



1
00:00:06,389 --> 00:00:02,629
station this is houston are you ready

2
00:00:10,150 --> 00:00:07,670
houston this is station we're ready for

3
00:00:14,910 --> 00:00:12,549
bloomberg tv this is mission control in

4
00:00:17,349 --> 00:00:14,920
houston please call station for a voice

5
00:00:19,029 --> 00:00:17,359
check station this is ryan chilcote with

6
00:00:26,790 --> 00:00:19,039
bloomberg tv

7
00:00:29,029 --> 00:00:26,800
we've got you loud and clear

8
00:00:31,990 --> 00:00:29,039
fantastic what an honor and a pleasure

9
00:00:34,790 --> 00:00:32,000
welcome to ryan's russia

10
00:00:38,630 --> 00:00:34,800
i understand i have all six of you uh on

11
00:00:42,150 --> 00:00:40,869
ryan you almost do oleg's busy flying

12
00:00:44,950 --> 00:00:42,160
the space station he's still hard at

13
00:00:48,310 --> 00:00:44,960

work but we've got five of six

14

00:00:50,470 --> 00:00:48,320

someone has to fly the space station

15

00:00:52,150 --> 00:00:50,480

that's very excusable

16

00:00:54,069 --> 00:00:52,160

how does it work up there i want to ask

17

00:00:55,990 --> 00:00:54,079

you there's six of you it's a big

18

00:00:58,549 --> 00:00:56,000

station right do you

19

00:01:01,110 --> 00:00:58,559

do you work in separate areas are are

20

00:01:06,230 --> 00:01:01,120

some areas segregated russians only some

21

00:01:08,950 --> 00:01:07,750

no absolutely not but it's a great

22

00:01:11,030 --> 00:01:08,960

question ryan

23

00:01:12,630 --> 00:01:11,040

we've got uh we we do often talk about

24

00:01:14,469 --> 00:01:12,640

there being two segments there being the

25

00:01:16,870 --> 00:01:14,479

u.s operational segment the russian

26

00:01:20,070 --> 00:01:16,880

segment when in fact this is one space

27

00:01:22,149 --> 00:01:20,080

station one crew and we're

28

00:01:24,149 --> 00:01:22,159

supported and uh and the space station

29

00:01:25,990 --> 00:01:24,159

is largely operated by control centers

30

00:01:27,830 --> 00:01:26,000

all around the world but from the

31

00:01:29,910 --> 00:01:27,840

perspective of the people that live and

32

00:01:32,310 --> 00:01:29,920

uh and work aboard space station this is

33

00:01:34,630 --> 00:01:32,320

one big team

34

00:01:36,789 --> 00:01:34,640

was that a mosquito he was just uh

35

00:01:39,670 --> 00:01:36,799

knocking down there what

36

00:01:42,710 --> 00:01:39,680

maybe i shouldn't ask what that was

37

00:01:45,270 --> 00:01:42,720

so in terms of the size no mosquitoes up

38

00:01:49,910 --> 00:01:47,350

in terms of the size of the station do

39

00:01:53,270 --> 00:01:49,920

you find yourselves bumping into one

40

00:01:58,310 --> 00:01:53,280

another how big is it and how often do

41

00:02:05,590 --> 00:02:01,670

we bump into each other every day all

42

00:02:08,229 --> 00:02:05,600

day long and station is big but it is

43

00:02:10,869 --> 00:02:08,239

amazing how often we'll all be working

44

00:02:13,190 --> 00:02:10,879

in like one cubic meter out of the

45

00:02:15,990 --> 00:02:13,200

thousand cubic meters that are up here

46

00:02:18,309 --> 00:02:16,000

and it's just it's just one of the facts

47

00:02:21,190 --> 00:02:18,319

that happens that you'll have one rack

48

00:02:23,030 --> 00:02:21,200

and there'll be a set of experiments and

49

00:02:25,670 --> 00:02:23,040

and at least three of us will be working

50

00:02:27,589 --> 00:02:25,680

all around this one rack

51
00:02:30,150 --> 00:02:27,599
and how do you divvy up the resources i

52
00:02:32,949 --> 00:02:30,160
mean i know sort of six grown men

53
00:02:37,350 --> 00:02:32,959
two bathrooms right one on the american

54
00:02:39,190 --> 00:02:37,360
side one on the russian side do you

55
