



1  
00:01:06,710 --> 00:01:03,110  
okay jim do you have a short opening

2  
00:01:11,109 --> 00:01:08,390  
yes thanks for the opportunity welcome

3  
00:01:12,870 --> 00:01:11,119  
on board columbia well we're just over

4  
00:01:14,710 --> 00:01:12,880  
the middle of the atlantic ocean headed

5  
00:01:16,710 --> 00:01:14,720  
toward africa at this time

6  
00:01:18,310 --> 00:01:16,720  
and as everybody knows by now this is

7  
00:01:20,230 --> 00:01:18,320  
our next last day in space we'll be

8  
00:01:21,830 --> 00:01:20,240  
coming home early because of the fuel

9  
00:01:23,030 --> 00:01:21,840  
cell degradation

10  
00:01:25,030 --> 00:01:23,040  
but i think the message that we want to

11  
00:01:27,590 --> 00:01:25,040  
leave everybody with from here on board

12  
00:01:29,429 --> 00:01:27,600  
columbia is that uh in the short time

13  
00:01:31,350 --> 00:01:29,439

that we've been here thanks to the hard

14

00:01:33,990 --> 00:01:31,360

work of the payload people on board

15

00:01:35,350 --> 00:01:34,000

columbia plus at huntsville

16

00:01:36,710 --> 00:01:35,360

we've been able to put together a good

17

00:01:38,149 --> 00:01:36,720

science program that we're going to

18

00:01:39,910 --> 00:01:38,159

bring back some meaningful science in

19

00:01:41,910 --> 00:01:39,920

the short period that we will be we have

20

00:01:43,109 --> 00:01:41,920

been here it's true that everybody is

21

00:01:44,950 --> 00:01:43,119

disappointed that we are going to have

22

00:01:46,789 --> 00:01:44,960

to come home early not only the crew but

23

00:01:47,990 --> 00:01:46,799

the investigators and the researchers

24

00:01:49,670 --> 00:01:48,000

who science that we were up here to

25

00:01:52,149 --> 00:01:49,680

accomplish

26

00:01:54,469 --> 00:01:52,159

but still i think we packed a lot into a

27

00:01:55,910 --> 00:01:54,479

short period of time with that is our

28

00:01:58,469 --> 00:01:55,920

kind of our theme i'd like to open up

29

00:02:01,270 --> 00:01:58,479

for questions at this time

30

00:02:02,069 --> 00:02:01,280

uh did the shuttle crew have any sort of

31

00:02:34,390 --> 00:02:02,079

a

32

00:02:35,910 --> 00:02:34,400

the

33

00:02:39,750 --> 00:02:35,920

people actually built a fuel cell but

34

00:02:43,910 --> 00:02:41,910

okay and from the ground the perspective

35

00:02:46,070 --> 00:02:43,920

of course has been that this has been a

36

00:02:46,949 --> 00:02:46,080

a really a pretty orderly

37

00:02:48,949 --> 00:02:46,959

uh

38

