



1
00:00:46,549 --> 00:00:03,909
i'm greg johnson pilot of sts-134

2
00:00:46,559 --> 00:00:59,430
my

3
00:00:59,440 --> 00:01:21,830
is

4
00:01:24,950 --> 00:01:23,670
good morning endeavor

5
00:01:27,749 --> 00:01:24,960
and a special good morning to you

6
00:01:31,350 --> 00:01:27,759
roberto that song was for you it was

7
00:01:34,149 --> 00:01:31,360
feldiosi la matina

8
00:01:36,630 --> 00:01:34,159
good morning houston uh thank you for

9
00:01:38,230 --> 00:01:36,640
playing that song

10
00:01:41,350 --> 00:01:38,240
la martina

11
00:01:45,429 --> 00:01:42,950
that means

12
00:01:46,230 --> 00:01:45,439
obviously waking up in the morning

13
00:01:48,789 --> 00:01:46,240

and

14

00:01:51,670 --> 00:01:48,799

we woke up this morning i flew to the

15

00:01:56,230 --> 00:01:51,680

russian side and uh

16

00:01:57,510 --> 00:01:56,240

yeah the carlo dima and caddy have

17

00:01:59,830 --> 00:01:57,520

undocked

18

00:02:03,109 --> 00:01:59,840

they still have not planned and

19

00:02:05,190 --> 00:02:03,119

we look forward to hear that they are

20

00:02:06,950 --> 00:02:05,200

back on earth

21

00:02:09,190 --> 00:02:06,960

well

22

00:02:15,190 --> 00:02:09,200

it's going to be a good day and thank

23

00:02:18,790 --> 00:02:17,190

this is mission control houston as

24

00:02:20,470 --> 00:02:18,800

you've heard the space shuttle endeavour

25

00:02:22,470 --> 00:02:20,480

crew now awake

26
00:02:24,630 --> 00:02:22,480
that was a special song played for

27
00:02:27,190 --> 00:02:24,640
italian space agency astronaut roberto

28
00:02:31,990 --> 00:02:29,830
kpix tv this is houston please call

29
00:02:34,790 --> 00:02:32,000
endeavor for a voice check

30
00:02:36,390 --> 00:02:34,800
endeavor this is kpix tv how do you hear

31
00:02:40,949 --> 00:02:36,400
me

32
00:02:44,949 --> 00:02:42,550
sounds good thank you

33
00:02:45,750 --> 00:02:44,959
so far on your mission we've been up

34
00:02:46,790 --> 00:02:45,760
here

35
00:02:48,710 --> 00:02:46,800
about

36
00:02:51,509 --> 00:02:48,720
seven and a half

37
00:02:53,990 --> 00:02:51,519
calendar days but since we launched at

38
00:02:56,070 --> 00:02:54,000

the end of our very first day we're on

39

00:02:58,470 --> 00:02:56,080

flight day nine so we've had eight wake

40

00:02:59,589 --> 00:02:58,480

ups and in that period of time we've had

41

00:03:01,750 --> 00:02:59,599

the launch

42

00:03:03,910 --> 00:03:01,760

we've inspected our heat shields we've

43

00:03:06,149 --> 00:03:03,920

joined up with the space station we've

44

00:03:08,470 --> 00:03:06,159

completed two space walks we've

45

00:03:09,270 --> 00:03:08,480

installed the ams particle detector

46

00:03:12,390 --> 00:03:09,280

we've

47

00:03:14,630 --> 00:03:12,400

taz installed the elc spare parts for

48

00:03:16,309 --> 00:03:14,640

the iss and a bunch of other stuff so

49

00:03:18,869 --> 00:03:16,319

we've we've gotten a lot done in this

50

00:03:21,190 --> 00:03:18,879

first week

51
00:03:23,589 --> 00:03:21,200
went on the space walk how was that like

52
00:03:25,589 --> 00:03:23,599
well that was my first spacewalk and uh

53
00:03:27,509 --> 00:03:25,599
you know that that was the most intense

54
00:03:29,509 --> 00:03:27,519
thing i've ever done in my life that was

55
00:03:31,990 --> 00:03:29,519
really amazing it's you know it's really

56
00:03:33,910 --> 00:03:32,000
amazing that humans can really do this

57
00:03:36,949 --> 00:03:33,920
it's not science fiction it's absolutely

58
00:03:38,789 --> 00:03:36,959
real and uh it was it was amazing it was

59
00:03:40,309 --> 00:03:38,799
a lot of fun

60
00:03:41,830 --> 00:03:40,319
and it was a big difference between the

61
00:03:44,789 --> 00:03:41,840
night and the day you know first thing i

62
00:03:47,589 --> 00:03:44,799
did when i went out there is uh

63
00:03:49,750 --> 00:03:47,599

i kind of wanted to do a little like uh

64
00:03:51,030 --> 00:03:49,760
you know look mom no hands kind of thing

65
00:03:52,869 --> 00:03:51,040
i i i

66
00:03:55,190 --> 00:03:52,879
but i with one hand holding on a

67
00:03:57,350 --> 00:03:55,200
handrail kind of just leaned back and

68
00:04:00,070 --> 00:03:57,360
looked at the earth below 220 miles

69
00:04:01,750 --> 00:04:00,080
below and uh you know what an amazing

70
00:04:03,589 --> 00:04:01,760
thing to be floating there holding on to

71
00:04:04,949 --> 00:04:03,599
the space station flying around the

72
00:04:06,949 --> 00:04:04,959
earth with the earth below like that

73
00:04:08,949 --> 00:04:06,959
just incredible um

74
00:04:11,350 --> 00:04:08,959
you know at night it was very strange

75
00:04:13,270 --> 00:04:11,360
actually because uh it was kind of like

76

00:04:16,069 --> 00:04:13,280

scuba diving in a way on a like on a

77

00:04:18,150 --> 00:04:16,079

coral coral wall because

78

00:04:19,830 --> 00:04:18,160

it's a void all around you just a total

79

00:04:21,590 --> 00:04:19,840

black void and the only thing that you

80

00:04:23,909 --> 00:04:21,600

know sort of connects you back to

81

00:04:25,670 --> 00:04:23,919

reality is this handrail in front of you

82

00:04:27,990 --> 00:04:25,680

that your light your headlamp is

83

00:04:30,150 --> 00:04:28,000

lighting up and everything else is just

84

00:04:31,990 --> 00:04:30,160

this endless void that you have no idea

85

00:04:34,390 --> 00:04:32,000

how far it is to anything it was very

86

00:04:36,550 --> 00:04:34,400

very surreal very very very interesting

87

00:04:38,310 --> 00:04:36,560

but the work went great and you know and

88

00:04:40,150 --> 00:04:38,320

we're trained so well to you know

89

00:04:42,629 --> 00:04:40,160

everything everything every part of the

90

00:04:44,230 --> 00:04:42,639

process is so methodical that we just

91

00:04:45,990 --> 00:04:44,240

kind of step through it and

92

00:04:48,550 --> 00:04:46,000

and just keep going and that kind of

93

00:04:49,749 --> 00:04:48,560

distracts you from you know getting

94

00:04:52,150 --> 00:04:49,759

getting lost

95

00:04:55,590 --> 00:04:52,160

in all the emotions and the spectacle of

96

00:05:01,430 --> 00:04:57,350

how all have you had the dream of of

97

00:05:06,870 --> 00:05:04,310

i think we'll both answer that one tim

98

00:05:08,870 --> 00:05:06,880

uh my first dream of being an astronaut

99

00:05:13,110 --> 00:05:08,880

was when i was seven years old back in

100

00:05:14,870 --> 00:05:13,120

1969 it was july the 20th and i was in

101
00:05:17,430 --> 00:05:14,880
central michigan at my grandparents

102
00:05:19,110 --> 00:05:17,440
house watching the lunar landing

103
00:05:20,950 --> 00:05:19,120
for the very first time on a black and

104
00:05:21,990 --> 00:05:20,960
white tv with my brother and sister mom

105
00:05:22,790 --> 00:05:22,000
and dad

106
00:05:28,629 --> 00:05:22,800
and

107
00:05:32,390 --> 00:05:30,070
yeah you know it's funny at the same

108
00:05:34,469 --> 00:05:32,400
time the same event um the tease box

109
00:05:36,390 --> 00:05:34,479
he's just a little bit older than me so

110
00:05:38,629 --> 00:05:36,400
i was six years old

111
00:05:41,350 --> 00:05:38,639
i was going to be seven in a month yeah

112
00:05:44,469 --> 00:05:41,360