00:02:43,990 --> 00:02:39,200
share bathrooms what happens if one

56
00:02:48,390 --> 00:02:46,229
a timely question that that often does

57
00:02:50,150 --> 00:02:48,400
happen here and we've got i guess i

58
00:02:51,910 --> 00:02:50,160
would consider we have almost uh two

59
00:02:54,150 --> 00:02:51,920
full baths or fully functional ones

60
00:02:55,830 --> 00:02:54,160
we've got two smaller ones that are in

61
00:02:58,149 --> 00:02:55,840
the uh the soyuz vehicles that brought

62
00:03:01,509 --> 00:02:58,159
us up here and we'll bring each of us

63
00:03:04,710 --> 00:03:01,519

crews of three back to the planet earth

64

00:03:06,630 --> 00:03:04,720

we do spend a surprising amount of time

65

00:03:09,030 --> 00:03:06,640

keeping that hardware working and

66

00:03:11,430 --> 00:03:09,040

functioning and but it's important to us

67

00:03:13,670 --> 00:03:11,440

and when there's an issue with uh with

68

00:03:15,030 --> 00:03:13,680

the one that's in node three for example

69

00:03:16,790 --> 00:03:15,040

then all of us use the one in the

70

00:03:18,470 --> 00:03:16,800

service module and if there's an issue

71

00:03:20,710 --> 00:03:18,480

with that one then we all use the one up

72

00:03:22,550 --> 00:03:20,720

here but uh no there's no uh no

73

00:03:24,309 --> 00:03:22,560

restrictions one way or the other

74

00:03:26,869 --> 00:03:24,319

and you have like a maintenance schedule

75

00:03:28,949 --> 00:03:26,879

of some kind i mean could can you

76
00:03:34,390 --> 00:03:28,959
something presumably the commander can

77
00:03:38,470 --> 00:03:35,509
you don't want to run the risk of a

78
00:03:40,710 --> 00:03:38,480
mutiny no actually there's not there's

79
00:03:42,470 --> 00:03:40,720
not per se

80
00:03:44,070 --> 00:03:42,480
you know so much a dedicated maintenance

81
00:03:45,670 --> 00:03:44,080
schedule is a lot of the work that we do

82
00:03:47,670 --> 00:03:45,680
is on condition so

83
00:03:48,949 --> 00:03:47,680
if if everything is working and humming

84
00:03:50,229 --> 00:03:48,959
along well

85
00:03:52,149 --> 00:03:50,239
and we don't have to change out a

86
00:03:54,550 --> 00:03:52,159
component for example for every you know

87
00:03:56,630 --> 00:03:54,560
every three months or whatever the the

88
00:03:58,229 --> 00:03:56,640

duty cycle would happen to be on it

89

00:03:59,670 --> 00:03:58,239

then things are fine occasionally we'll

90

00:04:02,229 --> 00:03:59,680

have a light an indicator light that'll

91

00:04:03,910 --> 00:04:02,239

come on to tell us that there's an issue

92

00:04:05,589 --> 00:04:03,920

with one of the components and we'll

93

00:04:07,509 --> 00:04:05,599

roll up our sleeves and we'll go to work

94

00:04:09,030 --> 00:04:07,519

and square it away

95

00:04:11,270 --> 00:04:09,040

if you don't mind if i could ask one of

96

00:04:14,550 --> 00:04:11,280

the cosmonauts a question i want to ask

97

00:04:17,349 --> 00:04:14,560

about how you eat on board is that

98

00:04:19,189 --> 00:04:17,359

something that you do separately do you

99

00:04:19,990 --> 00:04:19,199

invite the russians over they invite you

100

00:04:21,830 --> 00:04:20,000

over

101
00:04:38,710 --> 00:04:21,840
i mean is it sort of

102
00:04:43,990 --> 00:04:40,950
thank you for a good question

103
00:04:45,830 --> 00:04:44,000
we live here like one family

104
00:04:47,909 --> 00:04:45,840
and we try to help

105
00:04:52,230 --> 00:04:47,919
to every one of us

106
00:04:58,550 --> 00:04:54,469
we have

107
00:04:59,830 --> 00:04:58,560
time uh

108
00:05:01,350 --> 00:04:59,840
for

109
00:05:02,310 --> 00:05:01,360
to

110
00:05:07,990 --> 00:05:02,320
be

111
00:05:10,150 --> 00:05:08,000
supper or during the

112
00:05:11,670 --> 00:05:10,160
