



esa



DEC  
O NOD 1

1  
00:00:13,430 --> 00:00:03,830  
station this is houston are you ready

2  
00:00:13,440 --> 00:00:21,590  
houston we are ready for the event

3  
00:00:30,150 --> 00:00:24,070  
isa this is mission control houston

4  
00:00:37,270 --> 00:00:33,590  
this is alex topple from wwf how do you

5  
00:00:44,630 --> 00:00:39,510  
well we hear you loud and clear how do

6  
00:00:49,350 --> 00:00:47,510  
we hear you loud and clear too

7  
00:00:51,430 --> 00:00:49,360  
andre don

8  
00:00:52,790 --> 00:00:51,440  
and alex who's not here but he's on the

9  
00:00:56,630 --> 00:00:52,800  
spaceship

10  
00:00:57,590 --> 00:00:56,640  
in the netherlands

11  
00:00:59,830 --> 00:00:57,600  
uh

12  
00:01:00,630 --> 00:00:59,840  
we are here gathered with the angel punk

13  
00:01:13,190 --> 00:01:00,640

from

14

00:01:13,200 --> 00:01:16,870

ah

15

00:01:16,880 --> 00:01:20,710

andrei last time we met

16

00:01:27,670 --> 00:01:22,870

we you had your feet firmly on the

17

00:01:30,469 --> 00:01:27,680

ground and we were at the 2012 or 2011

18

00:01:32,950 --> 00:01:30,479

dinner for the 50 years birthday of wwf

19

00:01:35,190 --> 00:01:32,960

international in switzerland

20

00:01:37,190 --> 00:01:35,200

and we had quite a chat and we talked

21

00:01:39,109 --> 00:01:37,200

about all this and now it's happening so

22

00:01:41,350 --> 00:01:39,119

we are really

23

00:01:44,149 --> 00:01:41,360

enthusiastic that you're here

24

00:01:45,670 --> 00:01:44,159

we're discussing here the economy of the

25

00:01:48,550 --> 00:01:45,680

future

26

00:01:50,789 --> 00:01:48,560

which is a very big topic and you know

27

00:01:53,749 --> 00:01:50,799

we really we're talking about it a lot

28

00:01:55,510 --> 00:01:53,759

but we are here at earth and actually we

29

00:01:58,310 --> 00:01:55,520

thought that there would be no better

30

00:02:00,870 --> 00:01:58,320

persons than you two to give us a global

31

00:02:03,109 --> 00:02:00,880

perspective because you're the only two

32

00:02:06,069 --> 00:02:03,119

to three people who really have a global

33

00:02:07,030 --> 00:02:06,079

perspective at this moment

34

00:02:10,550 --> 00:02:07,040

so

35

00:02:13,030 --> 00:02:10,560

i left asked five colleagues from us

36

00:02:15,270 --> 00:02:13,040

here in the in the audience

37

00:02:17,430 --> 00:02:15,280

to ask you some questions

38

00:02:18,470 --> 00:02:17,440

i will introduce them and they ask their

39

00:02:21,270 --> 00:02:18,480

question

40

00:02:27,510 --> 00:02:21,280

and i hope you have a great response

41

00:02:30,390 --> 00:02:28,550

excellent

42

00:02:34,869 --> 00:02:30,400

it's it's good to hear you and we look

43

00:02:42,390 --> 00:02:38,390

okay let me start with alexander

44

00:02:43,670 --> 00:02:42,400

shestakov for sasha he is our arctic and

45

00:02:45,509 --> 00:02:43,680

our leader

46

00:02:52,710 --> 00:02:45,519

and he has the first question to you

47

00:02:58,070 --> 00:02:55,350

first i just like to send best regards

48

00:03:00,790 --> 00:02:58,080

from a great supporter of wwf work in

49

00:03:03,670 --> 00:03:00,800

russia sergey krikalev

50

00:03:06,070 --> 00:03:04,869

so as a

51

00:03:08,229 --> 00:03:06,080

question

52

00:03:10,790 --> 00:03:08,239

i like to ask

53

00:03:12,630 --> 00:03:10,800

you as a professional

54

00:03:14,630 --> 00:03:12,640

space traveler

55

00:03:17,350 --> 00:03:14,640