okay fine my family was on a vacation in

113
00:05:46,310 --> 00:05:44,479

florida um and we got to watch watch the

114

00:05:49,830 --> 00:05:46,320

launch of apollo 11

115

00:05:51,590 --> 00:05:49,840

and uh and my dad was a real uh fanatic

116

00:05:54,150 --> 00:05:51,600

of the space program and i used to watch

117

00:05:56,550 --> 00:05:54,160

star trek with them all the time and and

118

00:05:58,150 --> 00:05:56,560

when we saw that launch i i told him at

119

00:06:00,629 --> 00:05:58,160

that time that's what i want to do and

120

00:06:03,590 --> 00:06:00,639

somehow managed to keep the dream alive

121

00:06:09,270 --> 00:06:07,350

all right thank you very much

122

00:06:11,990 --> 00:06:09,280

endeavour this is houston acr that

123

00:06:13,909 --> 00:06:12,000

concludes the kpix portion of the event

124

00:06:16,309 --> 00:06:13,919

please stand by for a voice check from

125

00:06:17,830 --> 00:06:16,319

kgo tv

126

00:06:18,790 --> 00:06:17,840

thank you for being with us can you hear

127

00:06:20,390 --> 00:06:18,800

me

128

00:06:23,909 --> 00:06:20,400

yeah i hear you loud and clear how do

129

00:06:26,710 --> 00:06:25,350

well we hear you great and i really

130

00:06:28,390 --> 00:06:26,720

appreciate it uh both of you guys for

131

00:06:30,230 --> 00:06:28,400

coming on uh tell us what you're doing

132

00:06:31,909 --> 00:06:30,240

up there on this final mission for this

133

00:06:33,110 --> 00:06:31,919

shuttle that will help us back here on

134

00:06:35,430 --> 00:06:33,120

earth

135

00:06:38,550 --> 00:06:35,440

well i'm up here on the flight deck of

136

00:06:41,430 --> 00:06:38,560

endeavour here with uh our pilot uh box

137

00:06:43,350 --> 00:06:41,440

uh greg johnson and um we're having a

138

00:06:44,790 --> 00:06:43,360

great mission up here so far

139

00:06:46,150 --> 00:06:44,800

um you know the one of the biggest

140

00:06:48,230 --> 00:06:46,160

things we've done on this mission is

141

00:06:49,909 --> 00:06:48,240

install the alpha magnetic spectrometer

142

00:06:51,029 --> 00:06:49,919

so you know in a sense this is a science

143

00:06:53,110 --> 00:06:51,039

mission although we're really the

144

00:06:54,150 --> 00:06:53,120

delivery guys

145

00:06:55,909 --> 00:06:54,160

several of us were involved in the

146

00:06:57,990 --> 00:06:55,919

robotics to install it

147

00:07:00,950 --> 00:06:58,000

and this this is uh this is a really

148

00:07:02,790 --> 00:07:00,960

important uh uh scientific instrument

149

00:07:04,150 --> 00:07:02,800

you know kind of unlike

150

00:07:05,830 --> 00:07:04,160

all the other observatories and

151
00:07:07,990 --> 00:07:05,840
telescopes before that looked at light

152
00:07:09,670 --> 00:07:08,000
this is looking at cosmic rays cosmic

153
00:07:11,270 --> 00:07:09,680
particles and it's going to give us an

154
00:07:13,189 --> 00:07:11,280
understanding of

155
00:07:15,029 --> 00:07:13,199
the universe that we just haven't had

156
00:07:17,270 --> 00:07:15,039
before and

157
00:07:19,670 --> 00:07:17,280
solve some of the mysteries of physics

158
00:07:21,110 --> 00:07:19,680
now that's a science perspective but on

159
00:07:22,950 --> 00:07:21,120
the station we have a lot of other

160
00:07:26,070 --> 00:07:22,960
experiments going on there's a little

161
00:07:27,589 --> 00:07:26,080
over 100 experiments going on and and

162
00:07:29,350 --> 00:07:27,599
it's amazing how big the station is and

163
00:07:31,430 --> 00:07:29,360

with 12 people on board right now it's a

164

00:07:32,950 --> 00:07:31,440

big facility uh some of the things that

165

00:07:35,589 --> 00:07:32,960

are going on there are actually related

166

00:07:37,510 --> 00:07:35,599

to recycling and uh we're recycling

167

00:07:39,990 --> 00:07:37,520

water we're recycling air we're

168

00:07:41,589 --> 00:07:40,000

scrubbing on carbon dioxide and a lot of

169

00:07:43,430 --> 00:07:41,599

these technologies that were that were

170

00:07:45,350 --> 00:07:43,440

you that will be very necessary to be

171

00:07:47,430 --> 00:07:45,360

able to explore further will be able to

172

00:07:49,510 --> 00:07:47,440

be used back on earth to conserve

173

00:07:51,430 --> 00:07:49,520

resources and this is water recycled

174

00:07:53,430 --> 00:07:51,440

water from the station

175

00:07:56,790 --> 00:07:53,440

and this is recycled water from the

176

00:08:01,270 --> 00:07:59,029

very cool let me ask you this gentlemen

177

00:08:03,510 --> 00:08:01,280

are you planning anything uh special

178

00:08:10,869 --> 00:08:03,520

because this is the final mission for

179

00:08:16,309 --> 00:08:14,070

well uh you know this is uh endeavors uh

180

00:08:17,270 --> 00:08:16,319

25th and final uh

181

00:08:19,909 --> 00:08:17,280

flight

182

00:08:22,950 --> 00:08:19,919

and uh although we're really excited to

183

00:08:26,230 --> 00:08:22,960

be part of that final flight um you know

184

00:08:27,749 --> 00:08:26,240

celebrations and and uh even strongly

185

00:08:29,430 --> 00:08:27,759

acknowledging the fact that it's the

186

00:08:32,630 --> 00:08:29,440

final flight is really something you do

187

00:08:35,029 --> 00:08:32,640

afterwards and so right now we're uh

188

00:08:37,430 --> 00:08:35,039

enjoying and embracing the adventure of

189

00:08:38,870 --> 00:08:37,440

this final flight of endeavor we've

190

00:08:41,990 --> 00:08:38,880

still got some things to do on our

191

00:08:44,389 --> 00:08:42,000

timeline and when we get back home we'll

192

00:08:46,710 --> 00:08:44,399

probably have some celebrations and and

193

00:08:48,710 --> 00:08:46,720

this space shuttle uh is going to end up

194

00:08:50,550 --> 00:08:48,720

i believe in california

195

00:08:52,710 --> 00:08:50,560

um and uh

196

00:08:55,430 --> 00:08:52,720

just to share with everyone that comes

197

00:08:56,790 --> 00:08:55,440

to visit it so i guess the answer your

198

00:08:59,269 --> 00:08:56,800

question is yes there will be

199

00:09:01,350 --> 00:08:59,279

celebration but right now we're just

200

00:09:02,630 --> 00:09:01,360

doing business as normal thank you both

201
00:09:04,070 --> 00:09:02,640
for the privilege to talk with you have

202
00:09:06,070 --> 00:09:04,080
a safe trip back home and good luck with

203
00:09:09,430 --> 00:09:06,080
the rest of the mission endeavor this is

204
00:09:11,110 --> 00:09:09,440
kfbk how do you hear me

205
00:09:15,110 --> 00:09:11,120
we read you loud and clear i think

206
00:09:19,269 --> 00:09:17,190
that there is but we'll continue on and

207
00:09:21,030 --> 00:09:19,279
we would like to uh well again greetings

208
00:09:23,030 --> 00:09:21,040
from planet earth and thanks for taking

209
00:09:25,750 --> 00:09:23,040
time out of your busy schedule to talk

210
00:09:27,829 --> 00:09:25,760
with us today we are talking with greg

211
00:09:29,990 --> 00:09:27,839
johnson who is the pilot of this mission

212
00:09:32,070 --> 00:09:30,000
and mission specialist greg shamatoff

213
00:09:33,670 --> 00:09:32,080

who as i understand greg grew up in the

214

00:09:36,790 --> 00:09:33,680

san jose area

215

00:09:39,509 --> 00:09:36,800

