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MSD CONF

08:23:40-



MSD

MSD



PAO

MST
Mission Management Team
Restricted Access
www.nasa.gov
Houston, TX
November 14, 2003



1
00:00:04,150 --> 00:00:02,470
hi everybody josh byerly here in mission

2
00:00:05,510 --> 00:00:04,160
control houston i'm sure most everybody

3
00:00:08,070 --> 00:00:05,520
recognizes the person that's sitting

4
00:00:10,070 --> 00:00:08,080
beside me but this is a peggy whitson

5
00:00:12,629 --> 00:00:10,080
astronaut let's see uh record holder

6
00:00:14,070 --> 00:00:12,639
former space station commander former uh

7
00:00:16,230 --> 00:00:14,080
chief of the astronaut office peggy's

8
00:00:18,310 --> 00:00:16,240
done uh quite a lot of things i've spent

9
00:00:20,150 --> 00:00:18,320
many hours on a plane to kazakhstan with

10
00:00:22,710 --> 00:00:20,160
peggy so we've known each other for a

11
00:00:24,070 --> 00:00:22,720
while but you know peggy i can't really

12
00:00:25,109 --> 00:00:24,080
think of anybody probably more

13
00:00:26,390 --> 00:00:25,119

appropriate

14

00:00:27,589 --> 00:00:26,400

to talk about women in science like

15

00:00:29,029 --> 00:00:27,599

we've been doing all this week than you

16

00:00:30,710 --> 00:00:29,039

because a lot of people don't realize

17

00:00:32,470 --> 00:00:30,720

before you ever even became an astronaut

18

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

you had a long career

19

00:00:36,310 --> 00:00:34,320

as a scientist a researcher a professor

20

00:00:37,910 --> 00:00:36,320

she's got a bachelor a bachelor's of

21

00:00:40,790 --> 00:00:37,920

science degree in biology and chemistry

22

00:00:42,150 --> 00:00:40,800

she's got a phd in biochemistry so

23

00:00:43,350 --> 00:00:42,160

talk about you know these anniversaries

24

00:00:44,790 --> 00:00:43,360

we've been mentioning with and

25

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

terrascova and tally ride and how that

26
00:00:48,229 --> 00:00:46,480
sort of led to women in science and what

27
00:00:51,029 --> 00:00:48,239
are your thoughts on that as somebody

28
00:00:53,510 --> 00:00:51,039
who you know studied a lot in that field

29
00:00:55,990 --> 00:00:53,520
well i think i i became interested in

30
00:00:57,990 --> 00:00:56,000
science just because that was my natural

31
00:01:00,549 --> 00:00:58,000
interest i was very interested in high

32
00:01:03,270 --> 00:01:00,559
school and biology

33
00:01:05,109 --> 00:01:03,280
and when i went to college i took a lot

34
00:01:08,149 --> 00:01:05,119
of classes in chemistry and ended up

35
00:01:09,270 --> 00:01:08,159
double majoring in biology and chemistry

36
00:01:11,990 --> 00:01:09,280
but i think

37
00:01:13,750 --> 00:01:12,000
the role particularly for sally ride in

38
00:01:15,429 --> 00:01:13,760

my my career

39

00:01:17,749 --> 00:01:15,439

was the fact that

40

00:01:19,590 --> 00:01:17,759

in 1978 when i graduated from high

41

00:01:21,749 --> 00:01:19,600

school that year was the year they

42

00:01:24,070 --> 00:01:21,759

picked the first female astronauts so

43

00:01:26,550 --> 00:01:24,080

there was a whole class of females

44

00:01:28,550 --> 00:01:26,560

selected that year and it was it was

45

00:01:30,870 --> 00:01:28,560

very important to me in that i had

46

00:01:33,270 --> 00:01:30,880

wanted to be an astronaut before but at

47

00:01:35,190 --> 00:01:33,280

that point it became more of a goal

48

00:01:36,950 --> 00:01:35,200

something that i thought it was

49

00:01:39,270 --> 00:01:36,960

achievable and

50

00:01:41,190 --> 00:01:39,280

from that point on that's what i wanted

51

00:01:43,590 --> 00:01:41,200

to do luckily i had no idea how

52

00:01:45,350 --> 00:01:43,600

difficult it would be

53

00:01:47,990 --> 00:01:45,360

or how much effort and time it would

54

00:01:50,469 --> 00:01:48,000

take to actually make that that goal a

