



1
00:00:14,470 --> 00:00:11,669
so this is this is big we got ken ham

2
00:00:16,550 --> 00:00:14,480
the commander of the ses 132 crew very

3
00:00:19,029 --> 00:00:16,560
good my buddy mike good

4
00:00:20,550 --> 00:00:19,039
sitting right next to him

5
00:00:21,830 --> 00:00:20,560
what do you guys have like a nickname or

6
00:00:23,029 --> 00:00:21,840
something for this crew are you guys

7
00:00:24,230 --> 00:00:23,039
like the uh

8
00:00:26,230 --> 00:00:24,240
do you have anything what's been going

9
00:00:27,429 --> 00:00:26,240
on around here nicknames uh the the

10
00:00:30,550 --> 00:00:27,439
first one i think we had was the

11
00:00:31,589 --> 00:00:30,560
lollygaggers the lollygaggers

12
00:00:32,870 --> 00:00:31,599
yeah

13
00:00:34,950 --> 00:00:32,880

there's some other ones that we probably

14

00:00:37,030 --> 00:00:34,960

can't reveal to the public we can edit

15

00:00:39,590 --> 00:00:37,040

this it's okay we can always edit it out

16

00:00:43,430 --> 00:00:41,750

catch me up we're carrying up a russian

17

00:00:45,430 --> 00:00:43,440

module all right which is very

18

00:00:47,510 --> 00:00:45,440

interesting yes

19

00:00:49,029 --> 00:00:47,520

it's most interesting because

20

00:00:50,790 --> 00:00:49,039

it attaches to space station in a

21

00:00:52,389 --> 00:00:50,800

completely different way

22

00:00:53,910 --> 00:00:52,399

that we haven't done before all right

23

00:00:55,670 --> 00:00:53,920

this business typically when we attach

24

00:00:57,270 --> 00:00:55,680

modules as you know we kind of come up

25

00:00:59,110 --> 00:00:57,280

with a cbm or

26

00:01:04,070 --> 00:00:59,120

uh

27

00:01:05,270 --> 00:01:04,080

is the big ring yeah you get attached

28

00:01:06,469 --> 00:01:05,280

stuff that's right whole thing's put

29

00:01:07,830 --> 00:01:06,479

together isn't it

30

00:01:10,310 --> 00:01:07,840

all the modules come together with that

31

00:01:11,750 --> 00:01:10,320

yeah however this is mating to the

32

00:01:13,429 --> 00:01:11,760

birthing to the russian side of the

33

00:01:14,469 --> 00:01:13,439

space station completely different

34

00:01:18,789 --> 00:01:14,479

mechanism

35

00:01:20,149 --> 00:01:18,799

still use in progress use all right

36

00:01:21,270 --> 00:01:20,159

russian spaceships

37

00:01:22,390 --> 00:01:21,280

yeah

38

00:01:25,270 --> 00:01:22,400

exactly

39

00:01:26,469 --> 00:01:25,280

vehicles all right bring uh

40

00:01:28,149 --> 00:01:26,479

cargo and

41

00:01:29,990 --> 00:01:28,159

back and forth space station this

42

00:01:31,590 --> 00:01:30,000

talking mechanism is meant for free

43

00:01:34,149 --> 00:01:31,600

flyer which has a little sort of a pro

44

00:01:35,670 --> 00:01:34,159

mechanism right and then a receptacle on

45

00:01:38,069 --> 00:01:35,680

space station which is kind of looks

46

00:01:39,670 --> 00:01:38,079

like a big old funnel yeah and you fly

47

00:01:41,030 --> 00:01:39,680

this probe into the funnel and it gets

48

00:01:42,149 --> 00:01:41,040

guided down into the bottom and it

49

00:01:43,749 --> 00:01:42,159

latches in there and then all right

50

00:01:46,069 --> 00:01:43,759

contract it in and makes that a hard

51
00:01:47,990 --> 00:01:46,079
mating so okay

52
00:01:50,149 --> 00:01:48,000
the difference is in our case yeah it's

53
00:01:52,469 --> 00:01:50,159
robotically yeah so we're using the

54
00:01:55,030 --> 00:01:52,479
station big arm to take this big old

55
00:01:55,990 --> 00:01:55,040
module right which weighs about eight

56
00:01:58,870 --> 00:01:56,000
tons

57
00:01:59,990 --> 00:01:58,880
almost fifteen thousand pounds okay and

