



1
00:00:58,650 --> 00:00:57,720
at this time the ice team is at the pad

2
00:01:02,790 --> 00:00:58,660
on the mobile launcher platform

3
00:01:04,500 --> 00:01:02,800
conducting their final inspections of

4
00:01:07,230 --> 00:01:04,510
the vehicle looking for any indications

5
00:01:10,980 --> 00:01:07,240
of potential ice build ups following the

6
00:01:26,570 --> 00:01:10,990
tanking of the 500,000 gallons or so of

7
00:01:31,110 --> 00:01:28,800
this is shuttle launch control at

8
00:01:33,450 --> 00:01:31,120
t-minus three hours and holding with

9
00:01:36,120 --> 00:01:33,460
just about ten minutes remaining in our

10
00:01:38,850 --> 00:01:36,130
hold at this time it's about six minutes

11
00:01:41,340 --> 00:01:38,860
after midnight Eastern Time and we have

12
00:01:44,880 --> 00:01:41,350
live pictures of our crew for mission

13
00:01:47,790 --> 00:01:44,890

STS 84 in their suit-up room our mission

14

00:01:49,590 --> 00:01:47,800

commander Charles Precourt is on his

15

00:01:52,710 --> 00:01:49,600

third flight having served as mission

16

00:01:55,560 --> 00:01:52,720

specialist of STS 55 and then his pilot

17

00:01:57,060 --> 00:01:55,570

of STS 71 that was the first space

18

00:01:58,710 --> 00:01:57,070

shuttle mission to dock with the Russian

19

00:02:01,140 --> 00:01:58,720

space station and now he'll serve as

20

00:02:04,800 --> 00:02:01,150

commander of this the sixth mission to

21

00:02:08,430 --> 00:02:04,810

dock with the space station Mir he is a

22

00:02:14,960 --> 00:02:08,440

colonel in the Air Force and next to him

23

00:02:17,370 --> 00:02:14,970

of course is our pilot Eileen Collins

24

00:02:19,260 --> 00:02:17,380

she is preparing for her second shuttle

25

00:02:22,110 --> 00:02:19,270

mission she has logged over 4,000 hours

26

00:02:24,000 --> 00:02:22,120
and various aircraft and she was

27

00:02:27,110 --> 00:02:24,010
selected as an astronaut in 1990 and

28

00:02:30,060 --> 00:02:27,120
first flew aboard mission STS 63 and 95

29

00:02:31,770 --> 00:02:30,070
as the first female to pilot the space

30

00:02:38,400 --> 00:02:31,780
shuttle and this again will be here a

31

00:02:39,720 --> 00:02:38,410
second piloting mission the crew members

32

00:02:42,150 --> 00:02:39,730
are being assisted with their launch and

33

00:02:48,150 --> 00:02:42,160
entry suits by suit technicians from KSC

34

00:02:54,090 --> 00:02:48,160
and JSC Edward Lou is preparing for his

35

00:02:56,130 --> 00:02:54,100
first mission into space and on the

36

00:02:57,449 --> 00:02:56,140
other side of the room another one of

37

00:03:12,260 --> 00:02:57,459
our mission specialists preparing for

38

00:03:18,000 --> 00:03:16,350

michael foale this is a special mission

39

00:03:19,440 --> 00:03:18,010

for him he's flown three times before

40

00:03:21,720 --> 00:03:19,450

but on this particular flight of course

41

00:03:29,910 --> 00:03:21,730

he will be staying onboard the MIR space

42

00:03:31,980 --> 00:03:29,920

station and elena kondakova Russian

43

00:03:33,840 --> 00:03:31,990

Cosmo making her first trip in his place

44

00:03:36,180 --> 00:03:33,850

aboard the shuttle however she has spent

45

00:03:39,540 --> 00:03:36,190

nearly half a year in orbit aboard the

46

00:03:41,970 --> 00:03:39,550

space station Mir kondakova represents

47

00:03:48,570 --> 00:03:41,980

the Russian space agency she was

48

00:03:51,000 --> 00:03:48,580

selected as a cosmonaut in 1989 and John

49

00:03:57,990 --> 00:03:51,010

uhrin Francois Claire voir preparing for

50

00:04:21,449 --> 00:03:58,000

his flight today this will be his second

51
00:04:25,170 --> 00:04:23,249
again the crew waving and making the

52
00:04:31,050 --> 00:04:25,180
final goodbyes to employees at Kennedy

53
00:04:33,600 --> 00:04:31,060
Space Center mission commander charlie

54
00:04:36,870 --> 00:04:33,610
pre port with pilot Eileen Collins

55
00:04:39,810 --> 00:04:36,880
jean-francois fair warned Carlos Noriega

56
00:04:46,110 --> 00:04:39,820
had with lou elena kondakova and michael

57
00:04:47,430 --> 00:04:46,120
foale these launch pads are about four

58
00:04:49,409 --> 00:04:47,440
miles from the Vehicle Assembly Building

59
00:04:51,090 --> 00:04:49,419
and over the next few minutes engineers

60
00:04:53,159 --> 00:04:51,100
will be making final checks of the sound

61
00:04:54,629 --> 00:04:53,169
suppression water tank they'll be

62
00:04:56,879 --> 00:04:54,639
verifying that the tank has topped off

63
00:04:58,800 --> 00:04:56,889

to proper levels this particular tank

64

00:05:00,240 --> 00:04:58,810

holds about 300,000 gallons of water and

65

00:05:02,969 --> 00:05:00,250

on command just a few seconds before

66

00:05:04,350 --> 00:05:02,979

liftoff the tank is completely emptied

67

00:05:05,670 --> 00:05:04,360

as water flows to the sound suppression

68

00:05:10,290 --> 00:05:05,680

system onto the mobile launcher platform

69

00:05:13,920 --> 00:05:10,300

deck at a rate of about a hundred

70

00:05:15,719 --> 00:05:13,930

thousand gallons every 10 seconds in

71

00:05:17,040 --> 00:05:15,729

addition no other technical issues are

72

00:05:18,600 --> 00:05:17,050

being addressed by the management team

73

00:05:21,300 --> 00:05:18,610

at this time the engineers in the firing

74

00:05:24,450 --> 00:05:21,310

room are Manning their consoles

75

00:05:26,339 --> 00:05:24,460

maintaining a close watch on all aspects

76
00:05:30,180 --> 00:05:26,349
of the vehicle again no problems being

77
00:05:32,850 --> 00:05:30,190
discussed here we are at 12:35 a.m.

