --> 00:04:55,120

so i'm really honored to be here it's a

119

00:04:58,870 --> 00:04:56,560

it's a short even though i've been here

120

00:05:01,110 --> 00:04:58,880

100 and a little over 105 days and i've

121

00:05:02,950 --> 00:05:01,120

got just about another 40 on board it's

122

00:05:05,510 --> 00:05:02,960

really a short stay for me it's a once

123

00:05:07,270 --> 00:05:05,520

in a lifetime opportunity and the fact

124

00:05:08,870 --> 00:05:07,280

that you guys were to come on uh be able

125

00:05:10,070 --> 00:05:08,880

to come on board with me and talk to me

126

00:05:11,830 --> 00:05:10,080

just a little bit about it while i'm

127

00:05:13,590 --> 00:05:11,840

here is really special and hopefully

128

00:05:14,950 --> 00:05:13,600

i'll get to come back and see you and

129

00:05:17,830 --> 00:05:14,960

tell you even more about it when i get

130

00:05:19,430 --> 00:05:17,840

home given that our short time uh is you

131

00:05:21,510 --> 00:05:19,440

know our time is limited on board here

132

00:05:23,110 --> 00:05:21,520

so with that i'll go ahead like i said

133

00:05:24,550 --> 00:05:23,120

there's a bit of a delay i'll turn the

134

00:05:26,469 --> 00:05:24,560

mic off and i think you have some

135

00:05:37,430 --> 00:05:26,479

questions for me that i'd love to answer

136

00:05:41,430 --> 00:05:39,029

well commander first of all i want to

137

00:05:42,950 --> 00:05:41,440

welcome everyone participating today and

138

00:05:44,550 --> 00:05:42,960

that means school children across the

139

00:05:46,469 --> 00:05:44,560

state of indiana as well and in

140

00:05:48,950 --> 00:05:46,479

particular we wanted to know mrs brown's

141

00:05:51,029 --> 00:05:48,960

first grade class at seton catholic

142

00:05:52,550 --> 00:05:51,039

elementary school in richmond indiana we

143

00:05:55,110 --> 00:05:52,560

want to give them a special shout out

144

00:05:57,189 --> 00:05:55,120

but to all the young people watching uh

145

00:05:59,430 --> 00:05:57,199

hello and welcome

146

00:06:01,029 --> 00:05:59,440

i have several questions and i'll just

147

00:06:03,270 --> 00:06:01,039

ask them the sequence and let you answer

148

00:06:04,550 --> 00:06:03,280

them commander the first one you

149

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

mentioned some experiments could you

150

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

maybe describe the type of experiments

151  
00:06:14,870 --> 00:06:08,160  
you're conducting and how will it help

152  
00:06:21,270 --> 00:06:17,909  
yeah so we have a group of scientists on

153  
00:06:23,749 --> 00:06:21,280  
the ground really all over the world who

154  
00:06:26,230 --> 00:06:23,759  
really have had problems

155  
00:06:27,510 --> 00:06:26,240  
that they've wanted to solve and a zero

156  
00:06:29,350 --> 00:06:27,520  
gravity if you will we call it

157  
00:06:31,510 --> 00:06:29,360  
microgravity but it's essentially zero

158  
00:06:33,110 --> 00:06:31,520  
gravity environment is a great place to

159  
00:06:35,430 --> 00:06:33,120  
solve these problems

160  
00:06:37,670 --> 00:06:35,440  
stuff i've worked on uh since i've been

161  
00:06:40,150 --> 00:06:37,680  
here one one is just just 10 feet from

162  
00:06:42,790 --> 00:06:40,160  
me was in a fish aquarium and we had

163  
00:06:44,309 --> 00:06:42,800

fish on board called madoka that have

164

00:06:48,629 --> 00:06:44,319

bones

165

00:06:50,629 --> 00:06:48,639

not all fish do but these did and as a

166

00:06:52,870 --> 00:06:50,639

