



1
00:00:33,170 --> 00:00:30,830
hello everyone this is our post landing

2
00:00:36,430 --> 00:00:33,180
news conference for space shuttle

3
00:00:39,979 --> 00:00:36,440
discovery and we have with us our entire

4
00:00:42,170 --> 00:00:39,989
sts-133 flight crew and we'll turn it

5
00:00:44,540 --> 00:00:42,180
over now to Steve Lindsey our mission

6
00:00:46,940 --> 00:00:44,550
commander Steve hi well thanks for

7
00:00:48,709 --> 00:00:46,950
coming today it was a great day to come

8
00:00:52,279 --> 00:00:48,719
back and land in Florida we're happy to

9
00:00:54,950 --> 00:00:52,289
bring discovery home after 365 days on

10
00:00:56,750 --> 00:00:54,960
orbit and so you probably want to hear a

11
00:01:00,110 --> 00:00:56,760
big long speech for me so I think I'll

12
00:01:01,639 --> 00:01:00,120
just turn it over to questions please

13
00:01:03,380 --> 00:01:01,649

give your name and affiliation when the

14

00:01:04,910 --> 00:01:03,390

microphone comes to you we just have a

15

00:01:06,830 --> 00:01:04,920

brief time with the crew so if you'll

16

00:01:08,630 --> 00:01:06,840

just ask one question and if we do have

17

00:01:11,000 --> 00:01:08,640

time will come back around but just just

18

00:01:13,280 --> 00:01:11,010

a single question and we'll start here

19

00:01:15,590 --> 00:01:13,290

on the front with Marcia Marcia Dunn

20

00:01:16,910 --> 00:01:15,600

Associated Press Mike line bak told us

21

00:01:18,590 --> 00:01:16,920

just a little while ago that he didn't

22

00:01:21,260 --> 00:01:18,600

notice any big emotional outbursts or

23

00:01:23,330 --> 00:01:21,270

tears on the runway but my question for

24

00:01:25,880 --> 00:01:23,340

you is were there any tears among you

25

00:01:27,859 --> 00:01:25,890

how how emotional was it for you to

26

00:01:32,630 --> 00:01:27,869

bring discovery home for the last time

27

00:01:34,219 --> 00:01:32,640

and walk away uh you know as hard as I

28

00:01:36,319 --> 00:01:34,229

thought it would be it was hard to leave

29

00:01:40,370 --> 00:01:36,329

the flight deck when we were all done at

30

00:01:42,560 --> 00:01:40,380

least for me it was and you know we were

31

00:01:44,510 --> 00:01:42,570

focused today on bringing it home safely

32

00:01:46,160 --> 00:01:44,520

we're really working hard working hard

33

00:01:47,330 --> 00:01:46,170

the whole mission and so we didn't

34

00:01:49,160 --> 00:01:47,340

really have a whole lot of time to

35

00:01:50,719 --> 00:01:49,170

reflect about that but I did notice when

36

00:01:52,760 --> 00:01:50,729

I was on the ramp looking around you

37

00:01:54,499 --> 00:01:52,770

know walking around afterwards that it's

38

00:01:56,719 --> 00:01:54,509

the minutes past I kind of get more and

39

00:01:59,600 --> 00:01:56,729

more sad looking at the vehicle and how

40

00:02:01,130 --> 00:01:59,610

healthy it is and how how wonderful it

41

00:02:02,539 --> 00:02:01,140

performed and not just on this flight

42

00:02:03,889 --> 00:02:02,549

better you know the other two flights

43

00:02:06,649 --> 00:02:03,899

that I flew on it as well as every other

44

00:02:08,719 --> 00:02:06,659

flight you know it kind of got shattered

45

00:02:11,530 --> 00:02:08,729

for me I think as the as the minutes

46

00:02:18,470 --> 00:02:15,170

todd todd halverson of florida today for

47

00:02:20,840 --> 00:02:18,480

Nicole you worked on discovery here at

48

00:02:22,280 --> 00:02:20,850

the Kennedy Space Center during the

49

00:02:25,160 --> 00:02:22,290

mission you thought you might get choked

50

00:02:28,760 --> 00:02:25,170

up and there might be some tears what