what do you think

56

00:03:18,390 --> 00:03:17,360

that the space expeditions can

57

00:03:20,149 --> 00:03:18,400

do

58

00:03:21,750 --> 00:03:20,159

to support

59

00:03:24,309 --> 00:03:21,760

research and understanding of

60

00:03:26,390 --> 00:03:24,319

consequences of climate change

61

00:03:32,390 --> 00:03:26,400

and specifically of course i'm

62

00:03:36,309 --> 00:03:34,229

yes that's an interesting question uh

63

00:03:39,910 --> 00:03:36,319

for us uh it's uh

64

00:03:42,470 --> 00:03:39,920

uh we we see the earth uh in one moment

65

00:03:44,470 --> 00:03:42,480

so it's it's hard to to see differences

66

00:03:47,350 --> 00:03:44,480

in climate change which is uh going

67

00:03:50,309 --> 00:03:47,360

taking place over a longer period but of

68

00:03:53,509 --> 00:03:50,319

course we have a lot of good satellites

69

00:03:56,229 --> 00:03:53,519

and these satellites are specialized

70

00:03:58,710 --> 00:03:56,239

for earth observation for example the

71

00:04:01,670 --> 00:03:58,720

polar regions which we can hardly see

72

00:04:04,470 --> 00:04:01,680

from our orbit but with with uh with for

73

00:04:07,110 --> 00:04:04,480

example esa satellites like cryosat we

74

00:04:08,710 --> 00:04:07,120

have a fantastic means to really for

75

00:04:12,070 --> 00:04:08,720

example measure the thickness of the

76  
00:04:14,229 --> 00:04:12,080  
eyes and and uh and observe the changes

77  
00:04:16,710 --> 00:04:14,239  
that are taking place so we compare

78  
00:04:19,110 --> 00:04:16,720  
these data with with scientists who take

79  
00:04:22,469 --> 00:04:19,120  
measurements on the ground and this way

80  
00:04:25,270 --> 00:04:22,479  
we can really uh analyze and and and

81  
00:04:27,030 --> 00:04:25,280  
predict also how the how the ice layer

82  
00:04:29,830 --> 00:04:27,040  
for example is changing

83  
00:04:32,230 --> 00:04:29,840  
so this is something that uh people uh

84  
00:04:35,670 --> 00:04:32,240  
have to realize that the that earth

85  
00:04:38,310 --> 00:04:35,680  
observation is a very big uh big part of

86  
00:04:40,230 --> 00:04:38,320  
space flight everybody looks of course

87  
00:04:42,710 --> 00:04:40,240  
at the international space station and

88  
00:04:45,270 --> 00:04:42,720

and the great work we do up here but

89

00:04:49,030 --> 00:04:45,280

with satellites we have a really good

90

00:04:55,990 --> 00:04:49,040

means to see changes on the planet

91

00:05:05,189 --> 00:04:57,110

you

92

00:05:10,390 --> 00:05:06,950

hi andrei

93

00:05:12,629 --> 00:05:10,400

you visited my place you were in borneo

94

00:05:16,070 --> 00:05:12,639

part of borneo and we thank you grateful

95

00:05:17,110 --> 00:05:16,080

for the a esa donation to the heart of

96

00:05:19,670 --> 00:05:17,120

boreal

97

00:05:21,590 --> 00:05:19,680

my question is

98

00:05:24,950 --> 00:05:21,600

when you fly

99

00:05:26,150 --> 00:05:24,960

over again borneo or himalaya

100

00:05:27,830 --> 00:05:26,160

or

101  
00:05:29,990 --> 00:05:27,840  
amazon

102  
00:05:36,629 --> 00:05:30,000  
can you observe any

103  
00:05:41,590 --> 00:05:39,510  
yeah well one of the uh the beautiful

104  
00:05:44,230 --> 00:05:41,600  
things of the on the planet is of course

105  
00:05:45,909 --> 00:05:44,240  
the tropical regions but uh aside the

106  
00:05:48,710 --> 00:05:45,919  
effect is unfortunately that there's a

107  
00:05:51,189 --> 00:05:48,720  