as a science experiment to actually

167

00:06:54,790 --> 00:06:52,880

study the way bone is created and

168

00:06:56,469 --> 00:06:54,800

destroyed and of course astronauts we

169

00:06:58,710 --> 00:06:56,479

lose a we lose a fair amount of bone

170

00:07:01,749 --> 00:06:58,720

mass while we're up here and it's very

171

00:07:04,150 --> 00:07:01,759

closely related to osteoporosis and they

172

00:07:05,830 --> 00:07:04,160

have a real good chance of making a huge

173

00:07:07,749 --> 00:07:05,840

difference in osteoporosis in the

174

00:07:09,990 --> 00:07:07,759

elderly in the future and wouldn't that

175

00:07:11,270 --> 00:07:10,000

be wonderful if someday osteoporosis was

176  
00:07:13,510 --> 00:07:11,280  
a thing that we used to talk about

177  
00:07:14,710 --> 00:07:13,520  
instead of had to live with

178  
00:07:18,469 --> 00:07:14,720  
we have

179  
00:07:20,230 --> 00:07:18,479  
of different things that they look at us

180  
00:07:21,990 --> 00:07:20,240  
and medically because uh we're

181  
00:07:23,749 --> 00:07:22,000  
essentially almost in a bed-rest state

182  
00:07:25,350 --> 00:07:23,759  
up here not having to carry our own mass

183  
00:07:27,830 --> 00:07:25,360  
around all the time so we really have to

184  
00:07:29,589 --> 00:07:27,840  
look at preventive majors uh much like

185  
00:07:31,350 --> 00:07:29,599  
you'd have to to work

186  
00:07:33,670 --> 00:07:31,360  
to look at with you know some bed rest

187  
00:07:35,189 --> 00:07:33,680  
patients and stuff on the ground we also

188  
00:07:37,589 --> 00:07:35,199

can use it as a test

189

00:07:39,029 --> 00:07:37,599

test bed for spacecraft development out

190

00:07:40,710 --> 00:07:39,039

in the hallway here in the last few days

191

00:07:42,950 --> 00:07:40,720

we did some experiments called capillary

192

00:07:45,189 --> 00:07:42,960

flow where we're looking at how bubbles

193

00:07:46,469 --> 00:07:45,199

move around inside vessels and i i know

194

00:07:47,990 --> 00:07:46,479

if you've been in a hospital and you've

195

00:07:49,990 --> 00:07:48,000

seen maybe the nurse trying to flick

196

00:07:52,070 --> 00:07:50,000

bubbles out of the end of a syringe by

197

00:07:53,350 --> 00:07:52,080

studying the way uh the surface tension

198

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

works and stuff in bubbles in a

199

00:07:56,710 --> 00:07:54,879

microgravity environment with bigger

200

00:07:58,469 --> 00:07:56,720

bubbles they can understand what's going

201  
00:08:00,230 --> 00:07:58,479  
on there and someday that'll be a thing

202  
00:08:02,070 --> 00:08:00,240  
of the past too we'll just we'll know

203  
00:08:05,589 --> 00:08:02,080  
how to control bubble formulation in

204  
00:08:07,430 --> 00:08:05,599  
vessels and it's also applicable to

205  
00:08:09,589 --> 00:08:07,440  
fuel and fuel tanks and that sort of

206  
00:08:10,710 --> 00:08:09,599  
thing outside we're looking at robotic

207  
00:08:13,510 --> 00:08:10,720  
refueling

208  
00:08:15,430 --> 00:08:13,520  
for someday space craft we'll be able to

209  
00:08:17,830 --> 00:08:15,440  
visit say satellites already out there

210  
00:08:19,670 --> 00:08:17,840  
and robotically refuel them we just did

211  
00:08:22,070 --> 00:08:19,680  
some stuff outside on the space station

212  
00:08:23,029 --> 00:08:22,080  
in the last weeks made huge progress on

213  
00:08:25,430 --> 00:08:23,039

that

214

00:08:27,430 --> 00:08:25,440

and we also got some experiments outside

215

00:08:29,510 --> 00:08:27,440

