



1
00:00:27,720 --> 00:00:25,950
this is shuttle launch control we have

2
00:00:29,310 --> 00:00:27,730
now joined history's largest crew of

3
00:00:30,720 --> 00:00:29,320
astronauts in the operations and

4
00:00:32,120 --> 00:00:30,730
check-out building as they wait for

5
00:00:34,650 --> 00:00:32,130
their breakfast

6
00:00:36,270 --> 00:00:34,660
the seven-person crew is the largest

7
00:00:38,430 --> 00:00:36,280
ever to be launched into space by any

8
00:00:40,799 --> 00:00:38,440
nation and in fact is as large as the

9
00:00:44,850 --> 00:00:40,809
entire Mercury program astronaut corps

10
00:00:46,560 --> 00:00:44,860
was 21 years ago at the head table in

11
00:00:49,410 --> 00:00:46,570
the center is mission commander Bob

12
00:00:52,470 --> 00:00:49,420
Crippen and the other members are

13
00:00:54,270 --> 00:00:52,480

displayed about him on either side - Bob

14

00:00:56,460 --> 00:00:54,280

Crippen's immediate left is Sally Ride

15

00:00:58,530 --> 00:00:56,470

on her second trip into space Bob

16

00:01:00,240 --> 00:00:58,540

Crippen of Court has completed three

17

00:01:03,539 --> 00:01:00,250

trips this will be his fourth fourth

18

00:01:05,460 --> 00:01:03,549

mission in space seated - commander

19

00:01:07,230 --> 00:01:05,470

Crippen's Wright is Kathy Sullivan she's

20

00:01:09,840 --> 00:01:07,240

a space rookie of course on her first

21

00:01:15,420 --> 00:01:09,850

mission and to her right as Canadian

22

00:01:16,620 --> 00:01:15,430

Marc Garneau and will will be panning

23

00:01:22,280 --> 00:01:16,630

around a table here to see the other

24

00:01:25,080 --> 00:01:22,290

crew members as well as John McBride and

25

00:01:26,969 --> 00:01:25,090

Paul Scully power noticeable for his

26

00:01:29,099 --> 00:01:26,979

beard he's the payload specialist and

27

00:01:31,529 --> 00:01:29,109

John McBride is the pilot on his

28

00:01:33,389 --> 00:01:31,539

particular flight at the opposite end of

29

00:01:46,170 --> 00:01:33,399

the table was mission specialist 3 David

30

00:01:50,820 --> 00:01:48,960

and we understand that the crew is at

31

00:01:58,830 --> 00:01:50,830

this point beginning to make their way

32

00:02:01,020 --> 00:01:58,840

out of the crew quarters and we see

33

00:02:06,420 --> 00:02:01,030

Commander Bob Crippen and Sally Ride

34

00:02:13,770 --> 00:02:06,430

leaving their crew quarters followed by

35

00:02:15,630 --> 00:02:13,780

a Kathy Sullivan and Marc Garneau of

36

00:02:20,250 --> 00:02:15,640

Canada distinctives with a maple leaf

37

00:02:22,380 --> 00:02:20,260

flag on his flight suit all scholarly

38

00:02:24,210 --> 00:02:22,390

power with the beard and also followed

39

00:02:25,920 --> 00:02:24,220

by Georg Eddie several it was the

40

00:02:28,110 --> 00:02:25,930

fourteen astronauts and security

41

00:02:37,360 --> 00:02:28,120

personnel all climbing into the elevator

42

00:02:41,600 --> 00:02:39,650

true now leaving the operations and

43

00:02:43,790 --> 00:02:41,610

check-out building led by the two women

44

00:02:46,910 --> 00:02:43,800

on this flight Kathy Sullivan and Sally

45

00:02:50,000 --> 00:02:46,920

Ride commander Griffin and all the other

46

00:02:53,510 --> 00:02:50,010

crew members for history's largest

47

00:02:55,970 --> 00:02:53,520