00:02:50,869 --> 00:02:48,959

event it's unfolded with a lot of

39

00:02:52,309 --> 00:02:50,879  
deliberation

40

00:02:54,630 --> 00:02:52,319  
i just wonder though from your

41

00:02:57,110 --> 00:02:54,640  
perspective is there any sense of risk

42

00:03:01,190 --> 00:02:57,120  
or danger added because of the fuel cell

43

00:03:04,710 --> 00:03:02,630  
well certainly we understand that this

44

00:03:07,030 --> 00:03:04,720  
is one of the original electric

45

00:03:08,869 --> 00:03:07,040  
fly-by-wire airplanes that is we depend

46

00:03:11,110 --> 00:03:08,879  
upon electricity for this airplane to

47

00:03:13,670 --> 00:03:11,120  
fly therefore when you lose one-third of

48

00:03:15,990 --> 00:03:13,680  
your electrical producing capacity

49

00:03:19,190 --> 00:03:16,000  
you have to consider that

50

00:03:22,149 --> 00:03:19,200  
so as a result after we had to say fuel

51  
00:03:23,750 --> 00:03:22,159  
cell 2 we uh we had a little uh powwow

52  
00:03:25,509 --> 00:03:23,760  
here on the flight deck we made sure we

53  
00:03:27,589 --> 00:03:25,519  
understood all the emergency procedures

54  
00:03:29,509 --> 00:03:27,599  
as as modified by the fact that fuel

55  
00:03:31,509 --> 00:03:29,519  
cell 2 had been shut down so i don't

56  
00:03:32,869 --> 00:03:31,519  
want to convey the opinion that we

57  
00:03:34,869 --> 00:03:32,879  
thought we were in imminent danger

58  
00:03:36,550 --> 00:03:34,879  
certainly not we felt that the situation

59  
00:03:38,630 --> 00:03:36,560  
was well in hand but on the other hand

60  
00:03:40,309 --> 00:03:38,640  
we want to be prepared for the next

61  
00:03:41,830 --> 00:03:40,319  
possible failure we feel like that's

62  
00:03:43,589 --> 00:03:41,840  
where we're at right now

63  
00:03:45,350 --> 00:03:43,599

this is marcia dunham the associated

64

00:03:47,030 --> 00:03:45,360

press for the commander

65

00:03:48,550 --> 00:03:47,040

that same fuel had trouble during the

66

00:03:50,390 --> 00:03:48,560

countdown and the shuttle program

67

00:03:53,110 --> 00:03:50,400

manager now admits it should have been

68

00:03:54,789 --> 00:03:53,120

swapped out before flight how unsettling

69

00:03:56,229 --> 00:03:54,799

is it for you to be in this situation

70

00:03:57,750 --> 00:03:56,239

now considering you could have had a

71

00:04:02,470 --> 00:03:57,760

full flight if that fuel cell had been

72

00:04:05,910 --> 00:04:03,990

well certainly hindsight is always going

73

00:04:07,589 --> 00:04:05,920

to be 20 20.

