



1
00:02:38,630 --> 00:01:39,830

you

2
00:02:41,430 --> 00:02:39,430

uh

3
00:02:44,470 --> 00:02:41,440

everything is go here we're just waiting

4
00:02:47,270 --> 00:02:44,480

for the uh cabin pressure to bleed

5
00:03:16,550 --> 00:02:47,280

uh to low enough pressure to open the

6
00:03:22,949 --> 00:03:19,190

houston over

7
00:03:27,030 --> 00:03:24,949

roger we're showing a relatively static

8
00:03:28,630 --> 00:03:27,040

pressure on your cabin

9
00:03:30,149 --> 00:03:28,640

uh do you think you can open the hatch

10
00:03:34,869 --> 00:03:30,159

at this pressure about

11
00:03:50,229 --> 00:03:36,550

we're gonna try it

12
00:03:50,239 --> 00:03:55,990

now the hatch is coming open

13
00:04:00,309 --> 00:03:57,830

okay hold up going close now get the

14

00:04:20,550 --> 00:04:00,319

valve to

15

00:04:34,310 --> 00:04:23,270

hatch reported coming open at 109 hours

16

00:04:34,320 --> 00:04:54,070

correction 109.0735

17

00:05:01,909 --> 00:04:56,629

your window cleared yet the water went

18

00:05:11,350 --> 00:05:03,749

it was yeah

19

00:05:11,360 --> 00:05:17,110

columbia this is houston over

20

00:05:20,950 --> 00:05:19,189

here

21

00:05:24,469 --> 00:05:20,960

columbia this is houston we'd like you

22

00:05:25,749 --> 00:05:24,479

to cycle a fan in cryo hydrogen tank

23

00:05:29,270 --> 00:05:25,759

number one

24

00:05:30,469 --> 00:05:29,280

and lls time this orbit

25

00:05:32,469 --> 00:05:30,479

is

26

00:05:34,070 --> 00:05:32,479

one one one

27

00:05:39,110 --> 00:05:34,080

one niner

28

00:05:42,870 --> 00:05:40,790

correction make that for uh the next

29

00:05:57,029 --> 00:05:42,880

door but you already have the aos for

30

00:05:57,039 --> 00:06:13,590

roger out

31

00:06:13,600 --> 00:06:29,170

so

32

00:06:45,430 --> 00:06:36,090

[Music]

33

00:06:45,440 --> 00:06:54,870

foreign

34

00:06:54,880 --> 00:07:51,180

maybe watermelon

35

00:08:39,670 --> 00:07:58,630

[Music]

36

00:08:50,790 --> 00:08:42,550

they've been on the plss's now for 16

37

00:08:56,550 --> 00:08:53,590

columbia this is houston we show you

38

00:08:59,190 --> 00:08:56,560

nearing high gain antenna scan limits

39

00:09:19,350 --> 00:08:59,200

when you lose lock on us we request omni

40

00:09:37,190 --> 00:09:21,190

we're eight minutes away from loss of

41

00:09:42,790 --> 00:09:40,870

okay my windows cleared i'm gonna go to

42

00:09:55,030 --> 00:09:42,800

my cooling up a little bit or grab my

43

00:09:55,040 --> 00:10:00,630

all rcu windows are clear

44

00:10:10,610 --> 00:10:02,389

six circuit is

45

00:10:10,620 --> 00:10:24,230

[Music]

46

00:10:24,240 --> 00:10:38,870

area

47

00:10:45,090 --> 00:10:42,630

neil armstrong suit pressure four points

48

00:10:49,670 --> 00:10:45,100

right there

49

00:10:53,350 --> 00:10:51,350

okay

50

00:10:55,190 --> 00:10:53,360

so i called pop secondary circuit

51
00:10:59,590 --> 00:10:55,200
breaker open

52
00:11:06,389 --> 00:11:02,230
i have to lean this way

53
00:11:06,399 --> 00:11:16,350
my cabin ban one is uh

54
00:11:16,360 --> 00:11:21,750
[Music]

55
00:11:28,710 --> 00:11:23,590
it's open

56
00:11:36,660 --> 00:11:30,870
okay

57
00:11:36,670 --> 00:11:43,590
[Music]

58
00:11:46,310 --> 00:11:45,030
well i'm looking ahead i'm at it i'll

59
00:11:49,720 --> 00:11:46,320
get it

60
00:11:49,730 --> 00:12:06,150
[Music]

61
00:12:10,480 --> 00:12:08,230
and now we're ready to hook up the led

62
00:12:25,990 --> 00:12:10,490
here

63
00:12:28,790 --> 00:12:26,000

[Music]

64

00:12:31,670 --> 00:12:28,800

all right that should go down

65

00:12:34,870 --> 00:12:31,680

they would not twist now

66

00:12:37,460 --> 00:12:34,880

but the bag up this way

67

00:12:51,590 --> 00:12:37,470

that's even

68

00:12:51,600 --> 00:13:00,920

okay your visor

69

00:13:10,389 --> 00:13:03,190

[Music]

70

00:13:14,790 --> 00:13:12,790

right now it's on top of the drift

71

00:13:16,790 --> 00:13:14,800

forward

72

00:13:21,160 --> 00:13:16,800

now you're clear

73

00:13:45,269 --> 00:13:28,000

[Music]

74

00:13:45,279 --> 00:13:53,350

roll to the left

75

00:13:59,670 --> 00:13:56,710

your left foot to the right a little bit

76

00:14:04,240 --> 00:14:01,990

all that

77

00:14:04,240 --> 00:14:04,250

yep

78

00:14:04,250 --> 00:14:07,829

[Music]

79

00:14:12,250 --> 00:14:10,629

okay now i'm going to check

80

00:14:18,069 --> 00:14:12,260

the pass here

81

00:14:22,629 --> 00:14:20,710

okay not quite squared away

82

00:14:26,470 --> 00:14:22,639

all to the

83

00:14:31,990 --> 00:14:27,590

there even

84

00:14:37,990 --> 00:14:33,829

got plenty of room for your left

85

00:14:38,000 --> 00:14:41,350

back

86

00:14:41,360 --> 00:14:47,960

how am i doing you're doing fine

87

00:14:47,970 --> 00:15:04,710

[Music]

88

00:15:04,720 --> 00:15:14,710

okay you want this bag

89

00:15:22,240 --> 00:15:16,400

got it

90

00:15:33,350 --> 00:15:29,910

[Music]

91

00:15:36,260 --> 00:15:33,360

okay houston i'm on the porch

92

00:15:50,310 --> 00:15:36,270

roger nail

93

00:15:52,389 --> 00:15:50,320

[Music]

94

00:15:55,030 --> 00:15:52,399

columbia columbia this is houston one

95

00:15:59,509 --> 00:15:55,040

minute 30 seconds to llx all systems go

96

00:16:01,829 --> 00:16:00,710

there

97

00:16:05,560 --> 00:16:01,839

okay

98

00:16:05,570 --> 00:16:28,230

[Music]

99

00:16:33,890 --> 00:16:30,870

neil armstrong on the porch at 109 hours

100

00:17:01,509 --> 00:16:33,900

19 minutes 16 seconds

101
00:17:08,870 --> 00:17:01,519

[Music]

102
00:17:11,590 --> 00:17:10,390

okay everything's nice and straight in

103
00:17:21,270 --> 00:17:11,600

here

104
00:17:36,390 --> 00:17:24,400

i'm gonna pull it down

105
00:17:57,669 --> 00:17:38,470

roger we copy and we're standing by for

106
00:18:02,549 --> 00:17:59,909

loud and clear break break buzz this is

107
00:18:07,430 --> 00:18:02,559

houston uh radio check and verify tv

108
00:18:07,440 --> 00:18:14,070

azure tv certificate

109
00:18:14,080 --> 00:18:17,270

rogers

110
00:18:17,280 --> 00:18:24,630

and we're getting a picture on the tv

111
00:18:27,669 --> 00:18:26,549

uh there's a great deal of contrast in

112
00:18:29,190 --> 00:18:27,679

it and

113
00:18:31,029 --> 00:18:29,200

currently it's upside down on our

114

00:18:41,430 --> 00:18:31,039

monitor but we can make out a fair

115

00:18:45,909 --> 00:18:44,230

okay we can verify the position uh

116

00:19:01,990 --> 00:18:45,919

the opening i ought to have on the

117

00:19:12,150 --> 00:19:03,750

okay neil we can see you coming down the

118

00:19:16,950 --> 00:19:14,789

okay i just checked uh

119

00:19:19,029 --> 00:19:16,960

getting back up in that first step so

120

00:19:24,710 --> 00:19:19,039

it's

121

00:19:41,150 --> 00:19:24,720

adequate to get back up roger we copy

122

00:19:45,430 --> 00:19:43,590

[Music]

123

00:19:49,110 --> 00:19:45,440

for shadow photography on the sequence

124

00:19:53,510 --> 00:19:51,029

okay

125

00:19:57,029 --> 00:19:53,520

um at the foot of the ladder

126

00:19:57,990 --> 00:19:57,039

the lamb footbeds are only uh

127

00:20:01,029 --> 00:19:58,000

uh

128

00:20:02,789 --> 00:20:01,039

depressed in the surface about

129

00:20:07,110 --> 00:20:02,799

one or two inches

130

00:20:12,870 --> 00:20:09,909

very very fine-grained as you get close

131

00:20:14,310 --> 00:20:12,880

to it it's almost like a powder

132

00:20:27,190 --> 00:20:14,320

sound mass

133

00:20:27,200 --> 00:20:38,390

now now step off the lamb now

134

00:20:38,400 --> 00:20:43,430

that's one small step for man

135

00:21:01,590 --> 00:20:44,470

one

136

00:21:01,600 --> 00:21:04,789

as the

137

00:21:08,789 --> 00:21:07,909

surface is fine and powdery i can

138

00:21:11,909 --> 00:21:08,799

i can

139

00:21:13,029 --> 00:21:11,919

pick it up loosely with my toe

140

00:21:16,390 --> 00:21:13,039

it does

141

00:21:20,070 --> 00:21:16,400

adhere in fine layers uh

142

00:21:25,350 --> 00:21:20,080

like body charcoal to the uh

143

00:21:29,909 --> 00:21:28,149

i only go in a

144

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

small fraction of an inch maybe an

145

00:21:33,510 --> 00:21:32,080

eighth of an inch but i can see

146

00:21:36,470 --> 00:21:33,520

the footprints

147

00:21:37,909 --> 00:21:36,480

of my uh boots and the trench

148

00:21:39,270 --> 00:21:37,919

in the

149

00:21:43,590 --> 00:21:39,280

iron

150

00:21:43,600 --> 00:21:58,470

hey this is houston we're copying

151
00:22:02,310 --> 00:22:00,470
uh

152
00:22:03,990 --> 00:22:02,320
there seems to be no difficulty in

153
00:22:06,789 --> 00:22:04,000
moving around as

154
00:22:07,909 --> 00:22:06,799
as we suspected uh

155
00:22:10,149 --> 00:22:07,919
it's even

156
00:22:13,510 --> 00:22:10,159
perhaps easier than the simulations of

157
00:22:15,110 --> 00:22:13,520
160 that we performed

158
00:22:18,789 --> 00:22:15,120
in various

159
00:22:18,799 --> 00:22:22,149
absolutely no trouble to

160
00:22:22,159 --> 00:22:30,630
walk around

161
00:22:30,640 --> 00:22:33,510
okay the uh

162
00:22:38,390 --> 00:22:35,990
defend engine did not leave a crater of

163
00:22:40,310 --> 00:22:38,400

any size it

164

00:22:42,230 --> 00:22:40,320

has about one foot clearance on the

165

00:22:43,830 --> 00:22:42,240

ground we're uh it's actually on a very

166

00:22:46,149 --> 00:22:43,840

little place here

167

00:22:52,230 --> 00:22:49,590

i can see uh some evidence of uh

168

00:22:54,470 --> 00:22:52,240

of rays emanating from the defend engine

169

00:23:19,750 --> 00:22:54,480

but

170

00:23:23,669 --> 00:23:21,830

okay you'll have to pay out all the led

171

00:23:26,789 --> 00:23:23,679

that looks like it's coming out nice and

172

00:23:30,789 --> 00:23:28,870

okay it's uh

173

00:23:32,390 --> 00:23:30,799

quite dark here in the shadow a little

174

00:23:33,750 --> 00:23:32,400

hard for me to see that i have good

175

00:23:36,470 --> 00:23:33,760

footing

176
00:23:38,310 --> 00:23:36,480
i'll work my way over into the

177
00:23:41,990 --> 00:23:38,320
sunlight here without

178
00:23:42,000 --> 00:23:52,710
okay it's taut now

179
00:24:08,870 --> 00:23:54,630
unofficial time on the first step

180
00:24:14,710 --> 00:24:09,909
okay

181
00:24:16,950 --> 00:24:14,720
was still a little bit uh left in the

182
00:24:22,460 --> 00:24:16,960
okay don't hold it quite so tight

183
00:24:22,470 --> 00:24:30,950
[Music]

