



1  
00:00:22,880 --> 00:00:44,790  
or not

2  
00:00:44,800 --> 00:01:05,990  
oh

3  
00:01:10,230 --> 00:01:07,910  
you know we were just sitting in there

4  
00:01:11,190 --> 00:01:10,240  
in the in the orbital module and waiting

5  
00:01:12,469 --> 00:01:11,200  
for the

6  
00:01:13,910 --> 00:01:12,479  
checks downstairs

7  
00:01:15,590 --> 00:01:13,920  
and and we were thinking this looks

8  
00:01:17,990 --> 00:01:15,600  
exactly like in our training modules so

9  
00:01:19,990 --> 00:01:18,000  
you kind of think it's you're used to

10  
00:01:21,749 --> 00:01:20,000  
that but actually we said hey take a

11  
00:01:23,429 --> 00:01:21,759  
step back this is our real spaceship and

12  
00:01:24,830 --> 00:01:23,439  
that's an amazing feeling and then we

13  
00:01:55,670 --> 00:01:24,840

gave a good high five

14

00:01:59,429 --> 00:01:57,190

this is your rocket

15

00:02:01,350 --> 00:01:59,439

are you excited

16

00:02:02,709 --> 00:02:01,360

can you possibly look at that and not be

17

00:02:15,270 --> 00:02:02,719

exciting

18

00:02:36,550 --> 00:02:30,869

is

19

00:02:36,560 --> 00:03:40,869

exactly

20

00:03:40,879 --> 00:03:55,110

uh

21

00:03:55,120 --> 00:05:13,350

foreign

22

00:05:13,360 --> 00:05:26,550

oh

23

00:05:26,560 --> 00:06:29,749

so

24

00:06:29,759 --> 00:08:07,670

come on

25

00:08:59,110 --> 00:08:52,070

oh

26

00:09:03,110 --> 00:09:01,190

one veteran two first-time flyers for

27

00:09:05,350 --> 00:09:03,120

this crew how prepared are they and how

28

00:09:07,030 --> 00:09:05,360

complex will this mission be absolutely

29

00:09:09,829 --> 00:09:07,040

rob it's uh it's been great to actually

30

00:09:11,269 --> 00:09:09,839

see how well reid alex and max arrive

31

00:09:12,949 --> 00:09:11,279

are prepared for this mission i've spent

32

00:09:14,710 --> 00:09:12,959

the last couple of days in the cosmonaut

33

00:09:16,550 --> 00:09:14,720

hotel and they're just uh their

34

00:09:17,350 --> 00:09:16,560

preparations have just been excellent i

35

00:09:18,870 --> 00:09:17,360

know

36

00:09:20,870 --> 00:09:18,880

everybody looks at a crew that's got a

37

00:09:23,030 --> 00:09:20,880

couple of rookies and considers are they

38

00:09:24,550 --> 00:09:23,040

ready but they're ready for the complex

39

00:09:26,150 --> 00:09:24,560

mission that we have out in front of

40

00:09:27,750 --> 00:09:26,160

them they're ready to join swanny and

41

00:09:29,430 --> 00:09:27,760

the rest of the cosmonauts on board

42

00:09:30,630 --> 00:09:29,440

space station and get started with

43

00:09:33,030 --> 00:09:30,640

expedition

44

00:09:35,509 --> 00:09:33,040

it's got everything you want and more

45

00:09:36,949 --> 00:09:35,519

spacewalks visiting vehicles science

46

00:09:38,790 --> 00:09:36,959

galore

47

00:09:40,310 --> 00:09:38,800

how complicated will it be

48

00:09:42,230 --> 00:09:40,320

it'll certainly be a very very

49

00:09:43,590 --> 00:09:42,240

complicated it's really a big shell game

50

00:09:45,110 --> 00:09:43,600

to try to get all the pieces in the

51  
00:09:46,550 --> 00:09:45,120  
right order to make sure you're prepared

52  
00:09:48,630 --> 00:09:46,560  
for everything when the when the right

53  
00:09:49,990 --> 00:09:48,640  
time comes but i know this crew is up to

54  
00:09:51,750 --> 00:09:50,000  
it and we're really looking forward to

55  
00:09:53,430 --> 00:09:51,760  
