



1
00:00:32,069 --> 00:00:27,840
the countdown for the long haul

2
00:00:37,580 --> 00:00:32,079
lettuce on mission st s 30 quid

3
00:00:37,590 --> 00:00:43,080
by Mark team or by the table testing

4
00:00:48,600 --> 00:00:45,810
it is raining at the launch pad perfect

5
00:00:51,360 --> 00:00:48,610
for our scattered showers and obscenity

6
00:00:55,230 --> 00:00:51,370
showers rest of the space center of the

7
00:00:57,010 --> 00:00:55,240
st. John's and also downrange

8
00:00:58,960 --> 00:00:57,020
25 miles

9
00:01:01,930 --> 00:00:58,970
this is shuttle launch control at

10
00:01:06,790 --> 00:01:01,940
t-minus three hours and holding the ice

11
00:01:09,580 --> 00:01:06,800
team and closeout crew are in an area

12
00:01:11,980 --> 00:01:09,590
the ice team is on the 0 level or the

13
00:01:14,710 --> 00:01:11,990

deck of the mobile launch platform and

14

00:01:17,520 --> 00:01:14,720

there they will inspect the tanks half

15

00:01:19,740 --> 00:01:17,530

dome and the shuttle engine

16

00:01:23,460 --> 00:01:19,750

everything has been going very smoothly

17

00:01:25,950 --> 00:01:23,470

in our countdown the weather people

18

00:01:28,140 --> 00:01:25,960

saying still that there is a sixty

19

00:01:29,810 --> 00:01:28,150

percent chance that everything will be

20

00:01:32,930 --> 00:01:29,820

satisfactory for

21

00:01:34,840 --> 00:01:32,940

on time this afternoon and NASA test

22

00:01:38,149 --> 00:01:34,850

director around

23

00:01:40,190 --> 00:01:38,159

contact now with personal over

24

00:01:42,770 --> 00:01:40,200

and has given them permission to wake

25

00:02:00,510 --> 00:01:42,780

the fight food in preparation for this

26
00:02:00,520 --> 00:02:08,400
we're standing by to vote

27
00:02:15,620 --> 00:02:11,080
breakfast I in the center of course

28
00:02:22,910 --> 00:02:19,090
left to right is mission specialist

29
00:02:29,690 --> 00:02:25,490
from gravy

30
00:02:35,160 --> 00:02:33,180
mission specialist Mary please

31
00:02:45,190 --> 00:02:35,170
and looking

32
00:02:50,500 --> 00:02:47,229
this is shuttle launch control at

33
00:02:51,809 --> 00:02:50,510
t-minus three hours and holding in the

34
00:02:55,470 --> 00:02:51,819
suit

35
00:02:58,589 --> 00:02:55,480
with scenes from the crew quarters of

36
00:03:03,270 --> 00:02:58,599
commander Dave Walker hit the process of

37
00:03:07,920 --> 00:03:03,280
completing his preliminary suitable

38
00:03:22,670 --> 00:03:12,259

next to him is the pilot plant gravy

39

00:03:29,309 --> 00:03:24,200

he was

40

00:03:29,319 --> 00:03:34,210

ready

41

00:03:34,220 --> 00:03:47,210

they

42

00:03:47,220 --> 00:03:50,030

side

43

00:03:50,040 --> 00:03:54,649

there

44

00:03:54,659 --> 00:03:57,690

zippy

45

00:04:03,550 --> 00:03:59,480

the

46

00:04:03,560 --> 00:04:11,750

necessary

47

00:04:19,410 --> 00:04:14,640

they they will be putting on

48

00:04:19,420 --> 00:04:29,530

just prior

49

00:04:35,740 --> 00:04:32,860

and here comes the crew now

50

00:04:39,959 --> 00:04:35,750

being let out really by mission

51
00:04:48,580 --> 00:04:43,319
very pleased and the commander and

52
00:04:52,690 --> 00:04:48,590
pilots commanders a walker waving

