



1
00:00:17,189 --> 00:00:15,829
when we were told that we're going to go

2
00:00:19,269 --> 00:00:17,199
to the moon we're planning and we're

3
00:00:21,029 --> 00:00:19,279
training we're doing everything you know

4
00:00:22,470 --> 00:00:21,039
sometimes you get into a project that

5
00:00:24,390 --> 00:00:22,480
you really never

6
00:00:27,109 --> 00:00:24,400
quite see the end you're working hard

7
00:00:30,230 --> 00:00:27,119
you forget about the the final part the

8
00:00:31,910 --> 00:00:30,240
completion and that to me was sort of

9
00:00:33,510 --> 00:00:31,920
the way i felt we're going to the moon

10
00:00:35,430 --> 00:00:33,520
we're training this we're doing that

11
00:00:38,549 --> 00:00:35,440
we're learning something else and then

12
00:00:40,470 --> 00:00:38,559
it was on the day of the launch

13
00:00:41,910 --> 00:00:40,480

before light it was still dark when the

14

00:00:43,270 --> 00:00:41,920

three of us went up to the gantry now

15

00:00:44,950 --> 00:00:43,280

you have to remember that there's no one

16

00:00:47,350 --> 00:00:44,960

else around except a couple nervous

17

00:00:48,790 --> 00:00:47,360

checkout people the rocket itself is

18

00:00:51,029 --> 00:00:48,800

filled with five and a half million

19

00:00:52,709 --> 00:00:51,039

pounds of high explosives everyone else

20

00:00:54,310 --> 00:00:52,719

is a comfortable three and a half miles

21

00:00:56,790 --> 00:00:54,320

away

22

00:00:58,549 --> 00:00:56,800

and as my two companions were the first

23

00:01:01,189 --> 00:00:58,559

to go into the spacecraft where the

24

00:01:03,430 --> 00:01:01,199

gantry is some 330 feet tall there's a

25

00:01:05,670 --> 00:01:03,440

bridge across there they walked across

26

00:01:08,789 --> 00:01:05,680

it and they went into the spacecraft i

27

00:01:11,429 --> 00:01:08,799

was left alone fully suited up

28

00:01:13,270 --> 00:01:11,439

and breathing pure oxygen

29

00:01:14,789 --> 00:01:13,280

and i looked at the night and i saw

30

00:01:16,630 --> 00:01:14,799

these lights come down and there was

31

00:01:19,190 --> 00:01:16,640

this was the press corps that was

32

00:01:20,469 --> 00:01:19,200

manning the the press sites at that

33

00:01:21,910 --> 00:01:20,479

particular time

34

00:01:23,749 --> 00:01:21,920

and then i looked down and i saw the

35

00:01:25,270 --> 00:01:23,759

ground and i went to the press corps and

36

00:01:27,270 --> 00:01:25,280

i said

37

00:01:29,270 --> 00:01:27,280

these people are really serious

38

00:01:31,510 --> 00:01:29,280

we're going to go to the moon

39

00:01:33,670 --> 00:01:31,520

and you know sunny dawn on me that this

40

00:01:35,910 --> 00:01:33,680

was not another earth orbital flight

41

00:01:37,590 --> 00:01:35,920

this was the accumulation of the

42

00:01:40,069 --> 00:01:37,600

training we had done and the decisions

43

00:01:42,550 --> 00:01:40,079

we had made that in unless something in

44

00:01:44,149 --> 00:01:42,560

the last next couple hours happened this

45

00:01:46,870 --> 00:01:44,159

spacecraft and this rock we're going to

46

00:01:48,870 --> 00:01:46,880

take off and we're headed for the moon

47

00:01:51,109 --> 00:01:48,880

nobody'd ridden on the saturn v and even

48

00:01:52,950 --> 00:01:51,119

though there'd been what two unmanned

49

00:01:54,389 --> 00:01:52,960

saturn's apparently they didn't have the

50

00:01:56,789 --> 00:01:54,399

accelerometers

51
00:01:59,510 --> 00:01:56,799
in the right place because

52
00:02:02,310 --> 00:01:59,520
they soon no sooner lit this thing off

53
00:02:03,429 --> 00:02:02,320
when i realized that we had missed one

54
00:02:05,990 --> 00:02:03,439
major

55
00:02:07,109 --> 00:02:06,000
part of the simulation

56
00:02:10,309 --> 00:02:07,119
the the

57
00:02:13,750 --> 00:02:10,319