58
00:02:01,350 --> 00:02:00,000
basically do the same thing that you

59
00:02:03,429 --> 00:02:01,360
would do the pre-flier you take this

60
00:02:04,870 --> 00:02:03,439
module and ram it into the funnel and

61
00:02:06,230 --> 00:02:04,880
hopefully get those latches together

62
00:02:07,910 --> 00:02:06,240
okay that's the first thing that's been

63
00:02:09,270 --> 00:02:07,920

done i bet y'all i think that is first

64

00:02:10,949 --> 00:02:09,280

first time

65

00:02:12,070 --> 00:02:10,959

very cool so you guys are going to get

66

00:02:13,430 --> 00:02:12,080

to do that and you're carrying this

67

00:02:14,630 --> 00:02:13,440

thing up in your payload bay that's

68

00:02:15,670 --> 00:02:14,640

correct all right

69

00:02:17,670 --> 00:02:15,680

what do you call this thing what's the

70

00:02:19,830 --> 00:02:17,680

name it's a technically called the mini

71

00:02:21,670 --> 00:02:19,840

research module number one

72

00:02:25,990 --> 00:02:21,680

all right however it now has a russian

73

00:02:27,670 --> 00:02:26,000

name yep yet which means dawn

74

00:02:29,110 --> 00:02:27,680

that's very nice like the dawn like the

75

00:02:30,630 --> 00:02:29,120

sunrise

76

00:02:32,309 --> 00:02:30,640

that's very nice

77

00:02:33,830 --> 00:02:32,319

all right we actually tied that into the

78

00:02:37,670 --> 00:02:33,840

little description on our

79

00:02:39,030 --> 00:02:37,680

logo here wow which is it means two

80

00:02:40,630 --> 00:02:39,040

things here it kind of looks like the

81

00:02:42,070 --> 00:02:40,640

space shuttle flying off into the sunset

82

00:02:44,070 --> 00:02:42,080

yeah as it is kind of marked on the end

83

00:02:46,229 --> 00:02:44,080

of this space shuttle last night last

84

00:02:48,309 --> 00:02:46,239

flight of atlantis the last flight of

85

00:02:52,550 --> 00:02:48,319

space shuttle atlantis that's it right

86

00:02:58,149 --> 00:02:55,910

yeah but also it kind of looks like dawn

87

00:02:59,350 --> 00:02:58,159

so you have the old russell oh

88

00:03:01,830 --> 00:02:59,360

like it's a

89

00:03:03,190 --> 00:03:01,840

so our poet laureate gary yes the crew

90

00:03:05,430 --> 00:03:03,200

who developed a patch and the words that

91

00:03:07,190 --> 00:03:05,440

go in the back tied it all together

92

00:03:09,750 --> 00:03:07,200

so one of the things we got to do was go

93

00:03:11,910 --> 00:03:09,760

over to russia to see it yeah so we went

94

00:03:15,509 --> 00:03:11,920

over to and had a little russia visit uh

95

00:03:17,350 --> 00:03:15,519

we went over to inergia in uh moscow

96

00:03:19,430 --> 00:03:17,360

and we got to go inside

97

00:03:20,869 --> 00:03:19,440

ergia is there uh there's aerospace

98

00:03:22,710 --> 00:03:20,879

companies

99

00:03:24,869 --> 00:03:22,720

okay he actually got to climb inside of

100

00:03:27,190 --> 00:03:24,879

it check it out climb around outside of

101
00:03:29,509 --> 00:03:27,200
it and now it's uh it's since been

102
00:03:31,509 --> 00:03:29,519
shipped to uh florida so it's uh in

103
00:03:33,670 --> 00:03:31,519
florida ready to go or getting ready to

104
00:03:35,910 --> 00:03:33,680
go and we'll pack that in our payload

105
00:03:37,990 --> 00:03:35,920
bay and take it up with us and then his

106
00:03:39,990 --> 00:03:38,000
canvas grab

107
00:03:41,670 --> 00:03:40,000
robotically connected up to the rest of

108
00:03:43,350 --> 00:03:41,680
the station but the neat thing about it

109
00:03:45,589 --> 00:03:43,360
was being able to go over to russia oh

110
00:03:46,710 --> 00:03:45,599
that is so cool so we did that trip as a

111