lot of clouds so you really can fly over

108  
00:05:52,710 --> 00:05:51,199  
borneo or the amazon several times and

109  
00:05:56,070 --> 00:05:52,720  
the only thing you see is clouds it's

110  
00:05:57,830 --> 00:05:56,080  
it's a rainforest that's why but uh now

111  
00:06:00,870 --> 00:05:57,840  
and then we really have a good view and

112  
00:06:03,110 --> 00:06:00,880  
then you can indeed see uh deforestation

113  
00:06:05,590 --> 00:06:03,120

taking place you see the the parts in

114

00:06:08,390 --> 00:06:05,600

the in the rainforest that are that are

115

00:06:11,029 --> 00:06:08,400

being cut on the uh on site

116

00:06:12,390 --> 00:06:11,039

side rivers so that's something that you

117

00:06:14,870 --> 00:06:12,400

can observe

118

00:06:16,950 --> 00:06:14,880

you can see forest fires the the plumes

119

00:06:18,629 --> 00:06:16,960

you uh you can see from the fire from

120

00:06:20,629 --> 00:06:18,639

the from the fires

121

00:06:22,870 --> 00:06:20,639

what you can also see is the effect of

122

00:06:24,309 --> 00:06:22,880

uh deforestation for example if there's

123

00:06:26,870 --> 00:06:24,319

a erosion

124

00:06:29,510 --> 00:06:26,880

you can see a lot of uh uh of earth

125

00:06:32,309 --> 00:06:29,520

floating out of the the big rivers uh

126

00:06:33,909 --> 00:06:32,319

uh into the ocean uh of course like i

127

00:06:35,510 --> 00:06:33,919

said before

128

00:06:37,590 --> 00:06:35,520

it's hard to compare

129

00:06:40,870 --> 00:06:37,600

the the differences between my first

130

00:06:44,390 --> 00:06:40,880

flight and now which is in 2008

131

00:06:45,670 --> 00:06:44,400

it was in 2004 and and now so therefore

132

00:06:47,670 --> 00:06:45,680

we have a

133

00:06:49,029 --> 00:06:47,680

great satellite but there there are

134

00:06:51,270 --> 00:06:49,039

clear

135

00:06:53,510 --> 00:06:51,280

signs of things

136

00:06:55,830 --> 00:06:53,520

happening on our on our planet down

137

00:07:07,029 --> 00:06:58,950

and i hope that our rain forests do not

138

00:07:11,990 --> 00:07:08,150

thank you

139

00:07:16,790 --> 00:07:12,000

um the first question will be posed by

140

00:07:21,029 --> 00:07:18,070

hello andre

141

00:07:23,670 --> 00:07:21,039

it's an honor to speak to you

142

00:07:26,550 --> 00:07:23,680

do you notice from where you are

143

00:07:29,110 --> 00:07:26,560

any changes relating to the earth

144

00:07:31,430 --> 00:07:29,120

as a result of urbanization

145

00:07:33,589 --> 00:07:31,440

or desertification

146

00:07:36,309 --> 00:07:33,599

do you see for instance there were

147

00:07:37,830 --> 00:07:36,319

any algae blooms in the ocean

148

00:07:39,589 --> 00:07:37,840

that would damage

149

00:07:44,390 --> 00:07:39,599

or would have a negative effect on our

150

00:07:48,390 --> 00:07:45,430

well

151

00:07:50,950 --> 00:07:48,400

um one of the things that a uh

152

00:07:51,909 --> 00:07:50,960

is very interesting for to see from

153

00:07:54,230 --> 00:07:51,919

space

154

00:07:55,270 --> 00:07:54,240

is the earth at night

155

00:07:57,510 --> 00:07:55,280

because

156

00:08:01,270 --> 00:07:57,520

it's an amazing amount of flights and

157

00:08:02,790 --> 00:08:01,280

cities so urbanization is really huge

158

00:08:05,110 --> 00:08:02,800

and uh

159

00:08:07,430 --> 00:08:05,120

so at that moment you can really see

160

00:08:10,550 --> 00:08:07,440

that there's not so many uh