called missy that are looking at the way

216

00:08:30,710 --> 00:08:29,520

materials uh handle the space

217

00:08:32,469 --> 00:08:30,720

environment of course that's very

218

00:08:34,230 --> 00:08:32,479

important too for future spacecraft and

219

00:08:36,389 --> 00:08:34,240

satellites so we want to last a long

220

00:08:38,949 --> 00:08:36,399

time so it's just that's a that's four

221

00:08:40,310 --> 00:08:38,959

mentions of a broad brush i mean there

222

00:08:43,110 --> 00:08:40,320

are literally hundreds and hundreds and

223

00:08:44,470 --> 00:08:43,120

hundreds of ideas about 150 going on at

224

00:08:55,910 --> 00:08:44,480

the current time so it's pretty

225

00:08:59,990 --> 00:08:58,150

well commander our next question is

226

00:09:01,910 --> 00:09:00,000

you know education is a big issue for us

227

00:09:03,590 --> 00:09:01,920

here in indiana as a graduate from

228

00:09:05,750 --> 00:09:03,600

blackford high school in notre dame both

229

00:09:07,269 --> 00:09:05,760

here in indiana what classes did you

230

00:09:09,190 --> 00:09:07,279

take in high school and in college to

231

00:09:13,430 --> 00:09:09,200

prepare yourself for the life of an

232

00:09:17,110 --> 00:09:14,949

well let me tell you when i was in high

233

00:09:19,750 --> 00:09:17,120

school i i didn't see myself as an

234

00:09:20,949 --> 00:09:19,760

astronaut i i certainly would love to

235

00:09:23,110 --> 00:09:20,959

have been

236

00:09:25,750 --> 00:09:23,120

i was in love with aviation i saw myself

237

00:09:27,590 --> 00:09:25,760

as a pilot at that time and i enjoyed

238

00:09:29,430 --> 00:09:27,600

physics and math and science so i took

239

00:09:31,509 --> 00:09:29,440

the things i enjoyed and i you know i

240

00:09:33,269 --> 00:09:31,519

would encourage students to find the

241

00:09:36,470 --> 00:09:33,279

things the areas they really love the

242

00:09:38,710 --> 00:09:36,480

most and just put their heart into those

243

00:09:40,949 --> 00:09:38,720

all of the subjects it turns out to be

244

00:09:43,509 --> 00:09:40,959

an astronaut are very important

245

00:09:45,269 --> 00:09:43,519

language skills i spoke russian in the

246

00:09:47,750 --> 00:09:45,279

capsule coming up and down and and

247

00:09:49,910 --> 00:09:47,760

without a good fundamental

248

00:09:51,269 --> 00:09:49,920

you know knowledge of english and it's

249

00:09:53,750 --> 00:09:51,279

language structure and that sort of

250

00:09:55,750 --> 00:09:53,760

thing you you know you're not really

251  
00:09:57,910 --> 00:09:55,760  
prepared to go out and do that so the

252  
00:10:00,870 --> 00:09:57,920  
the the liberal arts are also just very

253  
00:10:02,870 --> 00:10:00,880  
important uh to to a lot of the things

254  
00:10:05,829 --> 00:10:02,880  
we do and of course communication and

255  
00:10:07,350 --> 00:10:05,839  
stuff is a big part of what i do now

256  
00:10:08,630 --> 00:10:07,360  
but like i said at that time i wasn't

257  
00:10:10,630 --> 00:10:08,640  
really thinking about it i was just

258  
00:10:12,389 --> 00:10:10,640  
thinking about taking a lot of math and

259  
00:10:14,230 --> 00:10:12,399  
science and physics and the things i

260  
00:10:16,230 --> 00:10:14,240  
enjoyed and then when i went to notre

261  
00:10:18,470 --> 00:10:16,240  
dame i studied engineering because it's

262  
00:10:20,069 --> 00:10:18,480  
just what i loved and and i wanted to be

263  
00:10:22,230 --> 00:10:20,079

a pilot and i wanted to understand

264

00:10:24,710 --> 00:10:22,240

