



1
00:00:08,390 --> 00:00:03,750
station this is houston are you ready

2
00:00:10,870 --> 00:00:09,430
houston

3
00:00:14,709 --> 00:00:10,880
space station here

4
00:00:18,150 --> 00:00:16,070
and houston chronicle this is mission

5
00:00:22,310 --> 00:00:18,160
control houston please go ahead and call

6
00:00:22,320 --> 00:00:27,029
okay this is eric berger

7
00:00:30,870 --> 00:00:28,630
eric berger mike fossum with you loud

8
00:00:34,389 --> 00:00:30,880
and clear hey mike good morning how are

9
00:00:39,430 --> 00:00:37,190
hey i'm living the dream how about you

10
00:00:41,750 --> 00:00:39,440
well i'm not quite that high but i in

11
00:00:44,470 --> 00:00:41,760
space but i appreciate that so i want to

12
00:00:46,310 --> 00:00:44,480
start with an important question mike

13
00:00:49,190 --> 00:00:46,320

your twitter your twitter handle is

14

00:00:50,790 --> 00:00:49,200

aggie or astro aggie and so i know

15

00:00:52,549 --> 00:00:50,800

you're a big fan

16

00:00:54,709 --> 00:00:52,559

but your aggies have blown three second

17

00:01:00,310 --> 00:00:54,719

half double digit leads this year

18

00:01:04,390 --> 00:01:02,389

absolutely not he's doing a great job

19

00:01:05,830 --> 00:01:04,400

when you're when you're just a handful

20

00:01:08,469 --> 00:01:05,840

of points away from

21

00:01:11,429 --> 00:01:08,479

from uh you know three wins you know a

22

00:01:13,109 --> 00:01:11,439

lot of things are going right

23

00:01:15,510 --> 00:01:13,119

talk about the technology that you have

24

00:01:17,109 --> 00:01:15,520

in space uh to be able to watch football

25

00:01:19,270 --> 00:01:17,119

games is it something that has to be

26
00:01:20,870 --> 00:01:19,280
uploaded to you or are you able to watch

27
00:01:25,030 --> 00:01:20,880
the games when you have some time off

28
00:01:28,390 --> 00:01:26,390
there's several different ways of doing

29
00:01:31,109 --> 00:01:28,400
it one is they can send it up live if

30
00:01:32,950 --> 00:01:31,119
it's on television and readily available

31
00:01:35,030 --> 00:01:32,960
they can ship it up uh when we have the

32
00:01:36,550 --> 00:01:35,040
right kind of satellite coverage up here

33
00:01:38,870 --> 00:01:36,560
and we've watched a little bit that way

34
00:01:40,950 --> 00:01:38,880
we've catch some news sometimes

35
00:01:43,990 --> 00:01:40,960
certainly the big events we watched the

36
00:01:45,590 --> 00:01:44,000
progress launch live a few days ago and

37
00:01:47,350 --> 00:01:45,600
we look forward to watching a soyuz

38
00:01:50,149 --> 00:01:47,360

launch live

39

00:01:52,469 --> 00:01:50,159

in another week and a half

40

00:01:54,870 --> 00:01:52,479

for games and special things like that

41

00:01:56,789 --> 00:01:54,880

of interest for us they they turn those

42

00:01:58,789 --> 00:01:56,799

into video files and uplink them for us

43

00:02:01,270 --> 00:01:58,799

so we can watch those uh later at our

44

00:02:04,389 --> 00:02:01,280

own time i i for me i get some

45

00:02:06,389 --> 00:02:04,399

television shows set up as well as aggie

46

00:02:08,630 --> 00:02:06,399

aggie games and uh

47

00:02:09,669 --> 00:02:08,640

church sermons from my church in houston

48

00:02:10,710 --> 00:02:09,679

okay

49

00:02:12,070 --> 00:02:10,720

uh

50

00:02:13,830 --> 00:02:12,080

you've been up in space for a while now

51
00:02:18,630 --> 00:02:13,840
what what what do you miss most about

52
00:02:23,030 --> 00:02:21,030
well gee i really missed not being home

53
00:02:24,070 --> 00:02:23,040
for the summer this year

54
00:02:27,589 --> 00:02:24,080
sorry

55
00:02:28,949 --> 00:02:27,599
uh one of the benefits of this

56
00:02:30,630 --> 00:02:28,959
particular uh

57
00:02:32,630 --> 00:02:30,640
schedule has been missing out on an

58
00:02:34,309 --> 00:02:32,640
entire summer we went over to uh to

59
00:02:37,430 --> 00:02:34,319
russia while it was still a little bit

60
00:02:38,470 --> 00:02:37,440