161

00:08:12,230 --> 00:08:10,560

places with fertile soil for example

162

00:08:15,189 --> 00:08:12,240

where people can go there's a lot of

163

00:08:16,869 --> 00:08:15,199

deserts a lot of uh saltwater ocean

164

00:08:17,749 --> 00:08:16,879

mountains

165

00:08:23,990 --> 00:08:17,759

and

166

00:08:26,950 --> 00:08:24,000

can see for example the pollution there

167

00:08:29,670 --> 00:08:26,960

you can see the haze layers over over uh

168

00:08:32,230 --> 00:08:29,680

big cities so there's uh a clear uh

169

00:08:34,870 --> 00:08:32,240

indications uh of the of the effects of

170

00:08:37,589 --> 00:08:34,880

uh of humans on the planet and uh the

171

00:08:39,269 --> 00:08:37,599

ongoing uh urbanization

172

00:08:42,070 --> 00:08:39,279

and um

173

00:08:44,149 --> 00:08:42,080

now concerning the uh the the lc the

174

00:08:45,750 --> 00:08:44,159

blooms uh i have to

175

00:08:48,470 --> 00:08:45,760

have a better look at that i see

176

00:08:50,790 --> 00:08:48,480

beautiful colors in the oceans and uh

177

00:08:52,630 --> 00:08:50,800

so that's something to look out for in

178

00:08:54,949 --> 00:08:52,640

the coming months that i'm still here

179

00:08:55,990 --> 00:08:54,959

i'll try to to spot those

180

00:08:58,630 --> 00:08:56,000

and

181

00:09:01,509 --> 00:08:58,640

my colleague has been in space as well

182

00:09:04,710 --> 00:09:01,519

before also for half a year and he has a

183

00:09:08,949 --> 00:09:04,720

good comparison a better comparison but

184

00:09:13,990 --> 00:09:11,350

uh one

185

00:09:15,750 --> 00:09:14,000

thing that i've noticed particularly

186

00:09:16,870 --> 00:09:15,760

in south america

187

00:09:20,630 --> 00:09:16,880

is the

188

00:09:22,150 --> 00:09:20,640

spread of light city lights at night

189

00:09:24,630 --> 00:09:22,160

nine years ago when i was on space

190

00:09:27,509 --> 00:09:24,640

station and i would take pictures of uh

191

00:09:30,710 --> 00:09:27,519

light uh earth nighttime lights

192

00:09:32,790 --> 00:09:30,720

uh south america was pretty dark and now

193

00:09:34,630 --> 00:09:32,800

there's been a lot of growth in the

194

00:09:43,110 --> 00:09:34,640

south american region

195

00:09:46,310 --> 00:09:44,310

great thanks

196

00:09:48,949 --> 00:09:46,320

the next question actually is to give

197

00:09:52,070 --> 00:09:48,959

you don so you can hand back the mic to

198

00:09:55,190 --> 00:09:52,080

dong uh it comes from carter

199

00:09:58,310 --> 00:09:55,200

carter roberts from the us

200

00:10:00,949 --> 00:09:58,320

first of all it's great to see you guys

201  
00:10:03,990 --> 00:10:00,959  
it's yet another evidence of how

202  
00:10:06,949 --> 00:10:04,000  
bald men have an oversized influence in

203  
00:10:06,959 --> 00:10:14,150  
hi uh don my question for you is uh

204  
00:10:22,230 --> 00:10:18,790  
my uh my question for you is

205  
00:10:24,630 --> 00:10:22,240  
you guys are heroes to our kids

206  
00:10:27,670 --> 00:10:24,640  
my kids love astronauts

207  
00:10:30,949 --> 00:10:27,680  
how do you see your work

208  
00:10:38,710 --> 00:10:30,959  
inspiring the next generation

209  
00:10:41,829 --> 00:10:39,910  
i believe

210  
00:10:43,310 --> 00:10:41,839  
that each generation

211  
00:10:45,829 --> 00:10:43,320  
finds its own

212  
00:10:48,230 --> 00:10:45,839  
inspirations and they pick and choose

213  
00:10:49,509 --> 00:10:48,240