exactly how the airplane works before i

265

00:10:26,790 --> 00:10:24,720

understa went to to fly them and and

266

00:10:28,069 --> 00:10:26,800

enjoy that part of the the career field

267

00:10:29,670 --> 00:10:28,079

too so

268

00:10:31,750 --> 00:10:29,680

i just prepared myself by taking the

269

00:10:33,509 --> 00:10:31,760

classes i liked worrying more about the

270

00:10:35,030 --> 00:10:33,519

learning i think than the grades just

271

00:10:47,670 --> 00:10:35,040

learn as much as you can for those

272

00:10:51,430 --> 00:10:49,509

well we have a uh

273

00:10:52,710 --> 00:10:51,440

another question essentially you

274

00:10:53,990 --> 00:10:52,720

answered a little bit you do speak

275

00:10:55,269 --> 00:10:54,000

russian but we were wondering what it's

276

00:10:56,949 --> 00:10:55,279

like to be in space with fellow

277

00:10:59,269 --> 00:10:56,959

astronauts from other nations in this

278

00:11:00,949 --> 00:10:59,279

case russia and japan and is there a

279

00:11:06,230 --> 00:11:00,959

language barrier or cultural barrier can

280

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

well there's not as much as you'd think

281

00:11:12,630 --> 00:11:11,040

obviously different kinds of foods

282

00:11:14,069 --> 00:11:12,640

different kinds of traditions but we

283

00:11:16,870 --> 00:11:14,079

enjoy learning about each other's

284

00:11:18,949 --> 00:11:16,880

traditions uh the cosmonauts on board uh

285

00:11:21,430 --> 00:11:18,959

when i celebrated thanksgiving up here

286

00:11:23,350 --> 00:11:21,440

there were just three of us me and my uh

287

00:11:25,509 --> 00:11:23,360

two russian cosmonaut crewmates oleg and

288

00:11:26,710 --> 00:11:25,519

evgeny who i flew up on the soyuz with

289

00:11:28,710 --> 00:11:26,720

and they came down and enjoyed

290

00:11:30,550 --> 00:11:28,720

thanksgiving dinner with me and asked a

291

00:11:33,190 --> 00:11:30,560

lot of questions about it and i do the

292

00:11:35,190 --> 00:11:33,200

same thing uh the japanese astronaut is

293

00:11:39,350 --> 00:11:35,200

gone now i was here with akioside for a

294

00:11:41,350 --> 00:11:39,360

bit and uh he uh you know he's uh he's

295

00:11:43,750 --> 00:11:41,360

speaks great english the cosmonauts

296

00:11:45,190 --> 00:11:43,760

speak very very well in english as well

297

00:11:46,710 --> 00:11:45,200

and we have to learn some russian

298

00:11:48,870 --> 00:11:46,720

because in the spacecraft the soyuz

299

00:11:50,310 --> 00:11:48,880

spacecraft itself we do speak russian

300

00:11:51,910 --> 00:11:50,320

the ground controllers are speaking to

301  
00:11:53,509 --> 00:11:51,920  
us in russian and that's just the

302  
00:11:55,590 --> 00:11:53,519  
language of operations all the books are

303  
00:11:57,590 --> 00:11:55,600  
written that way so we have we have to

304  
00:11:59,269 --> 00:11:57,600  
study those and frankly to get through

305  
00:12:01,190 --> 00:11:59,279  
that language barrier you just need a

306  
00:12:03,269 --> 00:12:01,200  
lot a lot of study time thousands of

307  
00:12:04,870 --> 00:12:03,279  
hours of actually of time i've spent

308  
00:12:06,550 --> 00:12:04,880  
studying russian over the last 10 years

309  
00:12:08,389 --> 00:12:06,560  
you know to prepare for the for the

310  
00:12:10,470 --> 00:12:08,399  
flight but it's all something given the

311  
00:12:12,230 --> 00:12:10,480  
amount of you know given some time that

312  
00:12:13,750 --> 00:12:12,240  
uh that you can get to and we speak a

313  