astronaut crew climbing into the Astro

48

00:03:00,200 --> 00:02:55,980

van which is a modified camper style

49

00:03:02,030 --> 00:03:00,210

vehicle incidentally the camper vehicle

50

00:03:04,810 --> 00:03:02,040

was purchased by NASA because of the

51
00:03:07,460 --> 00:03:04,820
increasing size of shuttle flight crews

52
00:03:10,160 --> 00:03:07,470
the former vehicles for proving just too

53
00:03:12,260 --> 00:03:10,170
small to carry all the people for the

54
00:03:15,430 --> 00:03:12,270
nine mile trip out to the flight bed the

55
00:03:19,330 --> 00:03:17,710
Kruse being sent off by a crowd of media

56
00:03:20,950 --> 00:03:19,340
representatives and employees which

57
00:03:22,780 --> 00:03:20,960
traditionally gather at the walkway

58
00:03:26,560 --> 00:03:22,790
leaving the operations and check-out

59
00:03:28,810 --> 00:03:26,570
building and the astral van will move

60
00:03:44,410 --> 00:03:28,820
off in just a few seconds for the nine

61
00:03:49,990 --> 00:03:46,960
Bob Crippen now donning his helmet he'd

62
00:03:51,820 --> 00:03:50,000
already put on his his vest this

63
00:03:53,830 --> 00:03:51,830

procedure of course is very familiar to

64

00:03:56,110 --> 00:03:53,840

Bob Crippen he's had three launches

65

00:04:00,690 --> 00:03:56,120

already in space and numerous tests

66

00:04:05,410 --> 00:04:03,790

commander Griffin at 47 years of age is

67

00:04:07,690 --> 00:04:05,420

the old man of this particular mission

68

00:04:10,960 --> 00:04:07,700

he was born in Beaumont Texas and he

69

00:04:12,370 --> 00:04:10,970

joined the astronaut corps in 1969 he

70

00:04:13,870 --> 00:04:12,380

was selected to be the pilot of the

71

00:04:16,569 --> 00:04:13,880

first space shuttle mission with John

72

00:04:18,699 --> 00:04:16,579

Young and has since flown to other space

73

00:04:20,590 --> 00:04:18,709

missions for a total of three this makes

74

00:04:25,060 --> 00:04:20,600

him NASA's most experienced Shuttle

75

00:04:27,090 --> 00:04:25,070

astronaut he's one of the five members

76

00:04:29,290 --> 00:04:27,100

of this mission with naval backgrounds

77

00:04:31,540 --> 00:04:29,300

commander Crippen is listed as a navy

78

00:04:33,670 --> 00:04:31,550

captain he was a naval attack pilot

79

00:04:38,610 --> 00:04:33,680

aboard two carrier USS independence for

80

00:04:43,330 --> 00:04:40,930

mission specialist one Kathy Sullivan

81

00:04:50,320 --> 00:04:43,340

now bordering boarding challengers

82

00:04:52,210 --> 00:04:50,330

cockpit and dr. Sally Ride is now

83

00:04:54,610 --> 00:04:52,220

entering orbiter challenger for her

84

00:04:56,440 --> 00:04:54,620

second flight into space a technician

85

00:04:58,300 --> 00:04:56,450

wiping down the soles of her shoes to

86

00:05:00,390 --> 00:04:58,310

make sure that no excess dirt would be

87

00:05:14,260 --> 00:05:00,400

tracked into the orbiter Columbia

88

00:05:16,780 --> 00:05:14,270

Challenger rather about the inner

89
00:05:20,140 --> 00:05:16,790
challengers cockpit now as Canadian Marc

90
00:05:22,030 --> 00:05:20,150
Garneau who is the first Canadian

91
00:05:22,540 --> 00:05:22,040
selected to fly in space aboard a space

92
00:05:25,420 --> 00:05:22,550
shuttle

93
00:05:27,670 --> 00:05:25,430
garna was also a PhD with a specialty in

94