74

00:04:09,589 --> 00:04:07,599

but this is a situation where with the

75

00:04:11,990 --> 00:04:09,599

best information that everybody had in

76  
00:04:13,350 --> 00:04:12,000  
hand at the time the decision was made i

77  
00:04:15,830 --> 00:04:13,360  
believe it was a correct one at the time

78  
00:04:18,390 --> 00:04:15,840  
to go ahead and launch

79  
00:04:20,229 --> 00:04:18,400  
after the problems developed on orbit

80  
00:04:21,830 --> 00:04:20,239  
the decision was made again i believe

81  
00:04:23,749 --> 00:04:21,840  
the correct one based on additional

82  
00:04:24,950 --> 00:04:23,759  
information and also degradation and

83  
00:04:26,629 --> 00:04:24,960  
fuel cell

84  
00:04:29,030 --> 00:04:26,639  
to take the safe path and bring us home

85  
00:04:30,550 --> 00:04:29,040  
early so i think everybody's acted in

86  
00:04:32,870 --> 00:04:30,560  
the best interest of the crew and the

87  
00:04:33,909 --> 00:04:32,880  
best interests of the program

88  
00:04:35,909 --> 00:04:33,919

and have

89

00:04:37,350 --> 00:04:35,919

tried to make the right decisions based

90

00:04:38,790 --> 00:04:37,360

on the information that you had at that

91

00:04:40,790 --> 00:04:38,800

time

92

00:04:42,310 --> 00:04:40,800

so we have no hesitation about the

93

00:04:43,830 --> 00:04:42,320

people who are helping us out on the

94

00:04:45,990 --> 00:04:43,840

ground

95

00:04:47,510 --> 00:04:46,000

we had an exciting time yesterday going

96

00:04:49,990 --> 00:04:47,520

through all the procedures

97

00:04:51,430 --> 00:04:50,000

but uh i felt we were in sync 100 with

98

00:04:53,430 --> 00:04:51,440

the ground they were helping us out

99

00:04:54,710 --> 00:04:53,440

every step of the way and we have total

100

00:04:56,469 --> 00:04:54,720

confidence in the people in mission

101  
00:04:58,790 --> 00:04:56,479  
control and in the mission management

102  
00:05:01,189 --> 00:04:58,800  
that are making these decisions

103  
00:05:03,350 --> 00:05:01,199  
to stephen young with reuters i was just

104  
00:05:05,270 --> 00:05:03,360  
wondering what kind of extraordinary

105  
00:05:07,510 --> 00:05:05,280  
measures you've been taking to try and

106  
00:05:10,550 --> 00:05:07,520  
squeeze as much power out of those last

107  
00:05:12,310 --> 00:05:10,560  
two fuel cells to use uh for the science

108  
00:05:14,150 --> 00:05:12,320  
i think i heard some references last

109  
00:05:20,150 --> 00:05:14,160  
night to people working by flashlight

110  
00:05:25,749 --> 00:05:23,430  
yes um what we did was we powered down

111  
00:05:28,070 --> 00:05:25,759  
all non-essential equipment including

112  
00:05:30,950 --> 00:05:28,080  
most of the lighting on board

113  
00:05:31,749 --> 00:05:30,960

and only turned things on as we needed

114

00:05:34,550 --> 00:05:31,759

it

115

00:05:36,629 --> 00:05:34,560

this enabled us to continue powering

116

00:05:38,390 --> 00:05:36,639

experiments in the lab

117

00:05:39,510 --> 00:05:38,400

and staying under

118

00:05:41,430 --> 00:05:39,520

the

119

00:05:43,029 --> 00:05:41,440

required amount

120

00:05:45,990 --> 00:05:43,039

of power

121

00:05:47,670 --> 00:05:46,000

running only two fuel cells

122

00:05:49,590 --> 00:05:47,680

thank you and um for whoever would like

123

00:05:51,670 --> 00:05:49,600

to take this i'm just wondering if this

124

00:06:01,350 --> 00:05:51,680

incident gives any of you a heightened

125

00:06:05,350 --> 00:06:03,990

i would say from our perspective

126

00:06:07,350 --> 00:06:05,360

we all understand from the very

127

00:06:09,029 --> 00:06:07,360

beginning how complicated a piece of

128

00:06:11,189 --> 00:06:09,039

equipment this is and how many things

129

00:06:13,270 --> 00:06:11,199

