



1
00:02:55,120 --> 00:02:52,330
and Atlantis Houston good morning or

2
00:02:58,720 --> 00:02:55,130
good evening Houston time we have you

3
00:03:00,070 --> 00:02:58,730
handed down through oak hanger and just

4
00:03:02,470 --> 00:03:00,080
in case we can't talk to you a little

5
00:03:05,320 --> 00:03:02,480
bit later you do have a go from Houston

6
00:03:14,940 --> 00:03:05,330
and Moscow for the maneuver the Geo 5.3

7
00:03:17,170 --> 00:03:14,950
maneuver at 1835 okay very good bill

8
00:03:19,690 --> 00:03:17,180
basis good evening to all of you there

9
00:03:21,850 --> 00:03:19,700
in Houston and thanks for the wakeup

10
00:03:24,640 --> 00:03:21,860
music is real appropriate because we had

11
00:03:27,760 --> 00:03:24,650
the Russians in our ward room last night

12
00:03:34,720 --> 00:03:27,770
Saturday night and a little barbecue a

13
00:03:39,370 --> 00:03:34,730

little max Q okay you should see a

14

00:03:44,520 --> 00:03:39,380

sheriff on leading us into bill through

15

00:03:47,650 --> 00:03:44,530

the docking module you folks put on and

16

00:03:49,449 --> 00:03:47,660

betingelser this compositor made of

17

00:03:52,000 --> 00:03:49,459

Tyler Crowe which makes it very

18

00:03:53,680 --> 00:03:52,010

convenient so one place Emil was hard to

19

00:03:55,810 --> 00:03:53,690

lose things when you lose stuff in there

20

00:03:58,330 --> 00:03:55,820

it's real difficult to find that these

21

00:04:00,580 --> 00:03:58,340

ventilator tube that you see all around

22

00:04:02,380 --> 00:04:00,590

Shannon all have fans in them and you

23

00:04:04,449 --> 00:04:02,390

can find some things on the intakes for

24

00:04:06,340 --> 00:04:04,459

them that's real helpful Jenna's going

25

00:04:08,410 --> 00:04:06,350

to stop here in just a minute after

26
00:04:12,520 --> 00:04:08,420
passing the narrowest part of mere here

27
00:04:15,340 --> 00:04:12,530
in crystal to service a plant growth

28
00:04:19,030 --> 00:04:15,350
experiment called svet which means

29
00:04:22,420 --> 00:04:19,040
flowers that that is weak plants and

30
00:04:26,650 --> 00:04:22,430
it's just in the last week had some new

31
00:04:28,810 --> 00:04:26,660
growth on the other beautiful plants and

32
00:04:30,969 --> 00:04:28,820
it's just fantastic to see them growing

33
00:04:35,940 --> 00:04:30,979
into the sunlight up here and say we're

34
00:04:40,690 --> 00:04:35,950
all nice refreshing green color to have

35
00:04:44,620 --> 00:04:40,700
aboard the outpost up here and that will

36
00:04:47,320 --> 00:04:44,630
continue on through cristal going

37
00:04:48,790 --> 00:04:47,330
towards the note the central node which

38
00:04:51,850 --> 00:04:48,800

is what makes all of this possible is

39

00:04:55,689 --> 00:04:51,860

fantastic piece of gear that allows

40

00:04:57,459 --> 00:04:55,699

I modules to be docked to the various

41

00:05:00,070 --> 00:04:57,469

ports on it and that's what made the

42

00:05:02,290 --> 00:05:00,080

construction of Mir station possible

43

00:05:05,020 --> 00:05:02,300

here we are getting into the dome you

44

00:05:08,619 --> 00:05:05,030

can see all of the hatches and docking

45

00:05:10,510 --> 00:05:08,629

adapters so forth right Ian they note

46

00:05:13,510 --> 00:05:10,520

itself it's a kind of a busy place we

47

00:05:15,820 --> 00:05:13,520

can look all around the node Shannon's

48

00:05:20,640 --> 00:05:15,830

gone they got forget the bed for her

49

00:05:23,890 --> 00:05:20,650

exercise period looking into our they

50

00:05:28,510 --> 00:05:23,900

rewrote a module coming here is a

51
00:05:30,129 --> 00:05:28,520
greenhouse experiment which John will be

52
00:05:32,589 --> 00:05:30,139
spending a great deal of time on you can

53
00:05:34,119 --> 00:05:32,599
see an Excel wrong so wrong about it on

54
00:05:36,519 --> 00:05:34,129
the bottom of the greenhouse experiment

55
00:05:38,559 --> 00:05:36,529
here as we rotate today that the

