



1  
00:00:14,950 --> 00:00:01,990  
station this is houston are you ready

2  
00:00:22,790 --> 00:00:16,790  
eastern station almost ready for the

3  
00:00:27,830 --> 00:00:25,590  
and i'm ready for the event

4  
00:00:33,210 --> 00:00:27,840  
pg-1 this is mission control houston

5  
00:00:33,220 --> 00:00:45,190  
[Music]

6  
00:01:08,310 --> 00:00:47,670  
hello i i read you loud and clear how

7  
00:01:08,320 --> 00:01:17,940  
is

8  
00:01:17,950 --> 00:01:49,030  
[Music]

9  
00:02:03,190 --> 00:01:51,590  
the first on july 9th went really well

10  
00:02:08,469 --> 00:02:04,950  
so we completed all our activities and

11  
00:02:11,270 --> 00:02:08,479  
we even went beyond with some activities

12  
00:02:13,670 --> 00:02:11,280  
to start the second one right however

13  
00:02:15,430 --> 00:02:13,680

the second one didn't go very well

14

00:02:33,190 --> 00:02:15,440

i brought the helmet here with me to

15

00:02:39,270 --> 00:02:34,869

this is the helmet i was wearing during

16

00:02:42,070 --> 00:02:40,949

air to be able to circulate must be

17

00:02:45,350 --> 00:02:42,080

forced

18

00:02:46,949 --> 00:02:45,360

so it must be ventilated constantly

19

00:02:48,550 --> 00:02:46,959

from this hole here that you see

20

00:02:56,710 --> 00:02:48,560

underneath

21

00:03:01,830 --> 00:02:59,030

the diffuser is this white part that you

22

00:03:42,550 --> 00:03:01,840

see inside the helmet so air comes into

23

00:03:46,789 --> 00:03:44,229

water doesn't flow so it's simply

24

00:03:48,229 --> 00:03:46,799

accumulated in a huge

25

00:03:50,869 --> 00:03:48,239

bubble

26

00:03:52,949 --> 00:03:50,879

that after a while i felt also because

27

00:03:56,949 --> 00:03:52,959

its temperature was very low

28

00:04:00,470 --> 00:03:58,309

as you can see the volume inside the

29

00:04:02,390 --> 00:04:00,480

helmet is not a lot so

30

00:04:05,429 --> 00:04:02,400

when the volume

31

00:04:08,229 --> 00:04:05,439

increased so that it would cover my eyes

32

00:04:09,910 --> 00:04:08,239

nose and ears

33

00:04:14,710 --> 00:04:09,920

that was the worst moment of the whole

34

00:04:18,629 --> 00:04:16,789

your colleague chris cassidy

35

00:04:21,189 --> 00:04:18,639

said that the incident could have had

36

00:04:23,270 --> 00:04:21,199

some dire consequences

37

00:04:27,590 --> 00:04:23,280

were you afraid and will you be going

38

00:04:30,629 --> 00:04:29,270

well those are two different questions

39

00:04:33,430 --> 00:04:30,639

let me answer

40

00:04:35,749 --> 00:04:33,440

the second one right away

41

00:04:36,469 --> 00:04:35,759

definitely i hope to be able to have

42

00:04:39,110 --> 00:04:36,479

other

43

00:04:43,430 --> 00:04:41,270

obviously this is my dream and the term

44

00:04:46,230 --> 00:04:43,440

of many astronauts but at this time

45

00:04:48,390 --> 00:04:46,240

we are busy with

46

00:04:49,990 --> 00:04:48,400

troubleshooting the spacesuit

47

00:04:52,070 --> 00:04:50,000

and the ones on the ground as well to

48

00:04:53,830 --> 00:04:52,080

see if it's a common problem once we

49

00:05:03,030 --> 00:04:53,840

have resolved this problem then we will

50

00:05:06,150 --> 00:05:04,310

that's something that we can do during