184
00:24:35,669 --> 00:24:33,909
uh looking up at the lamb uh i'm

185
00:24:41,269 --> 00:24:35,679
standing directly in the shadow now

186
00:24:45,029 --> 00:24:43,430
and i can see everything quite clearly

187
00:24:46,950 --> 00:24:45,039
the light is

188
00:24:48,870 --> 00:24:46,960

sufficiently

189

00:24:50,710 --> 00:24:48,880

bright backlighted into the front of the

190

00:25:00,290 --> 00:24:50,720

limb but everything is very clearly

191

00:25:00,300 --> 00:25:09,110

[Music]

192

00:25:53,320 --> 00:25:12,230

okay i'm gonna be changing it up

193

00:26:36,870 --> 00:26:01,230

[Music]

194

00:26:42,950 --> 00:26:38,789

surgeon says that we're installed on the

195

00:26:47,430 --> 00:26:45,190

surgeon says the crew is doing well data

196

00:26:49,510 --> 00:26:47,440

is good crew is doing well

197

00:26:57,510 --> 00:26:49,520

i'm still in the lec on the secondary

198

00:27:19,750 --> 00:27:06,789

so

199

00:27:23,750 --> 00:27:21,669

all right your neil we're reading you

200

00:27:25,350 --> 00:27:23,760

loud and clear

201

00:27:43,110 --> 00:27:25,360

getting some pictures and the

202

00:28:35,510 --> 00:27:45,830

35 and a half minutes of plss time

203

00:28:35,520 --> 00:28:40,230

about the contingency sample over

204

00:28:43,750 --> 00:28:41,350

all right you're going to get to that

205

00:29:06,470 --> 00:28:43,760

just be sure by finishing uh

206

00:29:06,480 --> 00:29:39,269

so

207

00:30:13,029 --> 00:29:40,950

okay going to get the contingent example

208

00:30:17,269 --> 00:30:16,070

okay the contingency sample is down and

209

00:30:17,990 --> 00:30:17,279

it's

210

00:30:23,269 --> 00:30:18,000

up

211

00:30:27,750 --> 00:30:25,190

like it's a little difficult to dig

212

00:30:29,510 --> 00:30:27,760

through the uh

213

00:30:31,350 --> 00:30:29,520

very interesting it's a very soft

214

00:30:33,190 --> 00:30:31,360

surface but uh here and there where i

215

00:30:34,870 --> 00:30:33,200

plug with the

216

00:30:37,669 --> 00:30:34,880

contingency sample

217

00:30:38,549 --> 00:30:37,679

collector i run into

218

00:30:47,909 --> 00:30:38,559

a

219

00:30:51,909 --> 00:30:47,919

very cohesive

220

00:30:51,919 --> 00:30:56,470

i try to get a rock in here

221

00:30:56,480 --> 00:31:08,149

a couple

222

00:31:12,789 --> 00:31:10,230

oh that looks beautiful

223

00:31:15,909 --> 00:31:12,799

it has a stark beauty all its own it's

224

00:31:17,669 --> 00:31:15,919

uh like much of the high desert of

225

00:31:20,700 --> 00:31:17,679

the united states it's

226

00:31:23,350 --> 00:31:20,710

different but it's very pretty out here

227

00:31:27,350 --> 00:31:23,360

[Music]

228

00:31:30,389 --> 00:31:28,630

a lot of the

229

00:31:33,269 --> 00:31:30,399

rock samples got here the hard rock

230

00:31:37,269 --> 00:31:33,279

samples have what appear to be vesicles

231

00:31:40,630 --> 00:31:39,350

also i'm looking at one now that appears

232

00:31:45,110 --> 00:31:40,640

to have some

233

00:31:45,120 --> 00:31:57,029

houston roger up

234

00:31:57,039 --> 00:32:13,190

okay the handle about the

235

00:32:15,909 --> 00:32:15,110

i'm sure i could push it in further but

236

00:32:17,669 --> 00:32:15,919

uh

237

00:32:21,509 --> 00:32:17,679

it's hard for me to pin down farther

238

00:32:25,509 --> 00:32:23,110

damn it didn't say you could throw

239

00:32:34,549 --> 00:32:25,519

something really throwing things away

240

00:32:34,559 --> 00:32:55,029

so

241

00:33:05,830 --> 00:32:57,509

towards the inside

242

00:33:05,840 --> 00:33:16,950

in the pocket uh yeah push down

243

00:33:16,960 --> 00:33:25,750

there you go

244

00:33:29,990 --> 00:33:27,669

my

245

00:33:31,430 --> 00:33:30,000

oxygen is 81

246

00:33:35,830 --> 00:33:31,440

i have no

247

00:33:35,840 --> 00:33:54,870

this is houston roger neal

248

00:34:07,430 --> 00:33:56,789

okay i got the camera going at one frame

249

00:34:07,440 --> 00:34:17,349

and i've got eight zero percent no flank

250

00:34:20,230 --> 00:34:18,829

are you getting a tv

251

00:34:38,470 --> 00:34:20,240

picture justin

252

00:34:41,669 --> 00:34:39,909

we're getting a picture you're not in at

253

00:34:43,829 --> 00:34:41,679

the present time we can see the bag on

254

00:34:58,870 --> 00:34:43,839

the led being moved by buzz though here

255

00:34:58,880 --> 00:35:19,990

over the handrail

256

00:35:20,000 --> 00:35:24,069

okay all right that's got it

257

00:35:32,150 --> 00:35:26,310

are you ready

258

00:35:37,510 --> 00:35:34,630

okay you saw what difficulties i was

259

00:35:58,950 --> 00:35:37,520

having i'll try to watch your place from

260

00:35:58,960 --> 00:36:06,870

all right the backup camera is uh

261

00:36:10,470 --> 00:36:08,870

okay your purses looks like it's clear

262

00:36:12,150 --> 00:36:10,480

and okay

263

00:36:17,990 --> 00:36:12,160

the doors are about to come over the

264

00:36:22,470 --> 00:36:19,990

okay now drop your bliss down there you

265

00:36:23,430 --> 00:36:22,480

go you're clear

266

00:36:25,990 --> 00:36:23,440

and

267

00:36:31,750 --> 00:36:26,000

laterally you're good

268

00:36:51,030 --> 00:36:33,990

okay you need a little bit of

269

00:36:51,040 --> 00:37:01,589

movement

270

00:37:01,599 --> 00:37:12,310

without any trouble at all that's good

271

00:37:12,320 --> 00:37:22,870

45 minutes plss time expanded

272

00:37:26,630 --> 00:37:24,710

neil this is houston based on your

273

00:37:38,310 --> 00:37:26,640

camera transfer with the lec do you

274

00:37:44,230 --> 00:37:40,470

that's the sample return containers the

275

00:38:02,310 --> 00:37:44,240

rock boxes that capcom i want to

276

00:38:02,320 --> 00:38:07,510

making sure not to lock it on my way out

277

00:38:07,520 --> 00:38:10,710

particularly good thought

278

00:38:17,510 --> 00:38:12,550

it's our home for the next couple hours

279

00:38:22,150 --> 00:38:19,430

okay i'm on the top step and i can look

280

00:38:27,030 --> 00:38:22,160

down over the rcu and

281

00:38:35,510 --> 00:38:29,030

that's a very simple matter to hop down

282

00:38:35,520 --> 00:38:41,430

is also very comfortable

283

00:39:00,390 --> 00:38:43,670

but you're on you've got three more

284

00:39:00,400 --> 00:39:04,790

both hands down about the fourth rung up

285

00:39:04,800 --> 00:39:07,829

there you go

286

00:39:07,839 --> 00:39:15,030

up you know i think i'll go to sleep

287

00:39:19,670 --> 00:39:16,310

a little more

288

00:39:38,230 --> 00:39:21,109

there you got it

289

00:39:38,240 --> 00:39:54,150

magnificent desolation

290

00:39:54,160 --> 00:40:02,390

both plss is nominal on consumables

291

00:40:06,550 --> 00:40:03,670

looks like the

292

00:40:08,309 --> 00:40:06,560

secondary strut

293

00:40:38,309 --> 00:40:08,319

have little thermal effects on it right

294

00:40:42,390 --> 00:40:40,630

hey you can

295

00:41:09,430 --> 00:40:42,400

take it out

296

00:41:14,710 --> 00:41:11,349

reaching down just

297

00:41:14,720 --> 00:41:26,550

get my suit dirty at this stage

298

00:41:44,710 --> 00:41:29,190

the mass of the backpack

299

00:41:50,390 --> 00:41:47,190

there's a slight dependency

300

00:41:50,400 --> 00:41:53,109

backwards

301

00:41:53,119 --> 00:41:58,710

due to the soft uh very soft

302

00:42:01,670 --> 00:41:59,910

mixture

303

00:42:27,190 --> 00:42:01,680

you're standing on a rock big rock there

304

00:42:31,990 --> 00:42:28,829

i wonder

305

00:42:35,910 --> 00:42:32,000

if right under the engine is good or

306

00:42:35,920 --> 00:42:39,349

i like that

307

00:42:47,340 --> 00:42:40,950

yeah that's i think that's a good

308

00:42:47,350 --> 00:42:57,349

[Music]

309

00:42:57,359 --> 00:43:18,790

another two boat stand over

310

00:43:22,550 --> 00:43:20,950

can't save too much for the reserve

311

00:43:35,190 --> 00:43:22,560

for the visibility right here without

312

00:43:35,200 --> 00:43:42,550

rod

313

00:43:55,349 --> 00:43:46,150

and uh incidentally these rocks are

314

00:44:00,150 --> 00:43:57,589

say again please buzz you're cutting out

315

00:44:00,160 --> 00:44:05,109

i say that the rocks are rather slippery

316

00:44:08,630 --> 00:44:06,390

so just

317

00:44:11,190 --> 00:44:08,640

very powdery

318

00:44:13,910 --> 00:44:11,200

purpose uh when it's on there

319

00:44:17,829 --> 00:44:13,920

let's pull up all the uh very little

320

00:44:31,030 --> 00:44:19,670

they'll tend to slide over it rather

321

00:44:35,910 --> 00:44:33,670

neil armstrong getting ready to move the

322

00:44:39,910 --> 00:44:35,920

tv camera now out to its panorama

323

00:44:39,920 --> 00:44:54,470

traction seems quite good

324

00:44:58,550 --> 00:44:56,470

start to lose my balance in one

325

00:45:08,550 --> 00:44:58,560

direction and recovery is

326

00:45:12,150 --> 00:45:10,790

and moving your arms around jack doesn't

327

00:45:14,470 --> 00:45:12,160

uh

328

00:45:20,069 --> 00:45:14,480

drop the surface

329

00:45:27,750 --> 00:45:22,470

and i have the insulation off the mesa

330

00:45:30,790 --> 00:45:29,030

you have to be careful that you're

331

00:45:34,150 --> 00:45:30,800

leaning in the direction you want to go

332

00:45:34,160 --> 00:45:38,950

slightly handy

333

00:45:42,630 --> 00:45:40,710

or if you have to cross your foot over

334

00:45:56,470 --> 00:45:42,640

to stay underneath where your

335

00:45:56,480 --> 00:46:04,470

find a purple rock nope

336

00:46:04,480 --> 00:46:09,589

very small sparkly uh

337

00:46:23,349 --> 00:46:11,510

magnets are

338

00:46:23,359 --> 00:46:30,870

biotype

339

00:46:53,910 --> 00:46:33,109

we'll leave that to the

340

00:47:11,589 --> 00:46:54,829

more

341

00:47:16,630 --> 00:47:15,030

biotite is a brown mica substance

342

00:47:33,109 --> 00:47:16,640

okay houston i'm going to change

343

00:47:45,589 --> 00:47:35,109

life support consumables still looking

344

00:47:50,470 --> 00:47:48,549

okay houston tell me

345

00:47:52,069 --> 00:47:50,480

get a new picture

346

00:47:53,670 --> 00:47:52,079

nail this is houston that's affirmative

347

00:47:56,069 --> 00:47:53,680

we're getting a new picture you can tell

348

00:47:57,829 --> 00:47:56,079

it's a longer focal length lens

349

00:48:02,790 --> 00:47:57,839

and for your information all limb

350

00:48:02,800 --> 00:48:42,069

they appreciate that thank you

351

00:48:42,079 --> 00:48:56,309

roger we've got you four-sided but uh

352

00:49:01,349 --> 00:48:59,109

for those who haven't read the plaque uh

353

00:49:03,670 --> 00:49:01,359

we'll read the plaque that's on the

354

00:49:04,870 --> 00:49:03,680

landing gear of islam

355

00:49:09,030 --> 00:49:04,880

there's

356

00:49:13,030 --> 00:49:09,040

two hemispheres one showing

357

00:49:17,510 --> 00:49:15,190

underneath it says

358

00:49:19,990 --> 00:49:17,520

airmen from the planet earth

359

00:49:22,790 --> 00:49:20,000

first set foot upon the moon

360

00:49:24,230 --> 00:49:22,800

july 1969

361

00:49:27,910 --> 00:49:24,240

80.