53
00:04:56,020 --> 00:04:52,700
may be waving as they go into the

54
00:05:06,180 --> 00:04:56,030
elevator for the trip down to the first

55
00:05:16,910 --> 00:05:10,110
SDS 30 people clapping now as they come

56
00:05:16,920 --> 00:05:21,119
may be waving

57
00:05:21,129 --> 00:05:34,300
flag waving

58
00:05:39,070 --> 00:05:36,280
keep the astronaut office Dan

59
00:05:41,560 --> 00:05:39,080
brandenstein he will be flying the

60
00:05:44,230 --> 00:05:41,570
weather aircraft today and that's going

61
00:05:46,200 --> 00:05:44,240
to be a very important task because the

62
00:05:48,930 --> 00:05:46,210
weather

63
00:05:55,470 --> 00:05:48,940

is changing and it still has to change

64

00:06:00,420 --> 00:05:58,020

please

65

00:06:02,129 --> 00:06:00,430

Circle

66

00:06:07,420 --> 00:06:02,139

that building

67

00:06:07,430 --> 00:06:12,620

hey

68

00:06:12,630 --> 00:06:20,390

van

69

00:06:26,080 --> 00:06:22,510

allowed it

70

00:07:09,150 --> 00:06:26,090

with emergency vehicle

71

00:07:09,160 --> 00:07:12,239

sure

72

00:07:12,249 --> 00:07:22,850

Russia

73

00:07:22,860 --> 00:07:57,220

astro van

74

00:08:02,330 --> 00:07:59,129

the entering the order

75

00:08:05,760 --> 00:08:02,340

shaking hands with that close out team

76
00:09:01,820 --> 00:08:05,770
commander Dave Walker and pilot rock

77
00:09:06,990 --> 00:09:04,560
this is shuttle launch control at

78
00:09:09,400 --> 00:09:07,000
t-minus two hours 20 minutes and

79
00:09:13,620 --> 00:09:09,410
Counting

80
00:09:13,630 --> 00:09:17,879
bandar

81
00:09:17,889 --> 00:09:26,460
cheering Dave Walker begins his checks

82
00:09:26,470 --> 00:09:36,180
here

83
00:09:42,170 --> 00:09:39,380
we'll be married please

84
00:09:45,560 --> 00:09:42,180
very Cleve is responsible for

85
00:09:49,100 --> 00:09:45,570
orchestrating the secondary payloads and

86
00:10:01,360 --> 00:09:53,120
the secondary payloads improve

87
00:10:01,370 --> 00:10:23,600
getting into the oil

88
00:10:23,610 --> 00:10:36,140

haha

89

00:10:55,519 --> 00:10:39,090

please

90

00:10:55,529 --> 00:10:58,400

Oh

91

00:10:58,410 --> 00:11:04,140

mission specialist dr. norm thagard

92

00:11:22,840 --> 00:11:07,020

into the orbiter

93

00:11:31,390 --> 00:11:25,809

is that your lab there

94

00:11:34,770 --> 00:11:31,400

the ILO's process underway

95

00:11:48,280 --> 00:11:38,220

one hour 31 minutes 9 seconds and

96

00:11:55,800 --> 00:11:51,460

the countdown clock will start down five

97

00:12:02,540 --> 00:11:59,350

in counting the countdown events now

98

00:12:08,550 --> 00:12:06,389

t minus 31 seconds when we begin the

99

00:12:11,790 --> 00:12:08,560

switch over to the onboard redundant

100

00:12:13,379 --> 00:12:11,800

settlement sequencer the ground launch

101
00:12:16,439 --> 00:12:13,389
sequencer is part of the launch

102
00:12:18,710 --> 00:12:16,449
processing system and operates by relay

103
00:12:20,710 --> 00:12:18,720
commands to be on board

104
00:12:22,689 --> 00:12:20,720
which then three four

105
00:12:25,660 --> 00:12:22,699
the LPS system that demands have been

106
00:12:27,790 --> 00:12:25,670
executed the primary job of being