00:12:15,750 --> 00:12:13,760

little bit of what we call ruthless

314

00:12:17,030 --> 00:12:15,760

they'll speak usually english to me to

315

00:12:18,310 --> 00:12:17,040

try their english and i'll see if i

316

00:12:19,829 --> 00:12:18,320

understand that and when i have a

317

00:12:22,069 --> 00:12:19,839

question for them or i go to them with

318

00:12:23,829 --> 00:12:22,079

the request i try to do it in russian

319

00:12:25,350 --> 00:12:23,839

and that's just a it's a good good

320

00:12:26,790 --> 00:12:25,360

operational technique and we sometimes

321

00:12:37,990 --> 00:12:26,800

use both languages to make sure we get

322

00:12:41,190 --> 00:12:39,670

well commander we have a couple of

323

00:12:43,190 --> 00:12:41,200

special guests here with us who each are

324

00:12:46,150 --> 00:12:43,200

going to ask you a question it's joel

325

00:12:47,990 --> 00:12:46,160

and kelly neff from uh you're

326

00:12:50,389 --> 00:12:48,000

from from indiana i think you know the

327

00:12:56,389 --> 00:12:50,399

family from montpelier joel is going to

328

00:13:04,230 --> 00:12:57,990

what do you eat for breakfast lunch and

329

00:13:08,470 --> 00:13:06,870

well that's a that's a great question uh

330

00:13:10,790 --> 00:13:08,480

joel and welcome aboard the space

331

00:13:14,389 --> 00:13:10,800

station uh it's great to have you here

332

00:13:16,470 --> 00:13:14,399

we uh we have a food lab in houston and

333

00:13:18,150 --> 00:13:16,480

in russia and in europe that prepares

334

00:13:20,389 --> 00:13:18,160

food for us to eat and they pre-package

335

00:13:22,710 --> 00:13:20,399

it um i do have some handy here that i

336

00:13:25,430 --> 00:13:22,720

can show you so for breakfast i you know

337

00:13:26,949 --> 00:13:25,440

i'm i i'm kind of a boring guy i kind of

338

00:13:29,350 --> 00:13:26,959

eat almost the same thing every morning

339

00:13:31,829 --> 00:13:29,360

but one of the things i have is is

340

00:13:33,750 --> 00:13:31,839

scrambled eggs and they come dried and

341

00:13:35,110 --> 00:13:33,760

they just have to be rehydrated i hope

342

00:13:37,269 --> 00:13:35,120

you can see that this has seasoned

343

00:13:39,030 --> 00:13:37,279

scrambled eggs on it at the little top

344

00:13:41,829 --> 00:13:39,040

at the top there is a little place where

345

00:13:43,829 --> 00:13:41,839

we can inject a needle and inject 100

346

00:13:45,670 --> 00:13:43,839

milliliters of hot water in here and you

347

00:13:47,590 --> 00:13:45,680

give it 15 minutes and you let the

348

00:13:49,910 --> 00:13:47,600

seasoning mix in and you have yourself

349

00:13:51,829 --> 00:13:49,920

some scrambled eggs and then i always

350

00:13:53,829 --> 00:13:51,839

grab some fruit also

351  
00:13:55,990 --> 00:13:53,839  
this happens to be apples with spice and

352  
00:13:57,829 --> 00:13:56,000  
it's come it's it's already it comes

353  
00:14:00,310 --> 00:13:57,839  
it's already packaged

354  
00:14:02,550 --> 00:14:00,320  
as hydrated and you just clip the

355  
00:14:04,550 --> 00:14:02,560  
package open and you can eat the uh the

356  
00:14:06,150 --> 00:14:04,560  
apples uh right out of it

357  
00:14:09,110 --> 00:14:06,160  
so um

358  
00:14:11,110 --> 00:14:09,120  
we sometimes get some food in cans too

359  
00:14:12,870 --> 00:14:11,120  
here's a food from

360  
00:14:14,629 --> 00:14:12,880  
the european space agency and it's

361  
00:14:16,949 --> 00:14:14,639  
packaged in a can and it's just got a

362  
00:14:18,870 --> 00:14:16,959  