51
00:02:32,360 --> 00:02:28,770
are your thoughts Landing discovery here

52
00:02:34,340 --> 00:02:32,370
for it's 39 to the final play yeah i

53
00:02:38,630 --> 00:02:34,350
think you know following on with what

54
00:02:41,510 --> 00:02:38,640
Steve said for me you know i feel like i

55
00:02:44,360 --> 00:02:41,520
have an emotional tie to discovery to

56
00:02:48,260 --> 00:02:44,370
the space shuttles and to KSC especially

57
00:02:50,420 --> 00:02:48,270
and i think you know it was kind of neat

58
00:02:52,220 --> 00:02:50,430
today while we were in still in the

59
00:02:54,350 --> 00:02:52,230
spacecraft still on the flight deck I

60
00:02:56,270 --> 00:02:54,360
mean we ran through almost every step of

61
00:02:59,120 --> 00:02:56,280
closing the vehicle down before it gets

62
00:03:01,820 --> 00:02:59,130
handed over to the convoy team that you

63
00:03:03,410 --> 00:03:01,830

could and we had our astronaut support

64

00:03:04,970 --> 00:03:03,420

person up there who you know would

65

00:03:08,630 --> 00:03:04,980

normally you know get us out of there

66

00:03:11,960 --> 00:03:08,640

and and then take over that for us but I

67

00:03:14,990 --> 00:03:11,970

think it just felt kind of good to you

68

00:03:17,840 --> 00:03:15,000

know to bring it as far as we could here

69

00:03:20,270 --> 00:03:17,850

at Kennedy and walking around under the

70

00:03:22,009 --> 00:03:20,280

vehicle I saw so many familiar faces you

71

00:03:23,300 --> 00:03:22,019

know so much that you know that passion

72

00:03:25,820 --> 00:03:23,310

that we talked about that people have

73

00:03:27,830 --> 00:03:25,830

working on these vehicles that you know

74

00:03:30,949 --> 00:03:27,840

that's where it really really was

75

00:03:33,110 --> 00:03:30,959

starting to hit home for me and I think

76

00:03:36,020 --> 00:03:33,120

more the more time I have to talk to

77

00:03:39,410 --> 00:03:36,030

more of those people you know the more

78

00:03:42,680 --> 00:03:39,420

emotional or the more the more of an

79

00:03:45,770 --> 00:03:42,690

impact it's going to have and I i have

80

00:03:48,470 --> 00:03:45,780

to say again though just how just how

81

00:03:50,420 --> 00:03:48,480

great it is to see that these people

82

00:03:52,220 --> 00:03:50,430

with that passion have the pride that

83

00:03:53,630 --> 00:03:52,230

goes along with it and are happy for

84

00:04:03,230 --> 00:03:53,640

every day they've had to work here and

85

00:04:09,780 --> 00:04:05,810

hi Robert Pearlman with collectspace.com

86

00:04:11,700 --> 00:04:09,790

for steve bowen your previous crew the

87

00:04:15,210 --> 00:04:11,710

first last crew of Atlantis before

88

00:04:16,830 --> 00:04:15,220

leaving Atlantis left your decal on

89

00:04:19,830 --> 00:04:16,840

board with your signature we don't know

90

00:04:21,390 --> 00:04:19,840

where that came from I was wondering if

91

00:04:23,130 --> 00:04:21,400

you might have done the same on this

92

00:04:24,690 --> 00:04:23,140

vehicle as a crew or if you did any

93

00:04:27,090 --> 00:04:24,700

other activities that were commemorative

94

00:04:28,110 --> 00:04:27,100

of nature to to mark discovery actually

95

00:04:29,160 --> 00:04:28,120

Steve made a really good point about

96

00:04:31,560 --> 00:04:29,170

that you really want to leave the

97

00:04:33,600 --> 00:04:31,570

vehicle in the condition that it existed

98

00:04:36,300 --> 00:04:33,610

in so that people can understand and see

99

00:04:38,010 --> 00:04:36,310

it once you put it on display in the in

100

00:04:40,860 --> 00:04:38,020