56
00:05:41,350 --> 00:05:38,569
designers that would be the proper

57
00:05:45,040 --> 00:05:41,360
attitude use a French vestibular

58
00:05:47,379 --> 00:05:45,050
experiment to lose it what you see that

59
00:05:50,409 --> 00:05:47,389
we've just flown over there going back

60
00:05:53,170 --> 00:05:50,419
to where we did for the farm our

61
00:05:57,219 --> 00:05:53,180
transfers in the last couple of days the

62
00:06:00,390 --> 00:05:57,229
our technology system pts unit is here

63
00:06:03,339 --> 00:06:00,400

on one set of lockers which as for that

64

00:06:05,589 --> 00:06:03,349

no difficulty as the first power

65

00:06:09,369 --> 00:06:05,599

transfer here's a French laser

66

00:06:12,969 --> 00:06:09,379

spectrometer called Alice and here are

67

00:06:16,180 --> 00:06:12,979

the cg b a crystal growth units up in

68

00:06:17,439 --> 00:06:16,190

the next set of lockers and we transfer

69

00:06:20,860 --> 00:06:17,449

those we've only got one more of the

70

00:06:27,399 --> 00:06:20,870

power transfers to go coming out of all

71

00:06:31,749 --> 00:06:27,409

three rota we go back to the load

72

00:06:33,369 --> 00:06:31,759

through the hatch that was used just a

73

00:06:37,570 --> 00:06:33,379

few months ago when three rotor came on

74

00:06:41,469 --> 00:06:37,580

up take a look around the nose just to

75

00:06:45,219 --> 00:06:41,479

show you how is you know bila confusing

76

00:06:46,629 --> 00:06:45,229

place it can be up there there's no up

77

00:06:48,999 --> 00:06:46,639

or down and you got to follow your nose

78

00:06:52,749 --> 00:06:49,009

to get to the right place and here's the

79

00:06:54,309 --> 00:06:52,759

orbit module of the Sawyer's that has

80

00:07:00,879 --> 00:06:54,319

the sky founder or launch and entry

81

00:07:02,379 --> 00:07:00,889

suits that include now John's the folks

82

00:07:03,330 --> 00:07:02,389

will be using that to come back down

83

00:07:10,800 --> 00:07:03,340

here

84

00:07:15,060 --> 00:07:10,810

months Shannon preparing for exercise

85

00:07:24,180 --> 00:07:15,070

here with help of Sasha as a flight

86

00:07:27,000 --> 00:07:24,190

engineer commanders eye view of the

87

00:07:28,830 --> 00:07:27,010

control post there that's where they

88

00:07:31,770 --> 00:07:28,840

conduct most of their air-to-ground

89

00:07:34,170 --> 00:07:31,780

sessions also got a viewport there at

90

00:07:35,940 --> 00:07:34,180

the center and a display similar to what

91

00:07:40,530 --> 00:07:35,950

we have on board the shuttle in order to

92

00:07:42,750 --> 00:07:40,540

do control of the vehicle big white

93

00:07:45,180 --> 00:07:42,760

tubes on either side as you can see to

94

00:07:48,570 --> 00:07:45,190

carry the air back and forth and around

95

00:07:52,050 --> 00:07:48,580

the mirror which is a huge complex 120

96

00:07:54,300 --> 00:07:52,060

tons now and once you get to that that

97

00:07:56,909 --> 00:07:54,310

docking no avoids real easy to get kind

98

00:07:59,120 --> 00:07:56,919

of confused which way is left which way

99

00:08:05,240 --> 00:07:59,130

is down which way is quant which way is

100

00:08:09,300 --> 00:08:05,250

crystal but here we wound up going into

101
00:08:15,000 --> 00:08:09,310
inspector we're going to take a peek at

102
00:08:16,790 --> 00:08:15,010
John here there we go there's John this

103
00:08:19,469 --> 00:08:16,800
is where Shannon did most of her work

104
00:08:21,120 --> 00:08:19,479
The Spectre arrived well norm was there

105
00:08:23,790 --> 00:08:21,130
and he was the one that that had a

106
00:08:26,279 --> 00:08:23,800
chance to unpack it all Shannon kind of

107
00:08:29,450 --> 00:08:26,289
set up her laboratory in there until

108
00:08:34,050 --> 00:08:29,460
free rotor arrived to see her balloon

109
00:08:36,510 --> 00:08:34,060
her books there John getting prepared to

110
00:08:37,769 --> 00:08:36,520
work here with his laptop and going