sideways vibrations with those big huge

58
00:02:16,150 --> 00:02:13,760
150 1.5 million pounds thrust each

59
00:02:17,830 --> 00:02:16,160
engines gimbling around trying to keep

60
00:02:20,070 --> 00:02:17,840
this thing straight

61
00:02:22,150 --> 00:02:20,080
uh the center of gravity is way down

62
00:02:25,270 --> 00:02:22,160
here we were up here like a ladybug on

63
00:02:27,110 --> 00:02:25,280

the end of your automobile antenna so as

64

00:02:28,630 --> 00:02:27,120

it moved down here an inch this thing

65

00:02:29,430 --> 00:02:28,640

moved a foot

66

00:02:31,830 --> 00:02:29,440

and

67

00:02:34,630 --> 00:02:31,840

it i literally felt like i was being

68

00:02:36,710 --> 00:02:34,640

thrashed around like a rat in the jaws

69

00:02:39,190 --> 00:02:36,720

of of a terrier

70

00:02:41,750 --> 00:02:39,200

and i was convinced that the fins were

71

00:02:43,830 --> 00:02:41,760

bouncing up the girders of the

72

00:02:44,949 --> 00:02:43,840

spacecraft of the launch

73

00:02:47,190 --> 00:02:44,959

tower

74

00:02:49,190 --> 00:02:47,200

also the noise was deafening there was

75

00:02:51,190 --> 00:02:49,200

no way we could communicate

76

00:02:53,030 --> 00:02:51,200

now frank he told me later was smart

77

00:02:54,550 --> 00:02:53,040

enough to take his hand off this launch

78

00:02:55,509 --> 00:02:54,560

abort

79

00:02:58,070 --> 00:02:55,519

handle

80

00:03:02,309 --> 00:02:58,080

because as fighter pilots it's much

81

00:03:05,910 --> 00:03:03,190

and

82

00:03:11,830 --> 00:03:05,920

uh

83

00:03:14,550 --> 00:03:11,840

i was sort of the flight engineer and so

84

00:03:16,630 --> 00:03:14,560

if i detected any kind of problem

85

00:03:17,830 --> 00:03:16,640

uh on the uh instruments i couldn't see

86

00:03:19,430 --> 00:03:17,840

them they were just kind of going like

87

00:03:20,869 --> 00:03:19,440

that

88

00:03:23,270 --> 00:03:20,879

i wouldn't have been able to communicate

89

00:03:24,390 --> 00:03:23,280

them to frank and if i had seen him and

90

00:03:26,470 --> 00:03:24,400

communicate he wouldn't be able to do

91

00:03:29,110 --> 00:03:26,480

anything about it anyway

92

00:03:32,309 --> 00:03:29,120

well we seemed like an hour when we

93

00:03:33,990 --> 00:03:32,319

cleared the tower and uh the noise

94

00:03:36,869 --> 00:03:34,000

started coming down a little bit and

95

00:03:38,789 --> 00:03:36,879

things smoothed out and i thought boy

96

00:03:41,750 --> 00:03:38,799

if we missed that in our training what

97

00:03:44,470 --> 00:03:43,670

so it was pretty spectacular and then as

98

00:03:47,750 --> 00:03:44,480

we

99

00:03:49,910 --> 00:03:47,760

burn the fuel out of this first stage

100

00:03:51,670 --> 00:03:49,920

it's extremely heavy probably what half

101
00:03:53,910 --> 00:03:51,680
of the weight of the vehicle

102
00:03:55,670 --> 00:03:53,920
that's when it was loaded as it burned

103
00:03:58,390 --> 00:03:55,680
its fuel down

104
00:04:00,229 --> 00:03:58,400
the whole thing became much less massive

105
00:04:02,229 --> 00:04:00,239
but the thrust was the same you know for

106
00:04:03,589 --> 00:04:02,239
those who went to high school physics f

107
00:04:06,550 --> 00:04:03,599
equals $m a$

108
00:04:09,670 --> 00:04:06,560
so as f is the same and m goes down a

109
00:04:11,750 --> 00:04:09,680
goes up so at uh at cut off what do we

110
00:04:13,350 --> 00:04:11,760
have about four g something like that

111
00:04:14,869 --> 00:04:13,360
four and a half g 's

112
00:04:16,509 --> 00:04:14,879
suddenly

113
00:04:19,749 --> 00:04:16,519

the rocket cut off

114

00:04:22,069 --> 00:04:19,759

instantaneously some retro rockets fired

115

00:04:25,030 --> 00:04:22,079

uh then the the

116

00:04:27,510 --> 00:04:25,040

primer cord sheared off the first stage

117

00:04:29,350 --> 00:04:27,520