yeah that's right i grew up in san jose

216

00:09:41,110 --> 00:09:39,519

i actually moved there from canada when

217

00:09:43,269 --> 00:09:41,120

i was very young my dad felt that

218

00:09:44,870 --> 00:09:43,279

california was the land of opportunity

219

00:09:46,790 --> 00:09:44,880

and for me obviously that worked out

220

00:09:48,230 --> 00:09:46,800

very nicely

221

00:09:50,550 --> 00:09:48,240

and i have a lot of family a lot of

222

00:09:52,550 --> 00:09:50,560

friends there and looking forward to

223

00:09:54,230 --> 00:09:52,560

seeing them after the mission a lot of

224

00:09:55,590 --> 00:09:54,240

them came to see the launch

225

00:09:58,150 --> 00:09:55,600

you know and i went to school in

226

00:10:00,630 --> 00:09:58,160

california cal poly and so a lot of a

227

00:10:03,110 --> 00:10:00,640

lot of ties to the entire area

228

00:10:04,710 --> 00:10:03,120

now question for both of you gentlemen

229

00:10:07,590 --> 00:10:04,720

for those of us and i'm i'm one of them

230

00:10:09,430 --> 00:10:07,600

who grew up watching the apollo missions

231

00:10:11,269 --> 00:10:09,440

of course skylab and then the the

232

00:10:12,630 --> 00:10:11,279

beginnings of the

233

00:10:14,790 --> 00:10:12,640

shuttle missions

234

00:10:17,110 --> 00:10:14,800

describe what it's like to be

235

00:10:18,790 --> 00:10:17,120

in space to be on one of these missions

236

00:10:20,230 --> 00:10:18,800

to be one of the very few people in the

237

00:10:24,870 --> 00:10:20,240

world to be able to do something like

238

00:10:29,590 --> 00:10:27,350

well i'll start off by saying uh it's a

239

00:10:32,470 --> 00:10:29,600

great honor and privilege and i know

240

00:10:35,509 --> 00:10:32,480

there are a whole bunch of people uh

241

00:10:37,430 --> 00:10:35,519

that would just love to be up here so

242

00:10:39,590 --> 00:10:37,440

because of that i

243

00:10:41,990 --> 00:10:39,600

cherish every single moment you know

244

00:10:44,150 --> 00:10:42,000

being in space being weightless is an

245

00:10:47,990 --> 00:10:44,160

adventure in and of itself everything in

246

00:10:50,870 --> 00:10:48,000

life is fun sleeping eating working

247

00:10:53,990 --> 00:10:50,880

joking around with your buddies uh i the

248

00:10:56,150 --> 00:10:54,000

space station now is huge you can get

249

00:10:57,430 --> 00:10:56,160

lost in it i make wrong turns now that

250

00:10:59,590 --> 00:10:57,440

we've got

251
00:11:02,550 --> 00:10:59,600
basically all five different modules

252
00:11:04,710 --> 00:11:02,560
connected at one juncture so uh it's a

253
00:11:06,550 --> 00:11:04,720
great honor and privilege to be in space

254
00:11:10,949 --> 00:11:06,560
and uh and i love it and i'm gonna let

255
00:11:14,550 --> 00:11:12,870
well you know as box said it's it's

256
00:11:16,150 --> 00:11:14,560
really an honor and you really feel that

257
00:11:18,630 --> 00:11:16,160
i mean it's a lot of work to prepare for

258
00:11:20,790 --> 00:11:18,640
everything that we do and uh you know

259
00:11:21,910 --> 00:11:20,800
for example the spacewalks we're doing

260
00:11:24,150 --> 00:11:21,920
on this mission i mean there's an

261
00:11:26,310 --> 00:11:24,160
incredible team you know behind

262
00:11:27,910 --> 00:11:26,320
everything we're doing up here and uh to

263
00:11:29,509 --> 00:11:27,920

be the one to get to do it it's an

264

00:11:31,350 --> 00:11:29,519

incredible privilege

265

00:11:33,430 --> 00:11:31,360

uh the one thing that we know we feel

266

00:11:35,990 --> 00:11:33,440

really uh good about doing is getting to

267

00:11:37,590 --> 00:11:36,000

share the the the time up here with with

268

00:11:40,069 --> 00:11:37,600

uh everyone else like we're doing right

269

00:11:42,150 --> 00:11:40,079

now because i mean this is all we can do

270

00:11:44,470 --> 00:11:42,160

i wish everybody could be up here

271

00:11:46,230 --> 00:11:44,480

someday that may be true but uh now what

272

00:11:47,829 --> 00:11:46,240

we can do is you know try to share our

273

00:11:49,670 --> 00:11:47,839

experience with everybody and we come

274

00:11:51,269 --> 00:11:49,680

back we can also you know

275

00:11:53,350 --> 00:11:51,279

travel around and do the same thing we

276

00:11:55,430 --> 00:11:53,360

really look forward to doing that

277

00:11:56,949 --> 00:11:55,440

all right greg johnson greg shamatoff

278

00:12:00,470 --> 00:11:56,959

unless there's any chance you can beam

279

00:12:02,150 --> 00:12:00,480

me up i guess we're finished here

280

00:12:05,350 --> 00:12:02,160

well we'd love to share this with you

281

00:12:08,389 --> 00:12:05,360

this is a an outstanding uh spaceship

282

00:12:11,430 --> 00:12:08,399

we're really honored to be on her last

283

00:12:13,990 --> 00:12:11,440

voyage uh 25th mission of endeavor and

284

00:12:15,670 --> 00:12:14,000

then the space shuttle will retire uh we

285

00:12:17,910 --> 00:12:15,680

have one more space shuttle mission

286

00:12:19,990 --> 00:12:17,920

after this sts-135

287

00:12:29,269 --> 00:12:20,000

and everybody be sure to watch that

288

00:12:38,629 --> 00:12:31,670

endeavor this is houston acr thank you

289

00:12:42,310 --> 00:12:40,790

thank you california endeavor we are now

290

00:12:49,829 --> 00:12:42,320

resuming operational audio

291

00:12:53,590 --> 00:12:51,350

the crew has

292

00:12:55,190 --> 00:12:53,600

restored

293

00:12:57,350 --> 00:12:55,200

several

294

00:12:58,550 --> 00:12:57,360

systems on board with the replacement of

295

00:13:01,829 --> 00:12:58,560

a failed

296

00:13:04,470 --> 00:13:01,839

remote power controller module

297

00:13:09,030 --> 00:13:07,430

remote power controller

298

00:13:12,870 --> 00:13:09,040

tripped

299

00:13:18,150 --> 00:13:15,990

that caused the temporary loss of

300

00:13:19,590 --> 00:13:18,160

some of the equipment on board the

301
00:13:21,910 --> 00:13:19,600
station that

302
00:13:23,670 --> 00:13:21,920
was recovered mike fink

303
00:13:25,910 --> 00:13:23,680
handled the removal and replacement of

304
00:13:26,790 --> 00:13:25,920
the rpcm

305
00:13:28,150 --> 00:13:26,800
and

306
00:13:30,230 --> 00:13:28,160
then the ground

307
00:13:32,069 --> 00:13:30,240
quickly uh powered it up and

308
00:13:34,230 --> 00:13:32,079
reconfigured all the systems and they're

309
00:13:35,430 --> 00:13:34,240
all back where they should be it's

310
00:13:37,590 --> 00:13:35,440
essentially

311
00:13:40,310 --> 00:13:37,600
very close to

312
00:13:42,949 --> 00:13:40,320
having a fuse blow and just having to

313
00:13:45,509 --> 00:13:42,959

replace that fuse here on the ground

314

00:13:48,949 --> 00:13:45,519

either in a car or

315

00:13:50,949 --> 00:13:48,959

if a circuit breaker popped in your home

316

00:13:53,350 --> 00:13:50,959

resetting that in the case of the

317

00:13:55,110 --> 00:13:53,360

station it requires a replacement of a

318

00:13:56,790 --> 00:13:55,120

of a piece of equipment

319

00:13:59,189 --> 00:13:56,800

and that was done and the systems are

320

00:14:00,230 --> 00:13:59,199

all back where they were before the

321

00:14:02,310 --> 00:14:00,240