51  
00:05:07,830 --> 00:05:06,160  
this increment or whether we need to

52  
00:05:10,310 --> 00:05:07,840  
wait till next time

53  
00:05:12,550 --> 00:05:10,320  
as far as the emotions that i felt

54  
00:05:14,870 --> 00:05:12,560  
during the uh

55  
00:05:17,110 --> 00:05:14,880  
those intense phases it's very hard to

56  
00:05:18,629 --> 00:05:17,120  
describe

57  
00:05:20,070 --> 00:05:18,639  
because it's a lot of emotions all at

58  
00:05:21,510 --> 00:05:20,080  
once

59  
00:05:24,790 --> 00:05:21,520  
definitely

60  
00:05:26,870 --> 00:05:24,800  
at a very basic level there is fear

61  
00:05:28,550 --> 00:05:26,880  
because i always say that fear is an

62  
00:05:33,830 --> 00:05:28,560  
instrument

63  
00:05:36,310 --> 00:05:33,840

or negative

64

00:05:38,070 --> 00:05:36,320

a scalpel in a surgeon's hand

65

00:05:39,590 --> 00:05:38,080

can be an instrument of life but it can

66

00:05:40,950 --> 00:05:39,600

also be used for

67

00:05:42,950 --> 00:05:40,960

to hurt people

68

00:05:46,150 --> 00:05:42,960

so fear has the same value

69

00:05:49,830 --> 00:05:47,990

to heighten your senses

70

00:05:53,350 --> 00:05:49,840

to be able to think on your feet and

71

00:05:55,670 --> 00:05:53,360

react more quickly if it's used

72

00:05:57,510 --> 00:05:55,680

properly and if we're trained to do so

73

00:05:59,909 --> 00:05:57,520

fortunately my training

74

00:06:02,150 --> 00:05:59,919

that i received on the ground and in

75

00:06:05,270 --> 00:06:02,160

many years in the uh

76

00:06:07,430 --> 00:06:05,280

italian air force as a pilot and then a

77

00:06:08,309 --> 00:06:07,440

test pilot that training was very useful

78

00:06:10,150 --> 00:06:08,319

to me

79

00:06:11,909 --> 00:06:10,160

because when i reacted to the emergency

80

00:06:14,390 --> 00:06:11,919

i try to keep calm

81

00:06:16,629 --> 00:06:14,400

and to focus on what the

82

00:06:18,629 --> 00:06:16,639

possible resolutions were

83

00:06:21,590 --> 00:06:18,639

and how to be able to go back even

84

00:06:23,430 --> 00:06:21,600

without a lot of visibility

85

00:06:24,150 --> 00:06:23,440

and i also tried to think as fast as i

86

00:06:27,029 --> 00:06:24,160

could

87

00:06:29,670 --> 00:06:27,039

if water had reached my mouth

88

00:06:32,710 --> 00:06:29,680

how could i have eliminated it so that i

89

00:06:37,270 --> 00:06:32,720

didn't drown in the helmet

90

00:06:41,670 --> 00:06:38,870

so talking about what happens on the

91

00:06:44,150 --> 00:06:41,680

international space station

92

00:06:47,590 --> 00:06:44,160

do you have an idea from there of what's

93

00:06:52,710 --> 00:06:48,790

what questions do you have for the

94

00:06:56,390 --> 00:06:54,390

i'm always in contact with the earth

95

00:06:59,350 --> 00:06:56,400

fortunately technology

96

00:07:01,510 --> 00:06:59,360

helps us on board of station

97

00:07:05,749 --> 00:07:01,520

and we have internet onboard the station

98

00:07:09,909 --> 00:07:07,749

and also due to the fact that we're

99

00:07:11,830 --> 00:07:09,919

working for the majority of our day but

100

00:07:13,029 --> 00:07:11,840

fortunately we have the ability to

101  
00:07:14,469 --> 00:07:13,039  
connect

