



1
00:00:04,870 --> 00:00:02,550
joining us now live here on space

2
00:00:07,190 --> 00:00:04,880
station live is an old friend of ours

3
00:00:09,509 --> 00:00:07,200
here is pam melroy who is a former

4
00:00:11,110 --> 00:00:09,519
astronaut she now has moved on to uh

5
00:00:12,950 --> 00:00:11,120
possibly bigger and better things we'll

6
00:00:14,709 --> 00:00:12,960
talk to her about that but pam how have

7
00:00:16,550 --> 00:00:14,719
you been

8
00:00:18,470 --> 00:00:16,560
uh hey josh it's great to hear your

9
00:00:19,750 --> 00:00:18,480
voice and be talking to my friends at

10
00:00:21,349 --> 00:00:19,760
nasa

11
00:00:23,029 --> 00:00:21,359
so first of all let's update people on

12
00:00:24,390 --> 00:00:23,039
what you've been up to since you left

13
00:00:30,070 --> 00:00:24,400

nasa

14

00:00:31,109 --> 00:00:30,080

couple years in industry at lockheed

15

00:00:32,229 --> 00:00:31,119

martin

16

00:00:35,030 --> 00:00:32,239

and

17

00:00:36,790 --> 00:00:35,040

moved up to the washington dc area

18

00:00:39,590 --> 00:00:36,800

and got some experience with the

19

00:00:41,590 --> 00:00:39,600

commercial space side at the faa

20

00:00:44,869 --> 00:00:41,600

and now i'm overseeing research and

21

00:00:46,790 --> 00:00:44,879

development in space and aviation at

22

00:00:48,709 --> 00:00:46,800

darpa the defense advanced research

23

00:00:50,549 --> 00:00:48,719

projects agency

24

00:00:52,389 --> 00:00:50,559

so do you do you miss being here in

25

00:00:53,990 --> 00:00:52,399

houston and hanging around the the

26

00:00:57,590 --> 00:00:54,000

johnson space center

27

00:00:59,510 --> 00:00:57,600

i sure do i miss jsc i miss houston and

28

00:01:01,349 --> 00:00:59,520

most of all i miss the people that i

29

00:01:02,950 --> 00:01:01,359

used to work with every day

30

00:01:04,469 --> 00:01:02,960

well it's it's good to hear from you

31

00:01:06,469 --> 00:01:04,479

we've been talking about the

32

00:01:08,310 --> 00:01:06,479

anniversaries of valentina taraskova and

33

00:01:09,429 --> 00:01:08,320

sally ride all this week on space

34

00:01:11,030 --> 00:01:09,439

station live we've had quite a bit of

35

00:01:12,870 --> 00:01:11,040

interviews we just talked to

36

00:01:14,390 --> 00:01:12,880

your former colleague peggy whitson just

37

00:01:15,749 --> 00:01:14,400

a few minutes ago but you know talk

38

00:01:17,830 --> 00:01:15,759

about what

39

00:01:19,109 --> 00:01:17,840

those two flights in particular and even

40

00:01:20,230 --> 00:01:19,119

the one that you flew with peggy we're

41

00:01:21,429 --> 00:01:20,240

looking at the picture right now on

42

00:01:23,190 --> 00:01:21,439

screen of

43

00:01:25,429 --> 00:01:23,200

the the hatchway handshake that you guys

44

00:01:27,350 --> 00:01:25,439

did back on sts-120 but talk about what

45

00:01:29,270 --> 00:01:27,360

those anniversaries mean and to you

46

00:01:31,590 --> 00:01:29,280

personally and just to human space

47

00:01:33,270 --> 00:01:31,600

flight in general

48

00:01:35,270 --> 00:01:33,280

well i think the

49

00:01:37,030 --> 00:01:35,280

the first feeling i have is how

50

00:01:39,670 --> 00:01:37,040

important it is to

51
00:01:41,990 --> 00:01:39,680
honor and recognize trailblazers and

52
00:01:43,429 --> 00:01:42,000
acknowledge the fact that

53
00:01:46,069 --> 00:01:43,439
they had

54
00:01:48,469 --> 00:01:46,079
difficulties and resistance

55
00:01:50,710 --> 00:01:48,479