power

322

00:14:03,910 --> 00:14:02,320

trip

323

00:14:06,550 --> 00:14:03,920

also the

324

00:14:09,509 --> 00:14:06,560

crew is focusing a good bit on today on

325

00:14:12,069 --> 00:14:09,519

replacing one of the the

326

00:14:15,350 --> 00:14:12,079

carbon dioxide removal assembly beds

327

00:14:18,710 --> 00:14:15,360

that basically absorbs carbon dioxide

328

00:14:21,750 --> 00:14:18,720

and then vents it overboard

329

00:14:24,069 --> 00:14:21,760

in a continuous recycle

330

00:14:25,750 --> 00:14:24,079

to remove carbon dioxide from the cabin

331

00:14:28,310 --> 00:14:25,760

atmosphere of the international space

332

00:14:32,389 --> 00:14:30,470

endeavor this is houston are you ready

333

00:14:35,990 --> 00:14:32,399

for the event and it'll be done a lot

334

00:14:40,230 --> 00:14:38,069

you should be talking to the daily this

335

00:14:41,910 --> 00:14:40,240

is houston please call endeavor for a

336

00:14:43,829 --> 00:14:41,920

voice check

337

00:14:46,150 --> 00:14:43,839

endeavor this is elizabeth saab with the

338

00:14:47,670 --> 00:14:46,160

daily how do you hear me we've got you

339

00:14:48,629 --> 00:14:47,680

loud and clear elizabeth how do you hear

340

00:14:51,990 --> 00:14:48,639

us

341

00:14:54,230 --> 00:14:52,000

by saying that a lot of the questions

342

00:14:56,389 --> 00:14:54,240

we'll be asking you were submitted from

343

00:14:58,230 --> 00:14:56,399

people all over the world

344

00:14:59,750 --> 00:14:58,240

and many of them before we get started

345

00:15:01,910 --> 00:14:59,760

just want to say sending you guys well

346

00:15:02,790 --> 00:15:01,920

wishes for your crew safe return and

347

00:15:04,629 --> 00:15:02,800

also

348

00:15:06,790 --> 00:15:04,639

uh commander kelly many well wishes for

349

00:15:08,710 --> 00:15:06,800

the continuing recovery of your wife

350

00:15:11,189 --> 00:15:08,720

congresswoman giffords with that i'll

351

00:15:13,750 --> 00:15:11,199

get into it um luke age seven from

352

00:15:17,269 --> 00:15:13,760

tennessee wants to know commander kelly

353

00:15:19,910 --> 00:15:17,279

how fast do you travel on launch and

354

00:15:23,990 --> 00:15:19,920

return and how fast you guys travel in

355

00:15:29,749 --> 00:15:26,629

so on liftoff we obviously start on the

356

00:15:31,350 --> 00:15:29,759

pad and we go from zero to seventeen

357

00:15:32,710 --> 00:15:31,360

thousand five hundred miles an hour and

358

00:15:33,990 --> 00:15:32,720

eight and a half minutes

359

00:15:36,150 --> 00:15:34,000

and then we pretty much stay at that

360

00:15:39,189 --> 00:15:36,160

speed for us for

361

00:15:40,949 --> 00:15:39,199

about 16 days and then to get home all

362

00:15:43,110 --> 00:15:40,959

that energy we put in on liftoff we have

363

00:15:44,629 --> 00:15:43,120

to take back out but instead of doing an

364

00:15:47,509 --> 00:15:44,639

eight and a half minutes we'll slow down

365

00:15:49,110 --> 00:15:47,519

over a period of about 40 minutes or so

366

00:15:51,590 --> 00:15:49,120

where we'll then glide to a landing in

367

00:15:52,790 --> 00:15:51,600

florida

368

00:15:55,030 --> 00:15:52,800

and uh

369

00:15:57,670 --> 00:15:55,040

from iceland wants to know uh mission

370

00:16:00,389 --> 00:15:57,680

specialist uh think describe what you

371

00:16:04,389 --> 00:16:00,399

see in space in one word

372

00:16:08,870 --> 00:16:06,790

that's great for mission specialist

373

00:16:11,509 --> 00:16:08,880

chamitov courtney from texas wants to

374

00:16:13,350 --> 00:16:11,519

know has there ever been a moment in all

375

00:16:14,790 --> 00:16:13,360

of your space career where all of those

376

00:16:16,790 --> 00:16:14,800

hours of training

377

00:16:18,230 --> 00:16:16,800

hadn't quite prepared you for it for

378

00:16:20,629 --> 00:16:18,240

example the other day when your

379

00:16:23,110 --> 00:16:20,639

spacewalk was cut short

380

00:16:24,949 --> 00:16:23,120

you know i think in fact um probably the

381

00:16:26,550 --> 00:16:24,959

opposite i mean the probably the most

382

00:16:29,749 --> 00:16:26,560

intense thing i have ever done is that

383

00:16:31,670 --> 00:16:29,759

spacewalk a few days ago and um you know

384

00:16:32,870 --> 00:16:31,680

it's such an overwhelming sensation to

385

00:16:36,230 --> 00:16:32,880

be out there and to see the earth

386

00:16:37,829 --> 00:16:36,240

between your legs 220 miles below and in

387

00:16:40,150 --> 00:16:37,839

every other direction you know trillions

388

00:16:41,670 --> 00:16:40,160

of miles to the next thing uh you know

389

00:16:42,629 --> 00:16:41,680

unless it's the sun which is a little

390

00:16:45,350 --> 00:16:42,639

closer

391

00:16:47,829 --> 00:16:45,360

but um uh you know what the training is

392

00:16:48,550 --> 00:16:47,839

so good that that you know we just focus

393

00:16:51,110 --> 00:16:48,560

on

394

00:16:52,790 --> 00:16:51,120

our next step and we we

395

00:16:55,030 --> 00:16:52,800

wherever we are we kind of know exactly

396

00:16:56,949 --> 00:16:55,040

what to do at the next step and uh

397

00:16:58,150 --> 00:16:56,959

and uh you know with so many things that

398

00:17:00,389 --> 00:16:58,160

we thought about in terms of

399

00:17:02,870 --> 00:17:00,399

contingencies uh in fact you know the

400

00:17:04,949 --> 00:17:02,880

alarm that i got in my suit um it may

401
00:17:07,350 --> 00:17:04,959
have sounded like a you know something

402
00:17:09,510 --> 00:17:07,360
of concern to the to you know the the

403
00:17:11,429 --> 00:17:09,520
audience listening on nasty tv but i was

404
00:17:13,110 --> 00:17:11,439
expecting that alarm because we already

405
00:17:14,949 --> 00:17:13,120
knew that that suit had a potential

406
00:17:16,630 --> 00:17:14,959
problem like that and we knew exactly

407
00:17:18,309 --> 00:17:16,640
what we were going to do so

408
00:17:20,630 --> 00:17:18,319
training is really terrific to prepare

409
00:17:22,309 --> 00:17:20,640
us for everything up here

410
00:17:24,710 --> 00:17:22,319
and uh the next question for commander

411
00:17:27,189 --> 00:17:24,720
kelly brandi from oklahoma wants to know

412
00:17:30,230 --> 00:17:27,199
what's your favorite pastime in space

413
00:17:33,909 --> 00:17:30,240

that you cannot do here on earth

414

00:17:35,190 --> 00:17:33,919

well i think it has to be for me is just

415

00:17:37,190 --> 00:17:35,200

flying

416

00:17:39,510 --> 00:17:37,200

through the space station

417

00:17:41,430 --> 00:17:39,520

uh when you leave the airlock of the

418

00:17:43,830 --> 00:17:41,440

space shuttle from one end of the space

419

00:17:44,789 --> 00:17:43,840

station to the other takes a couple

420

00:17:46,390 --> 00:17:44,799

minutes

421

00:17:48,230 --> 00:17:46,400

you know maybe not that depends on how

422

00:17:51,750 --> 00:17:48,240

fast you go obviously but

423

00:17:54,230 --> 00:17:51,760

it's uh really an amazing experience to

424

00:17:56,310 --> 00:17:54,240

just fly through a module

425

00:17:58,310 --> 00:17:56,320

so it's it's not described exactly as

426

00:18:00,070 --> 00:17:58,320

floating i mean you're literally