watching them work

56  
00:09:55,590 --> 00:09:53,440  
we're just two weeks removed from a

57  
00:09:57,430 --> 00:09:55,600  
soyuz landing and here we are back in

58  
00:09:59,110 --> 00:09:57,440  
kazakhstan soyuz vehicle behind you

59  
00:10:01,269 --> 00:09:59,120  
poised for launch

60  
00:10:03,269 --> 00:10:01,279  
as you as you look ahead

61  
00:10:04,630 --> 00:10:03,279  
a trilateral mission

62  
00:10:06,150 --> 00:10:04,640  
critical mission to the international

63  
00:10:07,750 --> 00:10:06,160

space station what are your thoughts as

64

00:10:09,350 --> 00:10:07,760

you stand on this historic launch pad

65

00:10:11,110 --> 00:10:09,360

that yuri gagarin launched from over a

66

00:10:13,509 --> 00:10:11,120

half century ago

67

00:10:15,910 --> 00:10:13,519

we are in a busy time period um

68

00:10:18,150 --> 00:10:15,920

for the space station right now 37s you

69

00:10:20,630 --> 00:10:18,160

mentioned just landed we talked a couple

70

00:10:23,269 --> 00:10:20,640

weeks ago spacex just landed

71

00:10:25,350 --> 00:10:23,279

in the in pacific we got all the

72

00:10:27,269 --> 00:10:25,360

commercial cargo back back into the

73

00:10:28,550 --> 00:10:27,279

principal investigator's hands which was

74

00:10:30,069 --> 00:10:28,560

great and now we're here we're ready to

75

00:10:33,350 --> 00:10:30,079

go from a crew size of three to get back

76

00:10:35,509 --> 00:10:33,360

up to a crew size of six

77

00:10:37,990 --> 00:10:35,519

dan how do you in your own mind view uh

78

00:10:40,310 --> 00:10:38,000

this uh from a personal sense of history

79

00:10:42,230 --> 00:10:40,320

and a sense of the importance at this

80

00:10:43,829 --> 00:10:42,240

moment in the space station program yeah

81

00:10:46,710 --> 00:10:43,839

it's been incredible we've been at this

82

00:10:48,230 --> 00:10:46,720

for 15 years 13 years continuous

83

00:10:49,990 --> 00:10:48,240

continuously man

84

00:10:52,230 --> 00:10:50,000

you know 90 000 orbits of the space

85

00:10:54,470 --> 00:10:52,240

station we're constantly learning new

86

00:10:56,710 --> 00:10:54,480

ways of how to advance technology for

87

00:10:59,030 --> 00:10:56,720

the exploration program and so it's just

88

00:11:00,790 --> 00:10:59,040

been a remarkable partnership and we're

89

00:11:02,790 --> 00:11:00,800

looking for many many years to come to

90

00:11:04,949 --> 00:11:02,800

keep on demonstrating the technology

91

00:11:06,949 --> 00:11:04,959

that we'll need to go further

92

00:11:08,550 --> 00:11:06,959

we have a crew one veteran two

93

00:11:10,230 --> 00:11:08,560

first-time flyers

94

00:11:11,829 --> 00:11:10,240

they've been training for quite a while

95

00:11:13,430 --> 00:11:11,839

for this mission and it's got a little

96

00:11:15,910 --> 00:11:13,440

bit of everything that lies ahead over

97

00:11:18,069 --> 00:11:15,920

the next six months how complex will

98

00:11:19,430 --> 00:11:18,079

this be and how critical is the mission

99

00:11:20,790 --> 00:11:19,440

for the station yeah we're gonna we're

100

00:11:22,150 --> 00:11:20,800

gonna put their training to work we've

101

00:11:24,150 --> 00:11:22,160

got uh

102

00:11:26,150 --> 00:11:24,160

three evas on on the u.s side that we

103

00:11:27,829 --> 00:11:26,160

need to conduct uh by the august time

104

00:11:29,829 --> 00:11:27,839

period um we've got some work to do

105