00:05:30,130 --> 00:05:27,680
electrical engineering he's an employee

95
00:05:32,320 --> 00:05:30,140
of the Canadian Navy and is along on

96
00:05:34,210 --> 00:05:32,330
this mission to perform primarily 10

97
00:05:35,620 --> 00:05:34,220
experiments in 3 different scientific

98
00:05:37,840 --> 00:05:35,630
fields for Canada

99
00:05:40,150 --> 00:05:37,850
he's one of 6 Canadian astronauts

100
00:05:48,600 --> 00:05:40,160
selected earlier this year for training

101
00:05:53,159 --> 00:05:51,370
and now entering challengers cockpit is

102
00:05:55,870 --> 00:05:53,169
Paul Scully power

103
00:05:57,610 --> 00:05:55,880
Scully powers most is the most recent

104
00:06:01,120 --> 00:05:57,620
addition to this crew list he's a

105
00:06:02,890 --> 00:06:01,130
civilian employee of the US Navy and he

106
00:06:05,260 --> 00:06:02,900
has considerable experience and time

107
00:06:07,240 --> 00:06:05,270
performing oceanographic research as a

108
00:06:10,270 --> 00:06:07,250
senior scientist our chief scientist on

109
00:06:12,219 --> 00:06:10,280
24 research cruises he was born and

110
00:06:14,950 --> 00:06:12,229
educated in Australia and has since

111
00:06:16,270 --> 00:06:14,960
become a United States citizen he will

112
00:06:17,890 --> 00:06:16,280
be conducting a wide range of

113
00:06:28,650 --> 00:06:17,900

oceanographic studies for the Navy

114

00:06:28,660 --> 00:06:32,860

see - 15

115

00:06:41,470 --> 00:06:38,530

t-minus 12 11 10 9 8 4 main engine start

116

00:06:48,550 --> 00:06:41,480

7 6 we have main engine start

117

00:06:52,690 --> 00:06:48,560

5 3 yeah that Darby ignition and this is

118

00:06:54,700 --> 00:06:52,700

large about the not for an employee he's

119

00:07:00,280 --> 00:06:54,710

been controlling them all main engines

120

00:07:03,610 --> 00:07:00,290

running a hundred percent roll program

121

00:07:05,920 --> 00:07:03,620

initiated 120 degree roll maneuver to

122

00:07:09,190 --> 00:07:05,930

put the ship on it's 37 degree

123

00:07:15,730 --> 00:07:09,200

inclination whether the crew heads down

124

00:07:20,530 --> 00:07:15,740

and wings level throttling down to 92

125

00:07:27,840 --> 00:07:20,540

percent main engines running smoothly

126

00:07:34,030 --> 00:07:30,310

challenger going through the period of a

127

00:07:44,500 --> 00:07:34,040

max Q of maximum dynamic pressure on the

128

00:07:54,580 --> 00:07:44,510

ship engine performance still stable ap

129

00:08:04,429 --> 00:07:59,420

Velocity's Challenger Houston

130

00:08:08,929 --> 00:08:04,439

so a SWAT Allah all main engines back at

131

00:08:09,799 --> 00:08:08,939

100% of thrust velocity 2,000 3,000 feet

132

00:08:12,079 --> 00:08:09,809

per second now

133

00:08:17,450 --> 00:08:12,089

altitude 11 miles distance downrange

134

00:08:22,850 --> 00:08:17,460

eight miles challenger 2 climbing at the

135

00:08:24,589 --> 00:08:22,860

rate of 1,800 feet per second engine

136

00:08:26,450 --> 00:08:24,599

performance still looks good all engines

137

00:08:30,550 --> 00:08:26,460

they're running at 100 percent of rated

138

00:08:35,149 --> 00:08:30,560

thrust APU performances nominal altitude

139

00:08:40,879 --> 00:08:35,159

4,200 feet altitude 18 miles 19 miles

140

00:08:46,610 --> 00:08:40,889

velocity 4,800 feet per second distance