pull ring there just a little pop top so

363  
00:14:21,590 --> 00:14:18,880

that we can just open it up and eat out

364

00:14:24,150 --> 00:14:21,600

of the can and then we you know we just

365

00:14:25,910 --> 00:14:24,160

throw the the remnants away so i'll go

366

00:14:27,829 --> 00:14:25,920

get that in a little bit and then to

367

00:14:29,350 --> 00:14:27,839

drink i usually have a little coffee for

368

00:14:31,110 --> 00:14:29,360

breakfast or some orange juice or maybe

369

00:14:33,750 --> 00:14:31,120

a breakfast drink or something and it

370

00:14:35,990 --> 00:14:33,760

comes in just a little foil pouch

371

00:14:37,670 --> 00:14:36,000

with a mix inside and then we inject

372

00:14:38,870 --> 00:14:37,680

water again into the top just like we

373

00:14:41,110 --> 00:14:38,880

would those eggs and then we just put a

374

00:14:43,189 --> 00:14:41,120

straw in here that has a clip so that i

375

00:14:44,629 --> 00:14:43,199

can just

376

00:14:46,310 --> 00:14:44,639

let a little squeeze out you can see a

377

00:14:48,550 --> 00:14:46,320

little little juice coming out the top

378

00:14:50,310 --> 00:14:48,560

of the straw there

379

00:14:54,870 --> 00:14:50,320

i'll squeeze a little out and and have

380

00:14:54,880 --> 00:15:11,750

there we go not too big a mess

381

00:15:20,550 --> 00:15:13,509

what is the first thing you're looking

382

00:15:23,829 --> 00:15:21,910

the first thing i'm looking forward to

383

00:15:27,509 --> 00:15:23,839

doing is taking a shower because i

384

00:15:29,110 --> 00:15:27,519

haven't had a shower in 107 days

385

00:15:30,629 --> 00:15:29,120

but the second thing i'm looking forward

386

00:15:32,069 --> 00:15:30,639

to doing is really just getting some

387

00:15:34,150 --> 00:15:32,079

relaxation

388

00:15:35,910 --> 00:15:34,160

the pace up here is pretty intense we we

389

00:15:38,150 --> 00:15:35,920

work a lot because it's expensive to get

390

00:15:39,990 --> 00:15:38,160

us up here so even on weekends we end up

391

00:15:41,749 --> 00:15:40,000

doing a lot of work

392

00:15:43,590 --> 00:15:41,759

so i'm looking forward to just having a

393

00:15:45,829 --> 00:15:43,600

little time off i'll have a

394

00:15:47,590 --> 00:15:45,839

some time to do some rehabilitation

395

00:15:49,350 --> 00:15:47,600

it'll be very difficult for me to work

396

00:15:51,910 --> 00:15:49,360

at first

397

00:15:53,910 --> 00:15:51,920

to do anything really that involves

398

00:15:55,749 --> 00:15:53,920

muscles because of the gravity effect

399

00:15:57,189 --> 00:15:55,759

it's just a really strange heavy feeling

400

00:15:59,269 --> 00:15:57,199

when you get home you're used to no

401  
00:16:01,829 --> 00:15:59,279  
gravity even holding your head up in

402  
00:16:03,350 --> 00:16:01,839  
space is effortless so your neck muscles

403  
00:16:05,509 --> 00:16:03,360  
kind of get lazy

404  
00:16:07,590 --> 00:16:05,519  
so um just moving around so i have to do

405  
00:16:09,910 --> 00:16:07,600  
a lot of rehabilitation

406  
00:16:12,550 --> 00:16:09,920  
and uh and get used to the environment

407  
00:16:13,990 --> 00:16:12,560  
again and then after that uh start to go

408  
00:16:15,829 --> 00:16:14,000  
out and really enjoy some things of

409  
00:16:17,269 --> 00:16:15,839  
course i'm looking forward to some of

410  
00:16:19,030 --> 00:16:17,279  
the foods you can't have up here we

411  
00:16:20,310 --> 00:16:19,040  
don't have pizza we don't have ice cream

412  
00:16:21,590 --> 00:16:20,320  
very often we had a little bit when i