107
00:12:30,040 --> 00:12:27,800
onboard computers is to check that all

108
00:12:32,110 --> 00:12:30,050
of those the criteria such as the

109
00:12:34,150 --> 00:12:32,120
appellant loads temperatures pressures

110
00:12:39,000 --> 00:12:34,160
and other measurements are normal and

111
00:12:48,009 --> 00:12:41,640
the Maryland tracking station has been

112
00:12:48,019 --> 00:12:52,889
eight minutes point in the countdown

113
00:12:52,899 --> 00:13:15,110

t-minus eight minutes and counting

114

00:13:20,150 --> 00:13:17,480
orbiter test conductor mikey has

115

00:13:22,490 --> 00:13:20,160
requested that Houston send a scare

116

00:13:24,680 --> 00:13:22,500
program commands which is the final

117

00:13:27,260 --> 00:13:24,690
update on antenna management and

118

00:13:30,509 --> 00:13:27,270
frequency changes and he is asked by the

119

00:13:35,390 --> 00:13:33,170
reconfigurable

120

00:13:40,220 --> 00:13:35,400
fuel cells and we have gone through

121

00:13:42,350 --> 00:13:40,230
orbiter access arm retract this is the

122

00:13:45,080 --> 00:13:42,360
walkway used by the astronauts to enter

123

00:13:46,670 --> 00:13:45,090
the orbiter in case of an emergency the

124

00:13:49,970 --> 00:13:46,680
arm can be placed back into position

125

00:13:53,449 --> 00:13:49,980
within about 15 seconds coming up on the

126
00:13:56,090 --> 00:13:53,459
7-minute pointing will count down

127
00:14:00,910 --> 00:13:56,100
the SRB an external tank safe and arm

128
00:14:00,920 --> 00:14:06,580
Oh

129
00:14:10,930 --> 00:14:08,620
vital clear the launch from the

130
00:14:12,880 --> 00:14:10,940
superintendent of rain operations as we

131
00:14:14,190 --> 00:14:12,890
come off t-minus four minutes and

132
00:14:16,830 --> 00:14:14,200
Counting

133
00:14:19,510 --> 00:14:16,840
the main engine final third sequence is

134
00:14:23,680 --> 00:14:21,520
orbiter flight control surfaces such as

135
00:14:26,380 --> 00:14:23,690
Alabama speed brakes and rudders now

136
00:14:30,800 --> 00:14:26,390
being moved to a pre-programmed pattern

137
00:14:39,920 --> 00:14:33,769
t-minus three minutes 40 seconds and

138
00:14:44,210 --> 00:14:42,500

t-minus three minutes 30 seconds all

139

00:14:46,420 --> 00:14:44,220

three engines now being

140

00:14:49,480 --> 00:14:46,430

to a pattern to verify their

141

00:14:51,040 --> 00:14:49,490

for a cent quite control after going

142

00:14:53,829 --> 00:14:51,050

through their paces they'll be aligned

143

00:14:57,340 --> 00:14:53,839

with our start position t-minus three

144

00:14:58,900 --> 00:14:57,350

minutes 18 seconds and counting

145

00:15:00,150 --> 00:14:58,910

up on the freedmen and pardon the

146

00:15:01,990 --> 00:15:00,160

penalty

147

00:15:06,120 --> 00:15:02,000

at t minus two

148

00:15:08,210 --> 00:15:06,130

55 seconds the start of excrement

149

00:15:10,220 --> 00:15:08,220

pressurization will begin

150

00:15:13,130 --> 00:15:10,230

gaseous nitrogen virgil's of the main

151
00:15:24,300 --> 00:15:13,140
engines will be permanent t-minus three

152
00:15:29,430 --> 00:15:27,249
oxygen tank being fresh fries

153
00:15:32,840 --> 00:15:29,440
sequencer is there

154