141

00:08:48,710 --> 00:08:46,620

downrange 29 alarms that call precursor

142

00:08:54,079 --> 00:08:48,720

to SRB separation which should tell

143

00:08:59,570 --> 00:08:54,089

momentarily and a little separate

144

00:10:23,269 --> 00:09:06,390

Austrian engine still running Challenger

145

00:10:42,320 --> 00:10:26,070

counter Houston you're go for a command

146

00:10:49,140 --> 00:10:46,160

okay and everybody's up here having fun

147

00:10:52,680 --> 00:10:49,150

you can play with the flight deck here

148

00:10:54,930 --> 00:10:52,690

for a while and we also have the have

149

00:10:57,090 --> 00:10:54,940

the big deck correction the sail obey

150

00:10:59,820 --> 00:10:57,100

camera zone if if you want to play with

151
00:11:05,370 --> 00:10:59,830
us but you really can't fit seven people

152
00:12:15,840 --> 00:11:05,380
in here look a bit crowded though not

153
00:12:15,850 --> 00:12:19,970
you

154
00:12:19,980 --> 00:12:24,420
and we have a nice picture here

155
00:12:36,260 --> 00:12:31,360
okay

156
00:12:37,570 --> 00:12:36,270
squared away and ready for SEP whenever

157
00:12:43,540 --> 00:12:37,580
you guys are

158
00:12:46,840 --> 00:12:44,750
Shh

159
00:12:57,949 --> 00:12:46,850
challenger Houston you're go for relief

160
00:13:31,030 --> 00:13:00,780
okay Sally's back in the arm off of the

161
00:13:31,040 --> 00:15:26,180
okay we have enough time to see better

162
00:15:36,769 --> 00:15:32,100
the interleaf deploying after that got a

163
00:15:42,269 --> 00:15:39,030

and once that leaves started deploying

164

00:15:45,030 --> 00:15:42,279

the oscillations pretty much stopped and

165

00:15:49,560 --> 00:15:45,040

by the time it was out it was nice and

166

00:16:19,860 --> 00:15:49,570

stable that moving look surprisingly

167

00:16:28,660 --> 00:16:22,270

seljuq you stand with you through Hawaii

168

00:16:31,420 --> 00:16:28,670

for eight and a half minutes okay yep we

169

00:16:33,700 --> 00:16:31,430

got like all right now oh right through

170

00:16:35,860 --> 00:16:33,710

a little up the Canadian make a

171

00:16:41,050 --> 00:16:35,870

experiment dealing with the state for

172

00:16:42,940 --> 00:16:41,060

that patient physical and Sally and Dave

173

00:16:44,890 --> 00:16:42,950

going through couple of idiots and

174

00:16:56,600 --> 00:16:44,900

monitor equipment at this time we're

175

00:17:04,010 --> 00:16:58,880

I'd equip but we have a teleprinter

176

00:17:07,790 --> 00:17:04,020

message and coming up at this time Roger

177

00:17:17,690 --> 00:17:10,490

and we like for you to leave the TV

178

00:17:19,100 --> 00:17:17,700

controls and panel I'm going up I had of

179

00:17:22,720 --> 00:17:19,110

a panel there back in command you can

180

00:17:22,730 --> 00:17:26,800

copy that

181

00:17:31,910 --> 00:17:29,770

ok we're getting more and more

182

00:17:35,330 --> 00:17:31,920

individuals into the into the picture

183

00:18:48,550 --> 00:17:35,340

now that's that's that's great chat got

184

00:18:55,810 --> 00:18:52,900

okay here's all what you think okay

185

00:19:01,120 --> 00:18:55,820

we're watching Shh sighs that's a good

186

00:19:02,310 --> 00:19:01,130

close-up thing what color did that dog

187

00:19:20,740 --> 00:19:02,320

spit with you

188

00:19:28,780 --> 00:19:23,930