362

00:49:28,829 --> 00:49:27,920

he came in peace with all mankind

363

00:49:31,990 --> 00:49:28,839

it has

364

00:49:33,670 --> 00:49:32,000

the crew members signatures and the

365

00:49:51,030 --> 00:49:33,680

signature of the

366

00:49:51,040 --> 00:49:54,309

ready for the camera

367

00:49:54,319 --> 00:50:00,230

i get it

368

00:50:00,240 --> 00:50:08,549

watch the led vents

369

00:50:08,559 --> 00:50:21,589

i'm afraid these uh mod materials are

370

00:50:21,599 --> 00:50:35,829

yeah surface material uh

371

00:50:35,839 --> 00:50:44,470

above

372

00:50:51,670 --> 00:50:48,390

very much like a very finely powdered

373

00:51:14,870 --> 00:50:52,470

but

374

00:51:20,150 --> 00:51:17,750

are you able to get things in focus

375

00:51:21,349 --> 00:51:20,160

this is houston we can see a buzz right

376
00:51:24,470 --> 00:51:21,359
hand

377
00:51:26,549 --> 00:51:24,480
it's somewhat out of focus

378
00:51:28,069 --> 00:51:26,559
i'd say we were focusing down to

379
00:51:29,750 --> 00:51:28,079
probably about

380
00:51:31,190 --> 00:51:29,760
eight inches to a foot behind the

381
00:51:36,790 --> 00:51:31,200
position of his hand when he was pulling

382
00:51:42,950 --> 00:51:40,150
okay have the temperature look on there

383
00:51:47,510 --> 00:51:42,960
aperture the camera is showing

384
00:51:47,520 --> 00:51:58,240
i'm a little cool and then color

385
00:52:16,829 --> 00:52:12,830
[Music]

386
00:52:16,839 --> 00:52:29,829
location elevation camera

387
00:52:32,870 --> 00:52:30,870
let's

388
00:52:35,270 --> 00:52:32,880

look at the minus of

389

00:52:37,990 --> 00:52:35,280

my stress

390

00:52:41,030 --> 00:52:38,000

the direction of travel there

391

00:52:43,030 --> 00:52:41,040

that was from uh right to left right so

392

00:52:51,829 --> 00:52:43,040

this one over here underneath the uh

393

00:53:03,270 --> 00:52:54,230

i got plenty of cable you got money

394

00:53:08,470 --> 00:53:06,870

okay i think i got the end of it

395

00:53:12,710 --> 00:53:08,480

something interesting in the bottom of

396

00:53:17,750 --> 00:53:15,349

maybe uh

397

00:53:19,030 --> 00:53:17,760

i keep going we got we got a lot more

398

00:53:39,670 --> 00:53:19,040

okay

399

00:53:44,309 --> 00:53:41,430

if you stand on the ladder facing

400

00:53:49,030 --> 00:53:44,319

forward the minus y strut is the landing

401
00:53:53,349 --> 00:53:51,109
40 50 feet why don't you turn around and

402
00:54:08,950 --> 00:53:53,359
let's step

403
00:54:13,109 --> 00:54:10,630
sun if i can afford it

404
00:54:14,390 --> 00:54:13,119
okay i guess

405
00:54:15,270 --> 00:54:14,400
i'll just leave it

406
00:54:21,750 --> 00:54:15,280
all right

407
00:54:21,760 --> 00:54:36,870
i've just denied that field

408
00:54:40,870 --> 00:54:39,270
houston the field of view is okay we'd

409
00:54:45,270 --> 00:54:40,880
like you to aim it a little bit more to

410
00:54:56,150 --> 00:54:48,150
okay

411
00:54:59,910 --> 00:54:57,750
a little bit too much to the right can

412
00:55:06,710 --> 00:54:59,920
you bring it back left about four or

413
00:55:06,720 --> 00:55:11,510

okay that looks good neil

414

00:55:15,670 --> 00:55:13,510

okay now uh

415

00:55:16,630 --> 00:55:15,680

i think that'll be farther away or

416

00:55:20,789 --> 00:55:16,640

closer

417

00:55:28,950 --> 00:55:23,430

let's uh try it like that for a while

418

00:55:32,789 --> 00:55:30,710

uh roger you look okay as far as

419

00:55:43,829 --> 00:55:32,799

distance goes neil and we'll line you up

420

00:55:43,839 --> 00:56:00,789

i haven't stopped

421

00:56:07,910 --> 00:56:03,030

oh

422

00:56:14,309 --> 00:56:09,829

tell me if you got a picture here

423

00:56:14,319 --> 00:56:25,829

okay i'm gonna move it

424

00:56:25,839 --> 00:56:39,510

okay there's another good one

425

00:56:39,520 --> 00:56:45,670

okay we've got that one

426
00:56:49,030 --> 00:56:47,589
okay now this one's right

427
00:56:50,630 --> 00:56:49,040
down some

428
00:56:53,109 --> 00:56:50,640
big west

429
00:56:55,190 --> 00:56:53,119
uh and i want to know if you can see an

430
00:56:57,990 --> 00:56:55,200
angular rock

431
00:57:00,230 --> 00:56:58,000
in the foreground roger we have a large

432
00:57:02,470 --> 00:57:00,240
triangular rock in the foreground that

433
00:57:07,670 --> 00:57:02,480
looks like a a much smaller rock a

434
00:57:16,390 --> 00:57:10,150
all right now on beyond about 10 feet is

435
00:57:21,430 --> 00:57:19,270
that rock is about the closest one to

436
00:57:23,510 --> 00:57:21,440
you is about sticking out of the

437
00:57:25,670 --> 00:57:23,520
the sand about

438
00:57:27,829 --> 00:57:25,680

one foot it's about a foot and a half

439

00:57:29,109 --> 00:57:27,839

long and it's about six inches

440

00:57:42,549 --> 00:57:29,119

uh

441

00:57:46,309 --> 00:57:44,230

danielle i've got the

442

00:57:48,789 --> 00:57:46,319

table out

443

00:57:58,789 --> 00:57:48,799

the back part

444

00:57:58,799 --> 00:58:01,510

face out

445

00:58:07,109 --> 00:58:04,150

roger and we see the shadow of the limb

446

00:58:09,829 --> 00:58:09,109

hills just beyond the shadow of the limb

447

00:58:11,030 --> 00:58:09,839

uh

448

00:58:14,470 --> 00:58:11,040

is a

449

00:58:16,950 --> 00:58:14,480

a pair of elongated craters uh

450

00:58:20,390 --> 00:58:16,960

that the probably the pair together is

451

00:58:22,549 --> 00:58:20,400

40 feet long and 20 feet across and

452

00:58:41,270 --> 00:58:22,559

they're probably 60 people probably get

453

00:58:53,349 --> 00:58:43,270

uh for a final orientation we'd like it

454

00:58:53,359 --> 00:58:58,230

uh back to the right about half as much

455

00:59:23,190 --> 00:59:09,990

okay

456

00:59:23,200 --> 00:59:35,589

one hour seven minutes time expended

457

00:59:35,599 --> 00:59:40,150

okay you can make a heart juice for me

458

00:59:40,160 --> 00:59:52,470

i just want one

459

01:00:06,549 --> 00:59:55,030

and incidentally you can use the shadow

460

01:00:21,670 --> 01:00:08,309

buzz is erecting the solar wind

461

01:00:21,680 --> 01:00:40,870

some of these uh small depressions uh

462

01:00:44,390 --> 01:00:42,710

a little bit you can

463

01:00:46,309 --> 01:00:44,400

force

464

01:00:48,230 --> 01:00:46,319

transmitted

465

01:00:51,190 --> 01:00:48,240

through the upper surface of the soil

466

01:00:53,349 --> 01:00:51,200

and about five or six inches of bay it

467

01:00:56,069 --> 01:00:53,359

breaks loose and uh

468

01:00:59,589 --> 01:00:56,079

moves as if it were caked on the surface

469

01:01:04,630 --> 01:01:01,750

i notice in the sauce parts where we

470

01:01:07,349 --> 01:01:04,640

have footprints uh nearly an inch deep

471

01:01:10,789 --> 01:01:07,359

but the soil is very cohesive and it

472

01:02:17,430 --> 01:01:10,799

will retain a

473

01:02:17,440 --> 01:02:45,510

all limb systems still looking good

474

01:02:45,520 --> 01:02:55,190

okay

475

01:02:55,200 --> 01:03:03,670

then come on

476

01:03:03,680 --> 01:03:34,710

oh

477

01:03:34,720 --> 01:04:02,789

set up a rocker

478

01:04:02,799 --> 01:04:21,270

okay i'll have to extend that one

479

01:04:41,510 --> 01:04:23,750

columbia columbia this is houston als

480

01:05:26,789 --> 01:04:43,029

neil armstrong has been on the lunar

481

01:05:31,829 --> 01:05:28,950

yeah radio van clear how's it going

482

01:05:33,670 --> 01:05:31,839

roger the eva is progressing beautifully

483

01:05:37,589 --> 01:05:33,680

i believe they're setting up the flag

484

01:05:37,599 --> 01:05:42,470

great

485

01:05:45,589 --> 01:05:43,910

i guess you're about the only person

486

01:05:58,470 --> 01:05:45,599

around that doesn't have tv coverage of

487

01:05:58,480 --> 01:06:06,390

oh it's beautiful mike really is

488

01:06:39,109 --> 01:06:08,309

yes indeed they've got the flag up now

489

01:06:39,119 --> 01:06:42,870

what's up

490

01:06:42,880 --> 01:06:55,990

you can pull that in awful

491

01:06:56,000 --> 01:07:02,710

it won't go up

492

01:07:02,720 --> 01:08:45,829

okay

493

01:08:45,839 --> 01:08:50,709

snail this is houston radio check over

494

01:08:57,660 --> 01:08:53,110

all right you're used to loud and clear

495

01:09:24,630 --> 01:09:10,309

[Music]

496

01:09:33,309 --> 01:09:25,920

so

497

01:09:33,319 --> 01:09:39,030

[Music]

498

01:09:42,070 --> 01:09:39,829

i'd

499

01:09:45,430 --> 01:09:42,080

like to evaluate the

500

01:09:46,829 --> 01:09:45,440

various spaces that a person can

501
01:09:49,269 --> 01:09:46,839
babbling on the

502
01:09:52,470 --> 01:09:49,279
surface i believe i'm out of your field

503
01:10:01,510 --> 01:09:52,480
of view is that right crown houston

504
01:10:06,229 --> 01:10:03,830
you're in our field of view now

505
01:10:08,310 --> 01:10:06,239
you have to deal with him all right you

506
01:10:10,470 --> 01:10:08,320
do have to be uh

507
01:10:13,189 --> 01:10:10,480
rather careful uh to keep track of where

508
01:10:22,590 --> 01:10:13,199
your center of mass is

509
01:10:42,709 --> 01:10:31,690
[Music]

510
01:10:42,719 --> 01:10:49,430
directions

511
01:10:49,440 --> 01:11:03,189
cut a little bit

512
01:11:07,350 --> 01:11:05,430
so-called kangaroo hop

513
01:11:08,470 --> 01:11:07,360

doesn't work for the theme of your

514

01:11:11,350 --> 01:11:08,480

forward

515

01:11:13,750 --> 01:11:11,360

ability is not quite as good

516

01:11:15,750 --> 01:11:13,760

as it is in the conventional working

517

01:11:23,150 --> 01:11:15,760

mansion

518

01:11:23,160 --> 01:11:36,790

[Music]

519

01:11:36,800 --> 01:11:41,030

now

520

01:11:49,350 --> 01:11:44,070

would get rather tiring after

521

01:11:57,430 --> 01:11:52,550

but this may be a function of the suit

522

01:11:57,440 --> 01:12:08,200

lack of gravity

523

01:12:12,709 --> 01:12:11,189

[Music]