have to be working just right

130

00:06:15,749 --> 00:06:13,280

we also know simultaneously how many

131

00:06:18,230 --> 00:06:15,759

levels of redundancy and backup systems

132

00:06:19,350 --> 00:06:18,240

there are in order to keep us safe even

133

00:06:21,189 --> 00:06:19,360

though things

134

00:06:23,830 --> 00:06:21,199

go wrong and things malfunction as they

135

00:06:25,430 --> 00:06:23,840

do on earth

136

00:06:26,870 --> 00:06:25,440

this is seth bornstein from the orlando

137

00:06:28,469 --> 00:06:26,880

sentinel we heard commander haasel's

138

00:06:30,070 --> 00:06:28,479

reaction yesterday when

139

00:06:32,309 --> 00:06:30,080

you were told the news

140

00:06:33,749 --> 00:06:32,319

about the shortened mission can we can

141

00:06:35,189 --> 00:06:33,759

the other three of you tell us what went

142

00:06:36,710 --> 00:06:35,199

through your mind when that was radioed

143

00:06:38,150 --> 00:06:36,720

up and how did you tell the blue who

144

00:06:42,390 --> 00:06:38,160

told the blue shift and what was their

145

00:06:46,230 --> 00:06:44,870

yeah i was disappointed when i got word

146

00:06:47,990 --> 00:06:46,240

that the mission would be shortened

147

00:06:49,909 --> 00:06:48,000

we've been training for this mission for

148

00:06:51,909 --> 00:06:49,919

uh over a year and a half or so working

149

00:06:53,430 --> 00:06:51,919

hard on the science the people on the

150

00:06:55,110 --> 00:06:53,440

ground at the marshall space flight

151  
00:06:56,550 --> 00:06:55,120  
center and the principal investigators

152  
00:06:57,990 --> 00:06:56,560  
all across the country and around the

153  
00:06:59,990 --> 00:06:58,000  
world they've been working on this

154  
00:07:02,710 --> 00:07:00,000  
mission even longer so it was a big

155  
00:07:04,870 --> 00:07:02,720  
disappointment to to end the mission uh

156  
00:07:06,870 --> 00:07:04,880  
but we've been working uh as hard as we

157  
00:07:09,350 --> 00:07:06,880  
can working double time up here trying

158  
00:07:11,189 --> 00:07:09,360  
to to make up for what we're losing by

159  
00:07:13,670 --> 00:07:11,199  
shortening the mission and

160  
00:07:15,589 --> 00:07:13,680  
uh two of the crew members i told on the

161  
00:07:17,830 --> 00:07:15,599  
blue shift when they woke up

162  
00:07:20,390 --> 00:07:17,840  
and uh they were it was a shock and

163  
00:07:21,990 --> 00:07:20,400

disbelief at first because

164

00:07:23,510 --> 00:07:22,000

nobody anticipated that we'd be coming

165

00:07:28,629 --> 00:07:23,520

home so soon we thought we were going to

166

00:07:32,950 --> 00:07:30,870

cool of course i was uh disappointed as

167

00:07:34,710 --> 00:07:32,960

well that the mission was cut short

168

00:07:36,550 --> 00:07:34,720

particularly from the perspective of the

169

00:07:38,230 --> 00:07:36,560

scientists who've been waiting and

170

00:07:39,909 --> 00:07:38,240

working so long to try and get these

171

00:07:42,070 --> 00:07:39,919

experiments in space

172

00:07:44,390 --> 00:07:42,080

on the other hand in just a few days

173

00:07:46,870 --> 00:07:44,400

that we've had we've managed to get

174

00:07:48,309 --> 00:07:46,880

results that were described to me by the

175

00:07:50,790 --> 00:07:48,319

investigators they told me before the

176  
00:07:52,469 --> 00:07:50,800  
mission hey look if we get a single data

177  
00:07:54,390 --> 00:07:52,479  
point we'll be ecstatic because these

178  
00:07:56,550 --> 00:07:54,400  
experiments are so difficult to do and

179  
00:07:58,469 --> 00:07:56,560  
they've never been done before that that

180  
00:08:00,230 --> 00:07:58,479  
result in itself will make us very happy

181  
00:08:02,550 --> 00:08:00,240  
and we've gotten that many times over in