111
00:08:41,459 --> 00:08:37,779
through an awful lot of his new

112
00:08:43,800 --> 00:08:41,469
inventory get set to go to work with

113
00:08:50,370 --> 00:08:43,810

some of the file management that comes

114

00:08:53,490 --> 00:08:50,380

up and down there air-to-ground now the

115

00:08:55,079 --> 00:08:53,500

pretty pretty pink tag there is intended

116

00:08:57,300 --> 00:08:55,089

to be read that's that's kind of our

117

00:09:00,360 --> 00:08:57,310

signal on board that the Tom Akers

118

00:09:05,930 --> 00:09:00,370

devised as to the red goes over to the

119

00:09:17,639 --> 00:09:08,790

floating back towards the towards the

120

00:09:20,280 --> 00:09:17,649

node here Sasha and I spend a lot of our

121

00:09:21,750 --> 00:09:20,290

mornings in quad to we both love

122

00:09:24,030 --> 00:09:21,760

photographing mirrors and looking out

123

00:09:26,280 --> 00:09:24,040

the windows and you'll see while here in

124

00:09:29,579 --> 00:09:26,290

a second as we get through some of the

125

00:09:35,490 --> 00:09:29,589

gyro dimes and help stabilize the MIR

126
00:09:38,340 --> 00:09:35,500
station and into the compartment at the

127
00:09:43,199 --> 00:09:38,350
far end of quarter that's their air lock

128
00:09:47,340 --> 00:09:43,209
was used for very VA's here are their

129
00:09:52,650 --> 00:09:47,350
spacesuits and there are three windows

130
00:09:54,720 --> 00:09:52,660
at any given time generally there's one

131
00:09:57,540 --> 00:09:54,730
of the face in the ground it's a

132
00:09:59,910 --> 00:09:57,550
wonderful place to be even though it

133
00:10:02,670 --> 00:09:59,920
kept cold for a number of reasons not

134
00:10:04,860 --> 00:10:02,680
least of which to keep the space suits

135
00:10:07,170 --> 00:10:04,870
in good shape there's a beautiful opener

136
00:10:09,660 --> 00:10:07,180
with a solar array stick it down towards

137
00:10:11,730 --> 00:10:09,670
it and our radiators from one of the

138
00:10:13,670 --> 00:10:11,740

windows of quantum you can just see the

139

00:10:17,760 --> 00:10:13,680

full array that came down right from it

140

00:10:18,960 --> 00:10:17,770

the commander's killer our monetary will

141

00:10:22,380 --> 00:10:18,970

converse sitting during the rendezvous

142

00:10:24,660 --> 00:10:22,390

and wouldn't entertain excite during the

143

00:10:30,630 --> 00:10:24,670

rendezvous now we had a really beautiful

144

00:10:33,750 --> 00:10:30,640

pass over New Zealand out another

145

00:10:36,050 --> 00:10:33,760

picture this one taken from a flight

146

00:10:38,430 --> 00:10:36,060

engineers cabin onboard the MIR station

147

00:10:40,829 --> 00:10:38,440

CJ is given in a little bit to get a

148

00:10:42,360 --> 00:10:40,839

picture of the overhead windows that's

149

00:10:44,040 --> 00:10:42,370

kind of what they were looking at well

150

00:10:46,230 --> 00:10:44,050

we were looking back at them during the

151
00:10:55,019 --> 00:10:46,240
the rendezvous docking a little bit

152
00:10:57,870 --> 00:10:55,029
wider view of that spectacular well here

153
00:11:03,630 --> 00:10:57,880
we are in the base block where shannon

154
00:11:05,460 --> 00:11:03,640
has started her exercise and Sasha the

155
00:11:08,250 --> 00:11:05,470
flight engineer flight engineer one

156
00:11:11,040 --> 00:11:08,260
double hop a flight engineer to is

157
00:11:22,199 --> 00:11:11,050
getting ready to talk to folks on the

158
00:11:27,079 --> 00:11:24,689
thanks for providing the docking module

159
00:11:29,879 --> 00:11:27,089
to us there we appreciate that bill

160
00:11:53,280 --> 00:11:29,889
we're going to make a turn here into the

161
00:12:00,030 --> 00:11:55,949
I kind of fly it into the end of the

162
00:12:03,689 --> 00:12:00,040
have here you can see the oil on suits

163
00:12:06,569 --> 00:12:03,699

toe down there at the bottom and kind of

164

00:12:10,650 --> 00:12:06,579

panning up all our return bags with the

165