524

01:12:14,310 --> 01:12:12,719

all right tranquility base this is

525

01:12:35,590 --> 01:12:14,320

houston can we get both of you on the

526

01:12:39,750 --> 01:12:37,830

the president of the united states is in

527

01:12:47,270 --> 01:12:39,760

his office now and would like to say a

528

01:12:51,110 --> 01:12:49,350

that would be an honor

529

01:12:53,270 --> 01:12:51,120

go ahead mr president this is houston

530

01:12:55,910 --> 01:12:53,280

out

531

01:12:58,310 --> 01:12:55,920

hello neil and buzz i'm talking to you

532

01:13:00,630 --> 01:12:58,320

by telephone from the oval room at the

533

01:13:09,669 --> 01:13:00,640

white house and this certainly has to be

534

01:13:13,669 --> 01:13:11,750

for every american this has to be the

535

01:13:16,149 --> 01:13:13,679

proudest day of our lives

536

01:13:20,550 --> 01:13:16,159

and for people all over the world

537

01:13:24,470 --> 01:13:23,110

in recognizing what an immense feat this

538

01:13:27,110 --> 01:13:24,480

is

539

01:13:28,310 --> 01:13:27,120
because of what you have done

540

01:13:31,830 --> 01:13:28,320
the heavens

541

01:13:34,470 --> 01:13:31,840
have become a part of man's

542

01:13:36,630 --> 01:13:34,480
and as you talk to us from the sea of

543

01:13:39,030 --> 01:13:36,640
tranquility

544

01:13:40,790 --> 01:13:39,040
it inspires us to redouble our efforts

545

01:13:43,060 --> 01:13:40,800
to bring peace

546

01:13:44,310 --> 01:13:43,070
and tranquility to earth

547

01:13:47,110 --> 01:13:44,320
[Music]

548

01:13:49,510 --> 01:13:47,120
for one priceless moment

549

01:13:52,070 --> 01:13:49,520
in the whole history of man

550

01:13:53,510 --> 01:13:52,080
all the people on this earth are truly

551
01:14:01,530 --> 01:13:53,520
one

552
01:14:08,229 --> 01:14:01,540
return safely to earth

553
01:14:12,310 --> 01:14:09,910
thank you mr president

554
01:14:15,830 --> 01:14:12,320
it's a great honor and privilege for us

555
01:14:24,990 --> 01:14:15,840
to be here representing

556
01:14:29,430 --> 01:14:27,669
[Music]

557
01:14:31,030 --> 01:14:29,440
the states for the future

558
01:14:33,189 --> 01:14:31,040
uh

559
01:14:35,990 --> 01:14:33,199
honor for us to be able to participate

560
01:14:37,750 --> 01:14:36,000
here today

561
01:14:39,510 --> 01:14:37,760
and thank you very much and i look

562
01:14:46,640 --> 01:14:39,520
forward all of us look forward to seeing

563
01:14:46,650 --> 01:14:55,430

[Music]

564

01:14:55,440 --> 01:15:01,430

columbia columbia this is houston over

565

01:15:06,470 --> 01:15:03,189

ron clear here

566

01:15:17,430 --> 01:15:06,480

right here i've got a p22 auto update uh

567

01:15:17,440 --> 01:15:20,709

you ready go ahead

568

01:15:26,149 --> 01:15:24,630

roger p22 landmark id lam

569

01:15:28,149 --> 01:15:26,159

p1

570

01:15:31,990 --> 01:15:28,159

110

571

01:15:32,000 --> 01:15:37,189

t2

572

01:15:37,199 --> 01:15:39,270

zero 1103206

573

01:15:44,390 --> 01:15:41,830

three miles south

574

01:15:46,390 --> 01:15:44,400

time of floatus approach

575

01:15:47,990 --> 01:15:46,400

one one zero

576
01:15:50,310 --> 01:15:48,000
three three

577
01:15:52,229 --> 01:15:50,320
four zero

578
01:15:54,390 --> 01:15:52,239
shaft

579
01:15:57,830 --> 01:15:54,400
three five three

580
01:15:59,830 --> 01:15:57,840
decimal eight five five

581
01:16:02,070 --> 01:15:59,840
trillion

582
01:16:05,350 --> 01:16:02,080
four six

583
01:16:07,350 --> 01:16:05,360
decimal four niner five

584
01:16:10,310 --> 01:16:07,360
roll zero

585
01:16:17,350 --> 01:16:10,320
pitch two five zero

586
01:16:31,590 --> 01:16:20,820
all right you thank you very

587
01:16:38,470 --> 01:16:34,709
to note that when i kick my foot

588
01:16:38,480 --> 01:16:44,070

no atmosphere here

589

01:16:49,270 --> 01:16:46,070

they seem to leave and

590

01:16:53,590 --> 01:16:49,280

most of them have about the same

591

01:16:57,750 --> 01:16:55,350

where i stand this

592

01:17:11,750 --> 01:16:57,760

large portion of them will

593

01:17:16,870 --> 01:17:15,030

so it's highly dependent upon

594

01:17:19,830 --> 01:17:16,880

best

595

01:17:22,470 --> 01:17:19,840

initial trajectory upwards

596

01:17:25,510 --> 01:17:22,480

determines where most of the

597

01:17:26,870 --> 01:17:25,520

already in the particle compound like

598

01:17:32,870 --> 01:17:26,880

the

599

01:17:36,790 --> 01:17:34,630

all right your buzz and break break

600

01:17:38,870 --> 01:17:36,800

columbia this is houston when you track

601
01:17:44,709 --> 01:17:38,880
out of high gain antenna limits request

602
01:17:44,719 --> 01:17:49,270
oh man

603
01:17:53,750 --> 01:17:51,590
i've noticed several times in going from

604
01:17:57,750 --> 01:17:53,760
the

605
01:18:00,229 --> 01:17:57,760
i go in

606
01:18:03,590 --> 01:18:00,239
i catch an additional our reflection off

607
01:18:07,350 --> 01:18:05,430
along with the reflection off my face

608
01:18:09,669 --> 01:18:07,360
onto the binder makes

609
01:18:13,110 --> 01:18:09,679
this ability very poor

610
01:18:15,189 --> 01:18:13,120
just that the transition

611
01:18:16,229 --> 01:18:15,199
sunlight into the shadow

612
01:18:40,470 --> 01:18:16,239
i

613
01:18:41,350 --> 01:18:40,480

battle area

614

01:18:43,990 --> 01:18:41,360

yeah

615

01:18:47,030 --> 01:18:44,000

visibility as we've said before is

616

01:18:51,750 --> 01:18:47,040

not too great but uh

617

01:18:56,709 --> 01:18:54,149

what sort of footprints we have and the

618

01:18:59,350 --> 01:18:56,719

minimal mission of the soil

619

01:19:01,430 --> 01:18:59,360

and after being out in a sunlight smile

620

01:19:02,790 --> 01:19:01,440

it takes uh

621

01:19:04,149 --> 01:19:02,800

watching there you can feel you're on

622

01:19:06,790 --> 01:19:04,159

the cable

623

01:19:22,020 --> 01:19:06,800

okay now link up your right foot right

624

01:19:27,430 --> 01:19:24,550

[Music]

625

01:19:56,550 --> 01:19:27,440

neil armstrong has the scoop for the

626

01:20:00,630 --> 01:19:58,149

the

627

01:20:03,189 --> 01:20:00,640

blue color of my boots

628

01:20:04,870 --> 01:20:03,199

have completely disappeared now into

629

01:20:08,070 --> 01:20:04,880

this

630

01:20:12,390 --> 01:20:09,990

i don't know exactly what color to

631

01:20:13,510 --> 01:20:12,400

describe this other than

632

01:20:16,390 --> 01:20:13,520

bayish

633

01:20:25,830 --> 01:20:16,400

cocoa color

634

01:20:25,840 --> 01:20:29,669

[Music]

635

01:20:29,679 --> 01:20:36,229

very fine particles

636

01:20:41,270 --> 01:20:38,390

uh this is houston you're cutting out on

637

01:20:43,350 --> 01:20:41,280

the end of your transmission can you

638

01:20:47,180 --> 01:20:43,360

speaking a little more closely into your

639

01:20:47,190 --> 01:20:59,430

[Music]

640

01:20:59,440 --> 01:21:02,390

sounded a little wet

641

01:21:02,400 --> 01:21:09,230

cool

642

01:21:09,240 --> 01:21:14,229

[Music]

643

01:21:14,239 --> 01:21:22,870

neil's been on the surface an hour now

644

01:21:22,880 --> 01:21:46,550

buzz not quite 20 minutes less than that

645

01:21:50,149 --> 01:21:48,950

uh there is a difference uh of course in

646

01:21:51,910 --> 01:21:50,159

the uh

647

01:21:54,070 --> 01:21:51,920

having radiation and

648

01:22:08,470 --> 01:21:54,080

moment so i think there's a tendency to

649

01:22:08,480 --> 01:22:23,270

[Music]

650

01:22:29,430 --> 01:22:25,910

one hour and a half expended on the

651
01:22:29,440 --> 01:23:13,510
columbia is refusing over

652
01:23:13,520 --> 01:23:20,629
so

653
01:23:29,430 --> 01:23:23,990
columbia houston over

654
01:23:35,030 --> 01:23:32,870
roger you should have vhf als with the

655
01:23:36,870 --> 01:23:35,040
limb right about now

656
01:23:39,510 --> 01:23:36,880
vhf loss

657
01:23:44,629 --> 01:23:39,520
will be at uh four zero minutes one five

658
01:23:44,639 --> 01:23:55,030
thank you

659
01:24:22,709 --> 01:23:56,070
so

660
01:24:30,470 --> 01:24:25,750
heart rates on both crewmen averaging

661
01:24:35,189 --> 01:24:33,030
flight surgeon reports they're right on

662
01:24:37,830 --> 01:24:35,199
the predicted number of the

663
01:24:43,430 --> 01:24:37,840

btu

664

01:24:43,440 --> 01:24:47,350

and he thinks they're in great shape

665

01:24:53,669 --> 01:24:49,510

i look around the area the uh the

666

01:25:06,420 --> 01:24:55,669

from south

667

01:25:10,229 --> 01:25:07,590

[Music]

668

01:25:15,510 --> 01:25:10,239

very light colored gray

669

01:25:21,590 --> 01:25:16,470

around

670

01:25:39,669 --> 01:25:24,870

then as i look off cloth gun

671

01:25:44,149 --> 01:25:41,270

larger amount

672

01:25:49,830 --> 01:25:47,030

battered areas looking toward us

673

01:26:00,980 --> 01:25:49,840

uh the general color

674

01:26:06,350 --> 01:26:03,030

[Music]

675

01:26:08,070 --> 01:26:06,360

area that we've picked up

676
01:26:12,470 --> 01:26:08,080
[Music]

677
01:26:17,590 --> 01:26:12,480
considerably darker in next year's house

678
01:26:45,510 --> 01:26:20,149
imagine that this has been

679
01:27:07,530 --> 01:26:50,070
is uh generally of a darker contrast

680
01:27:22,950 --> 01:27:08,870
[Music]

681
01:27:52,310 --> 01:27:34,870
so

682
01:27:55,510 --> 01:27:54,629
you can see neil armstrong bringing the

683
01:28:08,800 --> 01:27:55,520
scoop

684
01:28:08,810 --> 01:28:12,870
[Music]

685
01:28:17,510 --> 01:28:15,510
there are two raiders

686
01:28:20,070 --> 01:28:17,520
uh the one that's right in front of me

687
01:28:23,350 --> 01:28:20,080
now as i look off in about the

688
01:28:25,110 --> 01:28:23,360

11 o'clock position from spacecraft

689

01:28:29,430 --> 01:28:25,120

about

690

01:28:32,390 --> 01:28:29,440

30 to 35 feet from moss

691

01:28:35,430 --> 01:28:32,400

and several lost

692

01:28:37,110 --> 01:28:35,440

boxes of boulders of six eight inches

693

01:28:53,510 --> 01:28:37,120

across

694

01:28:57,910 --> 01:28:55,590

neil is filling the bulk sample bag

695

01:29:02,470 --> 01:28:57,920

attached to a scale

696

01:29:10,250 --> 01:29:05,270

buzz is behind the limit the

697

01:29:10,260 --> 01:29:19,590

[Music]