00:15:36,460 --> 00:15:32,850
the gaseous oxygen vent food

155
00:15:39,540 --> 00:15:38,130
final check to ensure

156
00:15:41,610 --> 00:15:39,550
only with

157
00:15:46,090 --> 00:15:41,620
it happens

158
00:15:46,100 --> 00:15:50,050
t-minus two minutes

159
00:16:00,480 --> 00:15:53,129
t-minus 2 minutes 20 seconds the

160
00:16:07,140 --> 00:16:03,430
we'll be reminded to close their visors

161
00:16:12,130 --> 00:16:09,240
five seconds away from

162
00:16:12,140 --> 00:16:19,980
j'ai beaucoup flow and have a good

163
00:16:26,280 --> 00:16:23,070

t-minus one minute 50 seconds and

164

00:16:27,990 --> 00:16:26,290

counting liquid hydrogen replenish of

165

00:16:31,810 --> 00:16:28,000

the external tank has started and

166

00:16:37,230 --> 00:16:33,580

battle

167

00:16:42,460 --> 00:16:39,970

commander Dave Walker saying ready to

168

00:16:44,150 --> 00:16:42,470

t-minus one minute 30 seconds and

169

00:16:46,269 --> 00:16:44,160

counting

170

00:16:48,730 --> 00:16:46,279

at the t minus one minute

171

00:16:49,470 --> 00:16:48,740

sequential will verify that the shuttle

172

00:16:53,189 --> 00:16:49,480

name

173

00:16:56,780 --> 00:16:53,199

ready to start p minus one minute 20

174

00:16:56,790 --> 00:17:10,199

liquid hydrogen tank now at

175

00:17:15,000 --> 00:17:12,449

t-minus one minute and Counting the

176
00:17:15,650 --> 00:17:15,010
sound suppression water system is now

177
00:17:17,819 --> 00:17:15,660
armed

178
00:17:21,049 --> 00:17:17,829
free liftoff water

179
00:17:23,689 --> 00:17:21,059
t-minus sixteen seconds

180
00:17:27,230 --> 00:17:23,699
when is 50 seconds and counting the

181
00:17:30,630 --> 00:17:27,240
hydrogen burn igniters has been armed

182
00:17:34,159 --> 00:17:30,640
any residual hydrogen gas under the name

183
00:17:40,000 --> 00:17:34,169
p minus forty seconds and counting

184
00:17:50,730 --> 00:17:43,210
computers have and we have gone for

185
00:17:56,540 --> 00:17:54,350
21 seconds the SRB nozzle jingles

186
00:18:01,760 --> 00:17:56,550
the way

187
00:18:11,620 --> 00:18:01,770
15 14 13 12

188
00:18:11,630 --> 00:18:54,760

zero

189

00:18:54,770 --> 00:18:58,140

three engines at

190

00:18:58,150 --> 00:19:14,400

velocity

191

00:19:14,410 --> 00:19:19,970

engine cell phone

192

00:19:19,980 --> 00:19:29,400

auditing now

193

00:19:33,760 --> 00:19:30,990

standing by

194

00:19:35,980 --> 00:19:33,770

separation from me

195

00:19:37,320 --> 00:19:35,990

two thousand feet per second altitude

196

00:19:48,040 --> 00:19:37,330

ten

197

00:19:48,050 --> 00:19:51,860

this is Mission Control all 18

198

00:19:51,870 --> 00:20:27,510

four percent

199

00:20:27,520 --> 00:20:31,250

this is Mission Control and

200

00:20:31,260 --> 00:20:34,419

Oh 343

201
00:20:39,280 --> 00:20:36,580
30

202
00:20:41,420 --> 00:20:39,290
39

203
00:20:53,620 --> 00:20:41,430
three engines all

204
00:21:00,710 --> 00:20:57,110
Atlantis performance nominal

205
00:21:02,810 --> 00:21:00,720
this is Mission Control this mission

206
00:21:06,390 --> 00:21:02,820
control that call let the crew know that

207
00:22:01,960 --> 00:21:06,400
the SRBs and the engines are

208