weekends

113
00:05:15,189 --> 00:05:11,680

we have um

114

00:05:17,590 --> 00:05:15,199

dinner together we speaking about our

115

00:05:19,270 --> 00:05:17,600

problems about our family

116

00:05:20,710 --> 00:05:19,280

uh of course

117

00:05:23,029 --> 00:05:20,720

on the earth

118

00:05:23,749 --> 00:05:23,039

and

119

00:05:26,310 --> 00:05:23,759

we

120

00:05:27,749 --> 00:05:26,320

uh

121

00:05:28,469 --> 00:05:27,759

interesting

122

00:05:30,150 --> 00:05:28,479

uh

123

00:05:31,110 --> 00:05:30,160

program or

124

00:05:32,550 --> 00:05:31,120

movie

125

00:05:33,510 --> 00:05:32,560

together

126

00:05:35,590 --> 00:05:33,520

uh

127

00:05:37,909 --> 00:05:35,600

what else

128

00:05:43,990 --> 00:05:37,919

one of you celebrated your 40th birthday

129

00:05:50,790 --> 00:05:47,510

uh yes we uh we had two

130

00:05:55,270 --> 00:05:53,990

birthday parties uh me and anatoly uh

131

00:05:58,950 --> 00:05:55,280

here on board

132

00:05:59,830 --> 00:05:58,960

it was a beautiful time because we

133

00:06:03,430 --> 00:05:59,840

were

134

00:06:06,469 --> 00:06:03,440

on altitude uh 400 kilometers

135

00:06:07,909 --> 00:06:06,479

over the earth it's like maybe records

136

00:06:09,350 --> 00:06:07,919

in the world

137

00:06:10,790 --> 00:06:09,360

i i think

138

00:06:13,510 --> 00:06:10,800

and

139

00:06:14,790 --> 00:06:13,520

we had a beautiful party with

140

00:06:18,870 --> 00:06:14,800

beautiful

141

00:06:19,749 --> 00:06:18,880

uh songs of our commander uh danielle he

142

00:06:21,029 --> 00:06:19,759

played

143

00:06:24,550 --> 00:06:21,039

guitar

144

00:06:29,270 --> 00:06:24,560

beautiful songs and we had a

145

00:06:31,350 --> 00:06:29,280

nice food it's like a strong coffee

146

00:06:35,189 --> 00:06:31,360

beautiful tea

147

00:06:37,189 --> 00:06:35,199

and something snacks

148

00:06:38,550 --> 00:06:37,199

it was a great time

149

00:06:40,950 --> 00:06:38,560

i gotta ask you

150

00:06:43,189 --> 00:06:40,960

give me a and i

151
00:06:45,270 --> 00:06:43,199
give me one thing that you think russia

152
00:06:47,350 --> 00:06:45,280
does better when it comes to space

153
00:07:13,670 --> 00:06:47,360
flight and one thing that you think the

154
00:07:17,430 --> 00:07:15,909
so that's an interesting question ryan

155
00:07:19,110 --> 00:07:17,440
there's there's a there's a lot of

156
00:07:20,469 --> 00:07:19,120
aspects to it if you look at just the

157
00:07:22,710 --> 00:07:20,479
day-to-day and the kind of things we

158
00:07:24,870 --> 00:07:22,720
interact with stuff that that would seem

159
00:07:26,710 --> 00:07:24,880
trivial sometimes maybe on on planet

160
00:07:29,670 --> 00:07:26,720
earth there's certain ways that we

161
00:07:31,990 --> 00:07:29,680
package uh food on the on the food that

162
00:07:34,629 --> 00:07:32,000
comes up via the the us assets there's

163
00:07:36,150 --> 00:07:34,639

uh uh different kinds of food that come

164

00:07:37,830 --> 00:07:36,160

up so food is one thing there's a lot of

165

00:07:39,510 --> 00:07:37,840

difference we actually share quite a bit

166

00:07:41,589 --> 00:07:39,520

across um

167

00:07:43,189 --> 00:07:41,599

across the hatches so to speak i think

168

00:07:45,189 --> 00:07:43,199

if i were to look at it more globally

169

00:07:47,350 --> 00:07:45,199

though the thing that that russia brings

170

00:07:49,749 --> 00:07:47,360

to space exploration that a lot of us

171

00:07:51,749 --> 00:07:49,759

are newcomers to is just the experience

172

00:07:53,670 --> 00:07:51,759

of long-duration space flight how do you

173

00:07:56,390 --> 00:07:53,680

live and work how does a

174

00:07:58,070 --> 00:07:56,400

human being stay up here and operate for