698

01:30:12,870 --> 01:29:21,830

that's the landing gear directly

699

01:30:38,390 --> 01:30:14,470

field's been on the surface about an

700

01:30:46,709 --> 01:30:40,550

i'm now in the area of the

701
01:30:46,719 --> 01:30:49,510
maybe

702
01:30:49,520 --> 01:31:20,950
for that

703
01:31:27,669 --> 01:31:24,229
buzz is making his way around the lamb

704
01:31:41,830 --> 01:31:27,679
photographing it from various angles

705
01:32:04,870 --> 01:31:44,950
nails still occupied with the

706
01:32:22,550 --> 01:32:07,510
one hour 40 minutes time expanded on the

707
01:32:22,560 --> 01:32:45,750
is

708
01:33:41,189 --> 01:33:14,470
so

709
01:33:41,199 --> 01:33:50,550
uh

710
01:33:59,590 --> 01:33:51,910
go ahead with the coordinates on the

711
01:33:59,600 --> 01:34:05,669
but i um

712
01:34:10,149 --> 01:34:07,270
i think they would know it if they were

713
01:34:12,550 --> 01:34:10,159

in such a location it looks like uh

714

01:34:13,830 --> 01:34:12,560

their language is pitched up

715

01:34:23,990 --> 01:34:13,840

quite a

716

01:34:29,669 --> 01:34:28,149

roger copy echo decimal three and seven

717

01:34:52,709 --> 01:34:29,679

decimal six

718

01:34:56,470 --> 01:34:54,870

and columbia this is houston while i'm

719

01:34:57,830 --> 01:34:56,480

talking to you

720

01:34:59,510 --> 01:34:57,840

los

721

01:35:01,910 --> 01:34:59,520

will be at

722

01:35:03,510 --> 01:35:01,920

one eleven

723

01:35:05,270 --> 01:35:03,520

one niner

724

01:35:07,109 --> 01:35:05,280

three one

725

01:35:09,270 --> 01:35:07,119

aos

726

01:35:29,669 --> 01:35:09,280

one one two

727

01:35:44,709 --> 01:35:32,070

columbia this is houston did you copy

728

01:35:44,719 --> 01:36:00,790

roger out

729

01:36:00,800 --> 01:36:22,830

so

730

01:36:29,910 --> 01:36:26,310

the dot deflector that's uh mounted on

731

01:36:33,109 --> 01:36:29,920

quad one seemed uh

732

01:36:33,119 --> 01:36:37,669

up right now on quad four

733

01:36:43,350 --> 01:36:41,030

uh you're breaking up again bud

734

01:36:46,149 --> 01:36:43,360

up again

735

01:36:49,270 --> 01:36:46,159

i'd say the uh jet deflector that's

736

01:36:51,189 --> 01:36:49,280

mounted on quad 4 it seems to be

737

01:36:52,709 --> 01:36:51,199

the surface of it seems to be more

738

01:36:53,430 --> 01:36:52,719

wrinkled

739

01:36:56,149 --> 01:36:53,440

and

740

01:36:58,229 --> 01:36:56,159

one that's on quad one

741

01:37:01,030 --> 01:36:58,239

generally uh

742

01:37:07,260 --> 01:37:01,040

uh underneath part of the lamp seems to

743

01:37:07,270 --> 01:37:11,189

[Music]

744

01:37:15,270 --> 01:37:13,030

uh illuminate

745

01:37:28,310 --> 01:37:15,280

the thermal effects much better than we

746

01:37:28,320 --> 01:37:32,870

[Music]

747

01:37:32,880 --> 01:38:00,390

okay

748

01:38:23,510 --> 01:38:02,690

uh

749

01:38:23,520 --> 01:38:26,950

[Music]

750

01:38:26,960 --> 01:38:31,070

badger emil has

751
01:38:37,189 --> 01:38:35,270
66 percent o2 no flags

752
01:38:39,669 --> 01:38:37,199
minimum cooling and the suit pressure is

753
01:38:57,109 --> 01:38:39,679
382

754
01:39:01,750 --> 01:38:58,950
neil has

755
01:39:04,229 --> 01:39:01,760
finished collecting and packing the

756
01:39:06,950 --> 01:39:04,239
bulk sample

757
01:39:09,109 --> 01:39:06,960
uh buzz this is houston have you removed

758
01:39:12,010 --> 01:39:09,119
the close-up camera from the mesa yet

759
01:39:16,550 --> 01:39:12,020
over

760
01:39:16,560 --> 01:39:32,149
thank you thank you

761
01:39:32,159 --> 01:39:45,830
so

762
01:39:45,840 --> 01:39:49,970
okay

763
01:40:20,950 --> 01:40:09,900

[Music]

764

01:40:24,310 --> 01:40:23,350

roger it looks like you're about a half

765

01:40:26,229 --> 01:40:24,320

hour

766

01:40:29,669 --> 01:40:26,239

slow on it we're working on consumables

767

01:40:29,679 --> 01:40:43,640

all right

768

01:40:43,650 --> 01:41:10,870

[Music]

769

01:41:14,950 --> 01:41:13,350

uh neil and buzz this is houston to

770

01:41:17,510 --> 01:41:14,960

clarify my lab

771

01:41:19,430 --> 01:41:17,520

uh your consumables are

772

01:41:21,750 --> 01:41:19,440

in good shape at this time

773

01:41:28,470 --> 01:41:21,760

the 30 minute preference was with

774

01:41:28,480 --> 01:41:34,160

nice i understand that

775

01:42:50,950 --> 01:41:37,270

[Music]

776

01:43:04,950 --> 01:42:53,270

neil's been on the surface now slightly

777

01:43:09,460 --> 01:43:07,830

note any abnormalities

778

01:43:13,830 --> 01:43:09,470

in the limb

779

01:43:19,430 --> 01:43:16,070

seem to be in good shape the primary and

780

01:43:21,030 --> 01:43:19,440

secondary suits are in good shape

781

01:43:22,390 --> 01:43:21,040

antennas

782

01:43:25,030 --> 01:43:22,400

are all

783

01:43:25,990 --> 01:43:25,040

in place

784

01:43:28,390 --> 01:43:26,000

but

785

01:43:30,950 --> 01:43:28,400

there's no evidence of a problem

786

01:43:32,870 --> 01:43:30,960

underneath the land due to the

787

01:43:43,590 --> 01:43:32,880

engineering laws or

788

01:43:49,030 --> 01:43:46,550

it's very surprising the uh

789

01:44:04,870 --> 01:43:49,040

very surprising lack of penetration of

790

01:44:19,530 --> 01:44:07,750

uh price right there is probably even

791

01:44:30,070 --> 01:44:20,629

[Music]

792

01:44:30,080 --> 01:44:39,030

we get a picture of the uh

793

01:44:39,040 --> 01:44:47,669

[Music]

794

01:44:47,679 --> 01:44:56,440

seem to be quite minimal

795

01:45:27,830 --> 01:45:06,470

[Music]

796

01:45:33,430 --> 01:45:31,430

of the surface color uh a rather minimal

797

01:45:36,390 --> 01:45:33,440

amount of uh

798

01:45:38,629 --> 01:45:36,400

uh radiating uh or etching away or

799

01:45:41,430 --> 01:45:38,639

erosion of the surface

800

01:45:44,229 --> 01:45:41,440

so now uh on decent uh both of us

801
01:45:53,669 --> 01:45:44,239
remarked that we could a large amount of

802
01:45:58,310 --> 01:45:56,310
it was reported beforehand that we would

803
01:45:59,830 --> 01:45:58,320
probably see an outgassing from the

804
01:46:01,750 --> 01:45:59,840
surface

805
01:46:03,830 --> 01:46:01,760
after uh

806
01:46:05,669 --> 01:46:03,840
actual engine shutdown but

807
01:46:07,669 --> 01:46:05,679
i recall

808
01:46:14,590 --> 01:46:07,679
i was unable to

809
01:46:53,109 --> 01:46:17,510
[Music]

810
01:46:53,119 --> 01:47:00,709
just too big an angle Neal

811
01:47:31,990 --> 01:47:02,470
yep

812
01:47:32,000 --> 01:48:02,390
so

813
01:48:26,470 --> 01:48:05,910

that will take very little

814

01:48:44,550 --> 01:48:29,109

and now if you take the camera over okay

815

01:48:44,560 --> 01:48:57,510

hey

816

01:49:01,030 --> 01:48:59,350

stop and take a photograph of something

817

01:49:02,709 --> 01:49:01,040

and then want to start moving and get

818

01:49:04,629 --> 01:49:02,719

sideways

819

01:49:07,030 --> 01:49:04,639

it's quite a tendency to start doing it

820

01:49:10,070 --> 01:49:07,040

with uh just gradual uh

821

01:49:19,750 --> 01:49:10,080

sideways hop because you start getting

822

01:49:19,760 --> 01:49:23,669

if you see us underneath the

823

01:49:23,679 --> 01:49:35,800

lamp over at the sdq bag you yesterday

824

01:49:35,810 --> 01:49:41,189

[Music]

825

01:49:41,199 --> 01:49:51,430

c secondary thread

826

01:49:55,480 --> 01:49:53,990

so the sgt based

827

01:50:06,149 --> 01:49:55,490

we don't necessarily

828

01:50:06,159 --> 01:50:12,229

without any problem

829

01:50:16,629 --> 01:50:14,390

columbia columbia this is houston we're

830

01:50:18,229 --> 01:50:16,639

about to lose you on the omni's request

831

01:50:21,430 --> 01:50:18,239

high gain antenna

832

01:50:25,510 --> 01:50:21,440

react mode six two zero

833

01:50:29,669 --> 01:50:25,520

yaw one three five over

834

01:50:50,790 --> 01:50:32,229

i'll pick an area deal make that y'all

835

01:50:54,470 --> 01:50:52,149

predicted through

836

01:50:56,310 --> 01:50:54,480

emu flight go ahead fine how are you

837

01:51:06,950 --> 01:50:56,320

doing i'll get an update here i'll get

838

01:51:12,229 --> 01:51:10,310

the surgeon says everything looks fine

839

01:51:14,310 --> 01:51:12,239

once again i'm mixing with all his work

840

01:51:16,470 --> 01:51:14,320

uh right now

841

01:51:19,430 --> 01:51:16,480

roger you might tell colombia that

842

01:51:26,470 --> 01:51:19,440

capcom stuff

843

01:51:30,629 --> 01:51:28,709

yes

844

01:52:11,430 --> 01:51:30,639

he can if he's watching it

845

01:52:32,629 --> 01:52:14,830

seismometer has been deployed

846

01:52:56,070 --> 01:52:34,149

they've been on the portable life

847

01:53:03,109 --> 01:52:59,750

and the manual uh deployment of the uh

848

01:53:07,589 --> 01:53:05,030

little spring that's at the end of this

849

01:53:10,470 --> 01:53:07,599

thing pulled off of the uh

850

01:53:12,070 --> 01:53:10,480

fish however i was able to reach up and

851

01:53:13,510 --> 01:53:12,080

get hold of the pit fit and pull it

852

01:53:17,830 --> 01:53:13,520

loose

853

01:53:18,930 --> 01:53:17,840

so uh it'll be defined manually also

854

01:53:31,750 --> 01:53:18,940

roger

855

01:53:31,760 --> 01:53:38,830

and the panorama is complete and the

856

01:54:01,830 --> 01:53:42,790

limb 7 7 30 position at

857

01:54:05,750 --> 01:54:03,910

that's neil armstrong to the left of the

858

01:54:20,229 --> 01:54:05,760

screen

859

01:54:29,109 --> 01:54:23,510

i think right out on that rise right

860

01:54:35,990 --> 01:54:31,350

that's the only guy for that

861

01:54:36,000 --> 01:54:42,709

on the high ground there and uh

862

01:54:42,719 --> 01:55:03,109

watch at the edge of that crater

863

01:55:10,550 --> 01:55:04,870

coming into view on the right carrying

864

01:55:15,589 --> 01:55:12,790

about 40 feet out i'd say after the end

865

01:55:20,950 --> 01:55:17,189

well it's gonna be a little difficult to

866

01:55:24,070 --> 01:55:22,870

but stop that next little ridge there

867

01:55:29,750 --> 01:55:24,080

isn't that one that'd be a pretty good

868

01:55:29,760 --> 01:55:52,390

yeah but i put the

869

01:55:52,400 --> 01:56:06,870

this right here is just as little

870

01:56:10,950 --> 01:56:08,470

and they will be out of the cameras

871

01:56:27,270 --> 01:56:10,960

field of view while setting up these

872

01:56:33,030 --> 01:56:31,350

full boulders uh look like basalt and uh

873

01:56:35,750 --> 01:56:33,040

they have probably uh

874

01:56:38,629 --> 01:56:35,760

two percent white minerals in them

875

01:56:41,109 --> 01:56:38,639

uh white uh purples

876

01:56:43,510 --> 01:56:41,119

and uh the thing that i reported is

877

01:56:45,270 --> 01:56:43,520

vesicular before i i'm not

878

01:56:46,470 --> 01:56:45,280

i don't believe i believe that anymore i

879

01:56:47,430 --> 01:56:46,480

think it's

880

01:56:49,430 --> 01:56:47,440

uh

881

01:56:54,149 --> 01:56:49,440

small craters

882

01:56:59,270 --> 01:56:57,350

little impact craters where uh shots

883

01:57:11,189 --> 01:56:59,280

dippy shot has hit the

884

01:57:11,199 --> 01:57:14,790

yeah i'm eating

885

01:57:18,310 --> 01:57:16,629

last night how are you doing

886

01:57:22,310 --> 01:57:18,320

okay it looks like we cut a little bit

887

01:57:28,310 --> 01:57:22,320

we've got about uh 15 minutes and

888

01:57:31,270 --> 01:57:29,750

consumer-wise

889

01:57:36,709 --> 01:57:31,280

how are you counting the 240 where did

890

01:57:36,719 --> 01:57:40,340

are you

891

01:57:40,350 --> 01:57:46,629

[Music]

892

01:57:50,870 --> 01:57:48,229

we just keep selecting the activities

893

01:57:52,870 --> 01:57:50,880

back and protecting our profiles

894

01:57:54,950 --> 01:57:52,880

and the current rate right now is around

895

01:57:56,390 --> 01:57:54,960

15 minutes beyond 240.