00:11:31,190 --> 00:11:29,839

still in our emu suit to get cleared

106

00:11:33,829 --> 00:11:31,200

and then there's also a couple russian

107

00:11:36,069 --> 00:11:33,839

ebas as well that are in uh coming up

108

00:11:37,829 --> 00:11:36,079

before august as well so there's a lot

109

00:11:39,190 --> 00:11:37,839

of activity we've got new and exciting

110

00:11:41,269 --> 00:11:39,200

research coming up on board the space

111

00:11:43,190 --> 00:11:41,279

station cases is bringing a lot of

112

00:11:44,630 --> 00:11:43,200

experiments to the table

113

00:11:46,949 --> 00:11:44,640

we're going to keep the crew extremely

114

00:11:48,550 --> 00:11:46,959

busy not only conducting evas

115

00:11:51,190 --> 00:11:48,560

but also in a full full research

116

00:11:52,949 --> 00:11:51,200

campaign mode so looking forward to it

117

00:11:54,230 --> 00:11:52,959

phil gerstenmaier nasa's associate

118

00:11:56,870 --> 00:11:54,240

administrator for space flight

119

00:11:59,430 --> 00:11:56,880

operations bill back at baikonur soyuz

120

00:12:01,750 --> 00:11:59,440

rocket behind you poised for launch

121

00:12:03,829 --> 00:12:01,760

a trilateral launch critical to the

122

00:12:05,750 --> 00:12:03,839

space station complex mission coming up

123

00:12:07,590 --> 00:12:05,760

for these three crew members

124

00:12:10,790 --> 00:12:07,600

how important is this and what is your

125

00:12:12,550 --> 00:12:10,800

perspective on what it means as we are

126

00:12:13,829 --> 00:12:12,560

well into the second decade of this

127

00:12:15,590 --> 00:12:13,839

partnership

128

00:12:17,269 --> 00:12:15,600

yeah again it's a

129

00:12:18,870 --> 00:12:17,279

tremendous

130

00:12:20,310 --> 00:12:18,880

accomplishment for the partnership to

131

00:12:22,629 --> 00:12:20,320

have everyone here and ready to go

132

00:12:24,629 --> 00:12:22,639

support and ready to get ready to go fly

133

00:12:26,790 --> 00:12:24,639

you know the russian commander and the

134

00:12:28,790 --> 00:12:26,800

u.s crew member and the german

135

00:12:30,629 --> 00:12:28,800

as part of the european space agency are

136

00:12:31,910 --> 00:12:30,639

just a tremendous team

137

00:12:33,910 --> 00:12:31,920

you know when you get a chance to really

138

00:12:35,590 --> 00:12:33,920

talk and meet this team again we've

139

00:12:37,350 --> 00:12:35,600

really pulled together the best from all

140

00:12:38,710 --> 00:12:37,360

these countries to work together and go

141

00:12:40,389 --> 00:12:38,720

to this tremendous facility the

142

00:12:42,069 --> 00:12:40,399

international space station

143

00:12:43,670 --> 00:12:42,079

as you described just a tremendous

144

00:12:45,509 --> 00:12:43,680

amount of activity incurring onboard

145

00:12:46,710 --> 00:12:45,519

space station just a lot of research

146

00:12:48,470 --> 00:12:46,720

getting done

147

00:12:50,310 --> 00:12:48,480

this facility will be really a

148

00:12:51,990 --> 00:12:50,320

tremendous benefit to all of us here on

149

00:12:53,670 --> 00:12:52,000

the earth and it's it's great to see the

150

00:12:55,990 --> 00:12:53,680

partnership come together it's great to

151

00:12:57,750 --> 00:12:56,000

see the the three countries and the

152

00:13:00,069 --> 00:12:57,760

three groups really come together in the

153

00:13:01,670 --> 00:13:00,079

partnership and just a tremendous time

154