from all the old fogies that were there

214

00:10:54,150 --> 00:10:49,519

before them

215

00:10:56,470 --> 00:10:54,160

and so i will leave the next generation

216

00:10:58,470 --> 00:10:56,480

to review the work that we're doing in

217

00:11:01,110 --> 00:10:58,480

space today

218

00:11:04,310 --> 00:11:01,120

pick and choose what they find inspiring

219

00:11:06,550 --> 00:11:04,320

and build upon that and and move off uh

220

00:11:15,509 --> 00:11:06,560

into space in the way that that they

221

00:11:19,509 --> 00:11:17,350

okay things don't

222

00:11:22,310 --> 00:11:19,519

um then we go to one of our final

223

00:11:24,389 --> 00:11:22,320

questions and that comes from our host

224

00:11:28,790 --> 00:11:24,399

in the netherlands and that is johan

225

00:11:33,670 --> 00:11:31,590

hi don hi andre what a privilege to

226

00:11:35,829 --> 00:11:33,680

communicate with you on our

227

00:11:38,550 --> 00:11:35,839

anniversary uh

228

00:11:41,030 --> 00:11:38,560

session here at our annual conference

229

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

andre my question to you would be this

230

00:11:44,949 --> 00:11:42,480

conference

231

00:11:47,110 --> 00:11:44,959

has a theme it's uh on the economy of

232

00:11:48,389 --> 00:11:47,120

the future community economy reversing

233

00:11:50,310 --> 00:11:48,399

the trend

234

00:11:51,350 --> 00:11:50,320

what would you what would be your

235

00:11:54,550 --> 00:11:51,360

biggest

236

00:11:57,430 --> 00:11:54,560

idea from safe how to bring about a

237

00:12:01,430 --> 00:11:57,440

sustainable green economy on planet

238

00:12:05,910 --> 00:12:03,190

yeah that's a good question well next

239

00:12:08,389 --> 00:12:05,920

week on may 15th the living planet

240

00:12:10,949 --> 00:12:08,399

report comes out you've already seen a

241

00:12:14,790 --> 00:12:10,959

draft of that and as you know that's an

242

00:12:16,790 --> 00:12:14,800

indicator uh of the the state uh of our

243

00:12:19,110 --> 00:12:16,800

and of the health of our planet

244

00:12:22,310 --> 00:12:19,120

and you're all together now in

245

00:12:24,550 --> 00:12:22,320

in one room uh for a real big

246

00:12:26,710 --> 00:12:24,560

brainstorming session and to think what

247

00:12:28,710 --> 00:12:26,720

you can do all together

248

00:12:31,509 --> 00:12:28,720

as a conservatist

249

00:12:32,790 --> 00:12:31,519

conservationist as protectionist of the

250

00:12:35,990 --> 00:12:32,800

of the earth

251  
00:12:38,470 --> 00:12:36,000  
you are protecting the planet but

252  
00:12:40,629 --> 00:12:38,480  
wwf has to

253  
00:12:43,350 --> 00:12:40,639  
put in the effort to combine to combine

254  
00:12:45,110 --> 00:12:43,360  
efforts and strengths of other

255  
00:12:48,389 --> 00:12:45,120  
of other entities because you have to

256  
00:12:50,870 --> 00:12:48,399  
think out of the box beyond what the wwf

257  
00:12:53,509 --> 00:12:50,880  
is doing in its network because we are

258  
00:12:56,310 --> 00:12:53,519  
all responsible and we all play a role

259  
00:12:58,550 --> 00:12:56,320  
in in finding solutions for protecting

260  
00:13:00,870 --> 00:12:58,560  
uh uh for protecting our beautiful

261  
00:13:03,990 --> 00:13:00,880  
planet so that means involving

262  
00:13:04,949 --> 00:13:04,000  
businesses and persuade governments

263  
00:13:07,509 --> 00:13:04,959

so

264

00:13:10,629 --> 00:13:07,519

