



1
00:00:34,470 --> 00:00:32,790
we are in moscow now we're at the

2
00:00:37,030 --> 00:00:34,480
airport actually and we're waiting on

3
00:00:39,270 --> 00:00:37,040
some other uh people to show up

4
00:00:40,389 --> 00:00:39,280
and um there's a few more nasa people

5
00:00:41,510 --> 00:00:40,399
that flew with us on the flight over

6
00:00:43,270 --> 00:00:41,520
here from washington and we're just

7
00:00:45,190 --> 00:00:43,280
waiting on them and we will get in the

8
00:00:47,750 --> 00:00:45,200
van and uh head to the hotel here in a

9
00:00:49,910 --> 00:00:47,760
few minutes so this is what uh

10
00:00:51,510 --> 00:00:49,920
we are

11
00:00:53,430 --> 00:00:51,520
waiting

12
00:00:55,510 --> 00:00:53,440
and a lot of people right now okay so

13
00:00:57,029 --> 00:00:55,520

you guys are adcoz right yes that's

14

00:00:58,790 --> 00:00:57,039

correct attitude determination and

15

00:00:59,990 --> 00:00:58,800

control officer correct

16

00:01:03,029 --> 00:01:00,000

are you impressed that i actually knew

17

00:01:04,789 --> 00:01:03,039

that i'm a little bit impressed yeah uh

18

00:01:05,990 --> 00:01:04,799

so tell people what that actually is

19

00:01:07,670 --> 00:01:06,000

what is it what do you do you're

20

00:01:08,870 --> 00:01:07,680

stationed right station flight okay so

21

00:01:10,789 --> 00:01:08,880

we work for the international space

22

00:01:12,230 --> 00:01:10,799

station what the attitude officer does

23

00:01:13,910 --> 00:01:12,240

is that we control how the space

24

00:01:15,749 --> 00:01:13,920

station's oriented as it orbits around

25

00:01:17,270 --> 00:01:15,759

the earth so you get to point the thing

26

00:01:19,749 --> 00:01:17,280

exactly right

27

00:01:21,270 --> 00:01:19,759

is that intimidating sometimes

28

00:01:22,789 --> 00:01:21,280

but we have a system that's very

29

00:01:24,469 --> 00:01:22,799

redundant and so a lot of times it just

30

00:01:26,710 --> 00:01:24,479

flies itself and we use

31

00:01:28,469 --> 00:01:26,720

gyroscopes and thrusters to uh maintain

32

00:01:29,910 --> 00:01:28,479

the attitude so what are you guys doing

33

00:01:31,429 --> 00:01:29,920

in moscow obviously we're here for the

34

00:01:33,830 --> 00:01:31,439

land the soyuz landings what are you

35

00:01:36,149 --> 00:01:33,840

doing um we're here actually to fly the

36

00:01:37,350 --> 00:01:36,159

shuttle to fly the shuttle yes

37

00:01:38,789 --> 00:01:37,360

so

38

00:01:40,630 --> 00:01:38,799

during the shuttle missions it gets a

39

00:01:42,469 --> 00:01:40,640

lot more complex because you've added a

40

00:01:45,190 --> 00:01:42,479

whole new attitude control system into

41

00:01:46,870 --> 00:01:45,200

the mix so basically two to three you're

42

00:01:49,109 --> 00:01:46,880

putting a big giant weight on the end of

43

00:01:50,950 --> 00:01:49,119

the station exactly and so

44

00:01:52,789 --> 00:01:50,960

with all of the changes that happen on a

45

00:01:54,870 --> 00:01:52,799

day-to-day basis with shuttle missions

46

00:01:56,389 --> 00:01:54,880

we find it's easier to talk face-to-face

47

00:01:57,350 --> 00:01:56,399

with our russian counterparts as opposed

48

00:01:59,670 --> 00:01:57,360

to

49

00:02:01,910 --> 00:01:59,680

working directly over the phones or over

50

00:02:03,190 --> 00:02:01,920

the loops of your interpreters because

51
00:02:04,469 --> 00:02:03,200
there's a lot of coordination that has

52
00:02:06,069 --> 00:02:04,479
to go on between our team and houston

53
00:02:08,469 --> 00:02:06,079
and the team here in moscow there's a

54
00:02:10,150 --> 00:02:08,479
lot of coordination so we spend most of

55
00:02:11,910 --> 00:02:10,160
our days going back and forth making

56
00:02:14,790 --> 00:02:11,920
sure that everyone is on the same page

57
00:02:15,589 --> 00:02:14,800
for the attitude plan for every day

58
00:02:19,190 --> 00:02:15,599
and

59
00:02:21,430 --> 00:02:19,200
they're not allowed because some events

60
00:02:23,670 --> 00:02:21,440
actually cannot use thrusters because

61
00:02:25,510 --> 00:02:23,680
you can damage the spacecraft yeah

62
00:02:27,190 --> 00:02:25,520
and of course we got a soyuz undocking

63
00:02:29,910 --> 00:02:27,200

during this whole thing too right and

64

00:02:31,430 --> 00:02:29,920

that's a whole new process it's

65

00:02:33,110 --> 00:02:31,440

something we've never done before so

66

00:02:34,830 --> 00:02:33,120

we're kind of paving the territory with

67

00:02:35,670 --> 00:02:34,840

this one but we'll do it

68

00:02:37,350 --> 00:02:35,680

flawlessly it's gonna be fine it's gonna

69

00:02:41,589 --> 00:02:37,360

be beautiful be flawless just make it

70

00:02:44,790 --> 00:02:42,949

all right where are we heading we're

71

00:02:47,670 --> 00:02:44,800

going to the esa office in moscow the

72

00:02:49,030 --> 00:02:47,680

european space agency correct

73

00:02:50,390 --> 00:02:49,040

usually we have this is our landing team

74

00:02:51,910 --> 00:02:50,400

meeting right we're going to talk about

75

00:02:52,949 --> 00:02:51,920

team face to face where we get together

76

00:02:55,110 --> 00:02:52,959

all the folks that are going to go out

77

00:02:56,630 --> 00:02:55,120

on the helos plus those of us supporting

78

00:02:58,949 --> 00:02:56,640

here from moscow

79

00:03:00,309 --> 00:02:58,959

all get together tag up and discuss

80

00:03:01,509 --> 00:03:00,319

what needs to happen and when and

81

00:03:03,990 --> 00:03:01,519

usually we've got this at the nasa

82

00:03:04,869 --> 00:03:04,000

office here but we are guests of isa

83

00:03:05,990 --> 00:03:04,879

today

84