to me were my fluid we were on her back

118

00:04:31,510 --> 00:04:29,360

so the fluid my ears were pinned to the

119

00:04:33,510 --> 00:04:31,520

back of my head and suddenly it all

120

00:04:35,510 --> 00:04:33,520

sloshed forward

121

00:04:37,270 --> 00:04:35,520

and i could not resist

122

00:04:39,189 --> 00:04:37,280

throwing my hand

123

00:04:41,590 --> 00:04:39,199

up in front of my face like it felt like

124

00:04:43,990 --> 00:04:41,600

i was being catapulted like one of these

125

00:04:45,749 --> 00:04:44,000

captain of castile catapults right

126

00:04:47,350 --> 00:04:45,759

through the instrument panel

127

00:04:49,830 --> 00:04:47,360

okay that went so i threw my hand up

128

00:04:54,710 --> 00:04:49,840

about the time my hand got up here

129

00:05:00,070 --> 00:04:57,110

so i looked up and had my my face my

130

00:05:02,950 --> 00:05:00,080

helmet on and here was this gash

131

00:05:04,790 --> 00:05:02,960

across my helmet and i thought oh gosh

132

00:05:07,189 --> 00:05:04,800

you know when the big boys see this you

133

00:05:09,189 --> 00:05:07,199

know it's going to just you know justify

134

00:05:11,270 --> 00:05:09,199

the rookie position

135

00:05:13,830 --> 00:05:11,280

well we made it into orbit and somewhere

136

00:05:16,310 --> 00:05:13,840

along the line uh i collected the

137

00:05:17,990 --> 00:05:16,320

helmets and i noticed that the other two

138

00:05:19,590 --> 00:05:18,000

guys each had

139

00:05:21,670 --> 00:05:19,600

a slash

140

00:05:24,390 --> 00:05:21,680

so my point is there's no rookies on the

141

00:05:26,950 --> 00:05:24,400

first saturn everybody's a rookie the

142

00:05:29,350 --> 00:05:26,960

launch was exciting and then we went on

143

00:05:31,830 --> 00:05:29,360

to the coast uh we went around once and

144

00:05:33,909 --> 00:05:31,840

a half around the earth and then over

145

00:05:35,670 --> 00:05:33,919

was over hawaii it wasn't we got the go

146

00:05:37,990 --> 00:05:35,680

for tli much

147

00:05:39,350 --> 00:05:38,000

go for translunar injection and i'll be

148

00:05:41,270 --> 00:05:39,360

honest with you i didn't think we would

149

00:05:42,870 --> 00:05:41,280

ever get that because i knew darn well

150

00:05:44,790 --> 00:05:42,880

that nasa wouldn't commit

151
00:05:48,390 --> 00:05:44,800
commit us unless everything was really

152
00:05:51,029 --> 00:05:48,400
perfect but over hawaii mike collins

153
00:05:54,150 --> 00:05:51,039
said apollo 8 you go for tli we lit this

154
00:05:57,189 --> 00:05:54,160
s4b started out picked up what 25 000

155
00:05:59,830 --> 00:05:57,199
miles an hour 35 000 feet a second 35

156
00:06:02,390 --> 00:05:59,840
000 feet a second 25 000 miles an hour

157
00:06:04,309 --> 00:06:02,400
and started toward the moon now in order

158
00:06:06,950 --> 00:06:04,319
to keep the heat load equal on the

159
00:06:08,950 --> 00:06:06,960
spacecraft we posit if that was the sun

160
00:06:09,909 --> 00:06:08,960
we positioned ourselves perpendicular to

161
00:06:11,670 --> 00:06:09,919
the sun

162
00:06:13,270 --> 00:06:11,680
and then just rotated all the way to the

163
00:06:15,990 --> 00:06:13,280

moon we so we i think we probably have

164

00:06:17,670 --> 00:06:16,000

the record for revolutions yeah

165

00:06:21,749 --> 00:06:17,680

and at kevin cube

166

00:06:23,590 --> 00:06:21,759

yeah we call it the barbecued mode about

167

00:06:24,870 --> 00:06:23,600

oh i don't know about two or three i

168

00:06:26,390 --> 00:06:24,880

might as well get this out of the way

169

00:06:27,350 --> 00:06:26,400

right now because it'll come up sooner

170

00:06:36,309 --> 00:06:27,360

or later

171

00:06:36,319 --> 00:06:39,590

i began to feel funny

172

00:06:44,550 --> 00:06:42,870

i'll tell you it wasn't a bit funny

173

00:06:46,230 --> 00:06:44,560