we really have to act now before well it

265

00:13:12,710 --> 00:13:10,639

will be uh soon too late if you don't do

266

00:13:17,030 --> 00:13:12,720

do a great effort

267

00:13:19,190 --> 00:13:17,040

now in june 2012 so coming soon a lot of

268

00:13:21,910 --> 00:13:19,200

nations but also businesses

269

00:13:24,389 --> 00:13:21,920

civil society representatives they all

270

00:13:26,870 --> 00:13:24,399

come together on the un conference on

271

00:13:29,670 --> 00:13:26,880

sustainable development so this is 20

272

00:13:31,829 --> 00:13:29,680

years after the the momentous earth

273

00:13:35,110 --> 00:13:31,839

summit

274

00:13:37,190 --> 00:13:35,120

a crucial opportunity because there

275

00:13:39,750 --> 00:13:37,200

we take stock on where the world is

276

00:13:42,470 --> 00:13:39,760

heading and and how we like say our

277

00:13:45,030 --> 00:13:42,480

future to take shape

278

00:13:47,590 --> 00:13:45,040

we now we all have the ability to save

279

00:13:50,230 --> 00:13:47,600

our home to protect our planet not only

280

00:13:52,150 --> 00:13:50,240

for us and not only because it's good to

281

00:13:53,670 --> 00:13:52,160

to protect it for present time but it's

282

00:13:57,350 --> 00:13:53,680

also

283

00:14:00,710 --> 00:13:57,360

for of course for the future generations

284

00:14:03,509 --> 00:14:00,720

we have solutions and and everybody can

285

00:14:05,430 --> 00:14:03,519

contribute to that so it it's it's

286

00:14:08,550 --> 00:14:05,440

making better choices

287

00:14:10,870 --> 00:14:08,560

uh for how to how to govern place uh how

288

00:14:14,069 --> 00:14:10,880

to produce how to consume all these

289

00:14:15,990 --> 00:14:14,079

things are needed we have to take care

290

00:14:18,230 --> 00:14:16,000

of our planet and it's in our hands and

291

00:14:21,269 --> 00:14:18,240

i wish you all the best with uh with

292

00:14:28,470 --> 00:14:21,279

brainstorming on this difficult but very

293

00:14:33,829 --> 00:14:31,430

thanks andre uh andre we we we still

294

00:14:36,389 --> 00:14:33,839

have some time for an extra question so

295

00:14:39,670 --> 00:14:36,399

i'd like to uh to get the floor once

296

00:14:43,189 --> 00:14:39,680

more to uh uh sasha he has another

297

00:14:48,230 --> 00:14:45,750

andrea don thanks a lot for

298

00:14:49,590 --> 00:14:48,240

your views and i especially enjoy flying

299

00:14:52,069 --> 00:14:49,600

panda

300

00:14:53,990 --> 00:14:52,079

so we know that your mission

301

00:15:01,030 --> 00:14:54,000

has been extended

302

00:15:06,629 --> 00:15:03,189

well you have a bit of a look here in

303

00:15:10,949 --> 00:15:06,639

the station and uh it's very technical

304

00:15:14,550 --> 00:15:10,959

it's all machines it's all metal and

305

00:15:16,710 --> 00:15:14,560

uh what i miss very much is nature it's

306

00:15:20,470 --> 00:15:16,720

it sounds like a cliché but if you're

307

00:15:23,910 --> 00:15:20,480

half here it would be so nice to walk uh

308

00:15:26,870 --> 00:15:23,920

in the rain uh and or get some nice

309

00:15:28,870 --> 00:15:26,880

sunshine here the birds etc so

310

00:15:31,189 --> 00:15:28,880

that's something uh uh

311

00:15:33,910 --> 00:15:31,199

i i miss and i look forward to

312

00:15:36,150 --> 00:15:33,920

uh to uh to to

313

00:15:38,069 --> 00:15:36,160

to feel and sense nature again but if

314

00:15:39,990 --> 00:15:38,079