78
00:05:35,339 --> 00:05:32,860
Eastern time and everything continues to

79
00:05:59,100 --> 00:05:35,349
look good for a launch and just under

80
00:06:05,060 --> 00:06:02,250
this picture is view as a shot taken

81
00:06:07,680 --> 00:06:05,070
from the 195-foot level the crew have

82
00:06:09,870 --> 00:06:07,690
the crew has arrived on this level and

83
00:06:11,610 --> 00:06:09,880
BB taking turns getting into the vehicle

84
00:06:13,950 --> 00:06:11,620
of course their next step is to cross

85
00:06:19,560 --> 00:06:13,960
the orbiter access arm on this level

86
00:06:22,710 --> 00:06:21,420
the orbiter access arm of course can

87
00:06:24,600 --> 00:06:22,720
support the weight of all the crew but

88
00:06:26,040 --> 00:06:24,610

they'll be taking their time there's

89

00:06:31,290 --> 00:06:26,050

only one crew member can enter the

90

00:06:33,330 --> 00:06:31,300

vehicle at a time again everything is

91

00:06:35,730 --> 00:06:33,340

progressing smoothly at this point in

92

00:06:37,830 --> 00:06:35,740

the count there are no concerns whether

93

00:06:39,210 --> 00:06:37,840

is going to be no issue for us no

94

00:06:42,870 --> 00:06:39,220

technical issues are being addressed at

95

00:06:45,390 --> 00:06:42,880

this time managers and engineers in the

96

00:06:50,600 --> 00:06:45,400

firing room or relaxed and prepared to

97

00:06:55,970 --> 00:06:50,610

allow the vehicle to perform those

98

00:06:58,890 --> 00:06:55,980

launches copy that and Atlantis

99

00:06:59,610 --> 00:06:58,900

everything has come together so we're

100

00:07:01,770 --> 00:06:59,620

ready to go

101
00:07:09,380 --> 00:07:01,780
you guys have a good flight good mission

102
00:07:15,000 --> 00:07:12,420
partners around the world already to go

103
00:07:18,090 --> 00:07:15,010
and we thank you all your hard work at

104
00:07:23,960 --> 00:07:18,100
MPD you cleared along topics

105
00:07:27,240 --> 00:07:23,970
boom on my mark three two one what

106
00:07:29,070 --> 00:07:27,250
t-minus five minutes ain't counting and

107
00:07:30,390 --> 00:07:29,080
we're at t-minus nine minutes and

108
00:07:32,730 --> 00:07:30,400
Counting and the ground launch sequencer

109
00:07:34,170 --> 00:07:32,740
has been initiated NASA test director

110
00:07:35,580 --> 00:07:34,180
John Guidi is about to call for the

111
00:07:38,250 --> 00:07:35,590
transmittal of stored pre-launch

112
00:07:40,020 --> 00:07:38,260
commands as Atlantis has less than nine

113
00:07:41,610 --> 00:07:40,030

minutes away from launch on a mission to

114

00:07:42,840 --> 00:07:41,620

the MIR Space Station to retrieve

115

00:07:44,760 --> 00:07:42,850

astronaut Jerry Linenger

116

00:07:47,160 --> 00:07:44,770

who has been in space now for the past

117

00:07:48,840 --> 00:07:47,170

four months and the orbiter access arm

118

00:07:51,000 --> 00:07:48,850

is now being retracted away from the

119

00:07:52,860 --> 00:07:51,010

vehicle this is the walkway used by the

120

00:07:55,050 --> 00:07:52,870

crew to gain entry into and out of the

121

00:08:20,199 --> 00:07:55,060

orbiter and it can be returned to

122

00:08:32,389 --> 00:08:22,219

next the three main engines will be

123

00:08:37,019 --> 00:08:35,190

and the gaseous oxygen vent hood is

124

00:08:42,149 --> 00:08:37,029

being slowly retracted away from the top

125

00:08:43,680 --> 00:08:42,159

of the external tank everything looks

126
00:08:45,360 --> 00:08:43,690
good and we're cleared for launch today

127
00:08:53,480 --> 00:08:45,370
no problems are being reported from the

128
00:09:10,360 --> 00:09:00,710
and t-minus two minutes and Counting

129
00:09:20,060 --> 00:09:10,370
on your flight for the whole team

130
00:09:26,240 --> 00:09:20,070
t-minus 15 10 9 8 7 we have a go for

131
00:09:28,220 --> 00:09:26,250
main engine start four three two one we

132
00:09:30,230 --> 00:09:28,230
have booster ignition and liftoff of the

133
00:09:43,090 --> 00:09:30,240
space shuttle Atlantis maintaining

134
00:09:47,450 --> 00:09:45,440
echoing the words of year ago down on

135
00:09:49,040 --> 00:09:47,460