413  
00:16:24,470 --> 00:16:21,600

first got here

414

00:16:27,509 --> 00:16:24,480

and also spending time outside i'm in an

415

00:16:29,430 --> 00:16:27,519

environment here that has all walls with

416

00:16:30,949 --> 00:16:29,440

equipment on all sides we can use any of

417

00:16:32,230 --> 00:16:30,959

them as racks and science we have

418

00:16:34,069 --> 00:16:32,240

science on the floor science on the

419

00:16:35,509 --> 00:16:34,079

ceiling and all walls and so it's just a

420

00:16:36,870 --> 00:16:35,519

busy environment so i'm looking forward

421

00:16:38,150 --> 00:16:36,880

to getting back out in nature again

422

00:16:40,150 --> 00:16:38,160

that's that's what i'm really looking

423

00:16:42,069 --> 00:16:40,160

forward to most besides family and

424

00:16:53,189 --> 00:16:42,079

friends of course so thanks for the the

425

00:16:57,670 --> 00:16:55,110

commander ford this is state senator tim

426

00:16:59,509 --> 00:16:57,680

lane and i have another question for you

427

00:17:01,829 --> 00:16:59,519

and it is how important is it that the

428

00:17:08,309 --> 00:17:01,839

u.s continue the manned space flight and

429

00:17:12,470 --> 00:17:10,470

well i think it's very important that

430

00:17:13,750 --> 00:17:12,480

that somebody continue it of course and

431

00:17:15,669 --> 00:17:13,760

i'd like to think that that somebody

432

00:17:18,230 --> 00:17:15,679

will be the united states

433

00:17:20,470 --> 00:17:18,240

we've always been a leader in space we

434

00:17:22,630 --> 00:17:20,480

frankly are a country who is very

435

00:17:25,270 --> 00:17:22,640

blessed with a lot of assets

436

00:17:27,669 --> 00:17:25,280

and a lot of really great technical and

437

00:17:29,750 --> 00:17:27,679

technological skill sets things that we

438

00:17:32,710 --> 00:17:29,760

can really contribute i think to the

439

00:17:35,190 --> 00:17:32,720

human race and so it's almost in my

440

00:17:36,310 --> 00:17:35,200

opinion our obligation to do it but i

441

00:17:38,230 --> 00:17:36,320

think we really ought to want to

442

00:17:39,190 --> 00:17:38,240

participate in it as well

443

00:17:41,669 --> 00:17:39,200

um

444

00:17:43,990 --> 00:17:41,679

it's it's uh absolutely true that space

445

00:17:47,350 --> 00:17:44,000

is the final frontier that's where we're

446

00:17:48,710 --> 00:17:47,360

heading um some someday a lot of people

447

00:17:50,630 --> 00:17:48,720

are going to know how to operate out

448

00:17:52,150 --> 00:17:50,640

here and live off the planet and i think

449

00:17:53,830 --> 00:17:52,160

it's important that the united states

450

00:17:56,470 --> 00:17:53,840

participate in

451  
00:17:59,669 --> 00:17:56,480  
it's really a small part of

452  
00:18:01,190 --> 00:17:59,679  
what we do with our money is to explore

453  
00:18:03,590 --> 00:18:01,200  
but i think the exploration is

454  
00:18:05,510 --> 00:18:03,600  
absolutely critical we do it at home in

455  
00:18:07,430 --> 00:18:05,520  
our families we spend time traveling and

456  
00:18:08,950 --> 00:18:07,440  
going out and seeing things and i think

457  
00:18:10,870 --> 00:18:08,960  
as a race we should go out and see

458  
00:18:12,230 --> 00:18:10,880  
what's out here too learn how to live

459  
00:18:15,590 --> 00:18:12,240  
out here and

460  
00:18:17,029 --> 00:18:15,600  
trust me there is a lot of stuff i since

461  
00:18:19,909 --> 00:18:17,039  
i've arrived on the space station i've

462  
00:18:21,750 --> 00:18:19,919  
just had my eyes watered in terms of