427

00:18:02,230 --> 00:18:00,080

you know flying through the air and

428

00:18:05,190 --> 00:18:02,240

that's you know i could do that all day

429

00:18:06,950 --> 00:18:05,200

every day have i had the chance

430

00:18:09,270 --> 00:18:06,960

what does that mean next question for

431

00:18:11,510 --> 00:18:09,280

mission specialists think who is your

432

00:18:14,310 --> 00:18:11,520

space hero and why

433

00:18:16,230 --> 00:18:14,320

well elizabeth i can't pick one i think

434

00:18:17,669 --> 00:18:16,240

we all stand on the shoulders of giants

435

00:18:19,990 --> 00:18:17,679

each mission we get

436

00:18:23,350 --> 00:18:20,000

better we go a little bit farther on in

437

00:18:25,669 --> 00:18:23,360

exploration so i think my space heroes

438

00:18:28,470 --> 00:18:25,679

are all the crews that came before us

439

00:18:29,990 --> 00:18:28,480

and hopefully we can provide adequate

440

00:18:32,789 --> 00:18:30,000

shoulders for the crews that come after

441

00:18:36,710 --> 00:18:34,310

well looks like that's all the time we

442

00:18:39,430 --> 00:18:36,720

have now but thanks so much you guys we

443

00:18:41,750 --> 00:18:39,440

wish you a safe return home and

444

00:18:43,990 --> 00:18:41,760

continued exploration in space thanks so

445

00:18:46,950 --> 00:18:44,000

much again

446

00:18:49,110 --> 00:18:46,960

endeavour this is news radio 1020 kdka

447

00:18:52,150 --> 00:18:49,120

how do you hear me

448

00:18:54,150 --> 00:18:52,160

news radio 1020 kdka this is the space

449

00:18:56,390 --> 00:18:54,160

shuttle endeavor mike's fink speaking

450

00:18:58,950 --> 00:18:56,400

howie is doing

451
00:19:00,870 --> 00:18:58,960
mike it's great to hear your voice from

452
00:19:03,669 --> 00:19:00,880
space hey you know you finally got the

453
00:19:06,230 --> 00:19:03,679
opportunity after all your time in space

454
00:19:12,230 --> 00:19:06,240
to go up there on board the space

455
00:19:16,470 --> 00:19:14,789
well it was an amazing launch we were

456
00:19:17,990 --> 00:19:16,480
sitting there in florida the clouds were

457
00:19:19,909 --> 00:19:18,000
coming over we were wondering if we were

458
00:19:22,630 --> 00:19:19,919
going to get canceled because of weather

459
00:19:24,630 --> 00:19:22,640
and then the clouds uh gently dissipated

460
00:19:26,390 --> 00:19:24,640
and eight and a half minutes later

461
00:19:28,710 --> 00:19:26,400
with a big kick in the pants we were up

462
00:19:31,510 --> 00:19:28,720
in space and boy was it amazing

463
00:19:32,950 --> 00:19:31,520

not everyone who is on board the shuttle

464

00:19:35,110 --> 00:19:32,960

at the time has a great view out the

465

00:19:40,150 --> 00:19:35,120

window but i understand you did have a

466

00:19:45,029 --> 00:19:42,310

yeah i was lucky to sit up on the flight

467

00:19:47,830 --> 00:19:45,039

deck i was sitting behind pilot box

468

00:19:49,909 --> 00:19:47,840

johnson and i could see out his window

469

00:19:51,270 --> 00:19:49,919

and it's different than my earlier

470

00:19:52,789 --> 00:19:51,280

missions when i flew on the soyuz

471

00:19:54,710 --> 00:19:52,799

because we were in the payload shroud so

472

00:19:57,110 --> 00:19:54,720

we couldn't see anything for a long time

473

00:19:59,350 --> 00:19:57,120

but here we could see the clouds race by

474

00:20:01,029 --> 00:19:59,360

we could see the beautiful planet get

475

00:20:02,630 --> 00:20:01,039

smaller and smaller and it was a really

476

00:20:05,029 --> 00:20:02,640

amazing sight

477

00:20:07,110 --> 00:20:05,039

you have logged so many hours on

478

00:20:11,029 --> 00:20:07,120

walks uh you doing any of that this time

479

00:20:15,430 --> 00:20:13,350

you bet in fact uh we just finished

480

00:20:17,830 --> 00:20:15,440

getting ready for tomorrow's spacewalk

481

00:20:21,190 --> 00:20:17,840

our crew so far has done two successful

482

00:20:23,270 --> 00:20:21,200

spacewalks and we got two more to go and

483

00:20:25,029 --> 00:20:23,280

i just came back from one two days ago

484

00:20:26,630 --> 00:20:25,039

and then we get to go out tomorrow it's

485

00:20:29,029 --> 00:20:26,640

one thing after another on a shuttle

486

00:20:31,270 --> 00:20:29,039

mission commander mark kelly i gotta ask

487

00:20:34,070 --> 00:20:31,280

you uh the local boy there from emsworth

488

00:20:38,789 --> 00:20:34,080

how is uh how's mike fink doing on that

489

00:20:43,830 --> 00:20:41,029

he's doing great you know it's uh it's

490

00:20:45,590 --> 00:20:43,840

really nice to have both mike and greg

491

00:20:47,510 --> 00:20:45,600

who have spent so much time on the space

492

00:20:49,270 --> 00:20:47,520

station anytime you know i need to find

493

00:20:51,029 --> 00:20:49,280

something i don't have to go look it up

494

00:20:53,270 --> 00:20:51,039

i just asked one of them and they've

495

00:20:55,590 --> 00:20:53,280

both been incredible crew members mike

496

00:20:57,270 --> 00:20:55,600

on the flight deck for ascent did an

497

00:20:59,190 --> 00:20:57,280

outstanding job

498

00:21:01,190 --> 00:20:59,200

and he's going to be on the flight deck

499

00:21:03,029 --> 00:21:01,200

here again for entry so it's a pleasure

500

00:21:04,789 --> 00:21:03,039

to have him on board

501
00:21:06,230 --> 00:21:04,799
hey greg can you give us a perspective

502
00:21:08,149 --> 00:21:06,240
on what it's like to be part of the

503
00:21:10,149 --> 00:21:08,159
final mission of endeavour realizing

504
00:21:11,909 --> 00:21:10,159
that when you all touch down the next

505
00:21:13,669 --> 00:21:11,919
stop for the endeavor is basically going

506
00:21:16,070 --> 00:21:13,679
to be a museum

507
00:21:17,830 --> 00:21:16,080
yeah it's difficult for us to think of

508
00:21:20,630 --> 00:21:17,840
it that way you know because we're up

509
00:21:22,549 --> 00:21:20,640
here the space station is uh you know

510
00:21:24,470 --> 00:21:22,559
basically assembly complete at this

511
00:21:26,470 --> 00:21:24,480
point and it's almost a million pounds

512
00:21:28,630 --> 00:21:26,480
of hardware it's huge i just uh kind of

513
00:21:29,909 --> 00:21:28,640

like did a video tour the other day and

514

00:21:32,070 --> 00:21:29,919

flew through all the modules there were

515

00:21:33,590 --> 00:21:32,080

12 crew members on board and all these

516

00:21:35,350 --> 00:21:33,600

different modules filled with science

517

00:21:37,029 --> 00:21:35,360

equipment and the shuttle is here and

518

00:21:38,950 --> 00:21:37,039

and you look at it from the cupola in

519

00:21:41,029 --> 00:21:38,960

the station and you see this giant space

520

00:21:42,630 --> 00:21:41,039

shuttle attached at one end it's just

521

00:21:44,470 --> 00:21:42,640

spectacular you know what we have up

522

00:21:45,909 --> 00:21:44,480

here and what we've accomplished up here

523

00:21:47,430 --> 00:21:45,919

and you know the space shuttle looks

524

00:21:49,350 --> 00:21:47,440

like it belongs

525

00:21:51,029 --> 00:21:49,360

right where it is you know this is a

526

00:21:53,029 --> 00:21:51,039

this is a beautiful machine

527

00:21:55,029 --> 00:21:53,039