his launch 36 years ago command with

136
00:09:50,840 --> 00:09:49,050
Scully report puts Atlantis into the

137
00:09:52,610 --> 00:09:50,850
roll heads down wings levels of the ADA

138
00:09:56,600 --> 00:09:52,620

have been a ride to orbit Mike Solt

139

00:09:58,010 --> 00:09:56,610

headed to the MIR space station the

140

00:09:59,570 --> 00:09:58,020

throttle up call acknowledged by

141

00:10:01,790 --> 00:09:59,580

Commander Charlie Precourt on the flight

142

00:10:03,770 --> 00:10:01,800

deck of Atlantis joined by pilot Eileen

143

00:10:05,450 --> 00:10:03,780

Collins flight engineer Carlos Noriega

144

00:10:07,610 --> 00:10:05,460

and mission specialist John Francois

145

00:10:09,920 --> 00:10:07,620

clear voix down on the mid-deck mission

146

00:10:11,480 --> 00:10:09,930

specialist at lu elena kondakova and

147

00:10:17,450 --> 00:10:11,490

mike foale beginning four months in

148

00:10:19,430 --> 00:10:17,460

space one minute 40 seconds into the

149

00:10:21,830 --> 00:10:19,440

flight atlantis traveling at 2300 miles

150

00:10:25,910 --> 00:10:21,840

per hour already 17 miles downrange from

151

00:10:27,590 --> 00:10:25,920

the launch site 20 miles in altitude 15

152

00:10:29,720 --> 00:10:27,600

seconds away from solid rocket booster

153

00:10:31,370 --> 00:10:29,730

separation that will be commanded by the

154

00:10:48,010 --> 00:10:31,380

general-purpose computers to the master

155

00:10:52,329 --> 00:10:49,900

booster officer confirms a good solid

156

00:10:54,010 --> 00:10:52,339

rocket booster separation guidance since

157

00:10:55,780 --> 00:10:54,020

converging on all three main engines now

158

00:10:59,699 --> 00:10:55,790

gently stirring Atlantis for a precise

159

00:11:07,540 --> 00:11:02,019

booster officer confirms main engine

160

00:11:35,900 --> 00:11:07,550

cutoff Lance we copy you ever go for the

161

00:11:42,150 --> 00:11:39,240

Atlanta Houston you'll have a great

162

00:11:43,800 --> 00:11:42,160

first full day in orbit the planning

163

00:11:45,750 --> 00:11:43,810

folks are going to hand it over to the

164

00:11:47,610 --> 00:11:45,760

rendezvous pros who will start getting

165

00:11:50,370 --> 00:11:47,620

you ready for tomorrow and that'll be

166

00:11:56,670 --> 00:11:50,380

the orbit one team and the next voice

167

00:11:58,650 --> 00:11:56,680

you hear will be Chris Hadfield okay

168

00:12:00,000 --> 00:11:58,660

bill well we're sure to a great start

169

00:12:01,889 --> 00:12:00,010

thanks to all your help down there and

170

00:12:04,319 --> 00:12:01,899

we're looking forward to seeing to get

171

00:12:06,090 --> 00:12:04,329

the bomb point we're all up and running

172

00:12:07,500 --> 00:12:06,100

about getting things done things look

173

00:12:17,890 --> 00:12:07,510

really great thanks for your help

174

00:12:17,900 --> 00:12:57,810

now after this one with to remove

175

00:12:57,820 --> 00:13:03,740

yes

176
00:13:03,750 --> 00:13:13,380
this

177
00:13:13,390 --> 00:13:41,610
the young module

178
00:13:41,620 --> 00:13:57,900
I understand take a seat

179
00:14:02,079 --> 00:14:00,190
and Atlanta Houston were on board

180
00:14:44,389 --> 00:14:02,089
looking into the space hab hello Jean

181
00:14:44,399 --> 00:15:12,100
okay Chris copy

182
00:15:12,110 --> 00:15:16,960
can you see much with that

183
00:15:22,900 --> 00:15:20,790
yes we do and I'll check with the pie

184
00:15:42,170 --> 00:15:22,910
okay would you like me to hold off on

185
00:15:48,300 --> 00:15:45,210
Atlanta's space have for RMD the pea I

186
00:15:50,160 --> 00:15:48,310
got a good look thanks you and says you

187
00:16:08,900 --> 00:15:50,170
have a go to go ahead and place that in

188
00:16:14,840 --> 00:16:11,570

now I put a question to the commander

189

00:16:17,300 --> 00:16:14,850

Charles Precourt what's it like having a

190

00:16:25,580 --> 00:16:17,310

British astronaut among you is he made

191

00:16:28,250 --> 00:16:25,590

of the right stuff he's warning me that

192

00:16:31,400 --> 00:16:28,260