the format that it was with the way we

101
00:04:42,330 --> 00:04:40,870
worked on it the way the technicians put

102
00:04:44,790 --> 00:04:42,340
it together with the engineers saw it

103
00:04:48,480 --> 00:04:44,800
and so I really didn't want to leave

104
00:04:54,300 --> 00:04:48,490
anything there to to to really more it

105
00:04:56,790 --> 00:04:54,310
anyway Jim Siegel celebration

106
00:04:59,070 --> 00:04:56,800
independent newspaper bill Gerstenmaier

107
00:05:00,660 --> 00:04:59,080
has shared with us on several occasions

108
00:05:03,360 --> 00:05:00,670
in the last few weeks that there are

109
00:05:06,030 --> 00:05:03,370
some sort of negotiations or discussions

110
00:05:08,580 --> 00:05:06,040
going on about having commercial company

111
00:05:10,290 --> 00:05:08,590
take over one or more of the shuttle

112
00:05:13,380 --> 00:05:10,300
vehicles and I wonder if you had a

113
00:05:16,940 --> 00:05:13,390

comment for us about the air worthiness

114

00:05:19,290 --> 00:05:16,950

and the the the appropriateness of

115

00:05:25,650 --> 00:05:19,300

continuing to operate the shuttle

116

00:05:29,030 --> 00:05:25,660

vehicles for the next 5-10 years let's

117

00:05:31,800 --> 00:05:29,040

see um and I know about the proposal

118

00:05:32,850 --> 00:05:31,810

that that's out there as part of you

119

00:05:34,050 --> 00:05:32,860

know there's multiple commercial

120

00:05:37,650 --> 00:05:34,060

proposals out there and that's one of

121

00:05:40,140 --> 00:05:37,660

the proposals as far as you know the

122

00:05:41,580 --> 00:05:40,150

viability of that with a in the

123

00:05:43,260 --> 00:05:41,590

competition you know that's going on

124

00:05:44,880 --> 00:05:43,270

right now we are not privy to that so I

125

00:05:46,920 --> 00:05:44,890

really can't answer that question as far

126

00:05:50,070 --> 00:05:46,930

as being able to fly the shuttles 5 10

127

00:05:52,050 --> 00:05:50,080

10 years more it's certainly it's

128

00:05:54,450 --> 00:05:52,060

certainly doable if the question is do

129

00:05:56,550 --> 00:05:54,460

we have the we have the resources to be

130

00:05:59,490 --> 00:05:56,560

able to to pay to do that in terms of

131

00:06:01,140 --> 00:05:59,500

what it can do you know I believe two

132

00:06:04,050 --> 00:06:01,150

flights a year would would keep the

133

00:06:06,780 --> 00:06:04,060

station fully supplied of mass and down

134

00:06:09,060 --> 00:06:06,790

mass so from a space station standpoint

135

00:06:12,570 --> 00:06:09,070

obviously be very advantageous to do

136

00:06:14,380 --> 00:06:12,580

that you know the agency in the nation

137

00:06:16,420 --> 00:06:14,390

is chosen to go in a little bit diff

138

00:06:18,160 --> 00:06:16,430

direction here and so so we'll have to

139

00:06:19,990 --> 00:06:18,170

see how that plays out but as far as it

140

00:06:22,480 --> 00:06:20,000

being able to fly five or ten years more

141

00:06:24,700 --> 00:06:22,490

you know I think the fact the discovery

142

00:06:27,790 --> 00:06:24,710

landed today in perfect condition tells

143

00:06:30,190 --> 00:06:27,800

you that it could enough its robust

144

00:06:31,810 --> 00:06:30,200

enough to do that I think its robust

145

00:06:33,610 --> 00:06:31,820

enough I mean you have to take really

146

00:06:35,230 --> 00:06:33,620

good care of it you really have to check

147

00:06:37,930 --> 00:06:35,240

everything you have to very much

148

00:06:39,880 --> 00:06:37,940

attention to detail and very very good

149

00:06:41,710 --> 00:06:39,890

management of everything and you really

150

00:06:43,450 --> 00:06:41,720