00:13:03,509 --> 00:13:01,680

again as as we're here in baikonur

155

00:13:05,030 --> 00:13:03,519

getting ready for another launch

156

00:13:07,750 --> 00:13:05,040

good meeting with roscosmos and and

157

00:13:09,910 --> 00:13:07,760

inergia top management you have a better

158

00:13:11,829 --> 00:13:09,920

sense than almost anybody as to how

159

00:13:13,350 --> 00:13:11,839

strong and how robust this all is at

160

00:13:15,590 --> 00:13:13,360

this point in time

161

00:13:17,910 --> 00:13:15,600

is it remarkable though even at this

162

00:13:20,710 --> 00:13:17,920

point at this age of the space station

163

00:13:22,710 --> 00:13:20,720

how well put together the partnership is

164

00:13:24,550 --> 00:13:22,720

and and how the station is functioning

165

00:13:26,550 --> 00:13:24,560

yeah again i think that you know the

166

00:13:29,350 --> 00:13:26,560

technical challenge of the space station

167

00:13:31,190 --> 00:13:29,360

is just really really large and it it

168

00:13:33,269 --> 00:13:31,200

takes people from all around the world

169

00:13:34,870 --> 00:13:33,279

to make this space station work and and

170

00:13:36,310 --> 00:13:34,880

sometimes it appears trivial and it

171

00:13:38,790 --> 00:13:36,320

appears easy but the technical

172

00:13:40,790 --> 00:13:38,800

challenges are just huge and and to

173

00:13:42,870 --> 00:13:40,800

really come together and work and figure

174

00:13:44,629 --> 00:13:42,880

out creative ways to solve solutions

175

00:13:47,350 --> 00:13:44,639

that that may actually be harder for

176

00:13:48,949 --> 00:13:47,360

your country or your group but to figure

177

00:13:50,710 --> 00:13:48,959

out a way to actually solve this

178

00:13:52,870 --> 00:13:50,720

technical problem as a team is just

179

00:13:54,389 --> 00:13:52,880

tremendous so the teamwork has grown

180

00:13:56,150 --> 00:13:54,399

over the years as the challenges are

181

00:13:57,990 --> 00:13:56,160

there the team has really come together

182

00:13:59,750 --> 00:13:58,000

and strong and and even at this time

183

00:14:01,910 --> 00:13:59,760

where it's a little shaky overall

184

00:14:03,590 --> 00:14:01,920

politically in other areas there's still

185

00:14:05,750 --> 00:14:03,600

a tremendous

186

00:14:07,189 --> 00:14:05,760

spirit of how can we accomplish this

187

00:14:09,189 --> 00:14:07,199

they see the greater purpose of what

188

00:14:11,430 --> 00:14:09,199

we're doing in space and we can be a

189

00:14:13,910 --> 00:14:11,440

model for others of how real teams can

190

00:14:15,829 --> 00:14:13,920

work together despite challenging times

191

00:14:17,269 --> 00:14:15,839

and despite technical challenges that

192

00:14:19,990 --> 00:14:17,279

come forward

193

00:14:23,269 --> 00:14:20,000

we're approaching 14 years 14 years of a

194

00:14:24,629 --> 00:14:23,279

continuous uh american and international

195

00:14:26,550 --> 00:14:24,639

partner presence on board the

196

00:14:28,389 --> 00:14:26,560

international space station how

197

00:14:30,150 --> 00:14:28,399

impressive is that

198

00:14:31,189 --> 00:14:30,160

even for the layman to understand and to

199

00:14:32,870 --> 00:14:31,199

grasp

200

00:14:33,910 --> 00:14:32,880

yeah it's it's amazing for me when i

201  
00:14:35,910 --> 00:14:33,920  
think about we've you know we've

202  
00:14:37,910 --> 00:14:35,920  
essentially had human beings off the