00:03:07,030 --> 00:03:06,000

because they have a big conference room

85

00:03:16,949 --> 00:03:07,040

right they have a big conference room

86

00:03:20,790 --> 00:03:18,550

with some showers and nice between

87

00:03:22,309 --> 00:03:20,800

heartlake and coastal you might have to

88

00:03:24,070 --> 00:03:22,319

pick your way around some of that on the

89

00:03:25,910 --> 00:03:24,080

way out

90

00:03:27,830 --> 00:03:25,920

probably not enough to make it really

91

00:03:30,470 --> 00:03:27,840

muddy over there but some of the ground

92

00:03:33,509 --> 00:03:30,480

may be just a bit damp and some spots

93

00:03:36,470 --> 00:03:33,519

uh if you happen to land very soon after

94

00:03:38,630 --> 00:03:36,480

the spacecraft lands you see the the

95

00:03:41,190 --> 00:03:38,640

little antennas is flashing light beacon

96

00:03:43,670 --> 00:03:41,200

and combined hf vhf antenna

97

00:03:45,430 --> 00:03:43,680

um those have hatches that cover them

98

00:03:47,830 --> 00:03:45,440

and they don't blow off until about 10

99

00:03:49,509 --> 00:03:47,840

minutes after a touchdown so stay away

100

00:03:51,030 --> 00:03:49,519

from the vehicle because that hatch will

101
00:03:53,030 --> 00:03:51,040
come blowing off and the antenna will

102
00:03:54,949 --> 00:03:53,040
come out and if you're in the path of it

103
00:03:56,789 --> 00:03:54,959
you could get beamed by it there was a

104
00:03:59,270 --> 00:03:56,799
incident a couple times ago when the

105
00:04:02,309 --> 00:03:59,280
video camera almost got hit by the hatch

106
00:04:07,429 --> 00:04:02,319
so stay clear of the vehicle until

107
00:04:11,750 --> 00:04:08,949
hey everybody it's day four here in

108
00:04:14,309 --> 00:04:11,760
moscow it's uh 7 p.m local time on

109
00:04:15,910 --> 00:04:14,319
saturday right now you saw our landing

110
00:04:17,670 --> 00:04:15,920
team meeting with the nasa personnel

111
00:04:20,150 --> 00:04:17,680
that we had day before yesterday so all

112
00:04:21,590 --> 00:04:20,160
that went off uh fine we got our safety

113
00:04:23,270 --> 00:04:21,600

briefing that we get each time we come

114

00:04:25,189 --> 00:04:23,280

over here about what to do what not to

115

00:04:26,629 --> 00:04:25,199

do when we get out in the field tomorrow

116

00:04:28,710 --> 00:04:26,639

morning at about seven o'clock we're

117

00:04:30,230 --> 00:04:28,720

going to leave the hotel and head up to

118

00:04:32,790 --> 00:04:30,240

star city which of course is where the

119

00:04:33,590 --> 00:04:32,800

cosmonauts and the astronauts train

120

00:04:35,510 --> 00:04:33,600

whatever they're part of these

121

00:04:37,670 --> 00:04:35,520

expeditions we're going to meet up with

122

00:04:39,749 --> 00:04:37,680

a few more people up there including the

123

00:04:41,590 --> 00:04:39,759

russian search and recovery forces and

124

00:04:42,710 --> 00:04:41,600

then we will all head out to tcoloski

125

00:04:44,469 --> 00:04:42,720

airfield

126

00:04:47,430 --> 00:04:44,479

and then take about a three hour flight

127

00:04:48,950 --> 00:04:47,440

down to the city of karaganda

128

00:04:50,710 --> 00:04:48,960

now sort of a crash course on how these

129

00:04:52,469 --> 00:04:50,720

soyuz landings work there's two

130

00:04:53,830 --> 00:04:52,479

different zones in kazakhstan that the

131

00:04:56,310 --> 00:04:53,840

soyuz's

132

00:04:58,390 --> 00:04:56,320

can land in there's a northern zone and

133

00:04:59,990 --> 00:04:58,400

a southern zone and in each one of those

134

00:05:02,469 --> 00:05:00,000

zones there's two different cities that

135

00:05:04,070 --> 00:05:02,479

we focus on there's sort of a main

136

00:05:06,230 --> 00:05:04,080

bigger city that we fly into that we

137

00:05:08,310 --> 00:05:06,240

stay in usually about a day or two and

138

00:05:10,390 --> 00:05:08,320

then there's a smaller secondary city

139

00:05:11,990 --> 00:05:10,400

that's sort of the staging area that we

140

00:05:13,670 --> 00:05:12,000

typically fly down to the night before

141

00:05:15,990 --> 00:05:13,680

the landing and what it does is just put

142

00:05:17,909 --> 00:05:16,000

us in the helicopters a bit closer to

143

00:05:20,710 --> 00:05:17,919

the actual landing area itself usually

144

00:05:22,390 --> 00:05:20,720

it's about a 15 minute flight at most

145

00:05:23,350 --> 00:05:22,400

from those cities so in the northern

146

00:05:24,790 --> 00:05:23,360

zone

147

00:05:26,469 --> 00:05:24,800

you've got the main city of cousteau

148

00:05:28,710 --> 00:05:26,479

that we fly into and then also the

149

00:05:30,790 --> 00:05:28,720

secondary city of arclick which is the

150

00:05:32,230 --> 00:05:30,800

staging city like i talked about down in

151
00:05:33,749 --> 00:05:32,240
the southern zone which is where we're

152
00:05:35,350 --> 00:05:33,759
going tomorrow

153
00:05:36,710 --> 00:05:35,360
you've got the main city of karaganda

154
00:05:39,110 --> 00:05:36,720
that that's where we'll actually fly

155
00:05:41,029 --> 00:05:39,120
into tomorrow after we leave moscow

156
00:05:43,830 --> 00:05:41,039
and then you've got the smaller city of

157
00:05:45,670 --> 00:05:43,840
jessica's gone that we will head down to

158
00:05:47,510 --> 00:05:45,680
on the helicopters the night before

159
00:05:49,590 --> 00:05:47,520
landing there's also one more meeting

160
00:05:51,110 --> 00:05:49,600
that we have to go to uh that will

161
00:05:53,029 --> 00:05:51,120
actually be the meeting with the search

162
00:05:55,670 --> 00:05:53,039
and recovery forces themselves this is

163
00:05:57,590 --> 00:05:55,680

where they sort of say that officially