55

00:01:51,670 --> 00:01:50,479

reality but i was lucky enough to be

56

00:01:52,830 --> 00:01:51,680

selected

57

00:01:54,469 --> 00:01:52,840

many years

58

00:01:56,230 --> 00:01:54,479

later

59

00:01:58,550 --> 00:01:56,240

and during the course of that time i

60

00:02:00,709 --> 00:01:58,560

think uh one thing that i always advise

61

00:02:02,230 --> 00:02:00,719

young people is you know in the pursuit

62

00:02:05,109 --> 00:02:02,240

of a goal like that you have to be

63

00:02:06,469 --> 00:02:05,119

having fun along the way yeah it's uh

64

00:02:09,510 --> 00:02:06,479

especially something like being an

65

00:02:11,350 --> 00:02:09,520

astronaut it's it's not very many people

66

00:02:12,790 --> 00:02:11,360

get lucky enough to be selected because

67

00:02:15,110 --> 00:02:12,800

we have just

68

00:02:16,229 --> 00:02:15,120

literally thousands of people to select

69

00:02:18,949 --> 00:02:16,239

from

70

00:02:21,030 --> 00:02:18,959

and uh so in order for us to be

71

00:02:22,710 --> 00:02:21,040

effective you know you just have to have

72

00:02:25,030 --> 00:02:22,720

fun along the way and doing what you're

73

00:02:27,110 --> 00:02:25,040

doing and and being a

74

00:02:28,790 --> 00:02:27,120

a great professional at whatever job it

75

00:02:30,309 --> 00:02:28,800

is you know we ask people all the time

76

00:02:31,589 --> 00:02:30,319

especially the astronauts you know did

77

00:02:33,190 --> 00:02:31,599

you start out wanting to become an

78

00:02:34,630 --> 00:02:33,200

asteroid or did you go into a field that

79

00:02:36,309 --> 00:02:34,640

you were passionate about and sort of

80

00:02:38,070 --> 00:02:36,319

led to it it sounds like you're kind of

81

00:02:40,070 --> 00:02:38,080

seeing sort of both when you kind of

82

00:02:41,430 --> 00:02:40,080

knew the end goal but you know you loved

83

00:02:43,670 --> 00:02:41,440

biology and chemistry so much that it

84

00:02:46,070 --> 00:02:43,680

sort of led to where you are absolutely

85

00:02:47,589 --> 00:02:46,080

i i do think it's important that you

86

00:02:49,990 --> 00:02:47,599

can't just become an astronaut by

87

00:02:50,949 --> 00:02:50,000

checking boxes you you've got to pursue

88

00:02:52,949 --> 00:02:50,959

something

89

00:02:54,470 --> 00:02:52,959

with a passion and that passion will

90

00:02:57,270 --> 00:02:54,480

make you stand out

91

00:02:59,910 --> 00:02:57,280

uh amongst your peers and that's a very

92

00:03:01,670 --> 00:02:59,920

important thing also you know for the

93

00:03:03,830 --> 00:03:01,680

having served on the last three

94

00:03:05,430 --> 00:03:03,840

selection boards it's really important

95

00:03:06,869 --> 00:03:05,440

to have a diversity of different

96

00:03:08,550 --> 00:03:06,879

experiences

97

00:03:10,390 --> 00:03:08,560

because when we go into space that's

98

00:03:12,790 --> 00:03:10,400

just another different experience that

99

00:03:14,550 --> 00:03:12,800

we have to be able to cope with so being

100

00:03:16,790 --> 00:03:14,560

able to work in different environments

101
00:03:18,949 --> 00:03:16,800
and being able to

102
00:03:22,309 --> 00:03:18,959
achieve things um

103
00:03:24,470 --> 00:03:22,319
in awkward situations or unusual

104
00:03:26,630 --> 00:03:24,480
not common situations is an important

105
00:03:28,229 --> 00:03:26,640
aspect in who we try and select to be an

106
00:03:29,509 --> 00:03:28,239
astronaut as well so you mentioned being

107
00:03:31,030 --> 00:03:29,519
on the last astronaut selection boards

108
00:03:32,710 --> 00:03:31,040
you know we just announced the new class

109
00:03:35,110 --> 00:03:32,720
that we're taking a look at your launch

110
00:03:36,710 --> 00:03:35,120
here on screen but the last class that

111
00:03:38,229 --> 00:03:36,720
we had you know it was notable and it

112
00:03:39,750 --> 00:03:38,239