have to stay vigilant with any

151
00:06:45,370 --> 00:06:43,460
spacecraft and the shuttles certainly no

152
00:06:46,840 --> 00:06:45,380
exception so I think if you're very

153
00:06:49,630 --> 00:06:46,850
disciplined about how you do that like

154
00:06:51,220 --> 00:06:49,640
we are now and do our very best to do

155
00:06:54,310 --> 00:06:51,230
that yeah I think it's viable thank you

156
00:06:56,560 --> 00:06:54,320
I can't Kramer for Space Flight magazine

157
00:06:58,150 --> 00:06:56,570
this questions for anybody can you give

158
00:07:00,160 --> 00:06:58,160
us an update on when the Robonaut might

159
00:07:02,380 --> 00:07:00,170
be unpacked and also tell us about your

160
00:07:08,950 --> 00:07:02,390
experiences of seeing the space station

161
00:07:11,500 --> 00:07:08,960
with all those vehicles there as for

162
00:07:13,630 --> 00:07:11,510
Robonaut we were the delivery team for

163
00:07:15,480 --> 00:07:13,640

that as a technology demonstrator and

164

00:07:17,860 --> 00:07:15,490

will help us try to figure out what a

165

00:07:19,900 --> 00:07:17,870

anthropomorphic or a humanoid type robot

166

00:07:22,090 --> 00:07:19,910

can do for us it's a very early

167

00:07:24,220 --> 00:07:22,100

prototype but I think just by having a

168

00:07:27,130 --> 00:07:24,230

form that's more resembling of us it

169

00:07:29,140 --> 00:07:27,140

excites a little bit of imagination I

170

00:07:31,210 --> 00:07:29,150

think dr. Coleman will be unpacking

171

00:07:33,610 --> 00:07:31,220

Robonaut sometime in the next very few

172

00:07:35,050 --> 00:07:33,620

weeks hopefully we've accelerated that a

173

00:07:37,060 --> 00:07:35,060

little bit by getting them ahead on some

174

00:07:39,280 --> 00:07:37,070

of the other tasks as to seeing the

175

00:07:40,810 --> 00:07:39,290

station as you know Nicole and I

176

00:07:43,480 --> 00:07:40,820

actually lived up there long term for a

177

00:07:46,660 --> 00:07:43,490

while I spent 197 days I think up there

178

00:07:48,760 --> 00:07:46,670

in 2009 it was a magnificent stack at

179

00:07:50,650 --> 00:07:48,770

that time it was my home it was a

180

00:07:52,600 --> 00:07:50,660

laboratory it was an incredible place to

181

00:07:54,580 --> 00:07:52,610

live in to view the earth and I couldn't

182

00:07:57,490 --> 00:07:54,590

imagine it being bigger or better but it

183

00:07:59,380 --> 00:07:57,500

is it's it was a few modules bigger we

184

00:08:00,940 --> 00:07:59,390

delivered yet another module and of

185

00:08:02,830 --> 00:08:00,950

course we had the Japanese on the

186

00:08:04,720 --> 00:08:02,840

European transport vehicles there and

187

00:08:06,280 --> 00:08:04,730

with the addition of the cupola it's

188

00:08:07,630 --> 00:08:06,290

even more magnificent that I left it I

189

00:08:09,820 --> 00:08:07,640

didn't think that possible it's

190

00:08:11,350 --> 00:08:09,830

brehtaking and the view we get from

191

00:08:14,320 --> 00:08:11,360

the shuttle as opposed to what I saw

192

00:08:16,030 --> 00:08:14,330

from the Soyuz is just magnificent it's

193

00:08:18,460 --> 00:08:16,040

almost unbelievable that we put that

194

00:08:22,540 --> 00:08:18,470

much mass and that much pressurized

195

00:08:24,970 --> 00:08:22,550

volume up there i James Fink with

196

00:08:26,920 --> 00:08:24,980

plainville citizen you know I've got

197

00:08:28,810 --> 00:08:26,930

four children at home that

198

00:08:30,490 --> 00:08:28,820

uh are very excited about what you've

199

00:08:32,200 --> 00:08:30,500

been doing one of which declared that

200