164

00:05:59,029 --> 00:05:57,600

everybody and all the equipment is in

165

00:06:00,070 --> 00:05:59,039

place all the different helicopters are

166

00:06:02,230 --> 00:06:00,080

ready to go

167

00:06:03,909 --> 00:06:02,240

all the all-terrain vehicles all the

168

00:06:06,230 --> 00:06:03,919

different medical support

169

00:06:07,749 --> 00:06:06,240

personnel are all set so that will take

170

00:06:09,189 --> 00:06:07,759

place uh

171

00:06:10,309 --> 00:06:09,199

usually the second day that we're down

172

00:06:12,390 --> 00:06:10,319

there

173

00:06:15,189 --> 00:06:12,400

so everything is uh beginning to get

174

00:06:16,950 --> 00:06:15,199

busy uh things are starting to pick up

175

00:06:19,590 --> 00:06:16,960

this is where the fun stuff starts

176
00:07:10,469 --> 00:06:19,600
because we get to start flying tomorrow

177
00:07:13,909 --> 00:07:12,070
so when you go to the atm you get

178
00:07:26,550 --> 00:07:13,919
confused about the zeros

179
00:07:33,510 --> 00:07:30,070
are you looking for ufos

180
00:07:35,110 --> 00:07:33,520
i'm trying to track on a satellite here

181
00:07:36,629 --> 00:07:35,120
this is how bill actually transmits a

182
00:07:38,230 --> 00:07:36,639
lot of his images back that's when you

183
00:07:42,830 --> 00:07:38,240
get them so fast

184
00:07:48,309 --> 00:07:46,550
works order for us to identify whether

185
00:07:49,589 --> 00:07:48,319
the landing sites were appropriate for

186
00:07:51,830 --> 00:07:49,599
the landing

187
00:07:55,270 --> 00:07:51,840
aviation energy

188
00:08:00,309 --> 00:07:55,280

and other entities conducted

189

00:08:03,510 --> 00:08:01,830

the nasa team has received their

190

00:08:30,309 --> 00:08:03,520

helicopter assignments they're prepared

191

00:08:33,269 --> 00:08:31,909

prior to this meeting i spoke to mission

192

00:08:34,709 --> 00:08:33,279

control center houston they've

193

00:08:36,230 --> 00:08:34,719

coordinated with the other partner

194

00:08:52,829 --> 00:08:36,240

mission controls and all the michigan

195

00:08:56,949 --> 00:08:54,630

foreign we're gonna fly down to

196

00:08:58,150 --> 00:08:56,959

jessica's gun tonight

197

00:08:59,750 --> 00:08:58,160

right and then tomorrow morning bright

198

00:09:01,829 --> 00:08:59,760

and early we're going out to the landing

199

00:09:03,990 --> 00:09:01,839

yes how many of these have you done

200

00:09:05,509 --> 00:09:04,000

i think this is my fifth fifth landing

201
00:09:07,350 --> 00:09:05,519
it's always an adventure isn't it it's

202
00:09:09,430 --> 00:09:07,360
uh it really is uh something's different

203
00:09:11,030 --> 00:09:09,440
about each one

204
00:09:13,030 --> 00:09:11,040
the last one in march was a little

205
00:09:14,630 --> 00:09:13,040
chilly that's what i did snow was

206
00:09:17,990 --> 00:09:14,640
blowing the wind

207
00:09:21,030 --> 00:09:18,000
wind was very very strong 30 knots and

208
00:09:23,030 --> 00:09:21,040
it was a very very poor visibility so

209
00:09:25,509 --> 00:09:23,040
this one the weather's been outstanding

210
00:09:26,790 --> 00:09:25,519
so actually that'll be unusual so i'm

211
00:09:28,389 --> 00:09:26,800
looking forward to it because one thing

212
00:09:30,470 --> 00:09:28,399
about this landing is that we're going

213
00:09:32,389 --> 00:09:30,480

to get some pretty unusual pictures of

214

00:09:33,670 --> 00:09:32,399

the space station with the shuttle

215

00:09:34,949 --> 00:09:33,680

actually attached so how cool is that

216

00:09:36,389 --> 00:09:34,959

going to be it's great you know we've

217

00:09:38,230 --> 00:09:36,399

been waiting for years to get that

218

00:09:40,070 --> 00:09:38,240

opportunity and we weren't really sure

219

00:09:42,230 --> 00:09:40,080

that we would we've been studying this

220

00:09:43,829 --> 00:09:42,240

uh dual doc ops which was what we call

221

00:09:44,790 --> 00:09:43,839

it but really to watch the soyuz back

222

00:09:46,470 --> 00:09:44,800

away

223

00:09:48,389 --> 00:09:46,480

while the shuttle's still there

224

00:09:49,829 --> 00:09:48,399

and uh we've studied it for quite a

225

00:09:51,829 --> 00:09:49,839

while knew that we could do it just the

226

00:09:53,430 --> 00:09:51,839

opportunity didn't present itself and

227

00:09:54,870 --> 00:09:53,440

with all these vehicles coming going to

228

00:09:56,550 --> 00:09:54,880

iss

229

00:09:57,990 --> 00:09:56,560

we finally got the chance and so i'm

230

00:10:00,310 --> 00:09:58,000

looking forward to seeing those

231

00:10:03,269 --> 00:10:00,320

beautiful pictures with the shuttle

232

00:10:05,269 --> 00:10:03,279

is that a 134 that is 1734 man you are

233

00:10:07,269 --> 00:10:05,279

supporting the home crowd aren't you

234

00:10:10,470 --> 00:10:07,279

gentlemen would you like a picture

235

00:10:13,670 --> 00:10:11,590

kirk has a

236

00:10:15,430 --> 00:10:13,680

gigantic bag

237

00:10:17,350 --> 00:10:15,440

what's in that

238

00:10:19,110 --> 00:10:17,360

what's in this i could tell you but i'd

239

00:10:21,430 --> 00:10:19,120

have to kill you

240

00:10:23,910 --> 00:10:21,440

so you're staying behind while we go

241

00:10:25,350 --> 00:10:23,920

tromp around i am i'm going to stay here

242

00:10:27,990 --> 00:10:25,360

at the lovely cosmonaut hotel in

243

00:10:30,550 --> 00:10:28,000

karaganda by the city it's a it's a nice

244

00:10:32,550 --> 00:10:30,560

hotel it's a beautiful hotel

245

00:10:34,150 --> 00:10:32,560

they've got great food here so how long

246

00:10:36,949 --> 00:10:34,160

have you been the dor

247

00:10:38,870 --> 00:10:36,959

now since january of 2010.