00:22:05,629 --> 00:22:03,889
Atlantis Houston everything down here

209
00:22:07,789 --> 00:22:05,639
looks real good to us you have a

210
00:22:36,010 --> 00:22:07,799
preliminary go for what about us getting

211
00:22:36,020 --> 00:22:44,880
business after

212
00:22:44,890 --> 00:26:47,720
Atlantis Houston

213
00:26:47,730 --> 00:28:48,080

ah

214

00:28:56,659 --> 00:28:50,129

Atlantis Houston good morning and

215

00:29:05,220 --> 00:29:02,639

good morning uses we're up a crowned

216

00:29:09,029 --> 00:29:05,230

everybody feeling good try to find your

217

00:29:11,430 --> 00:29:09,039

toothbrushes this is Mission Control

218

00:29:15,720 --> 00:29:11,440

flight a cheese wakeup music so that

219

00:29:17,369 --> 00:29:15,730

only thank you for the wakeup music this

220

00:29:19,470 --> 00:29:17,379

is Mission Control my flight night to

221

00:31:35,400 --> 00:29:19,480

wake up music was the theme music from

222

00:33:02,320 --> 00:31:37,500

lattice you somewhere get the good fit

223

00:33:02,330 --> 00:33:39,010

hey David Kevin

224

00:33:39,020 --> 00:35:12,960

ah

225

00:35:17,200 --> 00:35:14,609

where we got me that thanks for the

226

00:35:20,680 --> 00:35:17,210

information a great picture

227

00:35:23,170 --> 00:35:20,690

ah so gonna get in some big tech TV now

228

00:35:25,030 --> 00:35:23,180

you can see that dave has taken

229

00:35:28,500 --> 00:35:25,040

advantage of this break in between FDA

230

00:35:38,579 --> 00:35:28,510

samples to exercise on the treadmill

231

00:35:43,350 --> 00:35:41,040

you'll need a brother

232

00:35:45,150 --> 00:35:43,360

Jay's got both the marathon he's going

233

00:35:48,130 --> 00:35:45,160

to do today

234

00:35:48,140 --> 00:36:00,470

Oh

235

00:36:00,480 --> 00:38:36,500

you

236

00:38:36,510 --> 00:38:46,800

Atlantis used in good morning

237

00:38:54,740 --> 00:38:50,350

idea to take us very music

238

00:39:01,160 --> 00:38:57,830

it did keep well and we're ready to roll

239

00:39:03,800 --> 00:39:01,170

today okay there the surface of the

240

00:39:06,470 --> 00:39:03,810

sample that did as I ran around the bit

241

00:39:08,300 --> 00:39:06,480

deck and then also I've done of the

242

00:39:10,220 --> 00:39:08,310

flight deck and it's worth a visit to

243

00:39:12,380 --> 00:39:10,230

saw the capability of the camcorder I

244

00:39:15,970 --> 00:39:12,390

think this is the first time we really

245

00:39:18,950 --> 00:39:15,980

don't show on all of its capability

246

00:39:21,410 --> 00:39:18,960

zooming out a society of external test

247

00:39:24,080 --> 00:39:21,420

pilot pat down all of you can read it

248

00:39:29,090 --> 00:39:24,090

it's will dr. Lehman institute of higher

249

00:39:34,100 --> 00:39:29,100

learning we don't have any Cornell or

250

00:39:37,670 --> 00:39:34,110

Stanford patches on board only some of

251
00:39:41,450 --> 00:39:37,680
those daily killers and the teacher okay

252
00:39:44,390 --> 00:39:41,460
here we have your basic town it's an

253
00:39:46,700 --> 00:39:44,400
Angus com I'd like to say a little

254
00:39:52,930 --> 00:39:46,710
Obama's of America one of your owners up

255
00:39:55,370 --> 00:39:52,940