I better say yesterday what Mike's a

193

00:16:33,380 --> 00:16:31,410

great asset to the NASA program and he

194

00:16:35,990 --> 00:16:33,390

brings a load of experience from a lot

195

00:16:38,270 --> 00:16:36,000

of different areas to us and you know he

196

00:16:39,890 --> 00:16:38,280

kind of hinted at the fact that the

197

00:16:41,510 --> 00:16:39,900

benefits of an International Space

198

00:16:43,040 --> 00:16:41,520

Station is that the fact that we bring

199

00:16:45,230 --> 00:16:43,050

together the talents of many different

200

00:16:48,440 --> 00:16:45,240

nations and in fact many different

201
00:16:49,940 --> 00:16:48,450
cultures and new ideas bring new ways of

202
00:16:52,220 --> 00:16:49,950
doing things and we discover new things

203
00:16:54,170 --> 00:16:52,230
together so yeah Mike is a great asset

204
00:16:55,580 --> 00:16:54,180
we're going to miss him when we close

205
00:17:28,790 --> 00:16:55,590
the hatch but we're glad that he's

206
00:17:32,180 --> 00:17:30,740
okay well good morning bill but it

207
00:18:15,350 --> 00:17:32,190
sounds of that it must be time to rock

208
00:18:15,360 --> 00:18:21,159
- houston we have a nice downlink of mir

209
00:19:16,950 --> 00:18:28,279
all right Justin the binocs I could pick

210
00:19:16,960 --> 00:19:21,289
three point six in the first

211
00:19:41,730 --> 00:19:40,169
I'll write it down manage Houston we're

212
00:20:07,350 --> 00:19:41,740
back with you visually looking through

213
00:20:13,409 --> 00:20:10,600

you suggested updated our nav we're

214

00:20:17,130 --> 00:20:13,419

still in reflector one on both PCs and

215

00:20:20,710 --> 00:20:17,140

were within a foot on our handheld laser

216

00:20:22,570 --> 00:20:20,720

our dot that's it perfectly and

217

00:20:28,470 --> 00:20:22,580

Charlie's got a dead center in the

218

00:21:11,540 --> 00:20:30,430

sounds good all around thanks for the

219

00:21:44,170 --> 00:21:13,680

the lighting condition should be good

220

00:23:17,950 --> 00:21:48,200

this had a drop disparity Jesse rebooted

221

00:23:17,960 --> 00:24:48,630

didn't we have contact and capture

222

00:24:53,980 --> 00:24:51,430

listen last contract on my time the

223

00:24:57,580 --> 00:24:53,990

pressurization equalization is so bad

224

00:24:59,890 --> 00:24:57,590

over you loud and clear charlie we see

225

00:25:02,980 --> 00:24:59,900

that we're going to lose you to the co e

226

00:25:08,460 --> 00:25:02,990

and a little under two minutes and we'll

227

00:25:11,920 --> 00:25:10,570

Lana Houston were with you on the west

228

00:25:16,990 --> 00:25:11,930

and we're looking at you and hatch

229

00:25:19,540 --> 00:25:17,000

Charles I think that the video looks

230

00:25:22,330 --> 00:25:19,550

good you were ready to open looks great

231

00:26:20,920 --> 00:25:22,340

and sounds fine is all you have a you

232

00:27:13,890 --> 00:26:24,160

right now come on in June we got Elena

233

00:27:19,330 --> 00:27:17,049

is going to bring up the patrol with

234

00:27:23,500 --> 00:27:19,340

colors here he's going to show us how to

235

00:27:25,530 --> 00:27:23,510

fly through the mirror go ahead you take

236

00:27:27,730 --> 00:27:25,540

a logjam up ahead

237

00:27:31,080 --> 00:27:27,740

welcome everybody back in Houston a

238

00:27:42,050 --> 00:27:31,090

great day of the shuttle crew aboard

239

00:28:19,200 --> 00:27:44,600

system owner in the base book and

240

00:28:44,050 --> 00:28:21,269

this thing that Billy says he can hardly

241

00:28:48,550 --> 00:28:46,660

we've got just about everybody Sasha's

242

00:28:50,710 --> 00:28:48,560

going to come join us in the table here

243

00:28:53,860 --> 00:28:50,720

and say hello to the folks at the soup

244

00:28:55,120 --> 00:28:53,870

also I think Jerry might want to say

245

00:28:59,260 --> 00:28:55,130

something to you guys they're in a

246

00:29:00,880 --> 00:28:59,270

control center good job

247

00:29:02,770 --> 00:29:00,890

we should you didn't crew up here like

248

00:29:04,540 --> 00:29:02,780

you did and Charlie just water right in