it performs beautifully and it gets us

528

00:21:58,149 --> 00:21:55,039

up here and brings so much so much

529

00:22:00,310 --> 00:21:58,159

useful uh science and payload orbit and

530

00:22:03,190 --> 00:22:00,320

uh and then back and uh it's gonna be

531

00:22:05,270 --> 00:22:03,200

hard for us to you know to uh put it

532

00:22:07,029 --> 00:22:05,280

away in a museum you know but it'll be

533

00:22:08,710 --> 00:22:07,039

it's it's the end of an era you know and

534

00:22:10,070 --> 00:22:08,720

uh there'll be new vehicles to replace

535

00:22:11,990 --> 00:22:10,080

it and those new vehicles will hopefully

536

00:22:13,430 --> 00:22:12,000

allow us to go beyond low earth orbit

537

00:22:14,630 --> 00:22:13,440

and do new and greater things in the

538

00:22:16,070 --> 00:22:14,640

future so

539

00:22:18,630 --> 00:22:16,080

you know the time has to come at some

540

00:22:21,029 --> 00:22:18,640

point mission specialist greg shamatoff

541

00:22:22,789 --> 00:22:21,039

uh commander mark kelly and mission

542

00:22:24,710 --> 00:22:22,799

specialist and pittsburgh native

543

00:22:26,149 --> 00:22:24,720

endsworth native mike fink hey mike next

544

00:22:28,230 --> 00:22:26,159

time you're back in pittsburgh after the

545

00:22:32,390 --> 00:22:28,240

flight make sure you drop by the kdka

546

00:22:34,870 --> 00:22:33,669

absolutely

547

00:22:36,630 --> 00:22:34,880

we'll certainly

548

00:22:39,029 --> 00:22:36,640

get back to pittsburgh as soon as i can

549

00:22:40,630 --> 00:22:39,039

my parents are still there and we love

550

00:22:42,470 --> 00:22:40,640

coming up it's one of the best cities in

551

00:22:44,390 --> 00:22:42,480

the entire planet you all have a nice

552

00:22:46,390 --> 00:22:44,400

day

553

00:22:48,710 --> 00:22:46,400

endeavor this is houston acr that

554

00:22:50,789 --> 00:22:48,720

concludes the news radio kdka portion of

555

00:22:53,110 --> 00:22:50,799

the event please stand by for a voice

556

00:22:54,870 --> 00:22:53,120

check from ktrk

557

00:22:58,230 --> 00:22:54,880

deborah this is ktrk tv how do you hear

558

00:23:01,270 --> 00:22:59,590

okay you're loud and clear

559

00:23:05,270 --> 00:23:01,280

gentlemen good morning what's it feel

560

00:23:09,590 --> 00:23:07,350

good morning tom well it's always a

561

00:23:11,669 --> 00:23:09,600

great day when you're in orbit around

562

00:23:14,310 --> 00:23:11,679

the earth uh it's been a while you know

563

00:23:16,149 --> 00:23:14,320

for me three years since i was last in

564

00:23:19,190 --> 00:23:16,159

space and really enjoying the flight and

565

00:23:22,470 --> 00:23:21,029

well i know you guys have a lot on tap

566

00:23:23,590 --> 00:23:22,480

for this particular mission with of

567

00:23:25,110 --> 00:23:23,600

course you know you're going to have

568

00:23:26,789 --> 00:23:25,120

another space walk when it comes to

569

00:23:28,710 --> 00:23:26,799

installing that filter inside the the

570

00:23:30,390 --> 00:23:28,720

austin generation system and you've got

571

00:23:32,310 --> 00:23:30,400

a lot of work ahead but is it also kind

572

00:23:33,590 --> 00:23:32,320

of bittersweet knowing that this is it

573

00:23:39,270 --> 00:23:33,600

when it comes to the space shuttle

574

00:23:42,789 --> 00:23:41,430

yeah this is it for endeavor after we

575

00:23:45,830 --> 00:23:42,799

land

576

00:23:47,190 --> 00:23:45,840

back in florida hopefully um

577

00:23:50,870 --> 00:23:47,200

endeavour will

578

00:23:52,870 --> 00:23:50,880

head off to a museum so it's kind of sad

579

00:23:55,029 --> 00:23:52,880

but this mission still i mean we're

580

00:23:57,669 --> 00:23:55,039

halfway through it today

581

00:24:00,230 --> 00:23:57,679

and endeavor has to perform really

582

00:24:02,470 --> 00:24:00,240

really well for us and it has so far

583

00:24:04,710 --> 00:24:02,480

this is an incredible ship we're all

584

00:24:05,510 --> 00:24:04,720

going to be sorry to see them retired

585

00:24:08,230 --> 00:24:05,520

but

586

00:24:11,350 --> 00:24:08,240

we're also looking forward to uh you

587

00:24:13,990 --> 00:24:11,360

know exploration and the united states

588

00:24:15,669 --> 00:24:14,000

and maybe our international partners

589

00:24:17,430 --> 00:24:15,679

going to other destinations like back to

590

00:24:21,269 --> 00:24:17,440

the moon or maybe one day going to mars

591

00:24:24,149 --> 00:24:22,870

well gentlemen we have actually run out

592

00:24:25,590 --> 00:24:24,159

of time this morning we wish you the

593

00:24:27,909 --> 00:24:25,600

best and i know mike you'll be out on

594

00:24:29,590 --> 00:24:27,919

that uh space walk in just a short time

595

00:24:31,029 --> 00:24:29,600

so good luck with that have a great time

596

00:24:34,310 --> 00:24:31,039

in space we'll see when you get back on

597

00:24:38,710 --> 00:24:35,909

all right tom we'll see you then great

598

00:24:42,549 --> 00:24:40,470

endeavor this is the pittsburgh tribune

599

00:24:45,110 --> 00:24:42,559

review how do you hear me

600

00:24:46,390 --> 00:24:45,120

good morning rachel this is uh mike fink

601
00:24:48,230 --> 00:24:46,400
aboard the

602
00:24:51,029 --> 00:24:48,240
space shuttle endeavour we hear you loud

603
00:24:53,669 --> 00:24:51,039
and clear how do you hear us

604
00:24:55,510 --> 00:24:53,679
great hi colonel think i'll start with

605
00:24:57,269 --> 00:24:55,520
you how does it feel to be part of

606
00:25:03,750 --> 00:24:57,279
endeavour's last mission and the second

607
00:25:08,549 --> 00:25:06,310
you know i always you know i was a

608
00:25:09,909 --> 00:25:08,559
little kid back in the berg back in

609
00:25:11,830 --> 00:25:09,919
pittsburgh and i just really always

610
00:25:13,909 --> 00:25:11,840
wanted to fly in the space shuttle and

611
00:25:15,590 --> 00:25:13,919
my nasa career took me to go fly in

612
00:25:17,110 --> 00:25:15,600
space for a whole year

613
00:25:18,710 --> 00:25:17,120

flying with the russians before i had a

614

00:25:20,390 --> 00:25:18,720

chance to fly on the space shuttle and

615

00:25:22,549 --> 00:25:20,400

i'll tell you what it's uh it was worth

616

00:25:24,549 --> 00:25:22,559

the wait endeavour's a beautiful bird

617

00:25:27,029 --> 00:25:24,559

it's taking us

618

00:25:29,510 --> 00:25:27,039

through our mission step by step very

619

00:25:30,789 --> 00:25:29,520

very few problems if any and we're

620

00:25:32,710 --> 00:25:30,799

having a great mission so that's what

621

00:25:34,149 --> 00:25:32,720

i'm concentrating on and sure it's

622

00:25:37,110 --> 00:25:34,159

bittersweet that this is endeavour's

623

00:25:39,909 --> 00:25:37,120

last uh last mission but she's doing

624

00:25:41,669 --> 00:25:39,919

great and she saved her best for last

625

00:25:43,830 --> 00:25:41,679

now i know you've done two space walks

626
00:25:46,149 --> 00:25:43,840
so far um how did they go and can you

627
00:25:48,710 --> 00:25:46,159
tell us a little bit about what you did

628
00:25:51,190 --> 00:25:48,720
certainly our crew has uh done two space

629
00:25:53,830 --> 00:25:51,200
walks so far we have two more to go

630