was in the news because it was exactly

113
00:03:41,030 --> 00:03:39,760

half and half half women half men is

114

00:03:42,309 --> 00:03:41,040

that i mean what are your thoughts on

115

00:03:44,229 --> 00:03:42,319

that is that just sort of

116

00:03:45,509 --> 00:03:44,239

a normal thing now or is that still sort

117

00:03:47,589 --> 00:03:45,519

of a landmark

118

00:03:49,750 --> 00:03:47,599

event i think it was a little bit of a

119

00:03:51,350 --> 00:03:49,760

landmark event it was not

120

00:03:54,949 --> 00:03:51,360

an intention that we were going to

121

00:03:58,070 --> 00:03:54,959

select a group that was half and half

122

00:03:59,990 --> 00:03:58,080

and i think it it speaks to the caliber

123

00:04:01,830 --> 00:04:00,000

of the folks that we were interviewing

124

00:04:04,229 --> 00:04:01,840

both males and females

125

00:04:07,670 --> 00:04:04,239

but that we we ended up with half and

126
00:04:08,949 --> 00:04:07,680
half was is really actually coincidental

127
00:04:11,589 --> 00:04:08,959
you know obviously we want to have a

128
00:04:13,270 --> 00:04:11,599
diverse group of people but the exact

129
00:04:15,670 --> 00:04:13,280
number uh

130
00:04:17,030 --> 00:04:15,680
just happened to be a man and their

131
00:04:18,629 --> 00:04:17,040
backgrounds are all over the place i

132
00:04:20,390 --> 00:04:18,639
mean you know it's really you say

133
00:04:22,390 --> 00:04:20,400
diverse it really is i mean they come

134
00:04:24,710 --> 00:04:22,400
from military science all sorts of

135
00:04:26,150 --> 00:04:24,720
disciplines of science i mean it's i

136
00:04:27,749 --> 00:04:26,160
think it's cool whenever kids ask you

137
00:04:29,830 --> 00:04:27,759
know how can i become an astronaut it

138
00:04:31,350 --> 00:04:29,840

really is

139

00:04:32,790 --> 00:04:31,360

all over the place in terms of what you

140

00:04:34,950 --> 00:04:32,800

can go into and ultimately end up you

141

00:04:36,550 --> 00:04:34,960

know flying in space yes absolutely i

142

00:04:38,710 --> 00:04:36,560

think

143

00:04:40,469 --> 00:04:38,720

the important thing is any field math

144

00:04:43,270 --> 00:04:40,479

science or engineering

145

00:04:46,469 --> 00:04:43,280

is applicable to what we do in space

146

00:04:49,670 --> 00:04:46,479

and uh having that operational bent uh

147

00:04:51,909 --> 00:04:49,680

like the military folks have to offer is

148

00:04:55,030 --> 00:04:51,919

another uh category that works really

149

00:04:57,189 --> 00:04:55,040

well in in our core yeah but i think

150

00:04:59,189 --> 00:04:57,199

that being the jack of all trades being

151

00:05:01,110 --> 00:04:59,199

able to pick up all those pieces that

152

00:05:03,430 --> 00:05:01,120

you might not necessarily have had a lot

153

00:05:06,310 --> 00:05:03,440

of professional training in is important

154

00:05:07,909 --> 00:05:06,320

for the future of the astronaut once

155

00:05:09,830 --> 00:05:07,919

they are selected let's talk about your

156

00:05:12,870 --> 00:05:09,840

time aboard the station your expedition

157

00:05:14,230 --> 00:05:12,880

5 and 16 so a few years apart was it

158

00:05:15,430 --> 00:05:14,240

radically different you know the first

159

00:05:16,950 --> 00:05:15,440

time you went up there versus the second

160

00:05:18,469 --> 00:05:16,960

time or was it just you know i'm sure it

161

00:05:19,909 --> 00:05:18,479

was bigger you know the complex was

162

00:05:21,590 --> 00:05:19,919

bigger but

163

00:05:24,150 --> 00:05:21,600

what was life on board like the two

164

00:05:26,469 --> 00:05:24,160

different times actually the the complex

165

00:05:28,790 --> 00:05:26,479

hadn't changed that much uh because

166

00:05:31,590 --> 00:05:28,800

right after my expedition five we had

167

00:05:33,430 --> 00:05:31,600

the uh columbia accident and so we

168

00:05:36,230 --> 00:05:33,440

weren't doing a lot of assembly one