249

00:29:05,680 --> 00:29:04,550

steady as can be was great to see them

250

00:29:10,600 --> 00:29:05,690

and it's going to be a great celebration

251

00:29:36,780 --> 00:29:10,610

here Jerry it's great to see you and

252

00:29:40,360 --> 00:29:38,920

Atlantis Mir Houston if someone just

253

00:29:44,410 --> 00:29:40,370

wants to push and hold the button it's a

254

00:29:46,960 --> 00:29:44,420

pretty good area Mike okay Chris we're

255

00:29:50,050 --> 00:29:46,970

doing that and we've got one other gifts

256

00:29:52,150 --> 00:29:50,060

of session Vasily we're making them

257

00:30:06,880 --> 00:29:52,160

honorary 84 members with a little hat

258

00:30:09,040 --> 00:30:06,890

that shows our patch a little symbol on

259

00:30:11,170 --> 00:30:09,050

the Hat meant that he was an admiral but

260

00:30:13,180 --> 00:30:11,180

we prefer general in the Air Force of

261

00:30:15,370 --> 00:30:13,190

course since watching I have both Air

262

00:30:35,520 --> 00:30:15,380

Force types we'll just go with that and

263

00:30:40,470 --> 00:30:37,830

twon I give you a little tour of mirror

264

00:30:42,360 --> 00:30:40,480

on Jerry Linenger of course and I'm in

265

00:30:45,029 --> 00:30:42,370

the base block where you see most of

266

00:30:47,669 --> 00:30:45,039

pictures that come out of mirror the

267

00:30:51,090 --> 00:30:47,679

table where we all gather to eat when

268

00:30:53,549 --> 00:30:51,100

the times available got quite a bit of

269

00:30:55,560 --> 00:30:53,559

gear Avalos sleep cabin over this way

270

00:30:58,260 --> 00:30:55,570

this has happens to be the commander

271

00:31:00,919 --> 00:30:58,270

sleep station and you've got a little

272

00:31:07,080 --> 00:31:00,929

mirror he's got some personal pictures

273

00:31:09,330 --> 00:31:07,090

pens patches near 23 patch for example

274

00:31:12,419 --> 00:31:09,340

decorating his walls got a CD player

275

00:31:14,850 --> 00:31:12,429

little tape players to relax and take

276

00:31:18,510 --> 00:31:14,860

life easy sit one of the air generating

277

00:31:21,060 --> 00:31:18,520

systems is here and also the co2 clean

278

00:31:23,730 --> 00:31:21,070

system is here as long we'd say with a

279

00:31:25,919 --> 00:31:23,740

blot reading fantasy which takes out

280

00:31:28,470 --> 00:31:25,929

contaminants in the air and all those

281

00:31:30,360 --> 00:31:28,480

run in this module and this Walsall

282

00:31:33,149 --> 00:31:30,370

module where we're having some cooling

283

00:31:36,149 --> 00:31:33,159

leak problems than we did some repairs

284

00:31:38,669 --> 00:31:36,159

where we cut to and basically block them

285

00:31:40,890 --> 00:31:38,679

off with some plugs and it said you can

286

00:31:42,390 --> 00:31:40,900

see it's very difficult to work the area

287

00:31:45,779 --> 00:31:42,400

has to get cleared we had to totally

288

00:31:47,520 --> 00:31:45,789

cleared for about four weeks looking for

289

00:31:49,470 --> 00:31:47,530

the leaks and it's very very difficult

290

00:31:51,600 --> 00:31:49,480

to work back here

291

00:31:53,570 --> 00:31:51,610

on one label certain problem so uh

292

00:31:56,730 --> 00:31:53,580

Mike's going to have his hands full

293

00:31:58,830 --> 00:31:56,740

working back here finding the leak is

294

00:32:02,490 --> 00:31:58,840

one thing and then getting access to the

295

00:32:05,070 --> 00:32:02,500

leak is a different ballgame and it back

296

00:32:06,600 --> 00:32:05,080

back out by the way to fire I guess it's

297

00:32:09,509 --> 00:32:06,610

kind of interesting people heard about

298

00:32:12,750 --> 00:32:09,519

the fire the fire was basically in this

299

00:32:15,629 --> 00:32:12,760

region here with the plane shooting

300

00:32:17,250 --> 00:32:15,639

across this way and their players you

301
00:32:19,500 --> 00:32:17,260
can see where the camera is is basically

302
00:32:21,210 --> 00:32:19,510
where I was at and we had one other body

303
00:32:23,940 --> 00:32:21,220
in front of me I was passing a fire

304