00:08:35,019 --> 00:08:32,210

she's going to be an astronaut when she

201
00:08:36,279 --> 00:08:35,029
saw yer you launch the other day I was

202
00:08:37,959 --> 00:08:36,289
wondering if any of you had some words

203
00:08:39,550 --> 00:08:37,969
of encouragement for our next generation

204
00:08:43,620 --> 00:08:39,560
of astronauts that are looking forward

205
00:08:46,380 --> 00:08:43,630
to what NASA is going to bring us next

206
00:08:51,240 --> 00:08:46,390
let me start that then hand that over

207
00:08:53,860 --> 00:08:51,250
because I have five children gotcha

208
00:08:56,889 --> 00:08:53,870
that's right one what is thinking about

209
00:08:58,150 --> 00:08:56,899
it the first thing is that when you look

210
00:09:00,100 --> 00:08:58,160
at the people involved in the business

211
00:09:01,180 --> 00:09:00,110
of space right now in the u.s. we're

212
00:09:02,920 --> 00:09:01,190
doing a lot of hand-wringing and

213
00:09:06,610 --> 00:09:02,930

nail-biting about what our next step

214

00:09:08,139 --> 00:09:06,620

could be should be that will gel out I'm

215

00:09:09,820 --> 00:09:08,149

not too worried about that so the first

216

00:09:12,670 --> 00:09:09,830

news for the kids is don't get caught up

217

00:09:13,990 --> 00:09:12,680

in that look at what we have we have an

218

00:09:16,269 --> 00:09:14,000

international partner who is able to

219

00:09:18,400 --> 00:09:16,279

launch us up there and back we have

220

00:09:20,800 --> 00:09:18,410

three countries now putting men in orbit

221

00:09:22,420 --> 00:09:20,810

we have a magnificent station that's

222

00:09:24,460 --> 00:09:22,430

just really at the end of its assembly

223

00:09:26,889 --> 00:09:24,470

phase so starting is utilization phase

224

00:09:28,840 --> 00:09:26,899

we've got telescopes that are finding

225

00:09:30,670 --> 00:09:28,850

planets like crazy and other solar

226

00:09:32,680 --> 00:09:30,680

systems I don't think there's ever been

227

00:09:34,900 --> 00:09:32,690

a better time to think about being an

228

00:09:37,300 --> 00:09:34,910

astronaut as far as commercial space for

229

00:09:38,920 --> 00:09:37,310

us the more space the better and the

230

00:09:40,810 --> 00:09:38,930

world that your children grow up in is

231

00:09:42,610 --> 00:09:40,820

going to be I think much more rich in

232

00:09:44,560 --> 00:09:42,620

some ways than others we won't maybe

233

00:09:46,060 --> 00:09:44,570

have these magnificent shuttles which

234

00:09:48,730 --> 00:09:46,070

have done such a great job of building

235

00:09:50,380 --> 00:09:48,740

the station and other things but they're

236

00:09:55,210 --> 00:09:50,390

there will be space flight there will be

237

00:09:57,310 --> 00:09:55,220

a lot to do wells meals I look at it as

238

00:09:59,140 --> 00:09:57,320

this is a transition period and like all

239

00:10:01,150 --> 00:09:59,150

transition periods like an aviation

240

00:10:02,410 --> 00:10:01,160

after all one we had a we had airplanes

241

00:10:03,519 --> 00:10:02,420

but we really didn't know what to do

242

00:10:05,740 --> 00:10:03,529

with them if you ask someone back in

243

00:10:07,390 --> 00:10:05,750

that era what are we going to do with an

244

00:10:09,550 --> 00:10:07,400

airplane a lot of lot of people would

245

00:10:11,650 --> 00:10:09,560

say not much is not much to do with them

246

00:10:13,180 --> 00:10:11,660

then we had the roaring 20s and the time

247

00:10:15,010 --> 00:10:13,190

period where airplanes came along and

248

00:10:16,930 --> 00:10:15,020

kept we kept pushing the edge and

249

00:10:19,360 --> 00:10:16,940