175

00:08:00,390 --> 00:07:58,080

six months at a time how do you keep the

176

00:08:03,029 --> 00:08:00,400

hardware working for for those kind of

177

00:08:05,430 --> 00:08:03,039

uh you know durations and on the u.s

178

00:08:07,909 --> 00:08:05,440

side we have that we're relatively new

179

00:08:09,350 --> 00:08:07,919

to this um the european space agency

180

00:08:10,869 --> 00:08:09,360

astronauts many of whom have already

181

00:08:12,309 --> 00:08:10,879

been flying and have a lot of experience

182

00:08:14,710 --> 00:08:12,319

on the mirror

183

00:08:16,950 --> 00:08:14,720

for a long duration as well

184

00:08:19,270 --> 00:08:16,960

you probably already have a lot of that

185

00:08:20,629 --> 00:08:19,280

background i think we tend to make

186

00:08:25,110 --> 00:08:20,639

things

187

00:08:27,189 --> 00:08:25,120

to be very very intricate very very

188

00:08:29,270 --> 00:08:27,199

sophisticated sometimes maybe at the

189

00:08:31,430 --> 00:08:29,280

expense of

190

00:08:32,949 --> 00:08:31,440

easy maintainability i guess i would say

191

00:08:35,670 --> 00:08:32,959

sometimes we're learning a lot of great

192

00:08:38,550 --> 00:08:35,680

lessons here um on the modules that are

193

00:08:41,350 --> 00:08:38,560

forward of pma1

194

00:08:43,190 --> 00:08:41,360

let me ask you about the syuz because

195

00:08:45,190 --> 00:08:43,200

that's the way up to the station now i

196

00:08:45,990 --> 00:08:45,200

wanted to ask you um

197

00:08:48,230 --> 00:08:46,000

you know

198

00:08:50,070 --> 00:08:48,240

i guess this is you you you all came up

199

00:08:51,750 --> 00:08:50,080

now on the sius

200

00:09:02,870 --> 00:08:51,760

it must be very different than the

201
00:09:06,630 --> 00:09:04,470
okay

202
00:09:08,230 --> 00:09:06,640
obviously the thing that's that's most

203
00:09:11,030 --> 00:09:08,240
evident to all but the most casual

204
00:09:13,430 --> 00:09:11,040
observer is the soyuz or any capsule

205
00:09:15,670 --> 00:09:13,440
based spacecraft spacecraft is quite a

206
00:09:18,550 --> 00:09:15,680
bit smaller uh than the space shuttle is

207
00:09:20,550 --> 00:09:18,560
so from the perspective of of uh

208
00:09:23,190 --> 00:09:20,560
of riding a board the space shuttle has

209
00:09:25,670 --> 00:09:23,200
a lot of room and it was a very

210
00:09:27,750 --> 00:09:25,680
different ride on the on the soyuz it

211
00:09:30,790 --> 00:09:27,760
was much smaller now with that said

212
00:09:32,470 --> 00:09:30,800
capsules are a very elegant and uh and

213
00:09:34,790 --> 00:09:32,480

straightforward way to get to to low

214

00:09:36,630 --> 00:09:34,800

earth orbit and also to return to earth

215

00:09:38,150 --> 00:09:36,640

for me it was great to have had the

216

00:09:40,550 --> 00:09:38,160

experience to fly in both types of

217

00:09:42,389 --> 00:09:40,560

vehicles a soyuz affords us the

218

00:09:44,470 --> 00:09:42,399

opportunity to have a vehicle to act as

219

00:09:46,070 --> 00:09:44,480

a lifeboat for the entire duration that

220

00:09:47,829 --> 00:09:46,080

we're up here for all of the six months

221

00:09:49,590 --> 00:09:47,839

if there happens to be a serious

222

00:09:51,750 --> 00:09:49,600

emergency on board space station in a

223

00:09:53,430 --> 00:09:51,760

matter of minutes each of us all of us

224

00:09:55,509 --> 00:09:53,440

will get to our respective soyuz and

225

00:09:58,230 --> 00:09:55,519

those vehicles be ready to return earth

226

00:10:00,070 --> 00:09:58,240

in real short order so that's a that's

227

00:10:01,829 --> 00:10:00,080

kind of a dual purpose aspect to those

228

00:10:06,949 --> 00:10:01,839

and a very important one for long

229