102  
00:07:16,230 --> 00:07:14,479  
and to be able to follow what's

103  
00:07:17,909 --> 00:07:16,240  
happening in italy and in the world of

104  
00:07:21,110 --> 00:07:17,919  
course i'm very interested in what's

105  
00:07:21,120 --> 00:07:26,469  
a message for the italians

106  
00:07:30,950 --> 00:07:28,550  
i would like to say this to the italians

107  
00:07:32,390 --> 00:07:30,960  
to continue to believe

108  
00:07:35,350 --> 00:07:32,400  
in our nation

109  
00:07:36,710 --> 00:07:35,360  
to continue to believe in our country

110  
00:07:39,189 --> 00:07:36,720  
it's a little

111  
00:07:41,110 --> 00:07:39,199  
country but it's a great nation

112  
00:07:43,029 --> 00:07:41,120  
there's a lot that we can still do and

113  
00:07:45,189 --> 00:07:43,039

demonstrate to the world that we still

114

00:07:46,870 --> 00:07:45,199

have capabilities and then we still have

115

00:07:48,550 --> 00:07:46,880

the will to work

116

00:07:50,070 --> 00:07:48,560

and to

117

00:07:51,909 --> 00:07:50,080

come back

118

00:07:53,670 --> 00:07:51,919

and this is the time to

119

00:07:56,469 --> 00:07:53,680

look to the future and research and

120

00:08:10,950 --> 00:07:56,479

invest into the future and our youth so

121

00:08:15,029 --> 00:08:12,469

and faith

122

00:08:17,350 --> 00:08:15,039

so that with optimism we can come out of

123

00:08:20,390 --> 00:08:17,360

a moment of crisis that is not just

124

00:08:22,950 --> 00:08:20,400

italian but it's it's a worldwide crisis

125

00:08:28,950 --> 00:08:22,960

so my message is just this to be to have

126  
00:08:34,149 --> 00:08:31,510  
have you received something from italy

127  
00:08:36,469 --> 00:08:34,159  
with the latest spacecraft that came up

128  
00:08:37,990 --> 00:08:36,479  
something that you had asked for

129  
00:08:39,509 --> 00:08:38,000  
or did you realize that there's

130  
00:08:44,230 --> 00:08:39,519  
something else that you wanted up there

131  
00:08:55,030 --> 00:08:48,949  
spacecraft

132  
00:08:57,190 --> 00:08:55,040  
materials for the station

133  
00:09:00,310 --> 00:08:57,200  
not a lot of items for us astronauts

134  
00:09:01,829 --> 00:09:00,320  
what we received was a surprise i don't

135  
00:09:04,550 --> 00:09:01,839  
know if it came from italy i don't

136  
00:09:06,949 --> 00:09:04,560  
believe so but we did receive some

137  
00:09:09,269 --> 00:09:06,959  
fresh fruit and vegetable that here on

138  
00:09:12,470 --> 00:09:09,279

station it's an incredible luxury

139

00:09:14,389 --> 00:09:12,480

it's it's an explosion of colors and and

140

00:09:15,910 --> 00:09:14,399

scents that we didn't expect but

141

00:09:18,150 --> 00:09:15,920

honestly

142

00:09:19,590 --> 00:09:18,160

aside from my family and my daughters i

143

00:09:31,110 --> 00:09:19,600

don't really i'm not really miss

144

00:09:38,870 --> 00:09:32,630

and what did your mom tell you after

145

00:09:43,509 --> 00:09:41,030

once again thanks to technology i have

146

00:09:45,430 --> 00:09:43,519

the opportunity to utilize an internet

147

00:09:47,269 --> 00:09:45,440

phone to be able to communicate with my

148

00:09:51,540 --> 00:09:47,279

family

149

00:09:51,550 --> 00:10:02,389

[Music]