cool in houston area late last or last

61
00:02:40,869 --> 00:02:38,480
spring

62
00:02:42,390 --> 00:02:40,879
to go through the final preparations

63
00:02:44,630 --> 00:02:42,400

what i miss the most of course is my

64

00:02:46,630 --> 00:02:44,640

family my wife and my kids and my

65

00:02:48,390 --> 00:02:46,640

granddaughter who i can't wait to see in

66

00:02:50,309 --> 00:02:48,400

a few weeks

67

00:02:52,229 --> 00:02:50,319

yeah you missed the hottest and driest

68

00:02:53,589 --> 00:02:52,239

summer on record here in the state so i

69

00:02:59,030 --> 00:02:53,599

don't think you have a lawn anymore i'm

70

00:03:03,110 --> 00:03:01,430

i'm i'm sure that's true my family has

71

00:03:04,390 --> 00:03:03,120

intentionally not sent any pictures to

72

00:03:06,070 --> 00:03:04,400

me

73

00:03:08,470 --> 00:03:06,080

so you've had an interesting rotation

74

00:03:10,149 --> 00:03:08,480

with the the progress launch problems

75

00:03:11,589 --> 00:03:10,159

has it been challenging going back to a

76

00:03:16,149 --> 00:03:11,599

three person crew on the station after

77

00:03:20,390 --> 00:03:18,149

there's pluses and minuses associated

78

00:03:22,949 --> 00:03:20,400

with it uh certainly it's uh it's very

79

00:03:25,110 --> 00:03:22,959

busy uh because the station requires a

80

00:03:26,710 --> 00:03:25,120

certain amount of care and feeding uh

81

00:03:28,550 --> 00:03:26,720

once you take care of the care and

82

00:03:30,149 --> 00:03:28,560

feeding which is mandatory then you get

83

00:03:32,070 --> 00:03:30,159

the science and i know that's not our

84

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

priority but the fact is you have to

85

00:03:36,390 --> 00:03:34,640

clean the things replace things uh stuff

86

00:03:38,630 --> 00:03:36,400

like that and so we've had our hands

87

00:03:40,550 --> 00:03:38,640

full uh keeping the science load moving

88

00:03:43,589 --> 00:03:40,560

forward and we've done a good job of

89

00:03:46,149 --> 00:03:43,599

that i'm i'm proud of that uh so they're

90

00:03:48,149 --> 00:03:46,159

in ways it's you know there's a little

91

00:03:49,589 --> 00:03:48,159

uh you don't have to wait for the right

92

00:03:51,990 --> 00:03:49,599

piece of equipment when you go to the

93

00:03:54,390 --> 00:03:52,000

gym because there's you know no lines

94

00:03:56,710 --> 00:03:54,400

for the treadmill or for the the

95

00:03:58,309 --> 00:03:56,720

resistive exercise machine

96

00:04:00,070 --> 00:03:58,319

and so there's a little some benefits

97

00:04:01,750 --> 00:04:00,080

from having fewer people some things

98

00:04:04,789 --> 00:04:01,760

take a little less time because we just

99

00:04:06,070 --> 00:04:04,799

have three it's been an enjoyable time

100

00:04:07,910 --> 00:04:06,080

for us we're

101
00:04:08,789 --> 00:04:07,920
close friends from three corners of the

102
00:04:10,470 --> 00:04:08,799
world

103
00:04:11,990 --> 00:04:10,480
and we've had the chance to spend more

104
00:04:12,789 --> 00:04:12,000
time together

105
00:04:14,390 --> 00:04:12,799
and

106
00:04:16,870 --> 00:04:14,400
you know but we definitely look forward

107
00:04:19,110 --> 00:04:16,880
to the new guys showing up soon

108
00:04:20,629 --> 00:04:19,120
yeah at the same time you mentioned you

109
00:04:22,710 --> 00:04:20,639
guys spend time together but it's a big

110
00:04:24,310 --> 00:04:22,720
place so you can go you can go quite a

111
00:04:29,189 --> 00:04:24,320
while without seeing someone right when

112
00:04:33,670 --> 00:04:31,430
we work often we'll work in different

113
00:04:35,830 --> 00:04:33,680

corners or different areas uh there's

114

00:04:37,590 --> 00:04:35,840

two of us down here on the u.s end of

115

00:04:39,670 --> 00:04:37,600

the station if we you will satoshi

116

00:04:41,749 --> 00:04:39,680

furukawa and myself and we're helping

117

00:04:43,510 --> 00:04:41,759

each other a little bit more uh sergey