00:25:55,830 --> 00:25:53,840
the first one we had greg

631
00:25:59,190 --> 00:25:55,840
who's standing right next to me along

632
00:26:02,310 --> 00:25:59,200
with uh with drew feustel and they did

633
00:26:04,549 --> 00:26:02,320
some very important work to take some

634
00:26:06,630 --> 00:26:04,559
science experiments back in and get

635
00:26:09,590 --> 00:26:06,640
ready and help one of our communication

636
00:26:11,990 --> 00:26:09,600
systems uh get an upgrade so to speak

637
00:26:14,230 --> 00:26:12,000
and uh on our second spacewalk we did

638
00:26:16,149 --> 00:26:14,240

some long-term improvements uh for the

639

00:26:18,230 --> 00:26:16,159

space station so that it could last uh

640

00:26:20,390 --> 00:26:18,240

till its planned life of 2020 and

641

00:26:23,669 --> 00:26:20,400

perhaps beyond so tomorrow we're going

642

00:26:25,430 --> 00:26:23,679

to put a uh some some cabling out to

643

00:26:27,750 --> 00:26:25,440

give the russian part of the space

644

00:26:30,950 --> 00:26:27,760

station some more power and on our last

645

00:26:33,590 --> 00:26:30,960

spacewalk dr shamatoff and i will go out

646

00:26:36,070 --> 00:26:33,600

and leave a very long

647

00:26:37,430 --> 00:26:36,080

truss or i guess it's a beam on the

648

00:26:39,750 --> 00:26:37,440

outside that we can pick up with the

649

00:26:41,350 --> 00:26:39,760

robot arm and help inspect the space

650

00:26:43,190 --> 00:26:41,360

station or put a person at the end in

651
00:26:45,029 --> 00:26:43,200
case we need some extra reach so it's

652
00:26:47,909 --> 00:26:45,039
really exciting a lot of things are

653
00:26:51,430 --> 00:26:47,919
going on spacewalks are really tough and

654
00:26:57,110 --> 00:26:51,440
but we got a great crew so we can do it

655
00:27:00,710 --> 00:26:58,789
nice to hear you and a big hello to

656
00:27:04,789 --> 00:27:00,720
everyone back in pittsburgh hey we'd

657
00:27:08,789 --> 00:27:04,799
like to thank the daily news radio kdka

658
00:27:11,510 --> 00:27:08,799
ktrk tv in the pittsburgh tribune review

659
00:27:13,350 --> 00:27:11,520
endeavor we are now resuming operational

660
00:27:15,110 --> 00:27:13,360
audio communications and spanky you

661
00:27:22,070 --> 00:27:15,120
missed a great opportunity to list me as

662
00:27:25,990 --> 00:27:24,230
uh somehow uh scorch that flipped my

663
00:27:27,430 --> 00:27:26,000

mind but you definitely are my hero

664

00:27:29,990 --> 00:27:27,440

you're the you're the wind beneath my

665

00:27:35,669 --> 00:27:32,830

hey i'll be waiting for you when you get

666

00:27:38,230 --> 00:27:35,679

home all right welcome to our flight day

667

00:27:41,110 --> 00:27:38,240

nine highlights uh here's roberto on the

668

00:27:43,110 --> 00:27:41,120

mid deck uh this was a busy day of uh a

669

00:27:45,830 --> 00:27:43,120

lot of work on board the station

670

00:27:46,789 --> 00:27:45,840

and uh here's mark getting some exercise

671

00:27:48,789 --> 00:27:46,799

in

672

00:27:50,789 --> 00:27:48,799

here on the flight deck when uh the

673

00:27:52,630 --> 00:27:50,799

spacewalkers are getting ready for uh

674

00:27:55,269 --> 00:27:52,640

eva the next day

675

00:27:58,149 --> 00:27:55,279

um mark and roberto and i spend a lot of

676

00:28:01,269 --> 00:27:58,159

time this is box talking uh for example

677

00:28:03,830 --> 00:28:01,279

filling cwc there you see a a water bag

678

00:28:07,110 --> 00:28:03,840

it's about a hundred pound water bag now

679

00:28:08,950 --> 00:28:07,120

and it's timed uh to be uh

680

00:28:11,430 --> 00:28:08,960

the fill to be terminated at a

681

00:28:13,990 --> 00:28:11,440

particular time so i'm squeezing out

682

00:28:16,470 --> 00:28:14,000

some video just before the uh the end of

683

00:28:18,950 --> 00:28:16,480

the film

684

00:28:20,950 --> 00:28:18,960

we're uh here you are in from node 2

685

00:28:22,470 --> 00:28:20,960

we're going into the pmm it's a

686

00:28:23,510 --> 00:28:22,480

logistics module

687

00:28:25,269 --> 00:28:23,520

and

688

00:28:27,830 --> 00:28:25,279

this is really conveniently located for

689

00:28:28,950 --> 00:28:27,840

us for uh eva preparation there's mike

690

00:28:31,029 --> 00:28:28,960

and drew

691

00:28:33,110 --> 00:28:31,039

um we're preparing here i was in there

692

00:28:34,789 --> 00:28:33,120

with them earlier this morning this is

693

00:28:36,630 --> 00:28:34,799

greg paz

694

00:28:37,909 --> 00:28:36,640

uh we're setting up free e3 which is

695

00:28:39,750 --> 00:28:37,919

tomorrow

696

00:28:42,070 --> 00:28:39,760

and uh there's a lot of work to prepare

697

00:28:45,430 --> 00:28:42,080

for an evh day the suits have to be

698

00:28:47,669 --> 00:28:45,440

reconfigured and prepared and then we

699

00:28:49,669 --> 00:28:47,679

have a lot of tools to set up and then

700

00:28:51,669 --> 00:28:49,679

all the specific things for the eva uh

701

00:28:53,590 --> 00:28:51,679

this particular spacewalk

702

00:28:55,590 --> 00:28:53,600

uh something that they're handling right

703

00:28:57,909 --> 00:28:55,600

now is setting up

704

00:29:00,549 --> 00:28:57,919

an attachment mechanism for the station

705

00:29:02,470 --> 00:29:00,559

robotic garment uh to be able to to

706

00:29:04,549 --> 00:29:02,480

basically walk off to the russian side

707

00:29:06,789 --> 00:29:04,559

of this uh space station

708

00:29:08,310 --> 00:29:06,799

uh our robotic arm can move from one

709

00:29:11,669 --> 00:29:08,320

place to another

710

00:29:13,590 --> 00:29:11,679

end over end and this will allow us to

711

00:29:15,590 --> 00:29:13,600

use our robotic arm for tasks on the

712

00:29:17,190 --> 00:29:15,600

russian side of the space station so

713

00:29:19,029 --> 00:29:17,200

that's one of the major tasks the other

714

00:29:21,430 --> 00:29:19,039

thing we're doing is setting up some

715

00:29:24,070 --> 00:29:21,440

wiring to give some extra redundancy and

716

00:29:26,630 --> 00:29:24,080

power to the russian side we send power

717

00:29:29,110 --> 00:29:26,640

that direction from our solar rays and

718

00:29:30,630 --> 00:29:29,120

uh some re-wiring will make that uh more

719

00:29:34,149 --> 00:29:30,640

redundant

720

00:29:36,230 --> 00:29:34,159

and box was in there too this morning

721

00:29:38,950 --> 00:29:36,240

yeah roberto and i spent a lot of time

722

00:29:41,430 --> 00:29:38,960

uh milling around among those bags in

723

00:29:42,310 --> 00:29:41,440

the pmm kind of on a reverse easter egg

724

00:29:44,070 --> 00:29:42,320

hunt

725

00:29:46,389 --> 00:29:44,080

we had a big basket of eggs and we're

726

00:29:48,230 --> 00:29:46,399

delivering eggs to the different spots

727

00:29:49,750 --> 00:29:48,240

and i zoomed in on the end cone there

728

00:29:52,470 --> 00:29:49,760

where we were trying to find a real

729

00:29:54,789 --> 00:29:52,480

troublesome bag today there's some two

730

00:29:57,909 --> 00:29:54,799

or three dozen bags in the back of the

731

00:29:59,510 --> 00:29:57,919

pmm and we're able to find it and then

732

00:30:01,029 --> 00:29:59,520

we went across to the other side where

733

00:30:02,789 --> 00:30:01,039