248

00:10:40,870 --> 00:10:38,880

has it been over a year already

249

00:10:42,550 --> 00:10:40,880

that is i'm sorry how long a year that's

250

00:10:43,750 --> 00:10:42,560

that year it's a year yeah it's been

251
00:10:45,509 --> 00:10:43,760
over here it's been almost a year and a

252
00:10:47,509 --> 00:10:45,519
half are you enjoying it yeah having a

253
00:10:48,790 --> 00:10:47,519
really good time so you're speaking

254
00:10:49,670 --> 00:10:48,800
speaking russian pretty fluently now

255
00:10:50,630 --> 00:10:49,680
aren't you

256
00:10:52,470 --> 00:10:50,640
uh

257
00:10:56,470 --> 00:10:52,480
yeah

258
00:10:58,389 --> 00:10:56,480
the kids are doing really well like i

259
00:11:00,069 --> 00:10:58,399
kind of i kind of get by

260
00:11:01,829 --> 00:11:00,079
and practice a little bit i'm not afraid

261
00:11:03,509 --> 00:11:01,839
to make a fool of myself which is a very

262
00:11:04,949 --> 00:11:03,519
important trait when you're over here

263
00:11:07,509 --> 00:11:04,959

trying to speak russian otherwise you'll

264

00:11:09,350 --> 00:11:07,519

never venture out but uh

265

00:11:11,030 --> 00:11:09,360

but the kids are in uh russian schools

266

00:11:12,710 --> 00:11:11,040

so uh they've been like an immersion and

267

00:11:14,710 --> 00:11:12,720

they're almost fluent adapting like

268

00:11:15,750 --> 00:11:14,720

crazy yeah yeah it's embarrassing when

269

00:11:16,949 --> 00:11:15,760

you're seven-year-old almost

270

00:11:18,310 --> 00:11:16,959

seven-year-old is correcting you cannot

271

00:11:20,230 --> 00:11:18,320

speak here you haven't asked what what

272

00:11:22,790 --> 00:11:20,240

did you say yeah and she goes i can't

273

00:11:24,470 --> 00:11:22,800

tell you i can't help you

274

00:11:27,430 --> 00:11:24,480

so how different is doing this over here

275

00:11:29,110 --> 00:11:27,440

than being the commander of shuttle and

276

00:11:31,990 --> 00:11:29,120

oh goodness gracious i mean totally

277

00:11:34,150 --> 00:11:32,000

different i i i'm really enjoying it uh

278

00:11:35,430 --> 00:11:34,160

i i know people think that uh all

279

00:11:37,190 --> 00:11:35,440

astronauts want to do is fly all the

280

00:11:39,190 --> 00:11:37,200

time which maybe for some is true but i

281

00:11:41,910 --> 00:11:39,200

mean i enjoy a change of pace

282

00:11:43,829 --> 00:11:41,920

and uh it's really a great environment

283

00:11:45,430 --> 00:11:43,839

for the family and it's special to go

284

00:11:47,750 --> 00:11:45,440

ahead and do this and it's really a lot

285

00:11:50,150 --> 00:11:47,760

of fun to go ahead and watch

286

00:11:51,910 --> 00:11:50,160

all the astronauts that are coming out

287

00:11:53,750 --> 00:11:51,920

for training as they go through their

288

00:11:54,949 --> 00:11:53,760

flows to get them out the door to get

289

00:11:56,389 --> 00:11:54,959

them down the bike or to watch them

290

00:11:57,910 --> 00:11:56,399

launch to watch them when they come back

291

00:12:00,150 --> 00:11:57,920

after their landings and it's a really

292

00:12:01,350 --> 00:12:00,160

rewarding thing and especially you know

293

00:12:03,509 --> 00:12:01,360

in the office

294

00:12:05,509 --> 00:12:03,519

um it's always been the case we're kind

295

00:12:07,990 --> 00:12:05,519

of you're used to seeing a certain group

296

00:12:09,590 --> 00:12:08,000

of astronauts because of how your jobs

297

00:12:11,030 --> 00:12:09,600

all line up

298

00:12:13,350 --> 00:12:11,040

and so there's a whole other group of

299

00:12:15,430 --> 00:12:13,360

astronauts that you barely see

300

00:12:16,949 --> 00:12:15,440

and so now i'm seeing a lot of the folks

301
00:12:18,710 --> 00:12:16,959
that i normally wouldn't see that much

302
00:12:20,629 --> 00:12:18,720
of as they go through the station flow

303
00:12:22,470 --> 00:12:20,639
and so i get to spend more time with

304
00:12:23,430 --> 00:12:22,480
them so it's been really a lot of fun

305
00:12:24,629 --> 00:12:23,440
because the training flow's like what

306
00:12:26,230 --> 00:12:24,639
two years it's about two years yeah

307
00:12:28,150 --> 00:12:26,240
pretty pretty close to doing that but

308
00:12:29,990 --> 00:12:28,160
between when they start their language

309
00:12:31,590 --> 00:12:30,000
training for immersion and they start

310
00:12:33,670 --> 00:12:31,600
coming because there's a lot of travel

311
00:12:35,190 --> 00:12:33,680
especially for those that are going

312
00:12:36,310 --> 00:12:35,200
through his left cedars and the soyuz

313
00:12:37,750 --> 00:12:36,320

because there's so much more additional

314

00:12:40,310 --> 00:12:37,760

training to get them ready to fly the

315

00:13:05,269 --> 00:12:40,320

vehicle so some of them spent a long

316

00:13:09,269 --> 00:13:07,190

it's going to be under high temperature

317

00:13:14,710 --> 00:13:09,279

so they ask you not to move during the

318

00:13:20,389 --> 00:13:16,150

if there are any issues please talk to

319

00:13:26,230 --> 00:13:22,470

and please do not get off the vehicle

320

00:13:26,240 --> 00:13:39,990

have a nice fight

321

00:13:45,670 --> 00:13:42,790

this aircraft is equipped with two

322

00:13:47,030 --> 00:13:45,680

emergency exits

323

00:14:10,230 --> 00:13:47,040

one thing you have to have on these

324

00:14:13,990 --> 00:14:11,990

so there's our ride for today this is

325

00:14:16,550 --> 00:14:14,000

the russian mi-8 helicopter there's

326

00:14:18,550 --> 00:14:16,560

going to be uh i think 12

327

00:14:20,310 --> 00:14:18,560

supporting the landing today

328

00:14:22,389 --> 00:14:20,320

there's usually about i think anywhere

329

00:14:23,829 --> 00:14:22,399

between six and ten of us that ride

330

00:14:25,189 --> 00:14:23,839

in these choppers out to the landing

331

00:14:27,189 --> 00:14:25,199

site but

332

00:14:28,710 --> 00:14:27,199

of course we came down

333

00:14:30,870 --> 00:14:28,720

last night down to the city jessica's

334

00:14:32,870 --> 00:14:30,880

gone we spent a very short night here

335

00:14:35,990 --> 00:14:32,880

everybody got up at about

336

00:14:37,430 --> 00:14:36,000

4 30 or 5 o'clock this morning and

337

00:14:41,350 --> 00:14:37,440

part of our team went ahead and went

338

00:14:43,030 --> 00:14:41,360

down to the ballistic site

339

00:14:44,470 --> 00:14:43,040

which is where the capsule would land if

340

00:14:45,990 --> 00:14:44,480

it comes in a bit steeper than normally

341

00:14:48,629 --> 00:14:46,000

planned so they went ahead and left and

342

00:14:50,310 --> 00:14:48,639

that's actually who's leaving right now

343

00:14:51,509 --> 00:14:50,320

over there

344

00:14:53,269 --> 00:14:51,519

so they're going to take off and then

345

00:14:55,189 --> 00:14:53,279

we're going to be airborne

346

00:14:57,350 --> 00:14:55,199

usually around the time that

347

00:14:59,269 --> 00:14:57,360

we get confirmation that the orbit burn

348

00:15:01,110 --> 00:14:59,279

has taken place so

349

00:15:02,790 --> 00:15:01,120

everything's pretty much

350

00:15:03,990 --> 00:15:02,800

ready to go it's actually a nice day out

351
00:15:05,910 --> 00:15:04,000
here it

352
00:15:07,910 --> 00:15:05,920
can get pretty cold out here

353
00:15:09,430 --> 00:15:07,920
in kazakhstan but today i think it's

354
00:15:10,710 --> 00:15:09,440
supposed to be in the 70s

355
00:15:12,470 --> 00:15:10,720
and

356
00:15:14,550 --> 00:15:12,480
everything's everything's all set all

357
00:15:17,110 --> 00:15:14,560
right steve hart you are

358
00:15:18,790 --> 00:15:17,120
katie's flight surgeon so they say so

359
00:15:19,990 --> 00:15:18,800
exactly how many pounds of supplies are

360
00:15:21,910 --> 00:15:20,000
you having to carry

361
00:15:23,350 --> 00:15:21,920
uh i try not to think about it

362
00:15:25,269 --> 00:15:23,360
it's probably

363
00:15:27,269 --> 00:15:25,279

probably about 35.