896

01:58:22,870 --> 01:57:56,400

and you're going with that clock up

897

01:58:22,880 --> 01:58:43,830

i feel like smoking that

898

01:58:49,189 --> 01:58:45,589

i'm having a little bit of difficulty

899

01:58:51,430 --> 01:58:49,199

getting the beef still in the center

900

01:59:00,709 --> 01:58:51,440

wants to move around and around on the

901
01:59:00,719 --> 01:59:15,990
you're cutting out again but

902
01:59:19,350 --> 01:59:18,070
i say i'm not having too much success in

903
01:59:24,550 --> 01:59:19,360
uh

904
01:59:26,550 --> 01:59:24,560
but experiments

905
01:59:27,350 --> 01:59:26,560
the main thing is get the ball off the

906
01:59:30,709 --> 01:59:27,360
edge

907
01:59:32,870 --> 01:59:30,719
does not necessarily have to be centered

908
01:59:34,229 --> 01:59:32,880
if you can't get the ball off the edge

909
01:59:35,990 --> 01:59:34,239
yeah he said he was having trouble

910
01:59:37,990 --> 01:59:36,000
getting it off the outside at all i

911
01:59:39,830 --> 01:59:38,000
thought he said okay

912
02:00:48,790 --> 01:59:39,840
i missed it so it seems to be going

913
02:00:57,189 --> 02:00:50,629

hey you want to take a look at this bbc

914

02:01:04,950 --> 02:00:59,430

i found it pretty hard to get this

915

02:01:04,960 --> 02:01:14,560

much

916

02:01:14,570 --> 02:01:20,830

[Music]

917

02:01:24,070 --> 02:01:22,790

right

918

02:01:25,589 --> 02:01:24,080

believe it is

919

02:01:27,750 --> 02:01:25,599

i used and i don't think there's any

920

02:01:31,510 --> 02:01:27,760

hope for using this uh leveling device

921

02:01:37,589 --> 02:01:34,870

it looks to me is already

922

02:01:39,589 --> 02:01:37,599

the top here that the baby is in is uh

923

02:01:41,830 --> 02:01:39,599

now gone back

924

02:01:43,189 --> 02:01:41,840

at a concave over let's have enough to

925

02:01:46,229 --> 02:01:43,199

fight it too long

926
02:01:48,550 --> 02:01:46,239
let's let's forget it

927
02:01:50,229 --> 02:01:48,560
roger 11.

928
02:01:54,790 --> 02:01:50,239
press on uh if you think it'd like to

929
02:01:54,800 --> 02:02:02,390
okay

930
02:02:02,400 --> 02:02:05,380
searching for

931
02:02:05,390 --> 02:02:12,950
[Music]

932
02:02:12,960 --> 02:02:18,950
monitor

933
02:02:29,589 --> 02:02:20,310
our rates are still down on a

934
02:02:33,750 --> 02:02:31,350
i'm going on

935
02:02:35,910 --> 02:02:33,760
okay uh capcom fao

936
02:02:39,270 --> 02:02:35,920
flight

937
02:02:41,109 --> 02:02:39,280
surgeon and emu on the loop

938
02:02:44,550 --> 02:02:41,119

okay it looks like we can stand about

939

02:02:47,270 --> 02:02:44,560

another 15 minutes based on water

940

02:02:49,189 --> 02:02:47,280

surgeon says they're doing okay

941

02:02:51,830 --> 02:02:49,199

seems to me we ought to

942

02:02:52,870 --> 02:02:51,840

tell them uh we're good for an extra 15

943

02:02:55,189 --> 02:02:52,880

minutes

944

02:02:57,990 --> 02:02:55,199

buzz and market uh

945

02:03:00,629 --> 02:02:58,000

minus 10 when you start in okay but we

946

02:03:01,830 --> 02:03:00,639

agree that's fine planning you go the

947

02:03:03,669 --> 02:03:01,840

number looks a little better than that

948

02:03:08,390 --> 02:03:03,679

here

949

02:03:34,370 --> 02:03:12,229

polar array deployed automatically

950

02:03:34,380 --> 02:03:41,350

[Music]

951
02:03:45,350 --> 02:03:44,310
uh based on consumables and uh and

952
02:03:47,109 --> 02:03:45,360
anyway

953
02:03:48,310 --> 02:03:47,119
that's lined up we can give him another

954
02:03:49,910 --> 02:03:48,320
15

955
02:03:51,990 --> 02:03:49,920
and still give a

956
02:03:53,270 --> 02:03:52,000
minus 10 minute mark for buzz to start

957
02:03:54,870 --> 02:03:53,280
termination

958
02:03:58,970 --> 02:03:54,880
if he can curse

959
02:03:58,980 --> 02:04:08,390
[Music]

960
02:04:14,260 --> 02:04:12,310
go ahead okay for my question would buzz

961
02:04:17,270 --> 02:04:14,270
then be going in closer to nominal time

962
02:04:19,109 --> 02:04:17,280
[Music]

963
02:04:21,189 --> 02:04:19,119

i'll follow you

964

02:04:24,069 --> 02:04:21,199

we're going to give the total 15 minutes

965

02:04:26,790 --> 02:04:24,079

and we'll still give buzz a 10 minute

966

02:04:33,530 --> 02:04:26,800

minus 10 mark to start in based on that

967

02:04:38,629 --> 02:04:35,910

[Music]

968

02:04:42,550 --> 02:04:38,639

neil mrs houston over

969

02:04:46,550 --> 02:04:43,910

all right we've been looking at your

970

02:04:47,750 --> 02:04:46,560

concealables and you're in you're in

971

02:04:50,790 --> 02:04:47,760

good shape

972

02:04:54,069 --> 02:04:50,800

uh subject to your concurrence we'd like

973

02:04:56,870 --> 02:04:54,079

to extend the duration of the eva

974

02:04:58,390 --> 02:04:56,880

one five minutes from nominal we will

975

02:05:00,709 --> 02:04:58,400

still give bugs

976

02:05:04,149 --> 02:05:00,719

a hack at 10 minutes

977

02:05:09,189 --> 02:05:04,159

prior for uh heading in your current

978

02:05:14,950 --> 02:05:10,870

and that means buzz it have to start

979

02:05:16,709 --> 02:05:14,960

back in at about okay i'm fine

980

02:05:18,069 --> 02:05:16,719

flat experiments solve it out there with

981

02:05:21,189 --> 02:05:18,079

a camera

982

02:05:23,589 --> 02:05:21,199

get a picture of the bubble

983

02:05:24,709 --> 02:05:23,599

because he's still there

984

02:05:25,910 --> 02:05:24,719

roger he's still going to send you i

985

02:05:31,109 --> 02:05:25,920

haven't seen him come back from the side

986

02:05:36,310 --> 02:05:34,550

is the time expended on the plss this is

987

02:05:38,790 --> 02:05:36,320

houston if you're still in the vicinity

988

02:05:43,750 --> 02:05:38,800

of the pse could you get a photograph of

989

02:05:49,750 --> 02:05:45,589

i'll do that but

990

02:05:55,350 --> 02:05:52,069

what time would you estimate so we could

991

02:05:59,430 --> 02:05:55,360

allow for the uh documented sample over

992

02:06:04,149 --> 02:06:00,830

cross for 10

993

02:06:06,650 --> 02:06:04,159

minutes approximately approximately 10

994

02:06:12,470 --> 02:06:09,189

[Music]

995

02:06:17,109 --> 02:06:15,270

approximately 10 minutes right in the

996

02:06:18,310 --> 02:06:17,119

middle now

997

02:06:20,870 --> 02:06:18,320

wonderful

998

02:06:23,270 --> 02:06:20,880

take a picture for a move

999

02:06:25,109 --> 02:06:23,280

really question he asked he asked what

1000

02:06:27,910 --> 02:06:25,119

would he we estimate for the document

1001
02:06:31,510 --> 02:06:27,920
we're estimating about 10 minutes

1002
02:06:35,020 --> 02:06:31,520
uh now this is we're estimating about 10

1003
02:06:37,830 --> 02:06:35,030
10 minutes for the document sampling or

1004
02:06:39,510 --> 02:06:37,840
[Music]

1005
02:06:41,750 --> 02:06:39,520
e-town flag did you get your message to

1006
02:06:42,950 --> 02:06:41,760
capcom yes

1007
02:06:45,430 --> 02:06:42,960
okay

1008
02:06:48,069 --> 02:06:45,440
so yeah you got a message for columbia

1009
02:06:50,229 --> 02:06:48,079
or your battery charge

1010
02:06:53,270 --> 02:06:50,239
flight network we have a goody set

1011
02:07:03,570 --> 02:06:56,310
columbia columbia this is houston over

1012
02:07:03,580 --> 02:07:06,870
[Music]

1013
02:07:06,880 --> 02:07:16,149

15 over

1014

02:07:16,159 --> 02:07:29,140

roger

1015

02:07:45,910 --> 02:07:35,050

[Music]

1016

02:07:51,910 --> 02:07:49,109

you've got about 10 minutes left now

1017

02:07:58,790 --> 02:07:51,920

prior to commencing your eva termination

1018

02:07:58,800 --> 02:08:25,390

i understand

1019

02:08:25,400 --> 02:08:41,510

[Music]

1020

02:08:45,750 --> 02:08:43,430

flat experiments

1021

02:08:48,069 --> 02:08:45,760

go ahead i just leave uncaged

1022

02:08:50,390 --> 02:08:48,079

working well say a lot of short period

1023

02:08:52,870 --> 02:08:50,400

seismic activity

1024

02:08:57,990 --> 02:08:55,669

you go out and pass it up

1025

02:09:00,470 --> 02:08:58,000

yeah you can tell we're seeing some

1026

02:09:03,109 --> 02:09:00,480

info on there

1027

02:09:05,750 --> 02:09:03,119

tranquility base this is houston the

1028

02:09:09,910 --> 02:09:05,760

fact this icing experience has been

1029

02:09:30,470 --> 02:09:09,920

engaged and we're observing short period

1030

02:09:30,480 --> 02:09:43,589

too

1031

02:09:43,599 --> 02:09:48,550

now

1032

02:09:51,750 --> 02:09:50,390

it's got nine minutes

1033

02:09:53,510 --> 02:09:51,760

okay we're supposed to give him ten

1034

02:09:55,510 --> 02:09:53,520

minutes by the bottom of the ladder

1035

02:09:57,430 --> 02:09:55,520

right

1036

02:11:19,710 --> 02:09:57,440

yeah

1037

02:11:24,870 --> 02:11:22,149

[Music]

1038

02:11:27,430 --> 02:11:24,880

how about you gfc

1039

02:11:29,350 --> 02:11:27,440

everything looks good flank with garage

1040

02:11:31,109 --> 02:11:29,360

telecom how are you

1041

02:11:33,669 --> 02:11:31,119

we're looking good from the fourth round

1042

02:11:40,790 --> 02:11:33,679

because aldrin is collecting a core tube

1043

02:11:45,350 --> 02:11:43,189

i hope you're watching uh how hard i

1044

02:11:59,030 --> 02:11:45,360

have to hit this into the ground uh to

1045

02:11:59,040 --> 02:12:04,069

experiments flight

1046

02:12:11,589 --> 02:12:05,750

core tubes in the solar winds what you

1047

02:12:22,629 --> 02:12:14,149

experiments

1048

02:12:23,669 --> 02:12:22,639

two colored tubes in the solar wind

1049

02:12:25,109 --> 02:12:23,679

roger

1050

02:12:28,229 --> 02:12:25,119

okay

1051
02:12:33,660 --> 02:12:30,390
cut the cable again

1052
02:12:33,670 --> 02:12:42,149
[Music]

1053
02:12:46,470 --> 02:12:43,830
we'd like you all to get

1054
02:12:48,709 --> 02:12:46,480
two core tubes and the solar wind

1055
02:12:53,270 --> 02:12:48,719
experiment two core tubes and the solar

1056
02:12:53,280 --> 02:13:24,950
thank you

1057
02:13:28,629 --> 02:13:26,470
as he was taking those on the seismic

1058
02:13:30,629 --> 02:13:28,639
data if possible sometime the next

1059
02:13:32,709 --> 02:13:30,639
couple minutes before he comes in if you

1060
02:13:34,709 --> 02:13:32,719
get a little jump while she was hanging

1061
02:13:36,790 --> 02:13:34,719
on here at one time as he left the psc

1062
02:13:37,910 --> 02:13:36,800
we'd like to have it

1063
02:13:39,350 --> 02:13:37,920

a jump

1064

02:13:40,629 --> 02:13:39,360

roger

1065

02:13:59,410 --> 02:13:40,639

let's let him get through what he's

1066

02:13:59,420 --> 02:14:04,310

[Music]