00:10:11,590 --> 00:10:09,509

i want to ask you guys what should the

230

00:10:14,150 --> 00:10:11,600

what should the next frontier be when it

231

00:10:16,710 --> 00:10:14,160

comes to space exploration not nasa's

232

00:10:18,389 --> 00:10:16,720

view not the russian space agency's view

233

00:10:20,630 --> 00:10:18,399

but your own personal views maybe a

234

00:10:23,350 --> 00:10:20,640

couple you guys could share i mean is it

235

00:10:25,590 --> 00:10:23,360

mars is it the moon is it a base on the

236

00:10:27,590 --> 00:10:25,600

moon is it an asteroid

237

00:10:30,829 --> 00:10:27,600

is it more of what you're doing now in

238

00:10:36,150 --> 00:10:33,910

orbit well i think uh all three of them

239

00:10:38,230 --> 00:10:36,160

uh are going to happen uh i mean

240

00:10:40,790 --> 00:10:38,240

everybody looks always at the

241

00:10:42,630 --> 00:10:40,800

this moment and the budgetary problems

242

00:10:43,990 --> 00:10:42,640

of the next half year but in the long

243

00:10:46,069 --> 00:10:44,000

run uh

244

00:10:47,910 --> 00:10:46,079

humans will spread through the solar

245

00:10:49,350 --> 00:10:47,920

system and

246

00:10:51,590 --> 00:10:49,360

i think the asteroid is a very

247

00:10:52,630 --> 00:10:51,600

interesting topic i never thought about

248

00:10:56,069 --> 00:10:52,640

that

249

00:10:57,910 --> 00:10:56,079

very good one

250

00:10:59,509 --> 00:10:57,920

but for sure we will have base on the

251

00:11:01,990 --> 00:10:59,519

moon there will be there will be a

252

00:11:04,949 --> 00:11:02,000

mining on the moon and we will get

253

00:11:06,550 --> 00:11:04,959

great sources uh of energy we will use

254

00:11:09,190 --> 00:11:06,560

the solar energy more and then we will

255

00:11:11,509 --> 00:11:09,200

go to mars the problem is when i always

256

00:11:13,430 --> 00:11:11,519

say in 25 years but i said that 25 years

257

00:11:15,190 --> 00:11:13,440

ago as well that's one of the things of

258

00:11:20,230 --> 00:11:15,200

space flight we have to be very patient

259

00:11:25,670 --> 00:11:21,990

if if you look at our state of

260

00:11:26,870 --> 00:11:25,680

technology there's only about four

261

00:11:29,990 --> 00:11:26,880

general

262

00:11:31,910 --> 00:11:30,000

places we can go right now in space we

263

00:11:33,750 --> 00:11:31,920

could do low earth orbit

264

00:11:35,269 --> 00:11:33,760

we could do something between the earth

265

00:11:37,509 --> 00:11:35,279

and the moon and we call that the earth

266

00:11:41,269 --> 00:11:37,519

moon cis space we can do something on

267

00:11:43,430 --> 00:11:41,279

the moon and possibly go to mars and and

268

00:11:45,670 --> 00:11:43,440

these are about the the four general

269

00:11:47,829 --> 00:11:45,680

things that that we can do right now or

270

00:11:49,910 --> 00:11:47,839

contemplate doing and as far as i'm

271

00:11:52,150 --> 00:11:49,920

concerned it doesn't really matter which

272

00:11:55,269 --> 00:11:52,160

one you know choose one

273

00:11:56,949 --> 00:11:55,279

and the important thing is to choose one

274

00:11:58,949 --> 00:11:56,959

and stick with it for a long enough

275

00:12:02,150 --> 00:11:58,959

period of time so you can make some

276

00:12:04,790 --> 00:12:02,160

progress and it takes about 10 years to

277

00:12:06,870 --> 00:12:04,800

make any progress in these fronts so so

278

00:12:09,509 --> 00:12:06,880

we have to choose one of these

279

00:12:12,069 --> 00:12:09,519

and roll up our sleeves and just work

280

00:12:15,030 --> 00:12:12,079

and work and work for about 10 years

281

00:12:19,990 --> 00:12:15,040

before we will see real progress on this

282

00:12:24,310 --> 00:12:21,829