364

00:15:28,710 --> 00:15:27,279

now talk a little bit about what exactly

365

00:15:29,990 --> 00:15:28,720

you guys will do once the landing takes

366

00:15:32,550 --> 00:15:30,000

place you go and you check the crew just

367

00:15:35,990 --> 00:15:32,560

make sure they're feeling okay yeah um

368

00:15:38,069 --> 00:15:36,000

ideally our job is maytag repair manage

369

00:15:39,670 --> 00:15:38,079

and that we uh you know we're able to

370

00:15:40,389 --> 00:15:39,680

just stand back and observe the crew

371

00:15:42,150 --> 00:15:40,399

member

372

00:15:43,749 --> 00:15:42,160

the russians are very thorough in what

373

00:15:46,150 --> 00:15:43,759

they do as far as immediately taking

374

00:15:48,310 --> 00:15:46,160

care of folks monitoring

375

00:15:50,710 --> 00:15:48,320

blood pressure and pulses and such

376

00:15:53,030 --> 00:15:50,720

and i'm happy if i can just stand back

377

00:15:56,389 --> 00:15:53,040

and eyeball my crew member and see that

378

00:15:59,509 --> 00:15:58,069

i need to get involved i mean typically

379

00:16:00,710 --> 00:15:59,519

that doesn't happen until we get into

380

00:16:02,150 --> 00:16:00,720

the tent

381

00:16:04,389 --> 00:16:02,160

that's when the time when the suit comes

382

00:16:06,310 --> 00:16:04,399

off and we're able to do to do a more

383

00:16:09,350 --> 00:16:06,320

thorough assessment and

384

00:16:11,189 --> 00:16:09,360

if we need to use medications uh

385

00:16:14,389 --> 00:16:11,199

usually injections of fenergan

386

00:16:16,870 --> 00:16:14,399

medications like that for anti-nausea or

387

00:16:19,590 --> 00:16:16,880

if it gets more it's more uh involved

388

00:16:23,030 --> 00:16:19,600

then we end up having to put in ivs for

389

00:16:24,629 --> 00:16:23,040

fluid support and in general that's um

390

00:16:25,829 --> 00:16:24,639

you know if it's been a safe phenomenal

391

00:16:27,509 --> 00:16:25,839

landing

392

00:16:29,269 --> 00:16:27,519

that's all we're up against

393

00:16:30,550 --> 00:16:29,279

how hard is it actually to diagnose a

394

00:16:32,389 --> 00:16:30,560

patient that's actually up in space i

395

00:16:33,910 --> 00:16:32,399

mean you can't actually you know

396

00:16:35,670 --> 00:16:33,920

see them touch them you know like a

397

00:16:37,509 --> 00:16:35,680

normal doctor would so what kind of

398

00:16:38,790 --> 00:16:37,519

challenges is that um it's very

399

00:16:41,189 --> 00:16:38,800

difficult in

400

00:16:42,629 --> 00:16:41,199

in the ways that doctors usually trained

401
00:16:44,310 --> 00:16:42,639
i was

402
00:16:45,509 --> 00:16:44,320
educated as a neurologist and that's a

403
00:16:48,470 --> 00:16:45,519
field where there's a whole lot of

404
00:16:49,990 --> 00:16:48,480
hands-on and a lot of

405
00:16:51,350 --> 00:16:50,000
a lot of information you get from

406
00:16:53,110 --> 00:16:51,360
talking to the patient in the form of

407
00:16:55,269 --> 00:16:53,120
history is helpful so

408
00:16:57,670 --> 00:16:55,279
um for our crew members

409
00:16:59,910 --> 00:16:57,680
usually we're limited to emails three

410
00:17:02,710 --> 00:16:59,920
times a day at best and then if we're

411
00:17:05,750 --> 00:17:02,720
lucky we get phone calls on the cell

412
00:17:09,669 --> 00:17:07,270
as far as being able to lay hands on it

413
00:17:11,189 --> 00:17:09,679

we rely on other crew members on board

414

00:17:13,350 --> 00:17:11,199

to

415

00:17:15,189 --> 00:17:13,360

tell us what they feel or see

416

00:17:17,189 --> 00:17:15,199

and i spend a lot of time looking at

417

00:17:19,510 --> 00:17:17,199

images and there's quite a bit of

418

00:17:21,270 --> 00:17:19,520

imagery coming down from on board so

419

00:17:23,189 --> 00:17:21,280

it's high resolution high definition

420

00:17:25,429 --> 00:17:23,199

imagery so i'm able to get in there and

421

00:17:26,549 --> 00:17:25,439

see things and ask crew members later on

422

00:17:28,950 --> 00:17:26,559

about the

423

00:17:30,710 --> 00:17:28,960

bruised finger or

424

00:17:32,070 --> 00:17:30,720

scratch here or something like that

425

00:17:33,190 --> 00:17:32,080

usually they've forgotten how it even

426

00:17:34,310 --> 00:17:33,200

happened

427

00:17:35,510 --> 00:17:34,320

now one thing i think people don't

428

00:17:36,950 --> 00:17:35,520

realize that you're carrying a very

429

00:17:40,870 --> 00:17:36,960

important document which is katie's

430

00:17:45,750 --> 00:17:42,789