00:32:27,000 --> 00:32:23,950
extinguisher but we can only get one

305
00:32:30,389 --> 00:32:27,010
person in here like the player because

306
00:32:32,220 --> 00:32:30,399
of the claimed location and at that time

307
00:32:35,250 --> 00:32:32,230
the other Soyuz was on the other side

308
00:32:37,169 --> 00:32:35,260
where progress is now dot so you feel it

309
00:32:40,019 --> 00:32:37,179
have been very difficult to get through

310
00:32:42,360 --> 00:32:40,029
the flame itself to get to the one of

311
00:32:43,620 --> 00:32:42,370
the rescue vehicles and it was very

312
00:32:45,120 --> 00:32:43,630
difficult to fight the player because

313
00:32:48,779 --> 00:32:45,130

you could only give one body close

314

00:32:50,970 --> 00:32:48,789

enough to the player itself commander's

315

00:32:56,180 --> 00:32:50,980

post right here which is of course

316

00:33:02,220 --> 00:33:00,450

just hoping you and facility says hello

317

00:33:05,399 --> 00:33:02,230

to everybody doing a little work at the

318

00:33:08,100 --> 00:33:05,409

command post that is scope down here a

319

00:33:10,590 --> 00:33:08,110

couple CRT tubes and there's a lot of

320

00:33:13,350 --> 00:33:10,600

different commands in this area and over

321

00:33:16,710 --> 00:33:13,360

here is actually your signal of that

322

00:33:19,799 --> 00:33:16,720

yeah or your panel that gives you all to

323

00:33:22,740 --> 00:33:19,809

your caution and warning alarms okay

324

00:33:24,419 --> 00:33:22,750

this table very nice soft velcro and I

325

00:33:26,759 --> 00:33:24,429

found this the most effective place to

326

00:33:29,970 --> 00:33:26,769

do work if I head surface sampling or

327

00:33:32,220 --> 00:33:29,980

air sampling I'd organize my work right

328

00:33:33,570 --> 00:33:32,230

here put everything in Nice order and as

329

00:33:54,650 --> 00:33:33,580

fly to the place where I had to do

330

00:33:58,860 --> 00:33:56,850

we're about out of time I just want to

331

00:34:00,600 --> 00:33:58,870

thank you all for your attention and I

332

00:34:03,800 --> 00:34:00,610

hope you've got a feel for the space

333

00:34:06,270 --> 00:34:03,810

station as we flew you through it all

334

00:34:08,250 --> 00:34:06,280

it's a pretty pleasant place to live

335

00:34:36,810 --> 00:34:08,260

when you can get a space to look like

336

00:34:36,820 --> 00:34:57,780

plus three

337

00:36:25,739 --> 00:35:01,240

Charlie all five kits are still stowed

338

00:36:32,680 --> 00:36:29,349

the fourth row for the half of it and

339

00:36:34,120 --> 00:36:32,690

only the first as I work all up and then

340

00:36:38,589 --> 00:36:34,130

only the first column for the second two

341

00:36:43,749 --> 00:36:38,599

rows on window B they go into the second

342

00:36:46,900 --> 00:36:43,759

window all the way across and on see

343

00:36:52,089 --> 00:36:46,910

it's all the way across for maybe one

344

00:36:54,309 --> 00:36:52,099

half declares and on D it's about a half

345

00:36:56,259 --> 00:36:54,319

a square across and I'll try to show you

346

00:37:57,450 --> 00:36:56,269

the image here but it doesn't look like

347

00:37:57,460 --> 00:38:53,740

freestyle

348

00:38:53,750 --> 00:39:08,930

great

349

00:39:08,940 --> 00:39:43,710

looks like the one I think

350

00:39:43,720 --> 00:40:17,400

they can go ahead Elena

351

00:40:23,890 --> 00:40:22,720

they're all if the stairs location given

352

00:40:29,440 --> 00:40:23,900

it's a checklist

353

00:40:32,550 --> 00:40:29,450

except for item number 52 the cartridge

354

00:41:13,010 --> 00:40:32,560

assembly which is Shirley and Leslie and

355

00:41:18,720 --> 00:41:16,859

he said we are over Florida of course as

356

00:41:21,089 --> 00:41:18,730

you see it we have the reflection of a

357

00:41:23,490 --> 00:41:21,099

full moon and the Everglades and the

358

00:41:27,150 --> 00:41:23,500

clouds down over Florida it is a

359

00:41:29,040 --> 00:41:27,160

gorgeous Bank Florida we have the entire

360

00:41:37,410 --> 00:41:29,050

peninsula view as we head out over the

361