tell me about some of the traffic you've

283

00:12:26,150 --> 00:12:24,320

got coming up there you've got uh it's

284

00:12:28,550 --> 00:12:26,160

it's being called

285

00:12:30,389 --> 00:12:28,560

the cosmic traffic jam you've got an

286

00:12:37,430 --> 00:12:30,399

awful lot of spacecraft coming up there

287

00:12:40,870 --> 00:12:38,949

yeah we sure do and it's actually the

288

00:12:43,829 --> 00:12:40,880

lifeblood of space station a lot of the

289

00:12:46,230 --> 00:12:43,839

cargo vehicles um are key to keeping the

290

00:12:48,790 --> 00:12:46,240

space station operating and functioning

291

00:12:50,790 --> 00:12:48,800

it's the the method for us to return

292

00:12:52,310 --> 00:12:50,800

science something we put the shuttle to

293

00:12:53,990 --> 00:12:52,320

good use for in addition to bringing

294

00:12:56,470 --> 00:12:54,000

cargo up here

295

00:12:59,190 --> 00:12:56,480

and spacex the dragon uh their their

296

00:13:01,430 --> 00:12:59,200

vehicle which will launch we hope on

297

00:13:02,790 --> 00:13:01,440

april 30th of this this month will

298

00:13:04,710 --> 00:13:02,800

afford the capability of returning

299

00:13:07,590 --> 00:13:04,720

hardware from station

300

00:13:09,350 --> 00:13:07,600

we also have a progress card cargo

301

00:13:12,310 --> 00:13:09,360

vehicle dock to station right now it

302

00:13:14,150 --> 00:13:12,320

will uh bring uh trash back uh it'll

303

00:13:16,230 --> 00:13:14,160

actually be incinerated on the way back

304

00:13:18,310 --> 00:13:16,240

to earth's atmosphere another progress

305

00:13:20,310 --> 00:13:18,320

vehicle is lined up to come here and

306

00:13:22,310 --> 00:13:20,320

most importantly and most uh immediate

307

00:13:23,990 --> 00:13:22,320

for all of us on board is very soon

308

00:13:25,430 --> 00:13:24,000

we'll have the european automated

309

00:13:27,509 --> 00:13:25,440

transfer vehicle number three that's

310

00:13:29,190 --> 00:13:27,519

going to be docking on the aft part of

311

00:13:30,629 --> 00:13:29,200

space station here in a week

312

00:13:31,990 --> 00:13:30,639

so you've got commercial spacecraft

313

00:13:33,750 --> 00:13:32,000

you've got european spacecraft you've

314

00:13:36,550 --> 00:13:33,760

got japanese spacecraft russian

315

00:13:38,710 --> 00:13:36,560

spacecraft um the commercial from the

316

00:13:40,470 --> 00:13:38,720

united states i mean it is that an

317

00:13:43,269 --> 00:13:40,480

indication that the times have changed

318

00:13:45,670 --> 00:13:43,279

the old sort of uh cold war space race

319

00:13:48,150 --> 00:13:45,680

is long past because it's not just two

320

00:13:49,670 --> 00:13:48,160

countries not just two spacecraft but i

321

00:13:51,590 --> 00:13:49,680

mean it's you know you guys are busier

322

00:13:56,389 --> 00:13:51,600

than star trek up there with

323

00:14:01,829 --> 00:13:59,110

yeah i think well we are already for a

324

00:14:03,829 --> 00:14:01,839

while in the in this international era

325

00:14:05,509 --> 00:14:03,839

and i think that's a very good thing i i

326

00:14:07,430 --> 00:14:05,519

really like it to work one day in the

327

00:14:09,110 --> 00:14:07,440

japanese module then do something in the

328

00:14:12,310 --> 00:14:09,120

russian module

329

00:14:14,629 --> 00:14:12,320

and european american that's very good

330

00:14:16,629 --> 00:14:14,639

and i think we're getting into another

331

00:14:18,550 --> 00:14:16,639

new era and that is the the commercial

332

00:14:19,670 --> 00:14:18,560

space flight so it's very interesting

333

00:14:21,829 --> 00:14:19,680

that uh

334

00:14:24,389 --> 00:14:21,839

that the dragon

335

00:14:26,230 --> 00:14:24,399