203  
00:14:39,910 --> 00:14:37,920  
planet of the earth for 14 consecutive

204  
00:14:42,870 --> 00:14:39,920  
years and and to think there's kids that

205  
00:14:45,430 --> 00:14:42,880  
are you know 13 years old that have

206  
00:14:48,150 --> 00:14:45,440  
lived a life a full life to 13 years

207  
00:14:50,150 --> 00:14:48,160  
without having any other knowledge they

208  
00:14:51,189 --> 00:14:50,160  
just think of people being off of the

209  
00:14:53,030 --> 00:14:51,199  
earth and

210  
00:14:55,430 --> 00:14:53,040  
and working in space and it's just come

211  
00:14:57,430 --> 00:14:55,440  
as almost normal i think us in the

212  
00:14:59,350 --> 00:14:57,440  
industry we don't quite see it that way

213  
00:15:01,350 --> 00:14:59,360

it's it appears normal on the outside

214

00:15:03,350 --> 00:15:01,360

but we have lots of challenges every day

215

00:15:05,269 --> 00:15:03,360

with new things and and new things that

216

00:15:06,790 --> 00:15:05,279

rise but again we work together through

217

00:15:08,870 --> 00:15:06,800

those challenges and tremendous things

218

00:15:11,189 --> 00:15:08,880

can be accomplished so again you know as

219

00:15:13,269 --> 00:15:11,199

one of the crews expedition patches said

220

00:15:15,110 --> 00:15:13,279

you know off the earth for the earth

221

00:15:17,509 --> 00:15:15,120

that is truly what we're doing here we

222

00:15:19,350 --> 00:15:17,519

have crews on orbit but they're really

223

00:15:20,949 --> 00:15:19,360

doing activities and research that

224

00:15:23,110 --> 00:15:20,959

benefits every one of us here on the

225

00:15:25,509 --> 00:15:23,120

earth so so this these 14 years have

226

00:15:27,750 --> 00:15:25,519

been tremendous they've really stretched

227

00:15:29,509 --> 00:15:27,760

the partnership we've grown but i think

228

00:15:31,590 --> 00:15:29,519

the next years in the future will even

229

00:15:33,350 --> 00:15:31,600

yield bigger benefits for us here on the

230

00:15:35,350 --> 00:15:33,360

earth so i look forward to those

231

00:15:36,870 --> 00:15:35,360

continuing presence off the earth and

232

00:15:38,870 --> 00:15:36,880

and hopefully someday we push human

233

00:15:40,710 --> 00:15:38,880

presence into the solar system and move

234

00:15:44,790 --> 00:15:40,720

beyond low earth orbit and i clearly

235

00:15:47,670 --> 00:15:46,150

so what do you think of being here

236

00:15:50,069 --> 00:15:47,680

because you you kind of opened some

237

00:15:51,269 --> 00:15:50,079

doors just after segment then you were

238

00:15:53,430 --> 00:15:51,279

yeah

239

00:15:54,949 --> 00:15:53,440

well i mean that is a unique place for

240

00:15:57,670 --> 00:15:54,959

all of us

241

00:16:00,150 --> 00:15:57,680

the launch site i mean from where we

242

00:16:02,230 --> 00:16:00,160

lifted off when went to orbit

243

00:16:04,230 --> 00:16:02,240

it's a very special place and on top of

244

00:16:06,870 --> 00:16:04,240

that it's the same one from you from

245

00:16:10,550 --> 00:16:06,880

where yuri gagarin was also sent up to

246

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

orbit and it's a very historical

247

00:16:13,110 --> 00:16:12,000

area

248

00:16:15,189 --> 00:16:13,120

you can

249

00:16:17,350 --> 00:16:15,199

you've been flying with the shuttle

250

00:16:20,470 --> 00:16:17,360

flying with the soyuz you're back here