150

00:10:04,870 --> 00:10:03,829

that everything went fine that i was

151  
00:10:06,310 --> 00:10:04,880  
fine

152  
00:10:08,150 --> 00:10:06,320  
which was true

153  
00:10:09,269 --> 00:10:08,160  
without trying to minimize any of the

154  
00:10:11,110 --> 00:10:09,279  
events

155  
00:10:12,630 --> 00:10:11,120  
but also without exaggerating them

156  
00:10:15,110 --> 00:10:12,640  
because

157  
00:10:16,949 --> 00:10:15,120  
it never makes any sense to exaggerate

158  
00:10:19,269 --> 00:10:16,959  
so simply telling them that there was a

159  
00:10:19,990 --> 00:10:19,279  
malfunction that i was back and i was

160  
00:10:22,630 --> 00:10:20,000  
fine

161  
00:10:25,829 --> 00:10:22,640  
and both my mom and my

162  
00:10:30,790 --> 00:10:25,839  
my wife are very used to this kind of

163  
00:10:30,800 --> 00:10:42,550

thank you

164

00:10:46,470 --> 00:10:44,310

and in the second portion of the event

165

00:10:54,790 --> 00:10:46,480

luca i would like to speak to you about

166

00:11:05,190 --> 00:10:56,790

so i understand your pleasure let me put

167

00:11:05,200 --> 00:11:10,389

i'm ready ready for the question

168

00:11:14,310 --> 00:11:11,990

okay lucas so i understand you'll be

169

00:11:17,269 --> 00:11:14,320

taking part in a really cool experiment

170

00:11:18,870 --> 00:11:17,279

that's called energy with mike hopkins

171

00:11:23,030 --> 00:11:18,880

in september can you tell me a bit more

172

00:11:27,430 --> 00:11:25,190

yeah absolutely the energy experiment

173

00:11:30,550 --> 00:11:27,440

that will start in september

174

00:11:32,150 --> 00:11:30,560

both with me and mike hopkins subject

175

00:11:34,870 --> 00:11:32,160

is um

176  
00:11:37,829 --> 00:11:34,880  
is assessing the energy requirement for

177  
00:11:40,310 --> 00:11:37,839  
astronauts um especially with the view

178  
00:11:43,190 --> 00:11:40,320  
of a long duration mission what we're

179  
00:11:45,590 --> 00:11:43,200  
trying to discover here is or to assess

180  
00:11:48,470 --> 00:11:45,600  
is how much energy exactly does an

181  
00:11:50,069 --> 00:11:48,480  
astronaut need to um to go

182  
00:11:52,949 --> 00:11:50,079  
uh on a long direction mission for

183  
00:11:55,430 --> 00:11:52,959  
example to the moon or to mars

184  
00:11:57,190 --> 00:11:55,440  
and the idea is that if we can determine

185  
00:12:00,310 --> 00:11:57,200  
the exact quantity

186  
00:12:02,710 --> 00:12:00,320  
then we can we can pack

187  
00:12:05,269 --> 00:12:02,720  
the exact amount of food required and

188  
00:12:06,949 --> 00:12:05,279

that would be an incredible advantage

189

00:12:09,750 --> 00:12:06,959

both in terms of storage and in

190

00:12:12,310 --> 00:12:09,760

economical terms of how much money we we

191

00:12:14,470 --> 00:12:12,320

would spend in order to to send it and

192

00:12:20,389 --> 00:12:14,480

that also equates to how big the

193

00:12:24,069 --> 00:12:22,389

eating and drinking special things

194

00:12:29,829 --> 00:12:24,079

during this experiment can you tell a

195

00:12:35,910 --> 00:12:33,030

that is correct i will be

196

00:12:38,470 --> 00:12:35,920

i will be eating a very a very specific

197

00:12:48,069 --> 00:12:38,480

diet that is

198

00:12:54,389 --> 00:12:50,949

so this is a food that is that it's been

199

00:12:57,990 --> 00:12:54,399

packed already on the ground it's very

200

00:13:03,110 --> 00:13:00,870

the scientists know exactly uh the

201  
00:13:05,670 --> 00:13:03,120  
energy content of each specific

202  
00:13:08,790 --> 00:13:05,680  
container

203  
00:13:10,710 --> 00:13:08,800  
so by uh when i eat this food the the

204  
00:13:14,550 --> 00:13:10,720  
scientists will know exactly how much

205  
00:13:17,350 --> 00:13:14,560  
energy my intake is and then uh i'm

206  
00:13:20,550 --> 00:13:17,360  
going to be drinking a specific amount

207  
00:13:23,269 --> 00:13:20,560  
of water that that uh we let the

208  
00:13:26,069 --> 00:13:23,279  
the scientists know um

209  
00:13:28,069 --> 00:13:26,079  
they will let the scientists calculate

210  
00:13:30,710 --> 00:13:28,079  
how much of the energy i am i'm

211  
00:13:33,590 --> 00:13:30,720  