118

00:04:44,950 --> 00:04:43,520

volkov spends a good bit of his time

119

00:04:46,390 --> 00:04:44,960

down in the russian segment which is

120

00:04:49,430 --> 00:04:46,400

down back this way behind me we're in

121

00:04:51,110 --> 00:04:49,440

the u.s lab today uh and so we make a

122

00:04:52,710 --> 00:04:51,120

point of going down there uh you know

123

00:04:54,550 --> 00:04:52,720

and and having a just having a quick

124

00:04:56,710 --> 00:04:54,560

coffee with sergey and we get together

125

00:04:58,390 --> 00:04:56,720

for lunch and dinner so we may be

126

00:05:00,469 --> 00:04:58,400

working in different areas but we keep

127

00:05:02,070 --> 00:05:00,479

touch with each other so we all in in

128

00:05:04,629 --> 00:05:02,080

case of an emergency it's important to

129

00:05:05,830 --> 00:05:04,639

know where people are working especially

130

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

if you're not going to be in one of the

131

00:05:09,430 --> 00:05:07,759

prime work areas and right now sergey is

132

00:05:12,070 --> 00:05:09,440

working down in the progress ship that

133

00:05:13,110 --> 00:05:12,080

docked yesterday so he's uh he let me

134

00:05:15,270 --> 00:05:13,120

know that hey i'm going to be down in

135

00:05:17,909 --> 00:05:15,280

the progress so if anything's if you

136

00:05:18,790 --> 00:05:17,919

plan on going anywhere come get me

137

00:05:20,710 --> 00:05:18,800

yeah

138

00:05:22,950 --> 00:05:20,720

speaking of the progress cargo ships you

139

00:05:25,110 --> 00:05:22,960

took an amazing photo

140

00:05:27,270 --> 00:05:25,120

i think it was last week of a cargo ship

141

00:05:28,629 --> 00:05:27,280

burning up in the earth's atmosphere

142

00:05:33,590 --> 00:05:28,639

did you think about what was burning up

143

00:05:38,070 --> 00:05:35,830

oh you bet i helped pack it and so it

144

00:05:40,150 --> 00:05:38,080

was kind of funny i i got a series of

145

00:05:42,550 --> 00:05:40,160

photos there uh and so it was

146

00:05:44,150 --> 00:05:42,560

interesting to see as as uh for a short

147

00:05:45,510 --> 00:05:44,160

amount of time you could really see some

148

00:05:47,350 --> 00:05:45,520

details the lighting and everything

149

00:05:49,909 --> 00:05:47,360

worked out great and you could see i

150

00:05:51,590 --> 00:05:49,919

mean big pieces that were

151

00:05:54,150 --> 00:05:51,600

glowing as their own

152

00:05:56,230 --> 00:05:54,160

you know their own bright spark as as

153

00:05:57,909 --> 00:05:56,240

the ship was coming apart so that was uh

154

00:05:59,990 --> 00:05:57,919

quite interesting

155

00:06:02,070 --> 00:06:00,000

yeah you've uh

156

00:06:03,430 --> 00:06:02,080

tell me about your uh photography

157

00:06:05,189 --> 00:06:03,440

background are you an amateur

158

00:06:06,710 --> 00:06:05,199

photographer or you just you just have

159

00:06:08,309 --> 00:06:06,720

such a great vantage point up there it's

160

00:06:12,230 --> 00:06:08,319

it's easy to get these shots you do a

161

00:06:17,350 --> 00:06:15,029

well thanks eric no i'm a hack i i like

162

00:06:19,270 --> 00:06:17,360

photography but i've never had

163

00:06:20,870 --> 00:06:19,280

much training outside of what nasa

164

00:06:22,629 --> 00:06:20,880

provides to us but i have a lot of

165

00:06:23,830 --> 00:06:22,639

interest in it particularly the low

166

00:06:25,990 --> 00:06:23,840

light

167

00:06:27,749 --> 00:06:26,000

photography because it it it brings out

168

00:06:30,390 --> 00:06:27,759

things that you can see once you get in

169

00:06:32,469 --> 00:06:30,400

the the cupola and and really light

170

00:06:34,390 --> 00:06:32,479

adjust or light adapt

171

00:06:36,469 --> 00:06:34,400

to the darkness just as you can when you

172

00:06:39,029 --> 00:06:36,479

get away from the city lights and and

173

00:06:41,670 --> 00:06:39,039

get away from uh you know lights even