00:41:38,910 --> 00:41:37,420

Atlantic wish we were there Charlie

362

00:41:42,930 --> 00:41:38,920

we're back with you now we just had tea

363

00:41:45,150 --> 00:41:42,940

dress handover did you call yeah I just

364

00:41:46,650 --> 00:41:45,160

saying not only is for having a

365

00:41:48,810 --> 00:41:46,660

beautiful night tonight but all of these

366

00:41:50,520 --> 00:41:48,820

turn us we've still got the tip of

367

00:41:52,530 --> 00:41:50,530

Florida peninsula and say well we're

368

00:41:53,910 --> 00:41:52,540

over New York we see New York washed all

369

00:41:57,270 --> 00:41:53,920

the way over to st. Louis down to

370

00:41:58,800 --> 00:41:57,280

Atlanta Memphis all the cities stand out

371

00:42:15,850 --> 00:41:58,810

just nice and clear at the gorgeous out

372

00:42:15,860 --> 00:43:03,210

Eileen's up here secondly green ones

373

00:43:03,220 --> 00:44:00,750

when we copy

374

00:44:05,370 --> 00:44:04,350

well Robert just like to say that this

375

00:44:07,260 --> 00:44:05,380

is a great day for us

376

00:44:09,360 --> 00:44:07,270

it's a little bit sad of course because

377

00:44:11,610 --> 00:44:09,370

the thrilling flight is coming to an end

378

00:44:14,160 --> 00:44:11,620

and we're going to have to separate the

379

00:44:15,720 --> 00:44:14,170

vehicles here tomorrow morning and that

380

00:44:18,150 --> 00:44:15,730

will be a bittersweet memory for us

381

00:44:20,220 --> 00:44:18,160

we've had a great time getting that mic

382

00:44:22,290 --> 00:44:20,230

ready to take over the place set and

383

00:44:24,270 --> 00:44:22,300

fill the big shoes that Jerry's left

384

00:44:26,460 --> 00:44:24,280

behind here with a lot of progress being

385

00:44:27,900 --> 00:44:26,470

made on board this picture on the screen

386

00:44:29,820 --> 00:44:27,910

right here is really heartwarming for

387

00:44:30,270 --> 00:44:29,830

everybody goes done a fantastic job up

388

00:44:33,360 --> 00:44:30,280

there

389

00:44:34,470 --> 00:44:33,370

Cecilia Sasha who become our wonderful

390

00:44:35,940 --> 00:44:34,480

friends they've got to showed a

391

00:44:38,400 --> 00:44:35,950

wonderful home and we thank them very

392

00:44:40,790 --> 00:44:38,410

much for that and with that in mind we'd

393

00:44:47,410 --> 00:44:40,800

like to leave them a small gift from us

394

00:44:49,839 --> 00:44:47,420

it's a t-shirt one for each of them

395

00:44:55,720 --> 00:44:49,849

with our name of our shuttle and our per

396

00:45:01,700 --> 00:44:58,370

thank you very much and also one for

397

00:45:06,800 --> 00:45:01,710

Sasha a momento you can remember our

398

00:45:08,240 --> 00:45:06,810

plight and also from phase 1 the phase 1

399

00:45:12,230 --> 00:45:08,250

folks would like to leave their thanks

400

00:45:13,910 --> 00:45:12,240

also with the our crew up there with the

401
00:45:17,450 --> 00:45:13,920
face once your representing our program

402
00:45:19,700 --> 00:45:17,460
has been so successful Kristin Rossi is

403
00:45:22,940 --> 00:45:19,710
ready to close the hatch and we wish

404
00:45:24,140 --> 00:45:22,950
them well at a great fight and it's kind

405
00:45:26,230 --> 00:45:24,150
of sorry to see them

406
00:45:43,440 --> 00:45:26,240
close the hatch on ourselves here but

407
00:46:22,220 --> 00:46:19,410
okay guys we've got the hatch closed in

408
00:47:32,890 --> 00:46:22,230
the staircase to the side

409
00:47:32,900 --> 00:47:46,900
seven

410
00:48:30,900 --> 00:47:59,839
I'll be laying back here Justin we have

411
00:48:30,910 --> 00:48:39,099
bring your opinion

412
00:49:09,840 --> 00:49:03,349
13 carries caribou that might say 35

413
00:49:25,309 --> 00:49:11,610

cause their attitude look I'm still dark

414

00:49:25,319 --> 00:51:16,410

by

415

00:51:20,710 --> 00:51:18,400

and Atlanta Houston

416

00:53:08,950 --> 00:51:20,720

let's reconfigure back to normal air two

417

00:53:16,310 --> 00:53:12,880

Charlie has called them before time

418

00:53:23,579 --> 00:53:16,320

somebody Frankie talks a lot that's

419