182  
00:08:03,909 --> 00:08:02,560  
just these four days so on one hand i'm

183  
00:08:05,749 --> 00:08:03,919  
disappointed but on the other hand i'm

184  
00:08:07,350 --> 00:08:05,759  
very happy that in the short time we've

185  
00:08:10,150 --> 00:08:07,360  
had we've gotten them some good results

186  
00:08:12,469 --> 00:08:10,160  
that'll move them on into the future

187  
00:08:13,830 --> 00:08:12,479  
uh bill harwood cbs with uh i guess

188  
00:08:15,909 --> 00:08:13,840

maybe another question for dr william

189

00:08:17,830 --> 00:08:15,919

terrace along those same lines i mean

190

00:08:19,749 --> 00:08:17,840

if that's the case i mean you're only

191

00:08:21,350 --> 00:08:19,759

getting a four-day flight you would plan

192

00:08:22,869 --> 00:08:21,360

16. i mean you can't call the flight

193

00:08:25,189 --> 00:08:22,879

it's not a failure obviously but it's

194

00:08:27,430 --> 00:08:25,199

not a success either where do you how do

195

00:08:35,589 --> 00:08:27,440

you characterize the the results of this

196

00:08:39,829 --> 00:08:37,750

yeah for sure you can't cram

197

00:08:41,509 --> 00:08:39,839

16 days of work into four days but we're

198

00:08:42,709 --> 00:08:41,519

doing our best at it

199

00:08:45,350 --> 00:08:42,719

one of the experiments that i've been

200

00:08:47,190 --> 00:08:45,360

working on is called cslm coarsening of

201

00:08:49,110 --> 00:08:47,200

solid liquid mixtures

202

00:08:51,670 --> 00:08:49,120

and in this experiment in the glove box

203

00:08:52,949 --> 00:08:51,680

we've processed 72 of the 81 plan

204

00:08:54,790 --> 00:08:52,959

samples

205

00:08:56,470 --> 00:08:54,800

in the large isothermal furnace the

206

00:08:59,269 --> 00:08:56,480

japanese facility

207

00:09:01,829 --> 00:08:59,279

we processed uh i think it's uh six or

208

00:09:03,430 --> 00:09:01,839

seven of our plan 25

209

00:09:05,590 --> 00:09:03,440

runs that we're doing

210

00:09:06,790 --> 00:09:05,600

phase which is the the physics of heart

211

00:09:08,790 --> 00:09:06,800

spheres

212

00:09:11,110 --> 00:09:08,800

part of our express rack we processed

213

00:09:12,150 --> 00:09:11,120

one sample successfully and throughout

214

00:09:13,590 --> 00:09:12,160

the lab

215

00:09:15,430 --> 00:09:13,600

most of the experiments have been able

216

00:09:17,110 --> 00:09:15,440

to get at least one or two runs in so

217

00:09:19,990 --> 00:09:17,120

we're bringing some science back to

218

00:09:21,910 --> 00:09:20,000

almost all fields up here astro pgba

219

00:09:24,230 --> 00:09:21,920

we're growing our plants we've been

220

00:09:25,829 --> 00:09:24,240

growing the protein crystals up here so

221

00:09:27,030 --> 00:09:25,839

we're hitting the full gamut of it but

222

00:09:29,110 --> 00:09:27,040

you know for sure we're not bringing

223

00:09:31,030 --> 00:09:29,120

back 16 days worth of science but we're

224

00:09:33,829 --> 00:09:31,040

really proud of what we do what we are

225

00:09:37,990 --> 00:09:35,590

this is marcia dunn of the associated

226

00:09:39,590 --> 00:09:38,000

press for dr linterus please

227

00:09:41,190 --> 00:09:39,600

we've just heard your blue team was

228

00:09:43,750 --> 00:09:41,200

shocked when they heard the news and as

229

00:09:45,670 --> 00:09:43,760

a non-career astronaut who may be making

230

00:09:47,430 --> 00:09:45,680

their one and only flight were you

231

00:09:52,150 --> 00:09:47,440

shocked when you heard the news and are

232

00:09:57,430 --> 00:09:54,870

i think shock is not the right word uh

233

00:09:59,269 --> 00:09:57,440

certainly surprise and disappointment

234

00:10:01,509 --> 00:09:59,279

might be accurate

235

00:10:03,110 --> 00:10:01,519