174

00:06:43,830 --> 00:06:41,680

even in texas even in the area around

175

00:06:45,510 --> 00:06:43,840

houston and adjust and you see a lot

176

00:06:47,590 --> 00:06:45,520

more stars after you after you're

177

00:06:50,070 --> 00:06:47,600

looking for 20 minutes or so to adjust

178

00:06:52,390 --> 00:06:50,080

to the light so up here the cameras can

179

00:06:55,110 --> 00:06:52,400

do that same thing for us and and

180

00:06:57,110 --> 00:06:55,120

capture that view so that we can share

181

00:06:59,029 --> 00:06:57,120

it because it's it's really

182

00:07:02,230 --> 00:06:59,039

amazing particularly i mean the city

183

00:07:05,029 --> 00:07:02,240

lights uh and the i mean the earth lit

184

00:07:07,430 --> 00:07:05,039

by moonlight is is uh very interesting

185

00:07:10,469 --> 00:07:07,440

too as well as of course the aurora is

186

00:07:12,950 --> 00:07:10,479

which was not a real significant feature

187

00:07:14,550 --> 00:07:12,960

on my previous two space flights a

188

00:07:16,469 --> 00:07:14,560

little green glow on the horizon was

189

00:07:17,909 --> 00:07:16,479

about all we got but man we have flown

190

00:07:19,990 --> 00:07:17,919

through it this time and have been able

191

00:07:21,510 --> 00:07:20,000

to capture some of that it's great

192

00:07:23,990 --> 00:07:21,520

yeah those have been some pretty amazing

193

00:07:25,670 --> 00:07:24,000

shots as well uh you were on the station

194

00:07:27,189 --> 00:07:25,680

before the cupola and after the cupola

195

00:07:28,790 --> 00:07:27,199

what kind of a difference does that make

196

00:07:33,430 --> 00:07:28,800

in terms of being able to look back at

197

00:07:40,150 --> 00:07:36,710

it really the the cupola is i mean it's

198

00:07:43,029 --> 00:07:40,160

such a window and it's it's

199

00:07:44,790 --> 00:07:43,039

to me it's it's an amazing thing i have

200

00:07:47,110 --> 00:07:44,800

a history with it i was working on the

201
00:07:50,230 --> 00:07:47,120
space station redesign back in the early

202
00:07:52,629 --> 00:07:50,240
90s and the cupola came perilously close

203
00:07:54,070 --> 00:07:52,639
to being eliminated from the program and

204
00:07:56,070 --> 00:07:54,080
there was a a

205
00:07:58,629 --> 00:07:56,080
an astronaut now deceased named charles

206
00:08:01,990 --> 00:07:58,639
lacy veach who really gave it everything

207
00:08:03,670 --> 00:08:02,000
he had to uh to fighting the fight to

208
00:08:06,070 --> 00:08:03,680
make sure everybody understood the value

209
00:08:08,230 --> 00:08:06,080
of the cupola not just for watching the

210
00:08:10,309 --> 00:08:08,240
earth but to support robotic operations

211
00:08:13,029 --> 00:08:10,319
and i can't imagine reaching out and

212
00:08:14,790 --> 00:08:13,039
grabbing the free flyer htv

213
00:08:17,749 --> 00:08:14,800

cargo ship and the future ones that are

214

00:08:20,150 --> 00:08:17,759

coming without that direct eyeball view

215

00:08:22,469 --> 00:08:20,160

so it has a very definite operational

216

00:08:25,670 --> 00:08:22,479

need but the the value to the just the

217

00:08:27,510 --> 00:08:25,680

human to to to see the earth go by and

218

00:08:28,869 --> 00:08:27,520

because of the angles we can see the

219

00:08:30,790 --> 00:08:28,879

stars too

220

00:08:32,790 --> 00:08:30,800

and that's something that you can't see

221

00:08:34,630 --> 00:08:32,800

the the lab has a window right

222

00:08:35,430 --> 00:08:34,640

underneath me it's primarily dedicated

223

00:08:37,350 --> 00:08:35,440

to

224

00:08:39,829 --> 00:08:37,360

scientific instruments right now that

225

00:08:41,909 --> 00:08:39,839

even if it wasn't clustered with other

226

00:08:43,350 --> 00:08:41,919

cameras it's you can't really see the

227

00:08:44,870 --> 00:08:43,360

hor you can you can't really see the

228

00:08:47,190 --> 00:08:44,880

horizon and certainly can't see the

229

00:08:48,230 --> 00:08:47,200