00:53:23,589 --> 00:53:39,770

I've already bumped that out of work

420

00:53:52,650 --> 00:53:42,680

somebody's breaking box a lot Messier

421

00:53:56,520 --> 00:53:52,660

scratchy stuff I think it's me starting

422

00:53:57,960 --> 00:53:56,530

to get a pretty good light show look out

423

00:54:01,080 --> 00:53:57,970

the tail and you can if you guys got

424

00:54:03,530 --> 00:54:01,090

murdered looking up with the little

425

00:54:05,790 --> 00:54:03,540

camera here I can see the tail out there

426

00:54:08,310 --> 00:54:05,800

about the tail but I can see the plastic

427

00:54:13,730 --> 00:54:08,320

over the tail the overheads quick joke

428

00:54:19,670 --> 00:54:13,740

you said nice sunrise see the sunrise

429

00:54:28,410 --> 00:54:22,140

Suns gonna overpower the glow here so we

430

00:54:34,590 --> 00:54:28,420

didn't get a very long glow show can I

431

00:54:41,600 --> 00:54:34,600

see how much 12,000 feet I'm not gonna

432

00:54:49,530 --> 00:54:47,880

thousand feet okay any clips trail keeps

433

00:54:52,550 --> 00:54:49,540

flying the instruments 8,000 feet

434

00:54:55,110 --> 00:54:52,560

there's a runway tab looks really good

435

00:54:59,790 --> 00:54:55,120

yes it does it's dead-on better than

436

00:55:06,300 --> 00:54:59,800

anything 7,000 feet 6,000 feet to

437

00:55:10,770 --> 00:55:06,310

Pappy's nominally radar looks good radar

438

00:55:14,300 --> 00:55:10,780

looks good here forecast

439

00:55:20,910 --> 00:55:14,310

listen good real good

440

00:55:23,670 --> 00:55:20,920

yes 3,000 feet 35 briefly on the gear

441

00:55:29,420 --> 00:55:23,680

okay I see the pre-clear and the gears

442

00:55:31,110 --> 00:55:29,430

arms constancy naturally was 305 900

443

00:55:33,750 --> 00:55:31,120

South Poldark

444

00:55:35,670 --> 00:55:33,760

hey Bo you're on time piggy right I'm

445

00:55:37,860 --> 00:55:35,680

here those gear the gear moving I hear

446

00:55:41,560 --> 00:55:37,870

coming down Twitter feet father her on

447

00:55:47,980 --> 00:55:41,570

the ball bar 100 feet skiers down

448

00:55:50,200 --> 00:55:47,990

seventy sixty two hundred and thirty

449

00:55:53,350 --> 00:55:50,210

nine point five me you for coming down

450

00:55:54,910 --> 00:55:53,360

to 20 into 10 looking good eight six

451
00:56:01,800 --> 00:55:54,920
five four three two two and two

452
00:56:12,520 --> 00:56:10,450
down one and a half with Atlantis's

453
00:56:14,740 --> 00:56:12,530
speed now down to thirty thirty two

454
00:56:25,780 --> 00:56:14,750
hundred miles per hour the rudder on the

455
00:56:28,030 --> 00:56:25,790
tail of the orbiter is now active twin

456
00:56:30,940 --> 00:56:28,040
sonic booms announcing Atlantis's

457
00:56:46,599 --> 00:56:30,950
arrival in the landing area time to

458
00:56:53,019 --> 00:56:49,599
Atlantis now on glide slope and on

459
00:57:05,900 --> 00:56:53,029
centerline setting up for the final

460
00:57:05,910 --> 00:57:23,890
the landing gear is now down and luck

461
00:57:32,380 --> 00:57:31,249
main gear touchdown and nose gear

462
00:57:34,819 --> 00:57:32,390
touchdown

463
00:57:36,190 --> 00:57:34,829

Atlantis rolling out on runway three

464

00:57:39,410 --> 00:57:36,200

three at the Kennedy Space Center

465

00:57:42,559 --> 00:57:39,420

completing 145 orbits of the earth and a

466

00:57:45,170 --> 00:57:42,569

3.6 million mile journey to deliver mike

467

00:57:46,940 --> 00:57:45,180

foale to the MIR space station and also

468

00:58:11,660 --> 00:57:46,950

to return Jerry Linenger to earth after

469

00:58:17,270 --> 00:58:15,740

Houston Atlanta Fed will stop Colonel

470

00:58:19,460 --> 00:58:17,280

eCopy will stop and we'd like to offer

471

00:58:21,080 --> 00:58:19,470

congratulations on a flawless flight and

472

00:58:23,390 --> 00:58:21,090

a special welcome home welcome home for

473

00:58:27,500 --> 00:58:23,400

Jerry it would go for our post landing

474

00:58:28,790 --> 00:58:27,510

procedures on page five - three well we

475

00:58:30,760 --> 00:58:28,800

thank y'all you guys did a super job