00:12:12,780 --> 00:12:10,660

blue label's I'd like to know what's

166

00:12:14,730 --> 00:12:12,790

been the biggest surprise for you since

167

00:12:22,259 --> 00:12:14,740

you have become a mere cosmonaut which

168

00:12:26,430 --> 00:12:22,269

happened a couple of days back I guess

169

00:12:29,249 --> 00:12:26,440

the right answer to that is I'm amazed

170

00:12:31,590 --> 00:12:29,259

at how quickly i am adapted to the

171

00:12:34,139 --> 00:12:31,600

mirror I've never been on the real meal

172

00:12:38,100 --> 00:12:34,149

before it looks very different than the

173

00:12:40,439 --> 00:12:38,110

simulators I trained in and so at first

174

00:12:43,740 --> 00:12:40,449

I was a little concerned about that but

175

00:12:46,379 --> 00:12:43,750

Hawaii here and Sasha my two Russian

176
00:12:49,559 --> 00:12:46,389
crewmates as well as Shannon who spent

177
00:12:51,410 --> 00:12:49,569
six months there and really helped me

178
00:12:54,180 --> 00:12:51,420
out the last three days and I feel like

179
00:12:56,550 --> 00:12:54,190
I'm very comfortable there right now I

180
00:12:58,530 --> 00:12:56,560
had a great night sleep and I feel very

181
00:13:00,750 --> 00:12:58,540
good on the mirror right now tell me

182
00:13:03,389 --> 00:13:00,760
about the emotions that you were feeling

183
00:13:05,519 --> 00:13:03,399
during docking the hatch opening itself

184
00:13:12,569 --> 00:13:05,529
and now that you're back with astronauts

185
00:13:14,040 --> 00:13:12,579
again wow I guess but I before they're

186
00:13:15,600 --> 00:13:14,050
supposed to watch it sort of like

187
00:13:18,689 --> 00:13:15,610
Christmas Eve when you're a kid you know

188
00:13:19,650 --> 00:13:18,699

what I mean you just have a hard time

189

00:13:22,139 --> 00:13:19,660

getting to sleep and you're just

190

00:13:25,860 --> 00:13:22,149

wondering uh just what's going to happen

191

00:13:27,750 --> 00:13:25,870

the next day and then you know just took

192

00:13:29,250 --> 00:13:27,760

it one step at a time first of all they

193

00:13:32,699 --> 00:13:29,260

had to dock and that when just real fine

194

00:13:34,769 --> 00:13:32,709

then they had to have a hack to me

195

00:13:37,590 --> 00:13:34,779

because the docking wasn't any good the

196

00:13:40,429 --> 00:13:37,600

hatch didn't get open and everything

197

00:13:44,160 --> 00:13:40,439

just fell on just great and then finally

198

00:13:46,949 --> 00:13:44,170

you and hatch opening we met each other

199

00:13:48,629 --> 00:13:46,959

then you could sort of start thinking

200

00:13:50,309 --> 00:13:48,639

about going home one of the first things

201
00:13:52,620 --> 00:13:50,319
you're going to be asked to do when you

202
00:13:54,749 --> 00:13:52,630
get home is make recommendations for

203
00:13:57,059 --> 00:13:54,759
improvements to mere to make it more

204
00:14:02,070 --> 00:13:57,069
habitable for future crew members what

205
00:14:06,960 --> 00:14:05,340
well I guess the first door and

206
00:14:09,590 --> 00:14:06,970
basically the only suggestion that I

207
00:14:11,580 --> 00:14:09,600
would really have is just to have more

208
00:14:14,490 --> 00:14:11,590
experiments to do because that's the fun

209
00:14:17,010 --> 00:14:14,500
thing to do and more is better as far as

210
00:14:19,860 --> 00:14:17,020
I'm concerned here duh when you when you

211
00:14:21,570 --> 00:14:19,870
go on it for the first time John and if

212
00:14:26,240 --> 00:14:21,580
the atmosphere is clammy or anything

213
00:14:31,050 --> 00:14:28,320

today the truth I've heard those

214

00:14:33,270 --> 00:14:31,060

comments before but I thought the

215

00:14:36,320 --> 00:14:33,280

atmosphere there was very similar to a

216

00:14:39,150 --> 00:14:36,330

shuttle I find it very comfortable and

217

00:14:41,010 --> 00:14:39,160

what I was really surprised that is what

218

00:14:45,090 --> 00:14:41,020

I'm going to call the tremendous volume