169

00:05:38,310 --> 00:05:36,240

building yeah so when i arrived we were

170

00:05:40,710 --> 00:05:38,320

just beginning on my second flight we

171

00:05:43,189 --> 00:05:40,720

were just beginning the expansion and so

172

00:05:44,870 --> 00:05:43,199

during that time during expedition 16 we

173

00:05:46,629 --> 00:05:44,880

increased the internal volume of the

174

00:05:47,670 --> 00:05:46,639

station about 45

175

00:05:51,350 --> 00:05:47,680

so

176

00:05:53,510 --> 00:05:51,360

external parts of the station but the

177

00:05:55,430 --> 00:05:53,520

parts where the crew lived in

178

00:05:57,510 --> 00:05:55,440

hadn't changed that much

179

00:05:59,990 --> 00:05:57,520

since i'd been there previously so it

180

00:06:02,710 --> 00:06:00,000

was a very exciting time to be involved

181

00:06:04,870 --> 00:06:02,720

in that that growth of the station one

182

00:06:06,230 --> 00:06:04,880

person that brought up a pretty sizable

183

00:06:08,070 --> 00:06:06,240

piece of the international space station

184

00:06:09,510 --> 00:06:08,080

was pam melroy during sts-120 they

185

00:06:11,029 --> 00:06:09,520

brought up harmony you were there we're

186

00:06:12,390 --> 00:06:11,039

taking a look at the uh this famous

187

00:06:13,430 --> 00:06:12,400

picture of the greeting between you two

188

00:06:15,110 --> 00:06:13,440

you know we're talking about women in

189

00:06:16,629 --> 00:06:15,120

science and women in space flight talk

190

00:06:17,990 --> 00:06:16,639

about that moment for a second that you

191

00:06:20,790 --> 00:06:18,000

have you know the two commanders sort of

192

00:06:23,350 --> 00:06:20,800

united across this hatch yeah that was

193

00:06:25,670 --> 00:06:23,360

very special for us to actually have

194

00:06:26,550 --> 00:06:25,680

that time together as a

195

00:06:29,430 --> 00:06:26,560

pam

196

00:06:30,950 --> 00:06:29,440

sts-120 was supposed to arrive about a

197

00:06:33,110 --> 00:06:30,960

month before

198

00:06:35,189 --> 00:06:33,120

my launch and so i wasn't actually

199

00:06:37,590 --> 00:06:35,199

supposed to overlap with her

200

00:06:39,990 --> 00:06:37,600

uh and her mission and so it was just

201
00:06:42,150 --> 00:06:40,000
very coincidental that you know we both

202
00:06:44,870 --> 00:06:42,160
happen to be commanders on board

203
00:06:47,110 --> 00:06:44,880
uh the station and on the shuttle at the

204
00:06:48,550 --> 00:06:47,120
same time and be on orbit as commanders

205
00:06:50,710 --> 00:06:48,560
at the same time it's very special for

206
00:06:52,150 --> 00:06:50,720
us obviously so space station and

207
00:06:53,670 --> 00:06:52,160
science you know talk about the

208
00:06:56,230 --> 00:06:53,680
importance of it and what it sort of

209
00:06:57,749 --> 00:06:56,240
offers from a from a big picture

210
00:06:59,990 --> 00:06:57,759
you know why do we do this well the

211
00:07:02,710 --> 00:07:00,000
international space station is a

212
00:07:05,110 --> 00:07:02,720
a unique and it and it is that it's a

213
00:07:07,270 --> 00:07:05,120

unique laboratory in space

214

00:07:09,670 --> 00:07:07,280

and it offers an environment that

215

00:07:11,830 --> 00:07:09,680

doesn't have gravity and that is the

216

00:07:13,990 --> 00:07:11,840

variable of most of the experiments that

217

00:07:15,589 --> 00:07:14,000

occur on board the international space

218

00:07:16,870 --> 00:07:15,599

station because we could do all these

219

00:07:19,189 --> 00:07:16,880

experiments on the ground but the

220

00:07:20,870 --> 00:07:19,199

variable the unique thing about the

221

00:07:23,430 --> 00:07:20,880

experiments that we do up there is there

222

00:07:25,909 --> 00:07:23,440

is no gravity and that changes some of

223

00:07:28,629 --> 00:07:25,919

the physical properties of different

224

00:07:30,629 --> 00:07:28,639

reactions or interactions like for