pushing the envelope and now if I ask

250

00:10:21,880 --> 00:10:19,370

someone what's what's an airplane good

251
00:10:23,530 --> 00:10:21,890
for people could name thousands of thing

252
00:10:25,480 --> 00:10:23,540
and that's how space is going the same

253
00:10:26,620 --> 00:10:25,490
way we're kind of in this transition

254
00:10:28,180 --> 00:10:26,630
period there's always uncertainty in

255
00:10:29,620 --> 00:10:28,190
transition periods that's this the name

256
00:10:31,600 --> 00:10:29,630
of the game but I have no doubt in my

257
00:10:33,850 --> 00:10:31,610
mind that we're going to be moving on so

258
00:10:37,329 --> 00:10:33,860
Mars moon every all those places will be

259
00:10:39,100 --> 00:10:37,339
exploring the the solar system at first

260
00:10:39,369 --> 00:10:39,110
and someday we'll be exploring the the

261
00:10:41,499 --> 00:10:39,379
gal

262
00:10:43,479 --> 00:10:41,509
see so it's just a matter of time just

263
00:10:45,669 --> 00:10:43,489

win or you know when are we gonna get to

264

00:10:54,699 --> 00:10:45,679

these next steps and any transition

265

00:10:57,099 --> 00:10:54,709

period can be challenging Denise Chow at

266

00:10:59,139 --> 00:10:57,109

space com a question for alvin drew on

267

00:11:01,119 --> 00:10:59,149

your first spacewalk he became the 200

268

00:11:03,039 --> 00:11:01,129

person to work in the vacuum of space i

269

00:11:05,489 --> 00:11:03,049

just wonder if he could characterize

270

00:11:07,659 --> 00:11:05,499

what that experience was like for you

271

00:11:09,729 --> 00:11:07,669

first and foremost it was just glad to

272

00:11:11,229 --> 00:11:09,739

be part of that club with spacewalkers

273

00:11:12,489 --> 00:11:11,239

the number really wasn't that important

274

00:11:13,960 --> 00:11:12,499

to me as far as I was concerned there's

275

00:11:15,489 --> 00:11:13,970

really two big names in space walking

276

00:11:17,379 --> 00:11:15,499

into Alexa Lyon off the first person

277

00:11:19,689 --> 00:11:17,389

actually go out in space and Ed White

278

00:11:21,309 --> 00:11:19,699

obviously didn't have the benefit of Lex

279

00:11:23,109 --> 00:11:21,319

Leona's experience because the Cold War

280

00:11:24,999 --> 00:11:23,119

who became the first american to go out

281

00:11:28,139 --> 00:11:25,009

in space and the rest of us are all tied

282

00:11:30,039 --> 00:11:28,149

for third place as far as I'm concerned

283

00:11:32,519 --> 00:11:30,049

but it was a it was a wonderful

284

00:11:34,689 --> 00:11:32,529

experience to go out there for me it was

285

00:11:36,279 --> 00:11:34,699

the sense of going out there I think we

286

00:11:37,989 --> 00:11:36,289

were over the African or the Amazon

287

00:11:39,399 --> 00:11:37,999

jungle we went outside wet remember

288

00:11:42,429 --> 00:11:39,409

being struck by the sunlight the clouds

289

00:11:44,439 --> 00:11:42,439

and on these broad wide brown rivers

290

00:11:45,819 --> 00:11:44,449

down beneath and just being just taken

291

00:11:47,559 --> 00:11:45,829

aback by the whole thing reminding

292

00:11:49,689 --> 00:11:47,569

myself okay I've got six and a half

293

00:11:51,009 --> 00:11:49,699

hours worth of work to do in about seven

294

00:11:53,139 --> 00:11:51,019

a half hours worth of things to get done

295

00:11:54,879 --> 00:11:53,149

in at six a half hours so I better take

296

00:11:57,189 --> 00:11:54,889

in the view reminding myself remember

297

00:11:59,499 --> 00:11:57,199

what it was and then press on quickly

298

00:12:01,179 --> 00:11:59,509

and get to get the job done that was fun