219

00:14:47,940 --> 00:14:45,100

inside to move around then having been

220

00:14:50,670 --> 00:14:47,950

with the shuttle for so many years when

221

00:14:52,650 --> 00:14:50,680

I come back to the shuttle now I to me

222

00:14:54,720 --> 00:14:52,660

it looks smaller than I used to think it

223

00:14:57,690 --> 00:14:54,730

was so the volume in the mirror is quite

224

00:15:00,660 --> 00:14:57,700

large and that's the most thing that I

225

00:15:02,790 --> 00:15:00,670

was impressed with no I don't smell

226

00:15:04,950 --> 00:15:02,800

anything in there myself well that's

227

00:15:06,750 --> 00:15:04,960

good i think i've got a couple more

228

00:15:08,250 --> 00:15:06,760

questions for shannon that if people

229

00:15:10,650 --> 00:15:08,260

around here have come up with what are

230

00:15:12,690 --> 00:15:10,660

you going to do for an encore obviously

231

00:15:14,250 --> 00:15:12,700

it's gonna take you a time some time to

232

00:15:16,800 --> 00:15:14,260

recover from the effects of

233

00:15:18,330 --> 00:15:16,810

weightlessness for six months when you

234

00:15:20,040 --> 00:15:18,340

get back and talk to your bosses at NASA

235

00:15:26,190 --> 00:15:20,050

what are you going to say you'd like to

236

00:15:29,070 --> 00:15:26,200

do next have to ask me if I had a

237

00:15:30,450 --> 00:15:29,080

preference I would just like to have an

238

00:15:33,510 --> 00:15:30,460

interesting job I mean I just didn't

239

00:15:35,970 --> 00:15:33,520

really enjoy working and I hope that I

240

00:15:38,250 --> 00:15:35,980

just have an interesting job but right

241

00:15:40,110 --> 00:15:38,260

now my vision of life I guess doesn't

242

00:15:42,570 --> 00:15:40,120

extend much further than landing and

243

00:15:44,160 --> 00:15:42,580

saying hello to my family I can

244

00:15:46,530 --> 00:15:44,170

understand that a challenge were you

245

00:15:48,840 --> 00:15:46,540

able to see other satellites frequently

246

00:15:51,360 --> 00:15:48,850

as you are orbited the earth and did you

247

00:15:56,340 --> 00:15:51,370

see space jump flyby at all when you had

248

00:15:58,320 --> 00:15:56,350

time to look out the windows so I

249

00:16:00,600 --> 00:15:58,330

thought about you can see if you are

250

00:16:03,300 --> 00:16:00,610

little flecks of oh I think it's like

251
00:16:04,590 --> 00:16:03,310
paint something like that coming off me

252
00:16:07,110 --> 00:16:04,600
and they would sort of sparkle in the

253
00:16:10,020 --> 00:16:07,120
sunlight you can see that and as far as

254
00:16:12,660 --> 00:16:10,030
satellite the fob you know the moon a

255
00:16:14,010 --> 00:16:12,670
lot and I saw a lot of the satellites of

256
00:16:15,680 --> 00:16:14,020
Jupiter lot but I didn't see any

257
00:16:18,050 --> 00:16:15,690
artificial satellite

258
00:16:21,060 --> 00:16:18,060
all right quick final question for

259
00:16:23,100 --> 00:16:21,070
Valeri it's the question about Russian

260
00:16:24,810 --> 00:16:23,110
president Boris Yeltsin his health has

261
00:16:27,630 --> 00:16:24,820
deteriorated there's some debate about

262
00:16:29,370 --> 00:16:27,640
the open-heart surgery on him Ava Larry

263
00:16:30,900 --> 00:16:29,380

have you heard about this and be or you

264

00:16:36,390 --> 00:16:30,910

concerned about the health of President

265

00:16:38,220 --> 00:16:36,400

Yeltsin that is the medical of course we

266

00:16:40,680 --> 00:16:38,230

are are concerned about the health of

267

00:16:43,110 --> 00:16:40,690

the President and about any upcoming

268

00:16:48,030 --> 00:16:43,120

operations but this is a strategic

269

00:16:50,340 --> 00:16:48,040

question we are primarily concerned up

270

00:16:52,560 --> 00:16:50,350

here with the health of the crew at this

271

00:16:55,170 --> 00:16:52,570

time and the performance of the crews

272

00:16:56,490 --> 00:16:55,180

mission all right commander thank you