that's really hard to imagine

56
00:01:52,870 --> 00:01:50,720
for someone in my case who came

57
00:01:55,429 --> 00:01:52,880
so many years after both

58
00:01:58,310 --> 00:01:55,439
tereshkova and and sally ride

59
00:02:00,630 --> 00:01:58,320
and and so to to take a moment to honor

60
00:02:03,590 --> 00:02:00,640
them and remember that you know what

61
00:02:05,510 --> 00:02:03,600
they did was incredibly hard uh

62
00:02:07,190 --> 00:02:05,520
especially at the time that they did it

63
00:02:09,990 --> 00:02:07,200

it's also an opportunity to sort of

64

00:02:11,270 --> 00:02:10,000

reflect on the change in times and

65

00:02:13,990 --> 00:02:11,280

peggy's

66

00:02:15,830 --> 00:02:14,000

and my flight together two women

67

00:02:17,430 --> 00:02:15,840

uh commanders flying in space at the

68

00:02:19,110 --> 00:02:17,440

same time

69

00:02:21,750 --> 00:02:19,120

was really a reflection of how much

70

00:02:24,550 --> 00:02:21,760

things had changed that two women could

71

00:02:26,390 --> 00:02:24,560

uh completely by coincidence be uh

72

00:02:29,030 --> 00:02:26,400

commanding at the same time and so that

73

00:02:31,270 --> 00:02:29,040

it's a great reflection on on how far

74

00:02:33,110 --> 00:02:31,280

we've come and how many women have have

75

00:02:35,270 --> 00:02:33,120

flown in space and and it's also an

76

00:02:37,030 --> 00:02:35,280

opportunity to be excited and think

77

00:02:39,509 --> 00:02:37,040

about the future and men and women going

78

00:02:41,350 --> 00:02:39,519

to mars together booster ignition and

79

00:02:44,229 --> 00:02:41,360

we're taking a look at uh your flight on

80

00:02:45,589 --> 00:02:44,239

sts-120 your background is in science

81

00:02:47,190 --> 00:02:45,599

just like peggy's you've got a bachelor

82

00:02:48,470 --> 00:02:47,200

of arts degree in physics and astronomy

83

00:02:50,790 --> 00:02:48,480

and you've got a master science degree

84

00:02:52,229 --> 00:02:50,800

in earth and planetary sciences

85

00:02:54,790 --> 00:02:52,239

you've also got the military background

86

00:02:57,350 --> 00:02:54,800

but but talk about women in science and

87

00:02:59,750 --> 00:02:57,360

what got you interested in in the areas

88

00:03:02,710 --> 00:02:59,760

that you wanted to focus on

89

00:03:05,750 --> 00:03:02,720

well to be honest it was nasa

90

00:03:08,149 --> 00:03:05,760

watching uh the apollo program

91

00:03:09,830 --> 00:03:08,159

and watching uh people step out on the

92

00:03:13,910 --> 00:03:09,840

surface of the moon

93

00:03:17,350 --> 00:03:13,920

was very pivotal for me at a key age

94

00:03:19,670 --> 00:03:17,360

uh to to see that and to say i want to

95

00:03:22,149 --> 00:03:19,680

explore the universe i already had a

96

00:03:24,789 --> 00:03:22,159

fascination with astronomy

97

00:03:27,430 --> 00:03:24,799

but the idea of actually visiting

98

00:03:29,910 --> 00:03:27,440

space and going potentially out to

99

00:03:31,190 --> 00:03:29,920

another planet was so thrilling to me

100

00:03:32,390 --> 00:03:31,200

that it just

101
00:03:34,229 --> 00:03:32,400
locked me

102
00:03:36,390 --> 00:03:34,239
into the goal of studying physics and

103
00:03:38,869 --> 00:03:36,400
astronomy and earth science and

104
00:03:41,589 --> 00:03:38,879
planetary science so there's no question

105
00:03:43,030 --> 00:03:41,599
that was uh that was my inspiration

106
00:03:45,509 --> 00:03:43,040