here now I head up to the flight deck

256
00:39:59,540 --> 00:39:55,380
you can see that it works pretty good

257
00:40:01,100 --> 00:39:59,550
both inside and looking outside the same

258
00:40:04,910 --> 00:40:01,110
time the lighting doesn't seem to bother

259
00:40:19,460 --> 00:40:04,920
too much mark we're getting great

260
00:40:24,380 --> 00:40:22,310
hey let us know sobs look to the camper

261
00:40:27,109 --> 00:40:24,390
this is just about set set that down

262
00:40:28,430 --> 00:40:27,119
Logan later I both know when we get to

263
00:40:31,210 --> 00:40:28,440

sunrise will show a little bit of the

264

00:40:45,770 --> 00:40:31,220

hood you can tell us how that looks

265

00:41:03,500 --> 00:40:47,870

I was on a drill that will try to give

266

00:41:08,750 --> 00:41:06,080

as you food has a fairly significant

267

00:41:41,319 --> 00:41:08,760

zoom capability and stays in focus

268

00:41:46,239 --> 00:41:43,719

okay David now we're picking up by the

269

00:41:48,069 --> 00:41:46,249

Texas coast I think we're start out by

270

00:41:50,140 --> 00:41:48,079

Brown so I can't exactly tell for sure

271

00:41:52,180 --> 00:41:50,150

though is that the Padre I will follow

272

00:41:58,120 --> 00:41:52,190

it all the way up the coast he'll get a

273

00:42:04,209 --> 00:41:58,130

pretty good shot of music and we're

274

00:42:07,299 --> 00:42:04,219

still watching and there it is the

275

00:42:08,680 --> 00:42:07,309

hydrologic as it's moving so much I'll

276

00:42:13,839 --> 00:42:08,690

try to be a little bit study if that

277

00:42:18,219 --> 00:42:13,849

gives you a problem can you be steadier

278

00:42:25,779 --> 00:42:18,229

on a playback mark actually it's not

279

00:42:31,259 --> 00:42:25,789

that bad at all mark okay and there you

280

00:42:31,269 --> 00:43:54,750

you

281

00:44:03,000 --> 00:43:56,970

mark we had no idea what kind of a nice

282

00:44:04,530 --> 00:44:03,010

date is outside yeah we thought you'd

283

00:44:06,600 --> 00:44:04,540

enjoy watching nothing more than a bunch

284

00:44:21,819 --> 00:44:06,610

of numbers up on the screen and here's a

285

00:44:28,690 --> 00:44:24,999

and then we'll run along the coast or

286

00:46:03,720 --> 00:44:28,700

leans over to Florida and then we'll run

287

00:46:07,680 --> 00:46:05,670

and Atlantis we're losing the picture

288

00:46:08,849 --> 00:46:07,690

right now because of blockage but that

289

00:46:12,599 --> 00:46:08,859

was real good we appreciate it those are

290

00:46:18,270 --> 00:46:12,609

great shots ok I'll try a little bit

291

00:46:28,910 --> 00:46:18,280

steadier next time and you get a good

292

00:46:28,920 --> 00:46:55,390

we're here to pump you up

293

00:46:55,400 --> 00:48:13,730

ah

294

00:48:13,740 --> 00:48:42,010

you

295

00:48:47,320 --> 00:48:44,740

that was very lead taking a dyskinetic

296

00:48:50,410 --> 00:48:47,330

I've disconnected the cable from

297

00:49:09,599 --> 00:48:50,420

cortically was actually doing the whole

298

00:49:14,640 --> 00:49:12,269

yeah they just a reminder would like for

299

00:49:17,729 --> 00:49:14,650

you to make a quick visual inspection

300