okay now we're gonna take you out over

189

00:19:38,359 --> 00:19:28,790

to the one that's it's gonna pop them

190

00:19:50,000 --> 00:19:41,369

they're the top there's blood powers

191

00:19:55,820 --> 00:19:53,299

the gouges out of the blanket then the

192

00:20:02,299 --> 00:19:55,830

one tile that's beside the blanket

193

00:20:29,220 --> 00:20:02,309

picked up but there's another guy

194

00:20:35,639 --> 00:20:34,259

okay yeah okay clip we're going a lesson

195

00:20:37,860 --> 00:20:35,649

we won't be talking to you until then

196

00:20:41,370 --> 00:20:37,870

Burgas 9 + 3 0 we'd like you to dump

197

00:20:46,879 --> 00:20:41,380

tank 8 on to 70% and bobble down to 20%

198

00:22:54,010 --> 00:20:51,169

that lamp any time at your convenience

199

00:23:00,710 --> 00:22:56,210

Salinger Houston with you through

200

00:23:03,050 --> 00:23:00,720

teachers how do you read okay we reach a

201

00:23:05,510 --> 00:23:03,060

lot fair palette one Shh

202

00:23:15,380 --> 00:23:05,520

we read you loud and clear go ahead USA

203

00:23:33,130 --> 00:23:15,390

commentator this is Houston class center

204

00:23:39,610 --> 00:23:36,070

okay this is a gift and fresh center

205

00:23:56,410 --> 00:23:39,620

challenger we're ready for questions now

206

00:23:58,840 --> 00:23:56,420

from Gibson okay okay we're ready now

207

00:24:01,299 --> 00:23:58,850

for questions from Houston if I don't

208

00:24:04,000 --> 00:24:01,309

identify you by name and affiliation

209

00:24:07,930 --> 00:24:04,010

please do so Paul Reiser Associated

210

00:24:10,299 --> 00:24:07,940

Press based on the televisions use that

211

00:24:12,820 --> 00:24:10,309

we've seen of the people in your in your

212

00:24:15,730 --> 00:24:12,830

face cabin you look you resemble

213

00:24:19,030 --> 00:24:15,740

sometimes a camera and Joey's wandering

214

00:24:22,600 --> 00:24:19,040

out for Bob Crippen when you return are

215

00:24:24,730 --> 00:24:22,610

you going to really recommend that seven

216

00:24:29,560 --> 00:24:24,740

crew members again are flown aboard the

217

00:24:31,510 --> 00:24:29,570

space shuttle that's a very tough

218

00:24:34,480 --> 00:24:31,520

question of one that I considered a lot

219

00:24:36,400 --> 00:24:34,490

for us to take this mission I guess the

220

00:24:37,990 --> 00:24:36,410

result is that I have found that if

221

00:24:40,240 --> 00:24:38,000

people are properly disciplined that

222

00:24:42,760 --> 00:24:40,250

they're at least with the kinds of tasks

223

00:24:44,820 --> 00:24:42,770

that we have that they're we can't

224

00:24:50,799 --> 00:24:44,830

operate seven people in the shuttle

225

00:24:52,900 --> 00:24:50,809

Martin Dean yes Bob Crippen Bob how

226

00:24:54,730 --> 00:24:52,910

difficult or discouraging has it been

227

00:25:00,880 --> 00:24:54,740

for you to deal with a mission that has

228

00:25:06,400 --> 00:25:00,890

had so many troubles problem which

229

00:25:12,010 --> 00:25:06,410

nation was that for I follow up is this

230

00:25:14,980 --> 00:25:12,020

mission okay yeah we've had the problems

231

00:25:18,070 --> 00:25:14,990

I think they probably been more of tough

232

00:25:19,810 --> 00:25:18,080

for the ground to deal with the problem

233

00:25:21,490 --> 00:25:19,820