so this is probably an obvious question

107
00:03:47,190 --> 00:03:45,519
but whenever you flew your first flight

108
00:03:49,030 --> 00:03:47,200
uh you've done all this studying in

109
00:03:50,550 --> 00:03:49,040
earth and planetary sciences but did it

110
00:03:51,830 --> 00:03:50,560
really sort of change your view on that

111
00:03:54,229 --> 00:03:51,840
once you finally got up into space and

112
00:03:56,550 --> 00:03:54,239
could look down at the planet below

113
00:04:00,070 --> 00:03:56,560

well it's funny one of the things

114

00:04:02,550 --> 00:04:00,080

before i flew in space uh you know

115

00:04:04,070 --> 00:04:02,560

when you're a new astronaut and waiting

116

00:04:05,750 --> 00:04:04,080

for your flight assignment you still go

117

00:04:07,429 --> 00:04:05,760

out and you talk about the space program

118

00:04:09,190 --> 00:04:07,439

and you do prs and

119

00:04:10,869 --> 00:04:09,200

and so forth and people used to ask me

120

00:04:14,869 --> 00:04:10,879

what my favorite planet was and i would

121

00:04:19,349 --> 00:04:14,879

talk about neptune because my master's

122

00:04:22,150 --> 00:04:19,359

thesis was on the atmosphere of neptune

123

00:04:24,070 --> 00:04:22,160

and whether it was turbulent or layered

124

00:04:26,150 --> 00:04:24,080

and and so forth and so

125

00:04:28,310 --> 00:04:26,160

um being knowledgeable about it and

126

00:04:30,230 --> 00:04:28,320

interested in it i always used to say my

127

00:04:31,110 --> 00:04:30,240

favorite planet is neptune

128

00:04:33,430 --> 00:04:31,120

and

129

00:04:36,070 --> 00:04:33,440

uh of course when i went into space the

130

00:04:37,670 --> 00:04:36,080

first time and looked down at earth

131

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

it was sort of one of those forehead

132

00:04:42,710 --> 00:04:39,759

slap moments where you're like

133

00:04:44,629 --> 00:04:42,720

you idiot your favorite planet is earth

134

00:04:46,150 --> 00:04:44,639

um i just had never put it into that

135

00:04:48,230 --> 00:04:46,160

context before

136

00:04:50,070 --> 00:04:48,240

and i realized earth is my favorite

137

00:04:51,350 --> 00:04:50,080

planet i don't want to live anywhere

138

00:04:53,350 --> 00:04:51,360

else

139

00:04:54,950 --> 00:04:53,360

yeah it's it's always good to hear the

140

00:04:56,150 --> 00:04:54,960

astronauts talk about you know how their

141

00:04:57,270 --> 00:04:56,160

views have changed once they get up

142

00:04:59,270 --> 00:04:57,280

there it's interesting sometimes you got

143

00:05:00,390 --> 00:04:59,280

to leave the planet to really

144

00:05:02,070 --> 00:05:00,400

you know appreciate it in a different

145

00:05:04,230 --> 00:05:02,080

light once you get out there

146

00:05:05,510 --> 00:05:04,240

absolutely so whenever you talk to you

147

00:05:07,430 --> 00:05:05,520

talked about how you used to go give

148

00:05:08,790 --> 00:05:07,440

speeches to students and kids and things

149

00:05:10,870 --> 00:05:08,800

like that i'm sure you still do some of

150

00:05:12,150 --> 00:05:10,880

that what do you tell them in terms of

151
00:05:13,110 --> 00:05:12,160
the ones that are interested in science

152
00:05:15,189 --> 00:05:13,120
like how do they figure out what they

153
00:05:16,310 --> 00:05:15,199
want to go do

154
00:05:18,070 --> 00:05:16,320
well

155
00:05:20,550 --> 00:05:18,080
i think there's a lot of evidence to

156
00:05:22,150 --> 00:05:20,560