she can't don't leave home without it

431

00:17:48,549 --> 00:17:47,270

i uh technically it's an entry into the

432

00:17:51,270 --> 00:17:48,559

country so they've actually got to do

433

00:17:53,029 --> 00:17:51,280

customs paperwork and exit yeah exactly

434

00:17:54,470 --> 00:17:53,039

exactly

435

00:17:58,150 --> 00:17:54,480

so talk how many cameras you actually

436

00:18:00,070 --> 00:17:58,160

carry uh two take two cameras that's it

437

00:18:01,430 --> 00:18:00,080

you got two arms man but how many but

438

00:18:03,110 --> 00:18:01,440

you take a lot for launch though because

439

00:18:06,390 --> 00:18:03,120

you've got the remotes it's like a lot

440

00:18:10,549 --> 00:18:08,150

so how many of these have you done

441

00:18:11,669 --> 00:18:10,559

uh i don't know more than you can count

442

00:18:13,510 --> 00:18:11,679

uh

443

00:18:15,110 --> 00:18:13,520

i think every american landing except

444

00:18:16,390 --> 00:18:15,120

for one perhaps

445

00:18:17,430 --> 00:18:16,400

i think a lot of people don't realize

446

00:18:19,510 --> 00:18:17,440

that you know you don't simply just

447

00:18:20,870 --> 00:18:19,520

point the camera out of the window and

448

00:18:23,270 --> 00:18:20,880

take the shot that you guys because

449

00:18:25,110 --> 00:18:23,280

you're on the media helicopter with the

450

00:18:26,789 --> 00:18:25,120

associated press reuters whoever else

451

00:18:28,470 --> 00:18:26,799

comes out here

452

00:18:30,789 --> 00:18:28,480

and they actually open up the door for

453

00:18:32,470 --> 00:18:30,799

you guys and they strap you in and you

454

00:18:34,310 --> 00:18:32,480

literally basically you've already get

455

00:18:35,750 --> 00:18:34,320

your harness there you go furnace stuff

456

00:18:37,830 --> 00:18:35,760

you actually lean out and take the

457

00:18:40,630 --> 00:18:37,840

picture right yeah just a little bit how

458

00:18:42,789 --> 00:18:40,640

do you keep it still i mean seriously uh

459

00:18:46,150 --> 00:18:42,799

just a high shutter speed and

460

00:18:47,669 --> 00:18:46,160

stabilizer and a little bit of praying

461

00:18:48,710 --> 00:18:47,679

and once it lands your job's not done

462

00:18:50,950 --> 00:18:48,720

because you still have to take a ton of

463

00:18:52,150 --> 00:18:50,960

pictures of the crew and the capsule if

464

00:18:54,390 --> 00:18:52,160

we're lucky we'll get on the ground

465

00:18:55,830 --> 00:18:54,400

before the crew has come out and we can

466

00:18:58,390 --> 00:18:55,840

get over to the capsule and get some

467

00:19:00,549 --> 00:18:58,400

shots of uh them opening the hatch doors

468

00:19:02,710 --> 00:19:00,559

and each crew member coming out

469

00:19:03,990 --> 00:19:02,720

then uh hopefully having a beautiful day

470

00:19:05,590 --> 00:19:04,000

like today they won't be in a hurry to

471

00:19:08,710 --> 00:19:05,600

get inside the tent i imagine they'll

472

00:19:10,870 --> 00:19:08,720

enjoy it outside so unlike last time

473

00:19:12,230 --> 00:19:10,880

freezing

474

00:19:13,909 --> 00:19:12,240

sideways so

475

00:19:15,350 --> 00:19:13,919

and uh first thing i saw last time when

476
00:19:16,630 --> 00:19:15,360
i got off the helicopter was snowmobiles

477
00:19:19,270 --> 00:19:16,640
going by me

478
00:19:20,950 --> 00:19:19,280
it's always a bad sound

479
00:19:22,230 --> 00:19:20,960
so anyway hopefully today they'll sit on

480
00:19:24,630 --> 00:19:22,240
the ground in the chairs a little bit

481
00:19:26,230 --> 00:19:24,640
and then get some shots there and then

482
00:19:28,310 --> 00:19:26,240
them carrying them into the medical tent

483
00:19:30,710 --> 00:19:28,320
where they get their social suits taken

484
00:19:31,750 --> 00:19:30,720
off and uh their flight suits taking off

485
00:19:32,789 --> 00:19:31,760
and

486
00:19:34,310 --> 00:19:32,799
then hopefully they'll start sending

487
00:19:36,230 --> 00:19:34,320
some pictures right away and then you

488
00:19:37,510 --> 00:19:36,240

actually have to write the captions do

489

00:19:39,110 --> 00:19:37,520

everything yeah i've got those kind of

490

00:19:40,470 --> 00:19:39,120

in the bag i'll just modify them a

491

00:19:41,669 --> 00:19:40,480

little bit too

492

00:19:43,350 --> 00:19:41,679

for the pictures well there's no

493

00:19:45,029 --> 00:19:43,360

surprises if some random crew member

494

00:20:10,070 --> 00:19:45,039

comes home or something right

495

00:20:10,080 --> 00:21:41,830

15.