we ran into with the Cajun in antenna I

234

00:25:23,500 --> 00:25:21,500

know it's certainly given these surfing

235

00:25:24,010 --> 00:25:23,510

folks from the promised land get all

236

00:25:26,110 --> 00:25:24,020

their data

237

00:25:28,690 --> 00:25:26,120

I believe that Mission Control in

238

00:25:29,890 --> 00:25:28,700

Houston is done a marvelous job and it

239

00:25:33,789 --> 00:25:29,900

normally does and coming up with

240

00:25:35,320 --> 00:25:33,799

workarounds allows I think that's in the

241

00:25:37,539 --> 00:25:35,330

general tenor of the way we do business

242

00:25:38,770 --> 00:25:37,549

that if things don't work out we'll

243

00:25:40,510 --> 00:25:38,780

we'll make the best of what we have I

244

00:25:42,549 --> 00:25:40,520

believe we're getting good data for them

245

00:25:43,780 --> 00:25:42,559

we had a little problem with our fists I

246

00:25:45,490 --> 00:25:43,790

think that we've got that under control

247

00:25:47,200 --> 00:25:45,500

now and

248

00:25:49,110 --> 00:25:47,210

as far as we're concerned that things

249

00:25:53,260 --> 00:25:49,120

are running a little fairly smoothly

250

00:25:55,840 --> 00:25:53,270

okay Rebecca chase ABC this is for

251
00:26:00,070 --> 00:25:55,850
Commander Crippen and Sally Ride could

252
00:26:01,660 --> 00:26:00,080
you compare the this this mission with

253
00:26:04,000 --> 00:26:01,670
the other missions that you've been on

254
00:26:06,490 --> 00:26:04,010
comparing the problems on the the

255
00:26:08,740 --> 00:26:06,500
crowded conditions as well as the

256
00:27:03,430 --> 00:26:08,750
accomplishments of what you think

257
00:27:09,700 --> 00:27:06,940
CCV this one is for Marc Garneau

258
00:27:12,220 --> 00:27:09,710
you rather busy up there \$1 a day you're

259
00:27:13,630 --> 00:27:12,230
been conducting experiments and another

260
00:27:15,760 --> 00:27:13,640
eight hours if you're lucky you're

261
00:27:18,490 --> 00:27:15,770
sleeping are you getting much time just

262
00:27:29,770 --> 00:27:18,500
to gaze out the window and wonder that

263
00:27:32,200 --> 00:27:29,780

the splendor of it all stock at the

264

00:27:33,790 --> 00:27:32,210

window having a look out there I haven't

265

00:27:36,019 --> 00:27:33,800

been able to see it all because of some

266

00:27:37,729 --> 00:27:36,029

cloud but turning

267

00:28:05,239 --> 00:27:37,739

my share of the time at the window and

268

00:28:08,359 --> 00:28:05,249

if that's a really fantastic this is

269

00:28:12,379 --> 00:28:08,369

this is just in press enter to your copy

270

00:28:43,130 --> 00:28:12,389

challenger salad yes don't we copy lot

271

00:28:53,430 --> 00:28:49,560

like veal face get out outside to the

272

00:28:57,750 --> 00:28:53,440

Hicklin Shh we're just glad that they

273

00:29:05,450 --> 00:28:57,760

were not getting ready for entry sure

274

00:29:10,200 --> 00:29:08,220

and by the way everything has worked

275

00:29:12,930 --> 00:29:10,210

perfectly leave you number three checked

276

00:29:14,820 --> 00:29:12,940

out so polyps at all its authority of

277

00:29:24,360 --> 00:29:14,830

you've ever wanted to is that absolutely

278

00:29:27,000 --> 00:29:24,370

no problem Roger XP nude okay yeah what

279

00:29:28,410 --> 00:29:27,010