225

00:07:32,790 --> 00:07:30,639

crystallization you don't have those

226

00:07:33,909 --> 00:07:32,800

effects of gravity pulling and changing

227

00:07:36,390 --> 00:07:33,919

the the

228

00:07:38,390 --> 00:07:36,400

the way things actually go together and

229

00:07:40,390 --> 00:07:38,400

those crystals might be

230

00:07:43,110 --> 00:07:40,400

biological crystals or they could be

231

00:07:45,110 --> 00:07:43,120

superconductor crystals or zeolite

232

00:07:48,150 --> 00:07:45,120

crystals they could be anything

233

00:07:51,350 --> 00:07:48,160

uh and and those physical parameters the

234

00:07:53,909 --> 00:07:51,360

lack of gravity uh offers us a unique

235

00:07:55,830 --> 00:07:53,919

look at some of those uh

236

00:07:57,589 --> 00:07:55,840

characteristics of

237

00:07:59,430 --> 00:07:57,599

something that we understand pretty well

238

00:08:01,670 --> 00:07:59,440

on earth but when once we put it in

239

00:08:03,270 --> 00:08:01,680

space it's it's altered because of that

240

00:08:05,110 --> 00:08:03,280

lack of gravity

241

00:08:06,710 --> 00:08:05,120

one of the more exciting experiments

242

00:08:08,629 --> 00:08:06,720

that i did

243

00:08:10,230 --> 00:08:08,639

was looking at

244

00:08:12,390 --> 00:08:10,240

and i like all the experiments but i

245

00:08:15,270 --> 00:08:12,400

like the experiments that inco that

246

00:08:16,869 --> 00:08:15,280

involve a little more hands-on activity

247

00:08:18,309 --> 00:08:16,879

just because it gets me a little more

248

00:08:21,830 --> 00:08:18,319

involved makes me feel a little more

249

00:08:24,390 --> 00:08:21,840

like the scientist and the scientist

250

00:08:27,189 --> 00:08:24,400

but uh was looking at a colloid a

251
00:08:29,430 --> 00:08:27,199
colloidal suspension of iron that we had

252
00:08:31,670 --> 00:08:29,440
an electromagnetic field around

253
00:08:34,709 --> 00:08:31,680
and that colloidal suspension

254
00:08:36,870 --> 00:08:34,719
uh when you put it in electro so it's

255
00:08:39,029 --> 00:08:36,880
kind of like a super thick liquid and

256
00:08:40,550 --> 00:08:39,039
then you put it in the electromagnetic

257
00:08:42,550 --> 00:08:40,560
field and it would form a solid

258
00:08:44,070 --> 00:08:42,560
structure and the the thought is that

259
00:08:46,310 --> 00:08:44,080
you could potentially use this in

260
00:08:48,470 --> 00:08:46,320
suspension bridges or shock absorbers or

261
00:08:51,110 --> 00:08:48,480
something like earthquakes yes exactly

262
00:08:53,030 --> 00:08:51,120
so it has some potential benefits there

263
00:08:54,790 --> 00:08:53,040

and they're just trying to understand

264

00:08:56,070 --> 00:08:54,800

the physics of how you form these

265

00:08:57,350 --> 00:08:56,080

structures

266

00:08:58,710 --> 00:08:57,360

well one day

267

00:09:01,110 --> 00:08:58,720

because my eyes were getting a little

268

00:09:03,430 --> 00:09:01,120

old instead of putting in the 20 hertz

269

00:09:06,829 --> 00:09:03,440

required on the electromagnetic field i

270

00:09:11,030 --> 00:09:06,839

didn't see the decimal place so i put in

271

00:09:13,670 --> 00:09:11,040

2.0 and uh they saw uh this structure

272

00:09:15,829 --> 00:09:13,680

instead of forming a solid structure

273

00:09:18,550 --> 00:09:15,839

form this waveform structure that was

274

00:09:19,990 --> 00:09:18,560

moving and so and they hadn't seen that

275

00:09:22,310 --> 00:09:20,000

on earth and so

276

00:09:24,949 --> 00:09:22,320

interestingly a lot of the research that

277

00:09:26,790 --> 00:09:24,959

we do onboard station the benefits of it

278

00:09:29,030 --> 00:09:26,800

have to do with that time of being on

279

00:09:30,949 --> 00:09:29,040

board because once we saw that it did

280

00:09:33,269 --> 00:09:30,959

something different than it did on earth

281

00:09:35,509 --> 00:09:33,279