496

00:21:45,830 --> 00:21:43,750

so this is what it looks like right

497

00:21:47,350 --> 00:21:45,840

after soyuz lands you've got a ton of

498

00:21:49,110 --> 00:21:47,360

stuff going on that's the medical tent

499

00:21:50,549 --> 00:21:49,120

right there that they've set up probably

500

00:21:51,990 --> 00:21:50,559

100 yards or so away from where the

501
00:21:53,909 --> 00:21:52,000
soyuz landed

502
00:21:55,669 --> 00:21:53,919
uh the team here is already starting to

503
00:21:59,510 --> 00:21:55,679
uh gather up this

504
00:22:01,350 --> 00:21:59,520
just huge parachute that's on the ground

505
00:22:02,630 --> 00:22:01,360
and then there's the soyuz the guys are

506
00:22:03,990 --> 00:22:02,640
still working on getting the uh the

507
00:22:05,270 --> 00:22:04,000
hatch open they're after taking some

508
00:22:06,310 --> 00:22:05,280
pictures of the crew which is still

509
00:22:08,310 --> 00:22:06,320
inside

510
00:22:11,750 --> 00:22:08,320
um one thing we always try to look at is

511
00:22:13,750 --> 00:22:11,760
exactly how far the soyuz has bounced

512
00:22:15,190 --> 00:22:13,760
and as you can see it hasn't really that

513
00:22:17,750 --> 00:22:15,200

much

514

00:22:19,430 --> 00:22:17,760

and it's also upright

515

00:22:21,669 --> 00:22:19,440

so what i have to do now is actually

516

00:22:23,990 --> 00:22:21,679

call into houston

517

00:22:27,510 --> 00:22:24,000

and give kind of a live report

518

00:22:31,029 --> 00:22:27,520

on how things look here josh

519

00:22:33,350 --> 00:22:31,039

it looks like a gorgeous day out there

520

00:22:35,110 --> 00:22:33,360

you actually could not ask for

521

00:22:37,270 --> 00:22:35,120

better weather or better operations i

522

00:22:39,190 --> 00:22:37,280

mean this has just been fairly easy from

523

00:22:40,230 --> 00:22:39,200

beginning to end

524

00:22:42,070 --> 00:22:40,240

i mean the weather's probably in the

525

00:22:43,430 --> 00:22:42,080

upper 70s right now

526

00:22:45,590 --> 00:22:43,440

uh you can see they're taking the

527

00:22:46,950 --> 00:22:45,600

commander out now they just uh they just

528

00:22:59,590 --> 00:22:46,960

got him out of the capsule you also

529

00:22:59,600 --> 00:23:12,789

we haven't smelled anything in a while

530

00:23:15,029 --> 00:23:14,149

they're moving the crew into the medical

531

00:23:15,909 --> 00:23:15,039

tent now they were out there for

532

00:23:17,830 --> 00:23:15,919

probably

533

00:23:19,830 --> 00:23:17,840

15 minutes we're moving pretty quick

534

00:23:21,350 --> 00:23:19,840

today so we'll go in there and get the

535

00:23:23,350 --> 00:23:21,360

launch suits off put their flight suits

536

00:23:24,470 --> 00:23:23,360

on and then everybody's going to start

537

00:23:27,190 --> 00:23:24,480

getting their helicopter and we're going

538

00:23:29,669 --> 00:23:27,200

to head back to karaganda

539

00:23:59,029 --> 00:23:29,679

and that's how you do that

540

00:24:02,390 --> 00:24:00,950

welcome back to moscow josh thank you

541

00:24:11,990 --> 00:24:02,400

it's been a long day

542

00:24:15,590 --> 00:24:13,510

so you guys you have to take the tapes

543

00:24:17,350 --> 00:24:15,600

now that we actually we're not shooting

544

00:24:20,549 --> 00:24:17,360

on tapes we're shooting on digital now

545

00:24:22,549 --> 00:24:20,559

we are uh at chikawski airfield

546

00:24:24,230 --> 00:24:22,559

uh just about an hour northeast of

547

00:24:27,590 --> 00:24:24,240

moscow where

548

00:24:29,269 --> 00:24:27,600

a lot of the nasa and russian soyuz

549

00:24:32,470 --> 00:24:29,279

landing group have returned from the

550

00:24:34,630 --> 00:24:32,480

city of karaganda where they landed

551
00:24:36,710 --> 00:24:34,640
actually where they flew into after the

552
00:24:39,110 --> 00:24:36,720
soyuz landed it was about a three hour

553
00:24:41,029 --> 00:24:39,120
flight from carraganda back here and

554
00:24:43,750 --> 00:24:41,039
what we're going to be doing in a little

555
00:24:47,110 --> 00:24:43,760
while is transmitting some of the video

556
00:24:49,669 --> 00:24:47,120
that alexei shot in karaganda of the

557
00:24:50,630 --> 00:24:49,679
welcome ceremony of the expedition 27

558
00:24:52,950 --> 00:24:50,640
crew

559
00:24:55,430 --> 00:24:52,960
and uh we did some uh interviews with

560
00:24:57,029 --> 00:24:55,440
them as well and we don't uh we don't

561
00:24:59,590 --> 00:24:57,039