251

00:16:22,710 --> 00:16:20,480

i've things evolved a lot in fact if you

252

00:16:23,910 --> 00:16:22,720

look at what's happened in those past

253

00:16:25,990 --> 00:16:23,920

years

254

00:16:29,110 --> 00:16:26,000

oh yes i mean um

255

00:16:31,189 --> 00:16:29,120

i guess within the isa program

256

00:16:31,990 --> 00:16:31,199

i could probably say i missed the space

257

00:16:34,150 --> 00:16:32,000

lab

258

00:16:36,470 --> 00:16:34,160

because i participated in two flights

259

00:16:38,389 --> 00:16:36,480

and i was around when the whole

260

00:16:40,230 --> 00:16:38,399

system was developed

261

00:16:43,189 --> 00:16:40,240

and now we have the space station which

262

00:16:46,389 --> 00:16:43,199

is of course a big big step forward it

263

00:16:48,470 --> 00:16:46,399

is a system which allows us to

264

00:16:51,350 --> 00:16:48,480

do research work

265

00:16:53,509 --> 00:16:51,360

day in day out around the clock and in

266

00:16:54,470 --> 00:16:53,519

space them it was 10 days and then the

267

00:16:56,790 --> 00:16:54,480

whole

268

00:16:59,910 --> 00:16:56,800

chance was gone and the shuttle had to

269

00:17:01,509 --> 00:16:59,920

come back for that reason i think um

270

00:17:02,790 --> 00:17:01,519

there's a big

271

00:17:05,270 --> 00:17:02,800

evolution

272

00:17:09,110 --> 00:17:05,280

and from my point of view

273

00:17:10,069 --> 00:17:09,120

the space station is also kind of a tool

274

00:17:18,470 --> 00:17:10,079

to

275

00:17:21,909 --> 00:17:18,480

keep them in good health and in good

276

00:17:23,029 --> 00:17:21,919

spirit that is know how we need to

277

00:17:25,990 --> 00:17:23,039

continue

278

00:17:27,510 --> 00:17:26,000

to further objects like mars well in

279

00:17:29,669 --> 00:17:27,520

fact when you think about it what you

280

00:17:32,070 --> 00:17:29,679

did with space lab was something putting

281

00:17:34,390 --> 00:17:32,080

the basis space lab and mir and then

282

00:17:37,029 --> 00:17:34,400

we've got iss it's uh

283

00:17:39,830 --> 00:17:37,039

yes and in fact i mean i was

284

00:17:41,110 --> 00:17:39,840

also in mia so i know a little bit

285

00:17:46,150 --> 00:17:41,120

how

286

00:17:47,750 --> 00:17:46,160

work and life on the station looks like

287

00:17:50,710 --> 00:17:47,760

yes i think

288

00:17:53,750 --> 00:17:50,720

i could proudly say i'm one of the

289

00:17:54,789 --> 00:17:53,760

pioneers within the isa program at least

290

00:17:58,070 --> 00:17:54,799

and

291

00:18:00,549 --> 00:17:58,080

i'm now of course also very

292

00:18:01,750 --> 00:18:00,559

pleased that younger

293

00:18:05,029 --> 00:18:01,760

colleagues

294

00:18:07,190 --> 00:18:05,039

uh continue what we started more than 20

295

00:18:09,350 --> 00:18:07,200

years ago and if i tell you you are a

296

00:18:10,390 --> 00:18:09,360

backup you need to go tomorrow will you

297

00:18:11,669 --> 00:18:10,400

go

298

00:18:15,029 --> 00:18:11,679

sure

299

00:18:17,029 --> 00:18:15,039

if you buy me a ticket

300

00:18:18,950 --> 00:18:17,039

did you miss it

301

00:18:20,950 --> 00:18:18,960

well okay i mean you have to be

302

00:18:23,830 --> 00:18:20,960

realistic it's time now for the next

303

00:18:24,710 --> 00:18:23,840

generation to continue what we started

304

00:18:26,789 --> 00:18:24,720

but

305

00:18:29,909 --> 00:18:26,799

i mean if there would be