stars so that's the cupola's really huge

230

00:08:49,750 --> 00:08:48,240

benefit

231

00:08:51,670 --> 00:08:49,760

so there have been a couple successful

232

00:08:53,269 --> 00:08:51,680

progress launches since the the problems

233

00:08:55,509 --> 00:08:53,279

do you feel confident that the russians

234

00:09:00,790 --> 00:08:55,519

have ironed out the issues that with the

235

00:09:05,829 --> 00:09:03,269

i believe so eric the the with as many

236

00:09:08,150 --> 00:09:05,839

successful launches as they've had uh

237

00:09:10,470 --> 00:09:08,160

for many years it's clearly not a design

238

00:09:12,870 --> 00:09:10,480

problem so it goes back to some kind of

239

00:09:14,310 --> 00:09:12,880

a process problem

240

00:09:16,230 --> 00:09:14,320

and they they went all the way through

241

00:09:18,470 --> 00:09:16,240

those they tore them apart they rebuilt

242

00:09:21,350 --> 00:09:18,480

the engines to make sure there were no

243

00:09:23,030 --> 00:09:21,360

questions no lingering concerns and

244

00:09:24,470 --> 00:09:23,040

and you know it's a great successful

245

00:09:26,310 --> 00:09:24,480

launch and i think these launches are

246

00:09:28,230 --> 00:09:26,320

going to be some of the you know the

247

00:09:30,630 --> 00:09:28,240

highest probability success launches

248

00:09:34,150 --> 00:09:30,640

ever because every you know all

249

00:09:36,630 --> 00:09:34,160

attention is on every detail and maybe a

250

00:09:39,269 --> 00:09:36,640

renewed emphasis on on some of the

251
00:09:41,269 --> 00:09:39,279
details something escaped us somewhere

252
00:09:43,509 --> 00:09:41,279
uh that's pretty clear when when a ship

253
00:09:45,509 --> 00:09:43,519
goes down like that but i think i think

254
00:09:47,670 --> 00:09:45,519
we're in really great shape the the

255
00:09:49,030 --> 00:09:47,680
launches have been flawless and i look

256
00:09:51,110 --> 00:09:49,040
forward to another one in a week and a

257
00:09:53,030 --> 00:09:51,120
half hey what have you learned about

258
00:09:58,710 --> 00:09:53,040
yourself after after nearly six months

259
00:10:03,190 --> 00:10:00,790
you know i i really thought six months

260
00:10:04,630 --> 00:10:03,200
half a year that is that's you know a

261
00:10:07,030 --> 00:10:04,640
huge chunk out of your life and i

262
00:10:08,949 --> 00:10:07,040
thought this would just go on forever

263
00:10:11,030 --> 00:10:08,959

but uh there there must be something to

264

00:10:14,389 --> 00:10:11,040

einstein's uh you know theories of

265

00:10:16,230 --> 00:10:14,399

relativity uh uh speed and time because

266

00:10:17,670 --> 00:10:16,240

this has gone by in a flash i can't

267

00:10:20,630 --> 00:10:17,680

believe we've been up here five months

268

00:10:23,030 --> 00:10:20,640

there's no way uh and it it surprises me

269

00:10:26,550 --> 00:10:23,040

just how quick the days go by and and

270

00:10:28,470 --> 00:10:26,560

the weeks and months tick by so you know

271

00:10:30,790 --> 00:10:28,480

and i've enjoyed the opportunity to

272

00:10:32,310 --> 00:10:30,800

really dig in and and live what

273

00:10:34,870 --> 00:10:32,320

literally was a childhood dream of

274

00:10:36,230 --> 00:10:34,880

living and working on a space station as

275

00:10:38,150 --> 00:10:36,240

some people were dreaming about going to

276

00:10:39,750 --> 00:10:38,160

the moon i really did dream about living

277

00:10:41,910 --> 00:10:39,760

on a space station

278

00:10:43,030 --> 00:10:41,920

and so this has been just a great thing

279

00:10:44,630 --> 00:10:43,040

for me

280

00:10:49,509 --> 00:10:44,640

well mike have a safe trip home later

281

00:10:55,509 --> 00:10:50,870

thanks eric great talking to you i look

282

00:11:01,590 --> 00:10:57,829

station this is houston acr that

283

00:11:05,590 --> 00:11:03,750

to you eric berger from houston

284

00:11:07,110 --> 00:11:05,600

chronicle we appreciate your time today