is coming soon and uh that's that's the

336

00:14:28,310 --> 00:14:26,240

future like like with all kind of

337

00:14:30,550 --> 00:14:28,320

transportation we have uh

338

00:14:33,030 --> 00:14:30,560

on earth in the beginning it's uh it's

339

00:14:33,750 --> 00:14:33,040

it's new and it's some pioneers and then

340

00:14:36,710 --> 00:14:33,760

the

341

00:14:38,790 --> 00:14:36,720

companies take over and agencies go

342

00:14:40,710 --> 00:14:38,800

beyond and do new things and then

343

00:14:42,790 --> 00:14:40,720

continue with exploration i think it's a

344

00:14:47,269 --> 00:14:42,800

natural process and i'm very pleased

345

00:14:50,389 --> 00:14:47,279

that i'm here now when we start with it

346

00:14:53,030 --> 00:14:50,399

spacex says they may have round trip

347

00:14:53,829 --> 00:14:53,040

flights to mars

348

00:14:55,670 --> 00:14:53,839

for

349

00:14:58,470 --> 00:14:55,680

let me make sure i get this right a half

350

00:14:59,910 --> 00:14:58,480

million dollars in 10 years time

351

00:15:05,590 --> 00:14:59,920

what do you guys think about that that

352

00:15:09,269 --> 00:15:07,350

i think if we can greatly reduce the

353

00:15:12,710 --> 00:15:09,279

expense of getting things to low earth

354

00:15:15,509 --> 00:15:12,720

orbit it opens up in an unbelievable way

355

00:15:16,870 --> 00:15:15,519

uh space exploration for many more

356

00:15:19,670 --> 00:15:16,880

people that have had a privilege to do

357

00:15:21,990 --> 00:15:19,680

this so far and i think probably all of

358

00:15:24,710 --> 00:15:22,000

us would share the sentiment that says

359

00:15:26,870 --> 00:15:24,720

the more the merrier and uh and as soon

360

00:15:29,910 --> 00:15:26,880

as you can have uh companies are able to

361

00:15:32,870 --> 00:15:29,920

do this and be viable um and uh in the

362

00:15:34,710 --> 00:15:32,880

private sector then it greatly greatly

363

00:15:35,829 --> 00:15:34,720

opens up the possibilities for space

364

00:15:37,990 --> 00:15:35,839

flight

365

00:15:39,590 --> 00:15:38,000

like andre said i think it's important

366

00:15:42,790 --> 00:15:39,600

for the really hard very very tough

367

00:15:45,670 --> 00:15:42,800

things to be done probably by um by

368

00:15:47,910 --> 00:15:45,680

nations and by nations space agencies

369

00:15:50,310 --> 00:15:47,920

and and ideally by nations working

370

00:15:52,470 --> 00:15:50,320

together so those are the big steps that

371

00:15:55,110 --> 00:15:52,480

need to be taken you know on a big scale

372

00:15:56,790 --> 00:15:55,120

and they don't often return a lot of in

373

00:15:58,710 --> 00:15:56,800

return a lot on the investments in the

374

00:16:00,389 --> 00:15:58,720

near term as soon as we figured out the

375

00:16:01,829 --> 00:16:00,399

earth to low earth orbit piece and i

376

00:16:03,670 --> 00:16:01,839

think we're getting pretty close to that

377

00:16:05,749 --> 00:16:03,680

right now then the time is right for

378

00:16:08,230 --> 00:16:05,759

commercial companies to be able to step

379

00:16:10,150 --> 00:16:08,240

in and take over that piece and then the

380

00:16:12,470 --> 00:16:10,160

governments and the international space

381

00:16:14,870 --> 00:16:12,480

agencies will then take the next stride

382

00:16:16,310 --> 00:16:14,880

and and i think that's great and i think

383

00:16:18,389 --> 00:16:16,320

the more vehicles that we have that are

384

00:16:20,389 --> 00:16:18,399

able to fly in space the better it is

385

00:16:23,030 --> 00:16:20,399

for all of us

386

00:16:36,069 --> 00:16:23,040

now a very important question

387

00:16:42,150 --> 00:16:38,389

we don't have any electronics up here

388