i certainly expect it to go the full 16

236

00:10:05,030 --> 00:10:03,120

days i'd say the

237

00:10:06,470 --> 00:10:05,040

thing that i'm most uh troubled by is

238

00:10:07,829 --> 00:10:06,480

that after a few days of getting used to

239

00:10:09,350 --> 00:10:07,839

this new environment i'll have to come

240

00:10:11,430 --> 00:10:09,360

home and that's sort of sort of

241

00:10:15,590 --> 00:10:11,440

saddening but maybe there will be a

242

00:10:19,750 --> 00:10:17,750

commander this is jay barbary with nbc i

243

00:10:21,430 --> 00:10:19,760

was wondering if you and pilot uh still

244

00:10:22,870 --> 00:10:21,440

there if you would felt a little better

245

00:10:25,190 --> 00:10:22,880

if you could have come home today having

246

00:10:27,990 --> 00:10:25,200

a fly-by-wire spacecraft you're down to

247

00:10:29,590 --> 00:10:28,000

two fuel cells if you lose another one

248

00:10:31,430 --> 00:10:29,600

you're really in trouble would you like

249

00:10:37,190 --> 00:10:31,440

to come home this afternoon instead of

250

00:10:40,550 --> 00:10:38,550

the people on the ground that made this

251  
00:10:42,310 --> 00:10:40,560  
decision thought it through fully and

252  
00:10:45,590 --> 00:10:42,320  
what they were trying to do is give us

253  
00:10:47,110 --> 00:10:45,600  
enough time to make an orderly close-up

254  
00:10:49,670 --> 00:10:47,120  
of the lab

255  
00:10:52,150 --> 00:10:49,680  
and plan our de-orbit and our landing

256  
00:10:54,310 --> 00:10:52,160  
accordingly had we tried to rush to come

257  
00:10:56,230 --> 00:10:54,320  
home today things wouldn't have been as

258  
00:10:57,670 --> 00:10:56,240  
orderly and so i think that they made

259  
00:11:00,389 --> 00:10:57,680  
the right decision

260  
00:11:02,470 --> 00:11:00,399  
in bringing us home on tuesday

261  
00:11:04,870 --> 00:11:02,480  
so that we could have everything

262  
00:11:06,310 --> 00:11:04,880  
prepared for the re-entry and the

263  
00:11:08,949 --> 00:11:06,320

landing

264

00:11:10,389 --> 00:11:08,959

this is bill hubshere with way tv news

265

00:11:11,910 --> 00:11:10,399

in huntsville

266

00:11:13,350 --> 00:11:11,920

the question i have is is pretty much

267

00:11:15,030 --> 00:11:13,360

for anyone who would like to answer it

268

00:11:17,110 --> 00:11:15,040

you must be obviously pretty pleased

269

00:11:18,790 --> 00:11:17,120

with how the microgravity mission went

270

00:11:21,030 --> 00:11:18,800

thus far only after four days but do you

271

00:11:22,150 --> 00:11:21,040

think this hurts the the future of such

272

00:11:23,190 --> 00:11:22,160

missions or do you think that all the

273

00:11:25,110 --> 00:11:23,200

rest of them that weren't quite

274

00:11:29,509 --> 00:11:25,120

completed will just be put towards space

275

00:11:32,550 --> 00:11:30,550

i think

276

00:11:35,350 --> 00:11:32,560

this mission is not over yet these

277

00:11:37,190 --> 00:11:35,360

experiments will be reflowed sometime in

278

00:11:39,590 --> 00:11:37,200

the future we have a facility on board

279

00:11:41,910 --> 00:11:39,600

called the express rack and this is

280

00:11:43,750 --> 00:11:41,920

called the it's the expedited processing

281

00:11:45,509 --> 00:11:43,760

of experiments for space station and the

282

00:11:47,509 --> 00:11:45,519

actual rack that we have on board today

283

00:11:50,150 --> 00:11:47,519

is scheduled to be on one of the first

284

00:11:51,750 --> 00:11:50,160

utilization flights for space station so

285

00:11:53,350 --> 00:11:51,760

many of the facilities that you see here

286

00:11:55,350 --> 00:11:53,360

are going to continue flying up both on

287

00:11:57,509 --> 00:11:55,360

the shuttle and space tab

288

00:11:58,470 --> 00:11:57,519