you are see now David about it out there

280

00:29:30,990 --> 00:29:28,420

the two views that we're going to use

281

00:29:33,000 --> 00:29:31,000

for the UVA tomorrow but they'd be an

282

00:29:34,800 --> 00:29:33,010

easy one if you have to be an easy two

283

00:29:39,690 --> 00:29:34,810

so we're going to hook up the lower

284

00:29:41,850 --> 00:29:39,700

torso at the helmet hook up the us to

285

00:29:43,260 --> 00:29:41,860

use and we're going to go through a

286

00:30:32,690 --> 00:29:43,270

pressurization check make sure that

287

00:32:05,670 --> 00:31:51,140

okay

288

00:32:10,470 --> 00:32:05,680

not playing Oh stupid ring calm for

289

00:32:14,550 --> 00:32:10,480

Jurgen II decided that now we got the 50

290

00:32:27,920 --> 00:32:14,560

B understand okay we'll see with you

291

00:32:27,930 --> 00:33:06,830

maybe

292

00:33:06,840 --> 00:33:24,670

I am in space

293

00:33:24,680 --> 00:33:46,980

I don't care for those data for you

294

00:33:46,990 --> 00:33:59,350

Oh

295

00:34:42,879 --> 00:34:37,869

a little bit more difficult coming off

296

00:34:44,590 --> 00:34:42,889

you expected yeah done this with the

297

00:34:47,740 --> 00:34:44,600

pressure on it so I knew it's going to

298

00:34:49,300 --> 00:34:47,750

be a little tougher invade me quite that

299

00:35:01,100 --> 00:34:49,310

much but it finally did it

300

00:35:01,110 --> 00:35:20,480

they don't have to bet the ball now

301
00:35:20,490 --> 00:35:30,830
okay cool with that

302
00:36:03,580 --> 00:35:49,280
Oh mmm again that's coming loose did you

303
00:36:03,590 --> 00:36:13,300
okay good just to make sure it comes off

304
00:37:16,380 --> 00:36:16,090
okay

305
00:37:16,390 --> 00:38:21,270
that was a West Virginia

306
00:38:21,280 --> 00:38:40,620
Oh

307
00:38:48,520 --> 00:38:42,910
show you guys and we'll talk to you next

308
00:38:51,640 --> 00:38:48,530
to Bob at 6:44 okay we'll see you there

309
00:39:34,780 --> 00:38:51,650
thank you laughing you wish you

310
00:39:41,070 --> 00:39:39,070
Calvin let's go budget clip would you

311
00:39:46,690 --> 00:39:41,080
like me to read up that attitude they're

312
00:43:01,060 --> 00:39:46,700
just consultants my hand okay that's

313
00:43:06,040 --> 00:43:03,840

and Houston father how do you rate their

314

00:43:11,580 --> 00:43:06,050

Challenger Houston you're loud and clear

315

00:43:19,150 --> 00:43:13,870

order a challenger now approaching a

316

00:43:21,490 --> 00:43:19,160

Kentucky Tennessee line first

317

00:43:23,110 --> 00:43:21,500

role-reversal beginning right here over

318

00:43:29,160 --> 00:43:23,120

Knoxville Tennessee at an altitude of

319

00:43:36,810 --> 00:43:29,170

174 thousand 177 feet mock 11.35

320

00:43:59,700 --> 00:43:39,160

Challenger Houston back with you through

321

00:44:05,170 --> 00:44:01,990

Mission Control Houston velocity now

322

00:44:07,420 --> 00:44:05,180

10,000 555 feet per second altitude

323

00:44:09,400 --> 00:44:07,430

hundred sixty one thousand feet sink

324

00:44:13,390 --> 00:44:09,410

rate five hundred twenty two feet per

325

00:44:19,360 --> 00:44:13,400

second range three hundred seventy

326
00:44:21,580 --> 00:44:19,370
nautical miles velocity now 9800 thirty

327
00:44:29,590 --> 00:44:21,590
feet per second altitude hundred fifty

328
00:44:31,720 --> 00:44:29,600