1067

02:14:04,320 --> 02:14:32,229

so

1068

02:14:35,830 --> 02:14:33,910

buzz this is houston you have

1069

02:14:37,990 --> 02:14:35,840

approximately three minutes until you

1070

02:14:49,910 --> 02:14:38,000

must commence your eva termination

1071

02:15:04,470 --> 02:14:52,390

colombia this is houston approximately

1072

02:15:09,109 --> 02:15:06,790

and do you plan on commencing your sleep

1073

02:15:10,709 --> 02:15:09,119

on the backside this path if so we'll

1074

02:15:12,870 --> 02:15:10,719

disable uplink to you while we're

1075

02:15:16,229 --> 02:15:12,880

talking to the limb over

1076

02:15:19,669 --> 02:15:18,390

capcom flight

1077

02:15:21,190 --> 02:15:19,679

good luck

1078

02:15:22,229 --> 02:15:21,200

to get those tubes in the

1079

02:15:24,550 --> 02:15:22,239

[Music]

1080

02:15:25,589 --> 02:15:24,560

if we can get uh anything else into that

1081

02:15:27,830 --> 02:15:25,599

box

1082

02:15:31,030 --> 02:15:27,840

within the time distance we're able to

1083

02:15:32,950 --> 02:15:31,040

uh record uh in a documentary way where

1084

02:15:48,470 --> 02:15:32,960

the two

1085

02:15:48,480 --> 02:16:00,470

but they're

1086

02:16:04,790 --> 02:16:02,550

and the solar wind

1087

02:16:11,589 --> 02:16:04,800

anything else that you can throw into

1088

02:16:11,599 --> 02:16:54,600

i don't

1089

02:17:12,150 --> 02:16:56,309

[Music]

1090

02:17:12,160 --> 02:17:32,709

foreign

1091

02:17:36,469 --> 02:17:34,870

a buzz this is houston it's about time

1092

02:17:49,429 --> 02:17:36,479

for you to start your

1093

02:17:52,230 --> 02:17:50,709

they've been on their life support

1094

02:17:56,389 --> 02:17:52,240

system

1095

02:18:18,309 --> 02:17:56,399

minutes

1096

02:18:21,990 --> 02:18:20,230

and neil gets that too

1097

02:18:24,230 --> 02:18:22,000

so he gets the stereo cassette in the

1098

02:18:27,589 --> 02:18:24,240

film magazine

1099

02:18:29,910 --> 02:18:27,599

roger well i like this ebay uh

1100

02:18:31,589 --> 02:18:29,920

the mmp supposed to help him get that

1101

02:18:33,190 --> 02:18:31,599

and put it in his pocket for him so he

1102

02:18:39,110 --> 02:18:33,200

doesn't have to fumble it trying to get

1103

02:18:39,120 --> 02:18:43,509

i think the Imp's at the mesa

1104

02:18:43,519 --> 02:18:47,270

i remind them of the close-up camera

1105

02:19:00,810 --> 02:18:49,910

yeah neil and margaret houston like to

1106

02:19:08,870 --> 02:19:03,589

[Music]

1107

02:19:22,020 --> 02:19:10,790

and i'm picking up several pieces of

1108

02:19:47,110 --> 02:19:33,959

[Music]

1109

02:19:47,120 --> 02:19:58,870

roger

1110

02:20:21,110 --> 02:20:00,790

we want to keep a good margin in those

1111

02:20:21,120 --> 02:20:51,429

so

1112

02:20:51,439 --> 02:21:22,440

uh

1113

02:21:32,550 --> 02:21:23,750

[Music]

1114

02:21:32,560 --> 02:21:59,910

head on up the ladder

1115

02:22:05,990 --> 02:22:01,830

that white dot

1116

02:22:08,870 --> 02:22:06,000

right above the horizon on the right

1117

02:22:11,110 --> 02:22:08,880

is a phosphorous spot from the tv

1118

02:22:26,630 --> 02:22:11,120

converter in the park station in

1119

02:22:26,640 --> 02:22:52,150

okay

1120

02:22:52,160 --> 02:23:15,110

right

1121

02:23:15,120 --> 02:23:21,070

i think you can reach the

1122

02:23:21,080 --> 02:23:27,270

[Music]

1123

02:23:27,280 --> 02:23:40,790

okay

1124

02:23:40,800 --> 02:23:59,429

now

1125

02:24:03,670 --> 02:24:02,150

telcom control flight

1126

02:24:17,990 --> 02:24:03,680

go flight watch your switches and

1127

02:24:27,190 --> 02:24:19,429

neil has been on the surface a few

1128

02:24:30,870 --> 02:24:29,990

buzz approximately 20 minutes less than

1129

02:24:33,110 --> 02:24:30,880

that

1130

02:24:35,590 --> 02:24:33,120

uh neil this is houston did the

1131

02:24:40,630 --> 02:24:35,600

hasselblad magazine go up on that sample

1132

02:25:03,349 --> 02:24:43,110

i've got uh what i have a plant magazine

1133

02:25:03,359 --> 02:25:22,870

15.

1134

02:25:26,550 --> 02:25:24,550

mike's on the back side now let's get

1135

02:25:34,790 --> 02:25:26,560

everything in order

1136

02:25:34,800 --> 02:26:05,110

right here

1137

02:26:29,270 --> 02:26:07,030

lap

1138

02:26:29,280 --> 02:26:54,790

hey

1139

02:26:54,800 --> 02:27:13,429

so

1140

02:27:13,439 --> 02:27:29,030

okay that's kind of clear

1141

02:27:33,110 --> 02:27:30,950

transferring the sample containers into

1142

02:27:37,030 --> 02:27:33,120

the limb cabin now

1143

02:27:58,469 --> 02:27:39,349

camera came off i mean the field that

1144

02:28:02,630 --> 02:28:00,230

all right they just ease it down now

1145

02:28:10,950 --> 02:28:02,640

don't pull the lard on them

1146

02:28:15,110 --> 02:28:12,950

flight surgeon your surgeon

1147

02:28:16,389 --> 02:28:15,120

okay we feel like it's a cdr you're

1148

02:28:18,710 --> 02:28:16,399

getting out of the

1149

02:28:20,309 --> 02:28:18,720

family heart rate here for a sufficient

1150

02:28:22,309 --> 02:28:20,319

period of time we all ask you to slow

1151

02:28:24,469 --> 02:28:22,319

down wrestling

1152

02:28:32,820 --> 02:28:24,479

do you want an emu check okay

1153

02:28:32,830 --> 02:28:37,349

[Music]

1154

02:28:45,990 --> 02:28:39,840

all right

1155

02:28:51,429 --> 02:28:47,590

and i got

1156

02:28:58,870 --> 02:28:51,439

54 on the o2 and no flags

1157

02:28:58,880 --> 02:29:15,990

roger

1158

02:29:16,000 --> 02:29:54,710

you want to pass that one

1159

02:29:59,349 --> 02:29:57,030

the lick observatory in california

1160

02:30:02,150 --> 02:29:59,359

reports concern on the

1161

02:30:04,469 --> 02:30:02,160

laser button

1162

02:30:07,990 --> 02:30:04,479

no response necessary but uh we're in

1163

02:30:09,910 --> 02:30:08,000

good shape on consumables on cdr

1164

02:30:14,150 --> 02:30:09,920

right here about both

1165

02:30:19,429 --> 02:30:15,990

hey lan bugs for your information your

1166

02:30:21,349 --> 02:30:19,439

consumables remain in good shape

1167

02:30:25,429 --> 02:30:21,359

you're in good shape

1168

02:30:54,150 --> 02:30:27,830

okay i've got the one side hooked up for

1169

02:30:54,160 --> 02:31:05,590

all over me while i'm doing it

1170

02:31:05,600 --> 02:31:11,990

it looks like down here

1171

02:31:26,790 --> 02:31:14,790

now i think my watch stopped now

1172

02:31:26,800 --> 02:31:32,710

slightly

1173

02:31:35,670 --> 02:31:34,389

from the spacecraft i don't know whether

1174

02:31:38,550 --> 02:31:35,680

it's worth mentioning or not but it

1175

02:31:40,150 --> 02:31:38,560

might be if he needs to put a new uh mag

1176

02:31:50,950 --> 02:31:40,160

on and get some pictures of the lacy out

1177

02:31:50,960 --> 02:32:19,510

let me move back

1178

02:32:19,520 --> 02:32:31,590

okay

1179

02:32:31,600 --> 02:32:45,349

this is the hardest part

1180

02:32:45,359 --> 02:33:01,110

2 hours 40 minutes on the plss

1181

02:33:19,429 --> 02:33:02,230

others

1182

02:33:19,439 --> 02:33:22,710

get that

1183

02:33:31,670 --> 02:33:23,830

oh

1184

02:33:40,950 --> 02:33:32,870

now

1185

02:33:40,960 --> 02:33:53,429

okay okay

1186

02:33:59,349 --> 02:33:55,349

the flight epa if they dropped that mags

1187

02:34:10,469 --> 02:33:59,359

out again did they get that mag capcom

1188

02:34:14,550 --> 02:34:12,469

carefully selected if not document

1189

02:34:16,469 --> 02:34:14,560

examples

1190

02:34:34,630 --> 02:34:16,479

justin

1191

02:34:39,670 --> 02:34:37,110

unofficial time off the surface at one

1192

02:34:48,890 --> 02:34:39,680

eleven thirty seven thirty two start

1193

02:34:48,900 --> 02:34:54,790

[Music]

1194

02:34:54,800 --> 02:35:17,349

thank you

1195

02:35:17,359 --> 02:35:27,270

patch

1196

02:35:27,280 --> 02:35:42,309

okay

1197

02:35:42,319 --> 02:35:53,110

our data is closed and latched

1198

02:36:12,790 --> 02:35:55,110

and verified secure

1199

02:36:12,800 --> 02:36:25,190

so

1200

02:36:57,190 --> 02:36:27,590

we press open flight kevin coming up

1201
02:36:57,200 --> 02:37:08,710
three times

1202
02:37:08,720 --> 02:37:18,550
yes

1203
02:37:21,670 --> 02:37:20,469
one more time

1204
02:37:23,990 --> 02:37:21,680
are you supposed to be getting some

1205
02:37:24,950 --> 02:37:24,000
sleep in here somewhere no not yet

1206
02:37:26,550 --> 02:37:24,960
captain

1207
02:37:27,910 --> 02:37:26,560
fail fly

1208
02:37:29,750 --> 02:37:27,920
hellfire

1209
02:37:42,870 --> 02:37:29,760
check your flight plan for columbia from

1210
02:37:47,030 --> 02:37:45,270
about an hour later than this

1211
02:37:49,030 --> 02:37:47,040
okay fido flight get all your data

1212
02:37:50,070 --> 02:37:49,040
together we'll try one more time roger

1213
02:37:51,429 --> 02:37:50,080

thank you

1214

02:37:52,389 --> 02:37:51,439

fao will you get the information

1215

02:37:55,030 --> 02:37:52,399

together

1216

02:37:57,110 --> 02:37:55,040

roger fine gnc flight

1217

02:37:59,590 --> 02:37:57,120

flight chances are okay on consumables

1218

02:38:30,550 --> 02:37:59,600

or i'm gonna propel them that's

1219

02:38:30,560 --> 02:39:30,140

traffic

1220

02:39:30,150 --> 02:39:43,750

[Music]