00:03:48,070 --> 00:03:46,720
group

112
00:03:49,830 --> 00:03:48,080
and uh

113
00:03:51,270 --> 00:03:49,840

that was a good time you guys get to

114

00:03:52,550 --> 00:03:51,280

look around a little bit

115

00:03:54,630 --> 00:03:52,560

yeah right now

116

00:03:55,830 --> 00:03:54,640

for me it was the first time i was ever

117

00:03:57,110 --> 00:03:55,840

in russia have you been interviewing

118

00:03:58,949 --> 00:03:57,120

i've never been to this trip to russia's

119

00:04:00,550 --> 00:03:58,959

right so it was a fantastic

120

00:04:03,429 --> 00:04:00,560

adventure

121

00:04:04,710 --> 00:04:03,439

yeah it was it was an extremely valuable

122

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

experience to go actually see this

123

00:04:08,309 --> 00:04:06,640

hardware and understand how it worked

124

00:04:10,949 --> 00:04:08,319

yeah russians were

125

00:04:13,429 --> 00:04:10,959

over the top accommodating the amount of

126

00:04:15,350 --> 00:04:13,439

training they supplied us on how their

127

00:04:19,189 --> 00:04:15,360

module works

128

00:04:23,030 --> 00:04:20,469

an eva

129

00:04:24,870 --> 00:04:23,040

a simulated eba guy but an actual person

130

00:04:27,350 --> 00:04:24,880

inside one of their lawn suits showing

131

00:04:29,030 --> 00:04:27,360

us pressurized showing us how to take

132

00:04:31,350 --> 00:04:29,040

the bolts off of

133

00:04:32,310 --> 00:04:31,360

what we might have to do which is

134

00:04:34,070 --> 00:04:32,320

pretty pretty neat so you have

135

00:04:36,310 --> 00:04:34,080

contingency spacewalks is that what

136

00:04:38,870 --> 00:04:36,320

you're describing in the event that this

137

00:04:40,870 --> 00:04:38,880

uh this probe on the end of the module

138

00:04:42,710 --> 00:04:40,880

can't retract yeah we could be in a

139

00:04:44,710 --> 00:04:42,720

situation where we can't put this module

140

00:04:45,990 --> 00:04:44,720

back into the payload you bring it home

141

00:04:48,390 --> 00:04:46,000

so in that case you have to go outside

142

00:04:49,590 --> 00:04:48,400

eva and remove this whole mechanism off

143

00:04:50,310 --> 00:04:49,600

the end yeah

144

00:04:51,990 --> 00:04:50,320

so

145

00:04:53,430 --> 00:04:52,000

it's very very very unlikely but of

146

00:04:54,469 --> 00:04:53,440

course

147

00:04:57,189 --> 00:04:54,479

you know that's one of the cool things

148

00:04:58,710 --> 00:04:57,199

about both of you guys are military guys

149

00:05:02,310 --> 00:04:58,720

correct ken you're a navy guy mike of

150

00:05:04,469 --> 00:05:02,320

course an air force guy and uh

151

00:05:06,150 --> 00:05:04,479

you know what i'm a civilian but what i

152

00:05:07,749 --> 00:05:06,160

found interesting was you know over the

153

00:05:09,029 --> 00:05:07,759

years the way the space program has kind

154

00:05:10,950 --> 00:05:09,039

of led to friendship between our

155

00:05:12,310 --> 00:05:10,960

countries because

156

00:05:13,670 --> 00:05:12,320

probably when you guys first started in

157

00:05:15,749 --> 00:05:13,680

your military careers we weren't

158

00:05:17,909 --> 00:05:15,759

exchanging too much information with the

159

00:05:19,110 --> 00:05:17,919

with the russians right i mean and now

160

00:05:21,350 --> 00:05:19,120

and now it's you know i think it's a

161

00:05:23,029 --> 00:05:21,360

great sign of what the space program is

162

00:05:24,230 --> 00:05:23,039

has helped with and that's international

163

00:05:26,550 --> 00:05:24,240

relations because now we're working

164

00:05:27,590 --> 00:05:26,560

together with those guys uh hand in hand

165