we found taz

734

00:30:04,950 --> 00:30:02,799

busy at work you know he spent six

735

00:30:06,789 --> 00:30:04,960

months on the space station and now he's

736

00:30:10,310 --> 00:30:06,799

using some of his expertise to help the

737

00:30:12,310 --> 00:30:10,320

guys up here while we're visiting

738

00:30:14,070 --> 00:30:12,320

yeah this was a lot of fun uh he's

739

00:30:16,470 --> 00:30:14,080

getting a chance to do some maintenance

740

00:30:18,789 --> 00:30:16,480

get behind the racks i did a lot of this

741

00:30:21,909 --> 00:30:18,799

uh my last expedition

742

00:30:23,830 --> 00:30:21,919

and this particular rack is the ogs

743

00:30:25,590 --> 00:30:23,840

oxygen generation system actually this

744

00:30:28,310 --> 00:30:25,600

is the kind of thing you would use on on

745

00:30:29,750 --> 00:30:28,320

mars uh to the back of the rack as you

746

00:30:32,310 --> 00:30:29,760

can see it's very complicated in there

747

00:30:33,669 --> 00:30:32,320

we uh um here it's giving us back some

748

00:30:36,789 --> 00:30:33,679

additional oxygen

749

00:30:39,110 --> 00:30:36,799

uh we otherwise would be wasting

750

00:30:40,070 --> 00:30:39,120

now you can just see the mid deck

751
00:30:41,350 --> 00:30:40,080
there

752
00:30:43,029 --> 00:30:41,360
the activity going around i think

753
00:30:45,430 --> 00:30:43,039
they've been on the bike now for almost

754
00:30:47,269 --> 00:30:45,440
30 minutes you can see he's starting to

755
00:30:47,990 --> 00:30:47,279
get tired

756
00:30:50,470 --> 00:30:48,000
and

757
00:30:53,350 --> 00:30:50,480
but he is giving instructions even when

758
00:30:56,950 --> 00:30:53,360
he's exercising

759
00:31:00,230 --> 00:30:56,960
completing our uh video of the mid-deck

760
00:31:03,190 --> 00:31:00,240
operations we see mark over here

761
00:31:05,509 --> 00:31:03,200
checking the flight plan on a laptop

762
00:31:07,110 --> 00:31:05,519
and there goes the cwc

763
00:31:09,350 --> 00:31:07,120

the last thing that has to happen is

764

00:31:11,269 --> 00:31:09,360

this thing has to be transferred to the

765

00:31:13,430 --> 00:31:11,279

iss

766

00:31:15,590 --> 00:31:13,440

you see this is technical water with the

767

00:31:16,710 --> 00:31:15,600

green tag

768

00:31:19,990 --> 00:31:16,720

and

769

00:31:21,269 --> 00:31:20,000

off we go to the space station

770

00:31:23,269 --> 00:31:21,279

it's kind of hard to maneuver it with

771

00:31:25,029 --> 00:31:23,279

one hand but there goes the life of a

772

00:31:30,710 --> 00:31:25,039

cwc

773

00:31:37,909 --> 00:31:34,470

and off we go it's kind of a heavy bag

774

00:31:39,509 --> 00:31:37,919

and the arrival of the cwc into the gem

775

00:31:41,750 --> 00:31:39,519

beautiful laboratory oh check out the

776

00:31:43,669 --> 00:31:41,760

keyboard i found the other day

777

00:31:45,190 --> 00:31:43,679

which is a different story

778

00:31:47,110 --> 00:31:45,200

we actually had a band going the other

779

00:31:49,909 --> 00:31:47,120

night before katie left but here's where

780

00:31:52,789 --> 00:31:49,919

the cwc's are and no not down there

781

00:31:55,750 --> 00:31:52,799

you're actually going up here

782

00:31:58,070 --> 00:31:55,760

so thanks drew for the help with the cwc

783

00:31:59,669 --> 00:31:58,080

it's kind of heavy man i'm gonna pass oh

784

00:32:03,110 --> 00:31:59,679

what's that check out this keyboard i

785

00:32:05,509 --> 00:32:03,120

found no you didn't found it i found it

786

00:32:08,870 --> 00:32:05,519

position come on

787

00:32:10,789 --> 00:32:08,880

you haven't played it yet come on

788

00:32:12,630 --> 00:32:10,799

it works though

789

00:32:14,789 --> 00:32:12,640

i've got a couple of good songs that i

790

00:32:15,669 --> 00:32:14,799

uh remembered from before

791

00:32:17,830 --> 00:32:15,679

um

792

00:32:19,350 --> 00:32:17,840

let's see if i can remember ready but

793

00:32:22,549 --> 00:32:19,360

real quickly what happened the other

794

00:32:28,789 --> 00:32:24,870

how's that

795

00:32:30,549 --> 00:32:28,799

that's the preset recording

796

00:32:35,269 --> 00:32:30,559

come on i'm in max q

797

00:32:35,279 --> 00:32:41,269

all right turn off that thing

798

00:32:46,470 --> 00:32:43,750

okay so the other night uh i think we

799

00:32:48,630 --> 00:32:46,480

filmed it uh we had a little concert and

800

00:32:51,029 --> 00:32:48,640

uh box was playing keys katie played the

801
00:32:53,430 --> 00:32:51,039
flute and uh i played guitar and we

802
00:32:54,630 --> 00:32:53,440
played uh brown eyed girl

803
00:32:57,029 --> 00:32:54,640
and i didn't remember a lot of the

804
00:32:58,870 --> 00:32:57,039
chords yeah and and even though i've

805
00:33:00,789 --> 00:32:58,880
sung it for the last 10 years with the

806
00:33:02,950 --> 00:33:00,799
band i forgot the second verse but only

807
00:33:04,870 --> 00:33:02,960
part of it so you know i guess uh that's

808
00:33:06,230 --> 00:33:04,880
what happens in space you know

809
00:33:07,430 --> 00:33:06,240
actually it happens to me on earth too

810
00:33:10,789 --> 00:33:07,440
but

811
00:33:12,950 --> 00:33:10,799
everybody everybody enjoyed it made a

812
00:33:14,870 --> 00:33:12,960
little concert for folks yeah but i

813
00:33:17,990 --> 00:33:14,880

would i was at a loss for where to put

814

00:33:20,950 --> 00:33:18,000

the keyboard and uh so i had it laying

815

00:33:23,110 --> 00:33:20,960

on the deck there on that flat uh

816

00:33:26,549 --> 00:33:23,120

bag and the lap in the lead bag over

817

00:33:28,070 --> 00:33:26,559

there um but uh it was in the way

818

00:33:29,909 --> 00:33:28,080

and so then i realized hey you can put

819

00:33:31,830 --> 00:33:29,919

it on the wall you know and it actually

820

00:33:34,310 --> 00:33:31,840

worked better with those diagonal uh

821

00:33:36,070 --> 00:33:34,320

bungee cords right side down upside

822

00:33:38,710 --> 00:33:36,080

right side up upside down whatever you

823

00:33:40,149 --> 00:33:38,720

want hey fox tell us about this

824

00:33:41,350 --> 00:33:40,159

oh yeah i've been telling them about the

825

00:33:43,269 --> 00:33:41,360

cwc

826
00:33:46,070 --> 00:33:43,279
you know this is the final resting place

827
00:33:47,830 --> 00:33:46,080
place of cwc number six it's full of

828
00:33:50,310 --> 00:33:47,840
water it's full of water man it's got

829
00:33:52,470 --> 00:33:50,320
like 150 pounds of water in it let me

830
00:33:56,389 --> 00:33:52,480
see i can i can that's about what i can

831
00:33:59,590 --> 00:33:56,399
dumbbell it uh yeah yeah that's good

832
00:34:02,310 --> 00:34:00,630
thanks for coming on board the

833
00:34:05,669 --> 00:34:02,320
international space space station on

834
00:34:10,149 --> 00:34:07,430
it's nine a lot of fun you know we uh

835
00:34:11,750 --> 00:34:10,159
the cwc phil's are kind of a mundane

836
00:34:13,109 --> 00:34:11,760
task but it's something that every

837
00:34:14,389 --> 00:34:13,119
shuttle crew gets to do when they come

838
00:34:16,629 --> 00:34:14,399

to the iss

839

00:34:18,550 --> 00:34:16,639

and uh just wanted to glorify the cwc a

840

00:34:19,990 --> 00:34:18,560

little bit today