expanding and so they can they can

212  
00:13:36,710 --> 00:13:33,600  
create an equation where they have an

213  
00:13:39,110 --> 00:13:36,720

intake and an outtake of energy and thus

214

00:13:46,710 --> 00:13:39,120

come up with a very precise idea of what

215

00:13:51,110 --> 00:13:48,949

i understand also you'll be um you have

216

00:13:53,829 --> 00:13:51,120

been busy sharing your sleep pattern for

217

00:13:59,030 --> 00:13:53,839

an experiment called circadian rhythm

218

00:14:04,790 --> 00:14:01,670

yes circadian rhythm is a is a very

219

00:14:07,350 --> 00:14:04,800

interesting experiment um the idea is

220

00:14:10,389 --> 00:14:07,360

that because on the space station we

221

00:14:11,829 --> 00:14:10,399

we do not have a regular

222

00:14:12,629 --> 00:14:11,839

uh

223

00:14:14,949 --> 00:14:12,639

um

224

00:14:16,389 --> 00:14:14,959

the the alternates of night and day is

225

00:14:18,470 --> 00:14:16,399

no it's not regular it's not like on

226

00:14:20,310 --> 00:14:18,480

earth where we have uh

227

00:14:22,629 --> 00:14:20,320

basically 12 hours of daylight and 12

228

00:14:26,069 --> 00:14:22,639

hours a night uh here in the station we

229

00:14:28,150 --> 00:14:26,079

we have uh 16 cycles a day

230

00:14:32,150 --> 00:14:28,160

of night and day so obviously our sleep

231

00:14:34,790 --> 00:14:32,160

pattern is cannot be affected by those

232

00:14:37,750 --> 00:14:34,800

by those patterns and and we we go into

233

00:14:39,350 --> 00:14:37,760

a an artificial sleep pattern so

234

00:14:41,509 --> 00:14:39,360

this study

235

00:14:43,990 --> 00:14:41,519

has a sensor uh

236

00:14:46,790 --> 00:14:44,000

permanently connected to me for 36 hours

237

00:14:48,710 --> 00:14:46,800

that measures my temperature and

238

00:14:50,790 --> 00:14:48,720

the temperature is related to the

239

00:14:52,230 --> 00:14:50,800

activity of the body so

240

00:14:53,509 --> 00:14:52,240

technically when we're working we have a

241

00:14:55,910 --> 00:14:53,519

higher temperature when we sleep we have

242

00:14:58,629 --> 00:14:55,920

a lower temperature and by

243

00:15:00,870 --> 00:14:58,639

collecting this data they are able to

244

00:15:02,150 --> 00:15:00,880

determine how my sleep patterns have

245

00:15:03,670 --> 00:15:02,160

been affected

246

00:15:06,230 --> 00:15:03,680

by living in an environment that is

247

00:15:07,350 --> 00:15:06,240

completely alien to what the normal

248

00:15:10,030 --> 00:15:07,360

human

249

00:15:18,069 --> 00:15:12,870

is supposed to uh

250

00:15:21,910 --> 00:15:19,269

and what can we learn from this

251

00:15:26,069 --> 00:15:21,920

experiment why how can we use it

252

00:15:30,150 --> 00:15:28,949

well i can think of several uh several

253

00:15:32,069 --> 00:15:30,160

studies

254

00:15:33,269 --> 00:15:32,079

where the results will be will be

255

00:15:35,670 --> 00:15:33,279

applicable

256

00:15:37,829 --> 00:15:35,680

for example there are different there

257

00:15:41,509 --> 00:15:37,839

are several different kinds of areas of

258

00:15:44,550 --> 00:15:41,519

jobs that uh that have that have a very

259

00:15:46,870 --> 00:15:44,560

strong impact on how a person is

260

00:15:50,150 --> 00:15:46,880

sleep deprived or stressed

261

00:15:52,470 --> 00:15:50,160

uh for example medical doctors uh

262

00:15:54,949 --> 00:15:52,480

or people that work in the police or

263

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

pilots that have to uh deal with jet

264

00:16:00,710 --> 00:15:57,680

lags and long long stretches where they

265

00:16:03,030 --> 00:16:00,720

cannot sleep well this study will allow

266

00:16:04,710 --> 00:16:03,040

uh the creation of procedures

267

00:16:07,350 --> 00:16:04,720

and

268

00:16:09,509 --> 00:16:07,360

that protect these people from over

269

00:16:11,829 --> 00:16:09,519

fatigue and from

270

00:16:14,150 --> 00:16:11,839

from situation where a mistake can be

271

00:16:17,509 --> 00:16:14,160

made that could have fatal consequences

272

00:16:19,910 --> 00:16:17,519

so uh as you can see um the impact of

273

00:16:22,710 --> 00:16:19,920

this study uh even though it's a it's a