00:50:22,930 --> 00:49:17,739

bottle can picture them straight to the

301
00:50:22,940 --> 00:50:41,750

I

302
00:50:46,730 --> 00:50:44,060

Atlantis Houston good morning it's time

303
00:50:52,060 --> 00:50:46,740

to come home we have you through the car

304
00:50:52,070 --> 00:50:59,050

ratchet thank you good morning

305
00:50:59,060 --> 00:51:05,230

Atlanta to sit

306
00:51:10,180 --> 00:51:07,870

pending WCS deactivation you have a go

307
00:51:12,730 --> 00:51:10,190

for deorbit burn your signal is charlie

308
00:51:41,370 --> 00:51:15,010

Roger that if you need it marks a long

309
00:51:50,620 --> 00:51:48,220

Atlantis Houston without attractive Dave

310
00:51:53,260 --> 00:51:50,630

we'd like you to select Edwards 22 on

311
00:51:56,470 --> 00:51:53,270

area 15 will be going for the crosswind

312
00:52:00,370 --> 00:51:56,480

ETO peak start the winds right now are

313
00:52:22,709 --> 00:52:00,380

270 at ten gustas 16 that gives us seven

314

00:52:22,719 --> 00:52:28,650

Mission Control have a visual shot now

315

00:52:28,660 --> 00:52:34,210

traveling

316

00:52:34,220 --> 00:52:45,150

hundred eighty eight miles out

317

00:52:49,359 --> 00:52:46,930

Lana houston we

318

00:52:51,579 --> 00:52:49,369

nominal aimpoint expect to act turn of

319

00:52:53,120 --> 00:52:51,589

200 degrees the brakes should be about

320

00:52:56,920 --> 00:52:53,130

fifteen percent

321

00:52:56,930 --> 00:53:11,330

Oh

322

00:53:15,890 --> 00:53:12,950

this is Mission Control flight dynamics

323

00:53:18,650 --> 00:53:15,900

officer confirms that llantas looks

324

00:53:20,360 --> 00:53:18,660

super rolling onto final beginning a

325

00:53:24,260 --> 00:53:20,370

leftover head turn and heading alignment

326

00:53:31,630 --> 00:53:24,270

circle vehicle is on was perfectly lined

327

00:53:37,450 --> 00:53:33,970

velocity now 600 feet per second

328

00:53:47,800 --> 00:53:37,460

altitude 14,000 feet 7 miles from the

329

00:53:55,780 --> 00:53:50,980

Atlantis Hong glideslope home center

330

00:53:58,380 --> 00:53:55,790

line to 80 at eight bestest 16-7 peak 12

331

00:53:58,390 --> 00:54:04,780

read it up

332

00:54:11,390 --> 00:54:08,030

that last minute to wind information

333

00:54:15,410 --> 00:54:11,400

being passed to pilot Ron gravy and

334

00:54:16,980 --> 00:54:15,420

Commander Dave Walker Atlantis now five

335

00:54:18,450 --> 00:54:16,990

miles from the runway

336

00:54:36,829 --> 00:54:18,460

and the velocity of five minutes feet

337

00:54:36,839 --> 00:54:41,880

house 2 25 minutes

338

00:55:04,359 --> 00:54:43,870

going to be

339

00:55:04,369 --> 00:55:19,470

landing gear down a lot

340

00:55:54,870 --> 00:55:28,300

touchdown

341

00:56:02,400 --> 00:55:57,210

and Atlantis on her final roll out on

342

00:56:11,830 --> 00:56:04,900

convoy

343

00:56:11,840 --> 00:57:20,190

post landing

344

00:57:47,450 --> 00:57:21,590

mission

345

00:57:47,460 --> 00:57:58,800

SES group breathe by

346

00:58:03,140 --> 00:58:01,470

also among those green returning through

347

00:58:10,250 --> 00:58:03,150

those was dirty

348

00:58:14,980 --> 00:58:12,590

Admiral Richard truly acting