show that boys and girls are interested

157
00:05:24,390 --> 00:05:22,160
in different aspects

158
00:05:26,230 --> 00:05:24,400
of things and so i i try to bring all

159
00:05:29,590 --> 00:05:26,240
those things together

160
00:05:32,950 --> 00:05:29,600
uh you know boys i think uh get really

161
00:05:35,350 --> 00:05:32,960
motivated and excited about um

162
00:05:37,990 --> 00:05:35,360
you know cool technology for its own

163
00:05:40,950 --> 00:05:38,000

sake they love rocket engines and

164

00:05:43,510 --> 00:05:40,960

aircraft and and so forth girls tend to

165

00:05:46,550 --> 00:05:43,520

be more focused on they get engaged and

166

00:05:49,029 --> 00:05:46,560

hooked when they think about

167

00:05:51,670 --> 00:05:49,039

science and solving problems and

168

00:05:53,830 --> 00:05:51,680

engineering that solves world problems

169

00:05:56,070 --> 00:05:53,840

and so uh the great thing about space is

170

00:05:58,309 --> 00:05:56,080

that it has everything it's uh you know

171

00:05:59,909 --> 00:05:58,319

you're gonna fire off a giant rocket and

172

00:06:02,230 --> 00:05:59,919

you're gonna go explore space and

173

00:06:04,230 --> 00:06:02,240

understand uh the nature of the universe

174

00:06:06,390 --> 00:06:04,240

and the human body and our own planet

175

00:06:07,430 --> 00:06:06,400

and those are very real and engaging

176

00:06:09,189 --> 00:06:07,440

problems

177

00:06:10,629 --> 00:06:09,199

so i i think

178

00:06:12,790 --> 00:06:10,639

it's you know space is just sort of

179

00:06:16,390 --> 00:06:12,800

uniquely positioned to inspire both boys

180

00:06:18,150 --> 00:06:16,400

and girls but i i basically tell them uh

181

00:06:20,550 --> 00:06:18,160

because i do meet a lot of kids who are

182

00:06:22,070 --> 00:06:20,560

interested in science and and i often

183

00:06:23,590 --> 00:06:22,080

ask them do you know is there something

184

00:06:25,350 --> 00:06:23,600

you like in particular do you want to be

185

00:06:27,909 --> 00:06:25,360

an engineer do you like

186

00:06:30,950 --> 00:06:27,919

space do you want um

187

00:06:32,629 --> 00:06:30,960

do you like biology or chemistry and

188

00:06:33,590 --> 00:06:32,639

what i've found is

189

00:06:36,070 --> 00:06:33,600

the

190

00:06:38,070 --> 00:06:36,080

best way for kids to think about that is

191

00:06:40,309 --> 00:06:38,080

actually get exposed to real life

192

00:06:41,749 --> 00:06:40,319

situations like you right there in

193

00:06:44,870 --> 00:06:41,759

mission control

194

00:06:47,189 --> 00:06:44,880

and the opportunity to to kind of seek

195

00:06:48,950 --> 00:06:47,199

out those real life situations and find

196

00:06:51,830 --> 00:06:48,960

out which one really resonates and

197

00:06:53,909 --> 00:06:51,840

catches you and and so that's i think

198

00:06:55,830 --> 00:06:53,919

the best way to figure out what kind of

199

00:06:57,510 --> 00:06:55,840

science you actually want to do in the

200

00:06:58,710 --> 00:06:57,520

future is to go out and talk to real

201
00:07:00,629 --> 00:06:58,720
scientists

202
00:07:02,390 --> 00:07:00,639
well last question for you pam you took

203
00:07:03,430 --> 00:07:02,400
up a

204
00:07:04,790 --> 00:07:03,440
really important part of the

205
00:07:07,350 --> 00:07:04,800
international space station that was the

206
00:07:09,110 --> 00:07:07,360
uh harmony uh node which sort of started

207
00:07:11,270 --> 00:07:09,120