00:16:43,430 --> 00:16:42,160

that we can capable of playing it

389

00:16:47,430 --> 00:16:43,440

no video yeah yeah it's too

390

00:16:51,509 --> 00:16:49,189

it's too sophisticated for the space

391

00:17:02,790 --> 00:16:51,519

station yeah

392

00:17:06,150 --> 00:17:04,549

we

393

00:17:07,270 --> 00:17:06,160

ryan is still with us

394

00:17:08,949 --> 00:17:07,280

yeah yeah

395

00:17:09,909 --> 00:17:08,959

look i'm sorry i i thought we might have

396

00:17:10,870 --> 00:17:09,919

lost you

397

00:17:13,189 --> 00:17:10,880

sure

398

00:17:15,590 --> 00:17:13,199

we are bloomberg tv

399

00:17:17,429 --> 00:17:15,600

we were wondering how do you keep track

400

00:17:25,510 --> 00:17:17,439

of your investments when you're so far

401
00:17:29,430 --> 00:17:26,949
yeah we're all looking at each other

402
00:17:31,350 --> 00:17:29,440
saying what investments

403
00:17:33,510 --> 00:17:31,360
the folks that fly in space generally

404
00:17:36,230 --> 00:17:33,520
don't do this to become to become uh

405
00:17:38,230 --> 00:17:36,240
rich and uh you know the the the

406
00:17:40,710 --> 00:17:38,240
richness we have is in the opportunity

407
00:17:43,110 --> 00:17:40,720
to do this so actually i don't really

408
00:17:43,990 --> 00:17:43,120
think a whole lot about it and uh don't

409
00:17:45,830 --> 00:17:44,000
uh

410
00:17:47,990 --> 00:17:45,840
don't really have a whole lot in that

411
00:17:50,630 --> 00:17:48,000
maybe down the road sometime but uh for

412
00:17:52,630 --> 00:17:50,640
me my focus has been you know working in

413
00:17:54,630 --> 00:17:52,640

this business and uh working with this

414

00:17:56,310 --> 00:17:54,640

uh this great team that we have on board

415

00:17:57,669 --> 00:17:56,320

and and with all the wonderful folks

416

00:17:59,590 --> 00:17:57,679

smart folks that are on the ground that

417

00:18:01,909 --> 00:17:59,600

make it possible

418

00:18:03,029 --> 00:18:01,919

one last quick question and i think our

419

00:18:09,190 --> 00:18:03,039

biggest

420

00:18:11,909 --> 00:18:09,200

success in investment is our families

421

00:18:13,350 --> 00:18:11,919

and that goes well

422

00:18:15,110 --> 00:18:13,360

one quick question when you look out the

423

00:18:16,950 --> 00:18:15,120

window everybody wants to see obviously

424

00:18:19,510 --> 00:18:16,960

you can see earth i think we only got

425

00:18:21,430 --> 00:18:19,520

about 30 seconds you can see what other

426

00:18:23,029 --> 00:18:21,440

planets asteroids

427

00:18:30,470 --> 00:18:23,039

space junk what do you see out the

428

00:18:34,710 --> 00:18:32,310

well the thing that that really captures

429

00:18:36,789 --> 00:18:34,720

your uh the view is the planet earth i

430

00:18:38,390 --> 00:18:36,799

mean it is spectacular it is just beyond

431

00:18:41,270 --> 00:18:38,400

description at least beyond description

432

00:18:42,950 --> 00:18:41,280

for somebody like me and uh but with

433

00:18:44,630 --> 00:18:42,960

that said you can see stars that are

434

00:18:47,190 --> 00:18:44,640

just brilliant points of light that do

435

00:18:49,510 --> 00:18:47,200

not twinkle you see comets you see other

436

00:18:51,270 --> 00:18:49,520

satellites and spacecraft and uh but

437

00:18:56,230 --> 00:18:51,280

your eyes are always drawn back to our

438

00:18:59,669 --> 00:18:57,510

thank you very much thank you for

439

00:19:03,350 --> 00:18:59,679

joining us on ryan's russia

440

00:19:06,470 --> 00:19:04,950

ryan thank you it's pleasure talking to

441

00:19:08,470 --> 00:19:06,480

you today

442

00:19:11,909 --> 00:19:08,480

station this is houston acr that

443

00:19:15,029 --> 00:19:13,430

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