00:05:29,350 --> 00:05:27,600

here you know you're going over there

166

00:05:30,790 --> 00:05:29,360

you're getting to see stuff that

167

00:05:33,029 --> 00:05:30,800

you know years ago you had never gotten

168

00:05:35,430 --> 00:05:33,039

a chance to right and uh for both mike

169

00:05:37,270 --> 00:05:35,440

and i were both uh aviators

170

00:05:38,629 --> 00:05:37,280

in our early days in the military they

171

00:05:40,710 --> 00:05:38,639

were quite literally

172

00:05:42,950 --> 00:05:40,720

trained and capable of delivering

173

00:05:45,110 --> 00:05:42,960

nuclear weapons yeah to the old soviet

174

00:05:46,469 --> 00:05:45,120

union right and that took up a lot of

175

00:05:48,550 --> 00:05:46,479

our time

176

00:05:51,670 --> 00:05:48,560

and then here we are

177

00:05:53,350 --> 00:05:51,680

six months ago standing in red square

178

00:05:54,550 --> 00:05:53,360

enjoying

179

00:05:58,309 --> 00:05:54,560

their

180

00:05:59,510 --> 00:05:58,319

yeah and i i thought it was really sweet

181

00:06:00,550 --> 00:05:59,520

did that hit you did you guys think

182

00:06:02,629 --> 00:06:00,560

about that when it was going oh it

183

00:06:04,230 --> 00:06:02,639

really hit me as we were landing so

184

00:06:06,230 --> 00:06:04,240

we're on this commercial airplane flight

185

00:06:07,990 --> 00:06:06,240

over to moscow and we're landing in

186

00:06:09,430 --> 00:06:08,000

moscow we break out through the clouds

187

00:06:10,950 --> 00:06:09,440

and i see the ground over there for the

188

00:06:12,950 --> 00:06:10,960

first time and i thought to myself you

189

00:06:13,909 --> 00:06:12,960

know this is a little different than i

190

00:06:15,990 --> 00:06:13,919

uh

191

00:06:18,309 --> 00:06:16,000

than i trained for you know back in my

192

00:06:20,710 --> 00:06:18,319

old air force days of you know that was

193

00:06:22,950 --> 00:06:20,720

that was a target for us yeah so you're

194

00:06:25,670 --> 00:06:22,960

right it's nice to have uh

195

00:06:27,830 --> 00:06:25,680

you know gotten to this point and uh

196

00:06:29,270 --> 00:06:27,840

to be working with them yeah on

197

00:06:30,390 --> 00:06:29,280

something like this much better

198

00:06:32,150 --> 00:06:30,400

situation

199

00:06:33,749 --> 00:06:32,160

all right well i know you guys are busy

200

00:06:35,430 --> 00:06:33,759

appreciate you letting me uh talk with

201
00:06:37,029 --> 00:06:35,440
you uh you can hang around because all

202
00:06:38,550 --> 00:06:37,039
right today is great well everybody's

203
00:06:40,070 --> 00:06:38,560
outside doing an eva right now in our

204
00:06:41,749 --> 00:06:40,080
simulation yep

205
00:06:43,270 --> 00:06:41,759
pretending of course that's right no

206
00:06:45,189 --> 00:06:43,280
one's really outside you're not in space

207
00:06:51,830 --> 00:06:45,199
right now we're correct right

208
00:06:51,840 --> 00:06:56,070
that won't happen in space

209
00:06:58,629 --> 00:06:57,430
all right so you got your big sim going

210
00:07:00,469 --> 00:06:58,639
here we'll go see what those other guys

211
00:07:03,029 --> 00:07:00,479
are doing all right man

212
00:07:04,870 --> 00:07:03,039
don't forget to say hi to tony upstairs

213
00:07:06,150 --> 00:07:04,880

his peers up there too no pierce is over

214

00:07:07,670 --> 00:07:06,160

driving the big arm all right we'll go

215

00:07:09,830 --> 00:07:07,680

we'll go find we'll go say hi to tony

216

00:07:11,749 --> 00:07:09,840

we'll surprise him thanks you're the

217

00:07:14,230 --> 00:07:11,759

king you need a carrot

218

00:07:20,870 --> 00:07:14,240

what do you got i got carrots