463  
00:18:23,669 --> 00:18:21,760

what this science up here is all about

464

00:18:24,789 --> 00:18:23,679

and what it looks like on board so i'm

465

00:18:26,630 --> 00:18:24,799

looking forward to coming home and

466

00:18:28,870 --> 00:18:26,640

sharing that with you and i'm just i'm

467

00:18:31,510 --> 00:18:28,880

just a real believer even more so than i

468

00:18:42,390 --> 00:18:31,520

was 107 days ago when i first left the

469

00:18:45,669 --> 00:18:44,230

commander uh this is senator long again

470

00:18:47,270 --> 00:18:45,679

sir land had a couple more questions but

471

00:18:49,029 --> 00:18:47,280

we're running out of time i want to

472

00:18:51,430 --> 00:18:49,039

reconvene the senate at this time we

473

00:18:53,430 --> 00:18:51,440

have a special thing for you from us

474

00:18:54,870 --> 00:18:53,440

which we will all sign and give to you

475

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

when you're back on earth with us the

476

00:18:58,070 --> 00:18:56,480

senate is reconvened

477

00:19:00,549 --> 00:18:58,080

there is a special senate resolution

478

00:19:02,390 --> 00:19:00,559

commander recognizing your tremendous

479

00:19:04,390 --> 00:19:02,400

life so far all the wonderful things

480

00:19:06,470 --> 00:19:04,400

you've done as an air force pilot highly

481

00:19:09,190 --> 00:19:06,480

decorated i won't go into all the awards

482

00:19:11,029 --> 00:19:09,200

uh the fact that you earned a phd in

483

00:19:13,750 --> 00:19:11,039

astronautical engineering well on the

484

00:19:16,710 --> 00:19:13,760

air force the fact that you've had so

485

00:19:20,549 --> 00:19:18,630

achievements in your life at this time

486

00:19:22,390 --> 00:19:20,559

without going to the details

487

00:19:24,870 --> 00:19:22,400

i'm going to ask the senate to join me

488

00:19:27,430 --> 00:19:24,880

in endorsing this resolution on behalf

489

00:19:28,789 --> 00:19:27,440

of commander kevin ford all in favor say

490

00:19:30,070 --> 00:19:28,799

aye

491

00:19:32,150 --> 00:19:30,080

opposed nay

492

00:19:33,750 --> 00:19:32,160

the resolution is passed commander thank

493

00:19:43,669 --> 00:19:33,760

you so much for joining us today it's

494

00:19:47,909 --> 00:19:45,590

well thank you uh thank you to all the

495

00:19:49,909 --> 00:19:47,919

senators there and uh to all of you in

496

00:19:52,710 --> 00:19:49,919

the general assembly and really all the

497

00:19:54,549 --> 00:19:52,720

people of indiana so i love i love the

498

00:19:56,390 --> 00:19:54,559

place i can't wait to come home and see

499

00:19:58,150 --> 00:19:56,400

you i have a little flag that flew up

500

00:20:00,150 --> 00:19:58,160

with me it also flew up with me on

501  
00:20:02,070 --> 00:20:00,160  
discovery and back down so this flag has

502  
00:20:03,430 --> 00:20:02,080  
made all the all the trips to space i

503  
00:20:05,590 --> 00:20:03,440  
have it will have the same amount of

504  
00:20:07,669 --> 00:20:05,600  
time i've had in space and you'll be

505  
00:20:10,149 --> 00:20:07,679  
seeing it when i get it home to you you

506  
00:20:21,350 --> 00:20:10,159  
all have a great great thursday and

507  
00:20:21,360 --> 00:20:28,470  
thank you sir it's been an honor

508  
00:20:34,070 --> 00:20:30,230  
station this is houston acr that

509  
00:20:36,470 --> 00:20:34,080  
concludes the event thank you

510  
00:20:38,630 --> 00:20:36,480  
thank you to the indiana state senate

511  
00:20:43,990 --> 00:20:38,640  
station we're now resuming operational