299

00:12:03,189 --> 00:12:01,189

of course getting the jobs done after

300

00:12:18,779 --> 00:12:03,199

two spacewalks is very gratifying a very

301

00:12:24,009 --> 00:12:21,509

excuse me James Dean with Florida today

302

00:12:26,049 --> 00:12:24,019

Steve Atlantis is launching in a little

303

00:12:28,529 --> 00:12:26,059

over a month so plenty of time to jump

304

00:12:34,329 --> 00:12:28,539

into that flow if the opportunity arises

305

00:12:38,710 --> 00:12:34,339

but I wonder if any of you could talk

306

00:12:43,359 --> 00:12:38,720

about how you said that Tim was up there

307

00:12:44,710 --> 00:12:43,369

with you guys in more than spirit well I

308

00:12:46,239 --> 00:12:44,720

actually helped us through the EPA's on

309

00:12:48,249 --> 00:12:46,249

the ground which I greatly appreciated

310

00:12:52,719 --> 00:12:48,259

you're just having him in Mission

311

00:12:53,230 --> 00:12:52,729

Control just to be able to to question

312

00:12:55,240 --> 00:12:53,240

things

313

00:12:56,590 --> 00:12:55,250

and know that if I was doing something

314

00:12:57,970 --> 00:12:56,600

that wasn't quite right he was going to

315

00:13:00,160 --> 00:12:57,980

step in and help me out that was I

316

00:13:02,050 --> 00:13:00,170

greatly appreciated that and so he was

317

00:13:03,910 --> 00:13:02,060

definitely there with us outside when we

318

00:13:07,180 --> 00:13:03,920

were doing our space walks and that was

319

00:13:08,829 --> 00:13:07,190

fantastic to have him there yeah he used

320

00:13:10,420 --> 00:13:08,839

with us every day the whole time we were

321

00:13:12,820 --> 00:13:10,430

there I mean he was he was a big part of

322

00:13:14,079 --> 00:13:12,830

this mission from the very beginning you

323

00:13:15,820 --> 00:13:14,089

know as you as you go through the

324

00:13:18,670 --> 00:13:15,830

training process for a mission you

325

00:13:19,930 --> 00:13:18,680

developed this mission as a crew you're

326

00:13:23,079 --> 00:13:19,940

involved in that whole development

327

00:13:24,940 --> 00:13:23,089

process so he was involved you know

328

00:13:26,740 --> 00:13:24,950

obviously through the spacewalks because

329

00:13:28,930 --> 00:13:26,750

he'd led the development though sand at

330

00:13:31,510 --> 00:13:28,940

that actually enabled Steve to jump in

331

00:13:33,160 --> 00:13:31,520

with what a month to go and indigo train

332

00:13:37,329 --> 00:13:33,170

no spacewalks and do them successfully

333

00:13:40,540 --> 00:13:37,339

additionally he was our ms to flight

334

00:13:44,380 --> 00:13:40,550

engineer on the flight deck and trained

335

00:13:47,500 --> 00:13:44,390

alongside Alan Nicole in those positions

336

00:13:48,760 --> 00:13:47,510

for asset and entry and all of his work

337

00:13:53,320 --> 00:13:48,770

in developing the crew coordination

338

00:13:55,780 --> 00:13:53,330

allowed Alan Nicole to take his his his

339

00:13:58,240 --> 00:13:55,790

role on the flight deck as well and be

340

00:14:00,519 --> 00:13:58,250

able to do that so you know everything

341

00:14:03,069 --> 00:14:00,529

we did Tim touched and so he was with us

342

00:14:06,069 --> 00:14:03,079

all the time and you know we really wish

343

00:14:07,600 --> 00:14:06,079

he could have been there with us that's

344

00:14:09,579 --> 00:14:07,610

all the crew will have time for right

345

00:14:12,040 --> 00:14:09,589

now they're on a rather limited schedule

346

00:14:14,139 --> 00:14:12,050

this evening so that will be our final

347

00:14:16,660 --> 00:14:14,149

question and that will conclude this