thousand feet approaching the second

329
00:44:36,250 --> 00:44:31,730
roll reversal as they approach the

330
00:44:38,080 --> 00:44:36,260
Florida State Line up to two hundred

331
00:44:43,840 --> 00:44:38,090
thirty three thousand feet velocity

332
00:44:45,280 --> 00:44:43,850
sixty three hundred feet per second sink

333
00:44:52,309 --> 00:44:45,290
rate two hundred fifty six feet per

334
00:44:56,189 --> 00:44:54,809
Mission Control Houston the Cape has

335
00:45:00,749 --> 00:44:56,199
acquired the orbit on your infrared

336
00:45:03,749 --> 00:45:00,759
cameras long-range opticals now show a

337
00:45:05,400 --> 00:45:03,759
dot of light to Ola gradually increase

338
00:45:08,339 --> 00:45:05,410

to the shape of a space shuttle

339

00:45:10,349 --> 00:45:08,349

overturning Challenger now in a velocity

340

00:45:13,019 --> 00:45:10,359

of 4,200 feet per second altitude

341

00:45:21,420 --> 00:45:13,029

hundred four thousand feet a nautical

342

00:45:25,170 --> 00:45:21,430

mile from the runway this control

343

00:45:27,779 --> 00:45:25,180

Houston now 75 thousand feet 46 nautical

344

00:45:30,900 --> 00:45:27,789

miles to touchdown velocity now 1,800

345

00:45:33,989 --> 00:45:30,910

feet per second sink rate 226 feet per

346

00:45:36,120 --> 00:45:33,999

second altitude now 73 thousand feet

347

00:45:45,170 --> 00:45:36,130

we're seeing long-range optical from

348

00:45:54,179 --> 00:45:47,459

Columbia or challenger right on her

349

00:46:01,040 --> 00:45:54,189

ground fact watching now 1,500 feet per

350

00:46:07,190 --> 00:46:03,360

challenger is betting at 200 feet per

351

00:46:07,200 --> 00:46:19,700

altitude 34,000 feet we copy

352

00:46:24,540 --> 00:46:21,990

sonic boom has been heard at the Kennedy

353

00:46:30,750 --> 00:46:24,550

Space Center challenger now turn left

354

00:46:38,160 --> 00:46:30,760

overhead 90 degrees onto the hack 29,000

355

00:46:45,990 --> 00:46:38,170

feet 15 nautical miles velocity 730 feet

356

00:46:53,640 --> 00:46:46,000

per second altitude 27,000 feet range 13

357

00:46:59,940 --> 00:46:53,650

nautical mile equivalent airspeed 270

358

00:47:05,820 --> 00:46:59,950

knots altitude 22,000 feet now think

359

00:47:09,890 --> 00:47:05,830

great 223 feet per second angle of

360

00:47:19,290 --> 00:47:14,640

velocity 494 feet per second altitude

361

00:47:23,320 --> 00:47:19,300

1,100 feet 800 feet range 1.3 nautical

362

00:47:23,330 --> 00:47:34,520

here down

363

00:47:34,530 --> 00:47:48,900

that's it

364

00:48:02,740 --> 00:47:51,010

those down

365

00:48:07,540 --> 00:48:04,600

Mission Control Houston in eight days

366

00:48:37,749 --> 00:48:07,550

five hours 24 minutes the largest crew

367

00:48:42,769 --> 00:48:40,549

challenger Houston we copy that grip and

368

00:48:44,569 --> 00:48:42,779

you outfoxed us again you landed at KSC

369

00:49:13,280 --> 00:48:44,579

but the beer has been sent to headwords

370

00:49:13,290 --> 00:49:23,050

when the time

371

00:49:29,359 --> 00:49:27,859

so loosen this round of applause coming

372

00:49:35,450 --> 00:49:29,369

out of the mission control room here as

373

00:49:37,640 --> 00:49:35,460

the crew exits the orbiter commander Bob

374

00:49:41,210 --> 00:49:37,650

Crippen shaking hands with a ground crew