this huge expansion of the space station

208
00:07:12,230 --> 00:07:11,280
back on sts-120 because kibo came after

209
00:07:14,150 --> 00:07:12,240
that and

210
00:07:15,990 --> 00:07:14,160
uh the columbus laboratory and a lot of

211
00:07:17,270 --> 00:07:16,000
other pieces but you were on board for

212
00:07:18,309 --> 00:07:17,280
quite some time

213
00:07:19,749 --> 00:07:18,319

you probably saw some of the science

214

00:07:21,510 --> 00:07:19,759

that the crew was doing up there talk

215

00:07:22,790 --> 00:07:21,520

about uh you know what was your sort of

216

00:07:24,469 --> 00:07:22,800

your favorite experiment or what does

217

00:07:25,749 --> 00:07:24,479

the space station mean overall in terms

218

00:07:27,510 --> 00:07:25,759

of science and research and why is it

219

00:07:29,110 --> 00:07:27,520

important

220

00:07:31,749 --> 00:07:29,120

well i think the

221

00:07:33,270 --> 00:07:31,759

the most

222

00:07:34,950 --> 00:07:33,280

enduring

223

00:07:37,589 --> 00:07:34,960

science that's been done from the very

224

00:07:39,990 --> 00:07:37,599

first day in which i participated in is

225

00:07:40,710 --> 00:07:40,000

the science on the human body and i

226
00:07:43,670 --> 00:07:40,720
think

227
00:07:46,150 --> 00:07:43,680
studying how the human body reacts in a

228
00:07:48,230 --> 00:07:46,160
microgravity environment gives us key

229
00:07:50,550 --> 00:07:48,240
insights to

230
00:07:52,390 --> 00:07:50,560
aspects of living here on earth and one

231
00:07:53,430 --> 00:07:52,400
of my favorite medical experiments is

232
00:08:01,589 --> 00:07:53,440
the

233
00:08:03,830 --> 00:08:01,599
functionally dehydrated in space and you

234
00:08:06,070 --> 00:08:03,840
would think that people would have all

235
00:08:07,749 --> 00:08:06,080
kinds of problems with kidney stones and

236
00:08:09,589 --> 00:08:07,759
gall stones and things like that but

237
00:08:11,430 --> 00:08:09,599
statistically it's much less than you

238
00:08:13,909 --> 00:08:11,440

have here on earth

239

00:08:15,990 --> 00:08:13,919

and that is such a serious problem i

240

00:08:16,869 --> 00:08:16,000

mean it puts so many people in so much

241

00:08:17,589 --> 00:08:16,879

pain

242

00:08:29,110 --> 00:08:17,599

and

243

00:08:31,749 --> 00:08:29,120

such a central piece of of what is done

244

00:08:34,149 --> 00:08:31,759

on the space station but i think the

245

00:08:36,149 --> 00:08:34,159

other exciting piece about it is

246

00:08:38,149 --> 00:08:36,159

studying the earth from space and

247

00:08:40,469 --> 00:08:38,159

understanding our planet better

248

00:08:42,550 --> 00:08:40,479

and the final piece of that is testing

249

00:08:45,829 --> 00:08:42,560

technologies that will allow us to go

250

00:08:48,710 --> 00:08:45,839

outside low earth orbit and visit other

251

00:08:50,470 --> 00:08:48,720

planets and help us understand our earth

252

00:08:53,350 --> 00:08:50,480

even better so it's sort of a pretty

253

00:08:55,990 --> 00:08:53,360

broad portfolio from very immediate

254

00:08:57,990 --> 00:08:56,000

human to uh our understanding of the

255

00:08:59,670 --> 00:08:58,000

universe well pam we thank you for your

256

00:09:01,430 --> 00:08:59,680

time it's uh it's always good to hear

257

00:09:02,949 --> 00:09:01,440

from you we we miss you around here we

258

00:09:05,350 --> 00:09:02,959

hope that uh someday you'll come back

259

00:09:07,509 --> 00:09:05,360

and and say hi and come visit us