somebody would tell me you have to stay

315

00:15:42,870 --> 00:15:40,000

another half year i wouldn't mind either

316

00:15:50,710 --> 00:15:42,880

because the planet is fantastic to look

317

00:16:02,790 --> 00:15:52,150

thanks andre

318

00:16:06,069 --> 00:16:02,800

some of us love to sail on the ocean

319

00:16:10,790 --> 00:16:06,079

and uh i hear tell that you've got a

320

00:16:14,870 --> 00:16:10,800

very cool new boat tracking system

321

00:16:16,470 --> 00:16:14,880

on board the iss the vessel id system

322

00:16:21,990 --> 00:16:16,480

can you tell us a little bit more about

323

00:16:25,350 --> 00:16:24,069

that's a very interesting uh experiment

324

00:16:26,790 --> 00:16:25,360

where we uh

325

00:16:29,829 --> 00:16:26,800

uh exchange

326

00:16:32,069 --> 00:16:29,839

data with uh with ships all over the all

327

00:16:34,150 --> 00:16:32,079

over the world it's an automatic system

328

00:16:38,389 --> 00:16:34,160

and this is a very interesting it's a

329

00:16:41,110 --> 00:16:38,399

test bed to see how we can use

330

00:16:42,949 --> 00:16:41,120

the station uh to to do this kind of

331

00:16:44,389 --> 00:16:42,959

trekking and so

332

00:16:46,629 --> 00:16:44,399

uh it it

333

00:16:49,189 --> 00:16:46,639

for the for economy but for for trekking

334

00:16:50,629 --> 00:16:49,199

all these ships this is a very nice

335

00:16:52,069 --> 00:16:50,639

system and who knows what other

336

00:16:54,069 --> 00:16:52,079

applications

337

00:17:02,310 --> 00:16:54,079

we could

338

00:17:06,230 --> 00:17:04,870

okay one last question uh this is for

339

00:17:07,429 --> 00:17:06,240

don

340

00:17:11,590 --> 00:17:07,439

um

341

00:17:15,510 --> 00:17:11,600

don after four months in space

342

00:17:23,029 --> 00:17:15,520

how good are you at identifying a spot

343

00:17:26,710 --> 00:17:24,470

you're going to have to repeat that you

344

00:17:32,070 --> 00:17:26,720

were stepped on by other comm on station

345

00:17:37,669 --> 00:17:34,789

sure uh john you've been in space for

346

00:17:41,029 --> 00:17:37,679

four months now

347

00:17:42,950 --> 00:17:41,039

how good are you at uh looking at a spot

348

00:17:51,510 --> 00:17:42,960

on planet earth

349

00:17:57,590 --> 00:17:54,470

you get you get good about

350

00:17:59,669 --> 00:17:57,600

looking out the window and telling what

351

00:18:01,909 --> 00:17:59,679

part of the world you are in if you look

352

00:18:04,230 --> 00:18:01,919

out you see red dirt you're either over

353

00:18:07,350 --> 00:18:04,240

australia or you're over africa

354

00:18:10,310 --> 00:18:07,360

if you look out at night and you see a

355

00:18:13,590 --> 00:18:10,320

host of little tiny lights dispersed out

356

00:18:16,630 --> 00:18:13,600

in a fog you know you're over india and

357

00:18:19,110 --> 00:18:16,640

if you see blue-green city lights you

358

00:18:22,630 --> 00:18:19,120

know you're over japan so so there are

359

00:18:24,470 --> 00:18:22,640

certain characteristics of earth

360

00:18:26,230 --> 00:18:24,480

that show up either at night or daytime

361

00:18:28,470 --> 00:18:26,240

that you get used to and you just glance

362

00:18:35,990 --> 00:18:28,480

out the window and you go yeah

363

00:18:41,590 --> 00:18:38,230

and station this is houston acr that

364

00:18:44,630 --> 00:18:41,600

concludes the event thank y'all

365

00:18:47,110 --> 00:18:44,640

thank you european space agency station