then the investigators went back and

282

00:09:37,750 --> 00:09:35,519

looked at it at a different frequency as

283

00:09:40,230 --> 00:09:37,760

well and that's going to be the benefits

284

00:09:41,670 --> 00:09:40,240

of having that long duration capability

285

00:09:43,269 --> 00:09:41,680

on board

286

00:09:45,509 --> 00:09:43,279

and we're going to be asking i wonder

287

00:09:48,150 --> 00:09:45,519

why i did that that is when you actually

288

00:09:50,230 --> 00:09:48,160

have the biggest discoveries are when we

289

00:09:51,829 --> 00:09:50,240

see that difference and that's just like

290

00:09:53,590 --> 00:09:51,839

in the laboratories here on earth i

291

00:09:55,590 --> 00:09:53,600

wonder why i did that that's when you

292

00:09:57,670 --> 00:09:55,600

find the discoveries sometimes by happy

293

00:10:00,310 --> 00:09:57,680

accident right exactly and having the

294

00:10:02,870 --> 00:10:00,320

time to actually go and examine that on

295

00:10:04,710 --> 00:10:02,880

many of our previous missions on shuttle

296

00:10:06,870 --> 00:10:04,720

and then even some sounding rocket

297

00:10:09,110 --> 00:10:06,880

things they're all very quick and you

298

00:10:11,509 --> 00:10:09,120

don't have that time to really explore

299

00:10:12,949 --> 00:10:11,519

what that lack of gravity is doing

300

00:10:15,269 --> 00:10:12,959

in your experiment and so our

301
00:10:17,190 --> 00:10:15,279
investigators are focusing on that

302
00:10:20,069 --> 00:10:17,200
and of course being a biochemist i also

303
00:10:21,829 --> 00:10:20,079
like like all the uh physiological

304
00:10:24,630 --> 00:10:21,839
studies because

305
00:10:26,310 --> 00:10:24,640
for me that is our primary focus of

306
00:10:28,790 --> 00:10:26,320
understanding how we're going to get

307
00:10:31,670 --> 00:10:28,800
further get to the next step go on to

308
00:10:33,990 --> 00:10:31,680
live on the moon or go on to mars go to

309
00:10:36,310 --> 00:10:34,000
these different places we need to

310
00:10:38,310 --> 00:10:36,320
understand that physiology completely

311
00:10:39,670 --> 00:10:38,320
and you know the eye the ocular

312
00:10:42,470 --> 00:10:39,680
experiment that we're doing now is a

313
00:10:44,310 --> 00:10:42,480

really good example of us having blown

314

00:10:46,870 --> 00:10:44,320

in space for a long time and then only

315

00:10:47,990 --> 00:10:46,880

recently discovered that hey there is

316

00:10:49,590 --> 00:10:48,000

another

317

00:10:51,670 --> 00:10:49,600

factor that's going on here that we need

318

00:10:53,190 --> 00:10:51,680

to better understand in order to make

319

00:10:56,069 --> 00:10:53,200

sure that you know people are not going

320

00:10:58,829 --> 00:10:56,079

to have permanent vision damage

321

00:11:02,069 --> 00:10:58,839

and and see if we can understand why it

322

00:11:03,990 --> 00:11:02,079

happens and prevent it obviously so

323

00:11:05,190 --> 00:11:04,000

you're ready to go back absolutely and

324

00:11:06,069 --> 00:11:05,200

heartbeat i knew that was gonna be the

325

00:11:07,430 --> 00:11:06,079

answer

326

00:11:09,110 --> 00:11:07,440

peggy thank you so much it's always good

327

00:11:11,190 --> 00:11:09,120

to talk to you no problem it was a lot

328

00:11:13,030 --> 00:11:11,200

of fun if you'd like to learn more about

329

00:11:14,710 --> 00:11:13,040

peggy's past flights expedition 5

330

00:11:16,790 --> 00:11:14,720

expedition 16 or what the crew is doing

331

00:11:19,110 --> 00:11:16,800

currently on expedition 36 it's hard to

332

00:11:20,550 --> 00:11:19,120

say that number is just go by so fast

333

00:11:22,949 --> 00:11:20,560

just log on to the nasa website at

334

00:11:24,710 --> 00:11:22,959

www.nasa.gov

335

00:11:26,310 --> 00:11:24,720

station take a look at what the crew is

336

00:11:27,670 --> 00:11:26,320

up to and all the different research and