1221

02:39:43,760 --> 02:40:22,710

evening

1222

02:40:29,590 --> 02:40:25,590

limbs systems look good

1223

02:40:32,950 --> 02:40:29,600

cumin should now be transferring back to

1224

02:40:35,670 --> 02:40:32,960

tranquility bases

1225

02:40:38,870 --> 02:40:35,680

environmental control system

1226

02:40:41,030 --> 02:40:38,880

and later we'll switch to uh

1227

02:40:43,590 --> 02:40:41,040

to the vehicle's communications system

1228

02:40:46,150 --> 02:40:43,600

we estimate it'll be another

1229

02:44:09,269 --> 02:40:46,160

10 to 15 minutes before they're on the

1230

02:44:09,279 --> 02:45:44,070

so

1231

02:45:48,469 --> 02:45:46,389

and a replica of the

1232

02:45:50,389 --> 02:45:48,479

american flag on the lunar surface is

1233

02:45:59,910 --> 02:45:50,399

now being erected here in the control

1234

02:46:05,349 --> 02:46:03,030

and a replica of the plaque on

1235

02:46:33,750 --> 02:46:05,359

tranquility base has been hung on the

1236

02:46:48,150 --> 02:46:36,070

neil this is houston neil is this

1237

02:47:26,790 --> 02:46:51,269

buzz buzz this is houston radio check

1238

02:47:31,510 --> 02:47:28,630

uh this is houston

1239

02:48:01,429 --> 02:47:31,520

uh i copy a transmission calling houston

1240

02:48:07,510 --> 02:48:04,630

uh neil this is houston if you read we

1241

02:49:57,269 --> 02:48:07,520

suggest you install one plus antenna so

1242

02:49:57,279 --> 02:50:08,309

thanks

1243

02:50:08,319 --> 02:50:12,950

hey receive

1244

02:50:16,630 --> 02:50:15,190

be off

1245

02:50:35,269 --> 02:50:16,640

hey elizabeth houston we seem to be

1246

02:50:39,349 --> 02:50:36,950

this train quality how do you read

1247

02:50:42,950 --> 02:50:39,359

tranquility basis houston loud and clear

1248

02:50:46,710 --> 02:50:44,630

flat and clear we're in the process of

1249

02:53:31,190 --> 02:50:46,720

switching over to lam comm here

1250

02:53:36,309 --> 02:53:33,269

tranquility base this is houston we'd

1251
02:53:38,230 --> 02:53:36,319
like to verify your steerable antenna in

1252
02:53:40,150 --> 02:53:38,240
track mode slew we're going to do a

1253
02:53:45,670 --> 02:53:40,160
communications handover here on earth

1254
02:53:50,070 --> 02:53:47,750
roger that's affirmative we're in attack

1255
02:59:56,630 --> 02:53:50,080
mod slope

1256
02:59:56,640 --> 03:00:03,429
columbia columbia this is houston over

1257
03:00:06,469 --> 03:00:04,710
roger

1258
03:00:07,910 --> 03:00:06,479
charlie how do you read

1259
03:00:09,590 --> 03:00:07,920
roger columbia

1260
03:00:10,469 --> 03:00:09,600
reading here loud and clear on omni

1261
03:00:13,349 --> 03:00:10,479
charlie

1262
03:00:14,950 --> 03:00:13,359
the crew of tranquility base is back

1263
03:00:16,950 --> 03:00:14,960

inside their base

1264

03:00:19,830 --> 03:00:16,960

uh repressurized

1265

03:00:21,750 --> 03:00:19,840

they're in the process of doffing the

1266

03:00:24,250 --> 03:00:21,760

floaters everything went beautifully

1267

03:00:26,550 --> 03:00:24,260

over

1268

03:00:28,550 --> 03:00:26,560

[Applause]

1269

03:00:31,110 --> 03:00:28,560

hallelujah

1270

03:00:33,429 --> 03:00:31,120

and uh we'd like to get

1271

03:00:36,950 --> 03:00:33,439

pooh and accept from you we have a

1272

03:00:39,750 --> 03:00:36,960

state vector uplink and after that we'd

1273

03:00:41,590 --> 03:00:39,760

like you to realign your platform to the

1274

03:00:44,670 --> 03:00:41,600

new reps mat that we sent up our

1275

03:00:44,680 --> 03:00:50,309

[Applause]

1276
03:00:50,319 --> 03:00:56,350
all right you want a uh option one piece

1277
03:00:56,360 --> 03:01:12,070
[Applause]

1278
03:01:17,910 --> 03:01:14,630
this is a puddle of control dr charles

1279
03:01:20,710 --> 03:01:17,920
berry reports the heart rates

1280
03:01:21,890 --> 03:01:20,720
during this eva period

1281
03:01:25,190 --> 03:01:21,900
ranged from

1282
03:01:31,910 --> 03:01:28,309
a low of 90 for both crewmen

1283
03:01:32,870 --> 03:01:31,920
to a high of about 125

1284
03:01:35,429 --> 03:01:32,880
for

1285
03:01:37,190 --> 03:01:35,439
buzz aldrin at peak periods and a high

1286
03:01:39,990 --> 03:01:37,200
of 160

1287
03:01:43,910 --> 03:01:40,000
for neil armstrong at peak periods

1288
03:01:46,469 --> 03:01:43,920

that top reading coming during the time

1289

03:01:49,070 --> 03:01:46,479

he was transferring the rock boxes into

1290

03:01:57,510 --> 03:01:49,080

the land

1291

03:02:02,870 --> 03:02:00,150

dr barry says the data they got

1292

03:02:07,480 --> 03:02:02,880

indicates neil was working very hard at

1293

03:02:07,490 --> 03:02:42,830

[Applause]

1294

03:02:48,389 --> 03:02:45,910

so columbia this is houston uh we're

1295

03:02:50,070 --> 03:02:48,399

going to uplink you a new state picture

1296

03:02:52,469 --> 03:02:50,080

and then we'll send the wrestling up

1297

03:02:54,070 --> 03:02:52,479

again uh because sending the state

1298

03:02:57,190 --> 03:02:54,080

vector up will wipe out the one that you

1299

03:03:15,349 --> 03:02:57,200

have on board and then you can do a 352

1300

03:05:17,510 --> 03:04:39,030

so

1301
03:05:17,520 --> 03:05:31,429
i'm

1302
03:05:31,439 --> 03:06:04,930
uh

1303
03:06:04,940 --> 03:06:13,670
[Applause]

1304
03:06:13,680 --> 03:06:29,269
i'm

1305
03:06:29,279 --> 03:06:42,090
uh

1306
03:07:16,309 --> 03:06:44,469
[Applause]

1307
03:07:16,319 --> 03:07:20,450
ah

1308
03:07:20,460 --> 03:07:37,510
[Applause]

1309
03:07:37,520 --> 03:07:56,870
foreign

1310
03:07:56,880 --> 03:08:15,960
so

1311
03:08:15,970 --> 03:08:25,190
[Applause]

1312
03:08:25,200 --> 03:08:30,050
so

1313
03:08:30,060 --> 03:08:35,349

[Applause]

1314

03:08:42,390 --> 03:08:37,510

columbia this is houston do you read

1315

03:08:42,400 --> 03:08:47,990

[Applause]

1316

03:08:52,630 --> 03:08:50,710

columbia we've completed the uplink the

1317

03:08:53,830 --> 03:08:52,640

computer is yours you can go to block

1318

03:08:57,510 --> 03:08:53,840

however

1319

03:08:59,190 --> 03:08:57,520

uh we'd like you to hold off on the p52

1320

03:09:02,469 --> 03:08:59,200

option one align

1321

03:09:04,230 --> 03:09:02,479

until after you pass landing site two

1322

03:09:07,349 --> 03:09:04,240

and we're requesting that you perform

1323

03:09:09,030 --> 03:09:07,359

another p22 and attempt to find the lamb

1324

03:09:20,150 --> 03:09:09,040

this fast i've got some numbers for you

1325

03:09:46,550 --> 03:09:32,910

[Applause]

1326
03:09:48,389 --> 03:09:46,560
roger columbia p22 landmark id is lunar

1327
03:09:51,349 --> 03:09:48,399
module

1328
03:09:52,630 --> 03:09:51,359
make that uh tranquility base

1329
03:09:54,469 --> 03:09:52,640
d1

1330
03:09:55,750 --> 03:09:54,479
one one two

1331
03:10:00,950 --> 03:09:55,760
two five

1332
03:10:04,070 --> 03:10:02,309
three zero

1333
03:10:07,750 --> 03:10:04,080
one seven

1334
03:10:10,150 --> 03:10:07,760
four nautical miles south

1335
03:10:13,190 --> 03:10:10,160
time of closest approach

1336
03:10:15,030 --> 03:10:13,200
one one two three one

1337
03:10:16,469 --> 03:10:15,040
five two

1338
03:10:18,710 --> 03:10:16,479

shaft

1339

03:10:21,910 --> 03:10:18,720

three five seven

1340

03:10:23,349 --> 03:10:21,920

decimal zero five one

1341

03:10:25,190 --> 03:10:23,359

trunnion

1342

03:10:28,229 --> 03:10:25,200

zero four seven

1343

03:10:29,990 --> 03:10:28,239

decimal four three two

1344

03:10:32,389 --> 03:10:30,000

roll zero

1345

03:10:33,830 --> 03:10:32,399

pitch two five zero

1346

03:10:37,850 --> 03:10:33,840

yaw zero

1347

03:11:00,229 --> 03:10:57,910

[Applause]

1348

03:11:04,810 --> 03:11:00,239

columbia this is houston

1349

03:11:31,269 --> 03:11:04,820

did you copy my p22 update over

1350

03:11:31,279 --> 03:11:34,560

colombia

1351
03:11:39,190 --> 03:11:36,870
[Applause]

1352
03:11:44,660 --> 03:11:39,200
columbia this is houston

1353
03:11:44,670 --> 03:11:54,790
[Applause]

1354
03:11:58,770 --> 03:11:57,190
columbia this is houston do you copy my

1355
03:12:00,950 --> 03:11:58,780
pad over

1356
03:12:06,480 --> 03:12:00,960
[Applause]

1357
03:12:12,389 --> 03:12:06,500
[Music]

1358
03:12:31,110 --> 03:12:13,580
standby

1359
03:12:46,469 --> 03:12:33,150
okay

1360
03:12:46,479 --> 03:13:02,790
huh

1361
03:13:15,590 --> 03:13:04,180
yes

1362
03:13:18,550 --> 03:13:15,600
[Applause]

1363
03:13:20,550 --> 03:13:18,560

this is apollo control at 112 hours 19

1364

03:13:24,469 --> 03:13:20,560
minutes

1365

03:13:29,910 --> 03:13:24,479
the inhabitants of tranquility base are

1366

03:13:35,190 --> 03:13:32,229
still have not fully configured the

1367

03:13:37,510 --> 03:13:35,200
voice communications

1368

03:13:40,389 --> 03:13:37,520
however we are getting telemetry good

1369

03:13:43,670 --> 03:13:40,399
telemetry from tranquility base showing

1370

03:13:45,750 --> 03:13:43,680
a cabin pressure of 5

1371

03:13:48,950 --> 03:13:45,760
pounds per square inch

1372

03:13:51,190 --> 03:13:48,960
temperature of 60 degrees

1373

03:13:53,269 --> 03:13:51,200
we expect to

1374

03:14:00,309 --> 03:13:53,279
establish communications

1375

03:14:05,510 --> 03:14:02,070
during this

1376
03:14:08,469 --> 03:14:07,030
removing

1377
03:14:11,910 --> 03:14:08,479
the

1378
03:14:14,870 --> 03:14:11,920
portable life support systems

1379
03:14:18,550 --> 03:14:14,880
checking over their their

1380
03:14:22,070 --> 03:14:20,469
getting ready for

1381
03:14:23,670 --> 03:14:22,080
jettison

1382
03:14:24,389 --> 03:14:23,680
equipment

1383
03:14:26,670 --> 03:14:24,399
from

1384
03:14:28,389 --> 03:14:26,680
tranquility base the cabin will be

1385
03:14:30,469 --> 03:14:28,399
depressurized

1386
03:14:33,910 --> 03:14:30,479
before too long and equipment will be

1387
03:14:36,630 --> 03:14:33,920
jettisoned onto the lunar surface

1388
03:14:38,469 --> 03:14:36,640

tranquility base this is houston can you

1389

03:14:40,630 --> 03:14:38,479

give us some idea of how you're

1390

03:14:42,790 --> 03:14:40,640

progressing on the

1391

03:14:45,740 --> 03:14:42,800

flip stopping and preparation for a

1392

03:14:50,950 --> 03:14:48,070

[Applause]

1393

03:14:54,950 --> 03:14:50,960

all right houston tranquility base we're

1394

03:14:57,269 --> 03:14:54,960

in the process of uh using us what uh

1395

03:15:03,510 --> 03:14:57,279

film we have and i'm just getting ready

1396

03:15:08,630 --> 03:15:06,070

[Applause]

1397

03:15:11,269 --> 03:15:08,640

roger tranquility we'd like to

1398

03:15:13,990 --> 03:15:11,279

haul off as long as possible on the

1399

03:15:15,830 --> 03:15:14,000

lithium hydroxide canister uh make that

1400

03:15:17,830 --> 03:15:15,840

one of the last things you do in getting

1401

03:15:22,469 --> 03:15:17,840

ready for the deep breast if you can

1402

03:15:26,389 --> 03:15:24,070

all right you were

1403

03:15:28,790 --> 03:15:26,399

planning on doing that uh i just

1404

03:15:30,330 --> 03:15:28,800

wondering how much longer uh we want to

1405

03:15:33,030 --> 03:15:30,340

wait though

1406

03:15:34,550 --> 03:15:33,040

[Applause]

1407

03:15:36,950 --> 03:15:34,560

we've probably got another half an

1408

03:15:38,630 --> 03:15:36,960

hour's worth of uh picture taken and i

1409

03:15:40,469 --> 03:15:38,640

guess we could uh

1410

03:15:42,469 --> 03:15:40,479

run through an eight uh

1411

03:15:45,030 --> 03:15:42,479

cycle and uh

1412

03:15:54,389 --> 03:15:45,040

uh then change the

1413

03:15:57,429 --> 03:15:55,910

well it'll be a little grounded in here

1414

03:15:59,490 --> 03:15:57,439

for a while