maybe orbiter or middeck experiments and

289

00:12:00,069 --> 00:11:58,480

for sure

290

00:12:02,230 --> 00:12:00,079

in the future on the international space

291

00:12:03,990 --> 00:12:02,240

station

292

00:12:06,389 --> 00:12:04,000

this is seth bernstein from the orlando

293

00:12:08,790 --> 00:12:06,399

sentinel again commander also

294

00:12:10,310 --> 00:12:08,800

can you tell us what

295

00:12:11,509 --> 00:12:10,320

instruments are going to be powered down

296

00:12:14,310 --> 00:12:11,519

that you wouldn't normally have power

297

00:12:15,750 --> 00:12:14,320

down on landing uh tommy yesterday said

298

00:12:18,310 --> 00:12:15,760

there might be one or two things that

299

00:12:19,990 --> 00:12:18,320

might be reduced uh on

300

00:12:22,829 --> 00:12:20,000

on entry

301

00:12:25,430 --> 00:12:22,839

is how is it going to make gentry

302

00:12:27,110 --> 00:12:25,440

different let me talk to uh let me let

303

00:12:31,910 --> 00:12:27,120

you talk to my expert on the electrical

304

00:12:36,310 --> 00:12:34,069

basically most of our equipment will be

305

00:12:38,629 --> 00:12:36,320

running that we require for landing what

306

00:12:41,269 --> 00:12:38,639

we'll be doing is turning them on later

307

00:12:44,069 --> 00:12:41,279

in the flight perhaps turning them on

308

00:12:46,230 --> 00:12:44,079

sometime after the de-orbit burn and

309

00:12:47,910 --> 00:12:46,240

just prior to coming down for the final

310

00:12:50,389 --> 00:12:47,920

part of the landing

311

00:12:53,110 --> 00:12:50,399

some of the environmental systems

312

00:12:56,069 --> 00:12:53,120

may be turned off which might make it a

313

00:12:57,350 --> 00:12:56,079

little bit warmer once we land but the

314

00:12:59,750 --> 00:12:57,360

crew should be

315

00:13:02,629 --> 00:12:59,760

comfortable throughout the reentry and

316

00:13:04,949 --> 00:13:02,639

the landing phase

317

00:13:05,670 --> 00:13:04,959

bill harwood cbs again for dr lanterris

318

00:13:07,269 --> 00:13:05,680

uh

319

00:13:08,870 --> 00:13:07,279

rena the flight gets re-manifested or

320

00:13:10,550 --> 00:13:08,880

not is an unknown at this point of

321

00:13:11,910 --> 00:13:10,560

course and your nasa colleagues will

322

00:13:14,069 --> 00:13:11,920

look forward to other flights down the

323

00:13:15,430 --> 00:13:14,079

road but for you and dr crouch

324

00:13:17,269 --> 00:13:15,440

this might be it for you i was just

325

00:13:19,110 --> 00:13:17,279

wondering i mean in terms of

326

00:13:20,710 --> 00:13:19,120

the science aside the experience of

327

00:13:22,230 --> 00:13:20,720

space flight and all of that how

328

00:13:23,829 --> 00:13:22,240

disappointing is it to

329

00:13:25,110 --> 00:13:23,839

to do all this work get up there and

330

00:13:28,230 --> 00:13:25,120

then have to turn right around and come

331

00:13:32,310 --> 00:13:29,990

well it's disappointing from a science

332

00:13:34,629 --> 00:13:32,320

perspective no doubt but from a personal

333

00:13:37,110 --> 00:13:34,639

perspective the experience of learning

334

00:13:39,430 --> 00:13:37,120

about the nasa training the experience

335

00:13:41,590 --> 00:13:39,440

of going to space and and experiencing

336

00:13:43,509 --> 00:13:41,600

this completely new environment with all

337

00:13:45,670 --> 00:13:43,519

it has to offer in terms of teaching us

338

00:13:48,389 --> 00:13:45,680

about our life down on earth has been

339

00:13:50,550 --> 00:13:48,399

phenomenal and is something which i will

340

00:13:52,230 --> 00:13:50,560

treasure regardless of whether i fly

341

00:14:16,230 --> 00:13:52,240

again regardless of whether it was five

342

00:14:16,240 --> 00:14:24,870

greg that was the cm1-3 data cue card