274

00:16:24,069 --> 00:16:22,720

very it's a it could be it could feel

275

00:16:30,069 --> 00:16:24,079

like it's a very small study but the

276

00:16:35,430 --> 00:16:32,310

my last question luca is we're seeing

277

00:16:37,430 --> 00:16:35,440

all the time kind of a ping pong ball uh

278

00:16:39,910 --> 00:16:37,440

bouncing on a screen behind you in the

279

00:16:41,910 --> 00:16:39,920

middle of the columbus laboratory can

280

00:16:46,949 --> 00:16:41,920

you tell us a bit more about what that

281

00:16:49,749 --> 00:16:48,470

okay you're gonna have to ask the

282

00:16:50,870 --> 00:16:49,759

questions again the question again

283

00:16:57,030 --> 00:16:50,880

because i i

284

00:17:00,949 --> 00:16:58,629

we're seeing some

285

00:17:04,470 --> 00:17:00,959

kind of a ping pong ball bouncing on the

286

00:17:06,309 --> 00:17:04,480

screen behind you in columbus laboratory

287

00:17:10,870 --> 00:17:06,319

just behind you can you tell us a bit

288

00:17:15,750 --> 00:17:14,150

oh of course uh you mean this screen in

289

00:17:17,029 --> 00:17:15,760

the background

290

00:17:19,110 --> 00:17:17,039

so

291

00:17:21,350 --> 00:17:19,120

that machine is a is a

292

00:17:23,510 --> 00:17:21,360

is a sound machine is a um

293

00:17:26,630 --> 00:17:23,520

ultrasound machine a very small

294

00:17:28,549 --> 00:17:26,640

ultrasound machine uh as big as a laptop

295

00:17:30,789 --> 00:17:28,559

we use it for several experiments right

296

00:17:33,190 --> 00:17:30,799

now today we set it up for

297

00:17:35,029 --> 00:17:33,200

um for an experiment called ocular

298

00:17:37,909 --> 00:17:35,039

health where we do ultrasound of the

299

00:17:38,950 --> 00:17:37,919

ocular bulb to see how the lack of

300

00:17:40,789 --> 00:17:38,960

weight

301  
00:17:41,750 --> 00:17:40,799  
affects the shape of the eye and our

302  
00:17:43,430 --> 00:17:41,760  
vision

303  
00:17:45,510 --> 00:17:43,440  
but we also use it for another

304  
00:17:48,549 --> 00:17:45,520  
experiment called spinal ultrasound

305  
00:17:50,310 --> 00:17:48,559  
where we analyze the changes that the

306  
00:17:53,430 --> 00:17:50,320  
weightlessness causes on the on the

307  
00:17:55,270 --> 00:17:53,440  
spine now this specific experiment is is

308  
00:17:57,430 --> 00:17:55,280  
is very important ramification on the

309  
00:18:00,230 --> 00:17:57,440  
ground where

310  
00:18:03,190 --> 00:18:00,240  
until now in order to to have a to

311  
00:18:06,789 --> 00:18:03,200  
diagnose a problem on the spine we need

312  
00:18:09,909 --> 00:18:06,799  
very expensive machines like mris or uh

313  
00:18:11,430 --> 00:18:09,919

or or or body scans

314

00:18:13,350 --> 00:18:11,440

well thanks to the procedure that we are

315

00:18:15,430 --> 00:18:13,360

developing today on the space station on

316

00:18:17,669 --> 00:18:15,440

the ground through remote controlling in

317

00:18:20,710 --> 00:18:17,679

the future we will be able to diagnose

318

00:18:22,870 --> 00:18:20,720

um actually more very very in the very

319

00:18:24,789 --> 00:18:22,880

near future we will be able to diagnose

320

00:18:26,549 --> 00:18:24,799

uh problems on the spine using just a

321

00:18:28,230 --> 00:18:26,559

very simple and portable ultrasound

322

00:18:30,470 --> 00:18:28,240

machine just like the one you see behind

323

00:18:33,430 --> 00:18:30,480

me and that is is going to be very

324

00:18:35,029 --> 00:18:33,440

important for remote areas and places

325

00:18:40,870 --> 00:18:35,039

where those machines are just not

326

00:18:44,390 --> 00:18:42,630

thank you very much luca that concludes

327

00:18:50,310 --> 00:18:44,400

the second portion of the event keep up

328

00:18:53,830 --> 00:18:51,590

thank you jules it was a pleasure

329

00:18:56,870 --> 00:18:53,840

talking to you as always and i'll talk

330

00:18:58,549 --> 00:18:56,880

to you next time

331

00:19:08,549 --> 00:18:58,559

station this is houston acr that

332

00:19:11,270 --> 00:19:09,750

station thank you very much for the

333

00:19:13,750 --> 00:19:11,280

support

334

00:19:15,190 --> 00:19:13,760

thank you tg1 and isa station we're now