uplink from karaganda but what we're

562
00:25:01,830 --> 00:24:59,600
going to do is get that to a point as

563
00:25:03,990 --> 00:25:01,840

close as we can here in moscow and send

564

00:25:06,470 --> 00:25:04,000

that out to nasa tv so we can share that

565

00:25:08,710 --> 00:25:06,480

with people as quickly as we can and

566

00:25:11,430 --> 00:25:08,720

uh welcome our crew back home and i can

567

00:25:13,669 --> 00:25:11,440

watch it in the video file the nasa tv

568

00:25:14,870 --> 00:25:13,679

video file which we love oh so much yes

569

00:25:16,630 --> 00:25:14,880

we do

570

00:25:19,430 --> 00:25:16,640

you can watch it on nasa tv or at

571

00:25:22,070 --> 00:25:19,440

www.nasa.gov

572

00:25:26,310 --> 00:25:22,080

ntd hey you could be a commentator

573

00:25:29,909 --> 00:25:27,669

you know every time that you come over

574

00:25:32,950 --> 00:25:29,919

here and you get to work one of these

575

00:25:35,029 --> 00:25:32,960

soyuz landings or one of the launches

576

00:25:36,549 --> 00:25:35,039

they're all different they all have

577

00:25:38,149 --> 00:25:36,559

different personalities they all have

578

00:25:40,549 --> 00:25:38,159

different challenges

579

00:25:42,630 --> 00:25:40,559

uh they all have different memories

580

00:25:45,110 --> 00:25:42,640

but the one thing that i think is the

581

00:25:46,870 --> 00:25:45,120

common thread through all of it

582

00:25:48,710 --> 00:25:46,880

is that each of us they get to come out

583

00:25:51,990 --> 00:25:48,720

here and participate in this

584

00:25:54,470 --> 00:25:52,000

uh it's a high honor for us to be able

585

00:25:56,070 --> 00:25:54,480

to do that uh it is completely different

586

00:25:58,070 --> 00:25:56,080

from the space shuttle and totally

587

00:26:01,430 --> 00:25:58,080

different than the work that we do

588

00:26:03,590 --> 00:26:01,440

on the shuttle and and with those crews

589

00:26:06,070 --> 00:26:03,600

you're a long way from home the uh the

590

00:26:07,430 --> 00:26:06,080

hours are long the work is extremely

591

00:26:08,830 --> 00:26:07,440

hard

592

00:26:11,430 --> 00:26:08,840

you're really tired at the end of the

593

00:26:14,149 --> 00:26:11,440

day but whenever you step back and you

594

00:26:15,990 --> 00:26:14,159

look at it and you realize that

595

00:26:17,669 --> 00:26:16,000

you know you're one of the small you're

596

00:26:19,430 --> 00:26:17,679

part of a small group of people that

597

00:26:21,110 --> 00:26:19,440

gets to come over here

598

00:26:25,430 --> 00:26:21,120

and

599

00:26:27,830 --> 00:26:25,440

also work with

600

00:26:29,029 --> 00:26:27,840

the uh the russians and also our other

601
00:26:32,149 --> 00:26:29,039
international partners like the

602
00:26:35,110 --> 00:26:32,159
europeans and the japanese

603
00:26:36,630 --> 00:26:35,120
you know you realize that

604
00:26:38,789 --> 00:26:36,640
you're doing something that you probably

605
00:26:40,149 --> 00:26:38,799
never thought that you'd be able to do

606
00:26:41,909 --> 00:26:40,159
whenever you were growing up not

607
00:26:45,190 --> 00:26:41,919
everybody gets to do this

608
00:26:48,390 --> 00:26:45,200
and to be able to be a part of that team

609
00:26:49,750 --> 00:26:48,400
is something that is pretty remarkable

610
00:26:51,029 --> 00:26:49,760
you know you're getting to go up close

611
00:26:53,590 --> 00:26:51,039
to

612
00:26:54,870 --> 00:26:53,600
this small capsule that's all charred

613
00:26:57,830 --> 00:26:54,880

and

614

00:26:59,909 --> 00:26:57,840

realize it was just docked with the

615

00:27:01,750 --> 00:26:59,919

international space station just

616

00:27:03,669 --> 00:27:01,760

you know a few hours ago

617

00:27:05,269 --> 00:27:03,679

and you get to see the crew as they get

618

00:27:07,029 --> 00:27:05,279

out and they haven't

619

00:27:09,350 --> 00:27:07,039

been on earth in five or six months and

620

00:27:11,269 --> 00:27:09,360

you get to be uh sort of part of the uh

621

00:27:13,510 --> 00:27:11,279

the welcoming party

622

00:27:14,630 --> 00:27:13,520

i think it's to bring them back home

623

00:27:15,990 --> 00:27:14,640

and i think that it's something that

624

00:27:16,630 --> 00:27:16,000

each of us that gets to come over here

625

00:27:18,470 --> 00:27:16,640

and

626

00:27:20,710 --> 00:27:18,480

do this

627

00:27:23,029 --> 00:27:20,720

takes pretty seriously