219

00:07:25,909 --> 00:07:23,749

okay three alpha copy and uh i've got

220

00:07:27,749 --> 00:07:25,919

glove inspection and then steve you

221

00:07:28,950 --> 00:07:27,759

understand why we can't break the torque

222

00:07:31,110 --> 00:07:28,960

on the dish right so you've been

223

00:07:32,790 --> 00:07:31,120

following this whole conversation

224

00:07:35,749 --> 00:07:32,800

yeah they want to be able to bring it

225

00:07:39,189 --> 00:07:37,350

okay yeah as long as it makes sense to

226

00:07:40,790 --> 00:07:39,199

you so i got glove inspection then i

227

00:07:43,270 --> 00:07:40,800

guess if you want to get in position to

228

00:07:45,430 --> 00:07:43,280

do the dish uh we can push the rope and

229

00:07:47,670 --> 00:07:45,440

hope garrett's suit is good what's going

230

00:07:49,749 --> 00:07:47,680

on nobody panic the command

231

00:07:53,029 --> 00:07:49,759

there's alarms going on up there off up

232

00:07:56,230 --> 00:07:54,790

mike what's going on up there

233

00:07:57,670 --> 00:07:56,240

i have no idea i'm eating scrambled eggs

234

00:07:59,029 --> 00:07:57,680

what do you got this is very exciting is

235

00:08:01,189 --> 00:07:59,039

that what you got scrambled eggs they're

236

00:08:01,990 --> 00:08:01,199

any good yeah i love them i love these

237

00:08:03,830 --> 00:08:02,000

things

238

00:08:06,869 --> 00:08:03,840

eating a lot of space food today

239

00:08:08,790 --> 00:08:06,879

i'm going to try it what's your favorite

240

00:08:11,270 --> 00:08:08,800

right now

241

00:08:13,110 --> 00:08:11,280

scrambled eggs because it's warm

242

00:08:14,309 --> 00:08:13,120

yeah it tastes pretty good actually did

243

00:08:15,909 --> 00:08:14,319

you have breakfast this morning because

244

00:08:17,270 --> 00:08:15,919

it's already it's like lunch time yeah i

245

00:08:19,029 --> 00:08:17,280

don't know yeah

246

00:08:20,629 --> 00:08:19,039

i actually we started right away we were

247

00:08:22,629 --> 00:08:20,639

trying to get these guys dressed and out

248

00:08:24,309 --> 00:08:22,639

the door yeah yeah space walks this is

249

00:08:25,909 --> 00:08:24,319

the first time i've had to eat

250

00:08:27,510 --> 00:08:25,919

so i had some coffee earlier but now i'm

251
00:08:28,790 --> 00:08:27,520
having my breakfast you're busy that's

252
00:08:30,550 --> 00:08:28,800
it i gotta hurry up and eat my breakfast

253
00:08:31,589 --> 00:08:30,560
right now my lunch

254
00:08:33,750 --> 00:08:31,599
i don't want to have lunch without

255
00:08:35,190 --> 00:08:33,760
breakfast

256
00:08:36,949 --> 00:08:35,200
do a min order

257
00:08:39,750 --> 00:08:36,959
but it can all be at the same time yeah

258
00:08:42,469 --> 00:08:40,870
because you're so busy you don't have

259
00:08:44,230 --> 00:08:42,479
time to you know to get your meal going

260
00:08:46,630 --> 00:08:44,240
in earlier i mean you were one of the

261
00:08:48,470 --> 00:08:46,640
great eaters in spain i ate a lot yes i

262
00:08:50,310 --> 00:08:48,480
actually gained weight inspect i ate

263
00:08:52,150 --> 00:08:50,320

pretty well underground too though so

264

00:08:53,990 --> 00:08:52,160

yeah you know and you know it takes

265

00:08:55,110 --> 00:08:54,000

practice it does it's not for everybody

266

00:08:56,630 --> 00:08:55,120

you know people i'm going to eat a lot

267

00:08:58,630 --> 00:08:56,640

and then they get a stomach ache and

268

00:09:01,670 --> 00:08:58,640

it's no good it's not for everybody

269

00:09:02,790 --> 00:09:01,680

right yeah you need to build up today

270

00:09:03,910 --> 00:09:02,800

all right what are you doing well there