you know jim lovell and i had flown for

174

00:06:48,790 --> 00:06:46,240

two weeks and i'd never gotten sick i've

175

00:06:50,950 --> 00:06:48,800

never been sick in an airplane but i

176

00:06:54,710 --> 00:06:50,960

really wasn't feeling too good and so i

177

00:06:56,629 --> 00:06:54,720

managed to throw up all over them

178

00:06:59,510 --> 00:06:56,639

and that caused great consternation back

179

00:07:01,990 --> 00:06:59,520

on earth when anders wanted to squeal on

180

00:07:03,350 --> 00:07:02,000

me i wouldn't let him so finally he

181

00:07:05,909 --> 00:07:03,360

dumped it on the tape and they read

182

00:07:07,909 --> 00:07:05,919

about it and then eight hours later i

183

00:07:09,909 --> 00:07:07,919

covered his tail for eight hours

184

00:07:11,029 --> 00:07:09,919

but interestingly enough all the

185

00:07:13,430 --> 00:07:11,039

scientists

186

00:07:14,629 --> 00:07:13,440

dr van allen was convinced that we got

187

00:07:16,390 --> 00:07:14,639

fried going through his zionist

188

00:07:18,390 --> 00:07:16,400

ionosphere belt

189

00:07:19,510 --> 00:07:18,400

this not the doctors were going nuts and

190

00:07:21,589 --> 00:07:19,520

we wanted

191

00:07:23,909 --> 00:07:21,599

as if we they couldn't decide whether or

192

00:07:26,309 --> 00:07:23,919

not they were going to abort the mission

193

00:07:28,230 --> 00:07:26,319

they didn't have much to say about it

194

00:07:30,390 --> 00:07:28,240

frank i have to tell you this right now

195

00:07:31,990 --> 00:07:30,400

but we were going to the moon regardless

196

00:07:33,430 --> 00:07:32,000

of what happened exactly

197

00:07:34,629 --> 00:07:33,440

one of the important things on the

198

00:07:36,390 --> 00:07:34,639

flight plan

199

00:07:38,390 --> 00:07:36,400

was when we would lose communication

200

00:07:40,469 --> 00:07:38,400

with the earth because as you go around

201

00:07:42,629 --> 00:07:40,479

the moon the communications will be

202

00:07:45,270 --> 00:07:42,639

blanked out because it was s-band radar

203

00:07:47,110 --> 00:07:45,280

that we were using to communicate and so

204

00:07:49,189 --> 00:07:47,120

that was a very critical point we we had

205

00:07:51,670 --> 00:07:49,199

never seen the moon as john mentioned

206

00:07:53,909 --> 00:07:51,680

and uh i was really it was perfect

207

00:07:57,189 --> 00:07:53,919

darkness and we're flying backwards

208

00:07:58,869 --> 00:07:57,199

hoping aiming 240 000 miles inning for

209

00:08:01,029 --> 00:07:58,879

aiming for a place 60 miles above the

210

00:08:04,070 --> 00:08:01,039

lunar surface so i was watching that

211

00:08:05,830 --> 00:08:04,080

time very very very closely uh and

212

00:08:07,430 --> 00:08:05,840

hoping that we were on track and just at

213

00:08:09,110 --> 00:08:07,440

the minute we were second we were

214

00:08:09,990 --> 00:08:09,120

supposed to lose communication we lost

215

00:08:10,790 --> 00:08:10,000

it

216

00:08:13,029 --> 00:08:10,800

and

217

00:08:14,790 --> 00:08:13,039

boy that's great what a wonderful deal i

218

00:08:15,909 --> 00:08:14,800

said we just lost it right on time and

219

00:08:17,670 --> 00:08:15,919

anders says

220

00:08:21,189 --> 00:08:17,680

well they probably turned a damn radio

221

00:08:25,270 --> 00:08:22,790

okay now i got you to the moon you guys

222

00:08:27,430 --> 00:08:25,280

take over

223

00:08:29,029 --> 00:08:27,440

well we as frank said and as john said

224

00:08:30,390 --> 00:08:29,039

we didn't see the moon because we

225

00:08:32,469 --> 00:08:30,400

weren't supposed to look at it because

226

00:08:34,709 --> 00:08:32,479

the sun was sort of right behind it

227

00:08:37,430 --> 00:08:34,719

afraid to hurt we'd hurt our eyes

228

00:08:39,909 --> 00:08:37,440

but when we uh oriented the spacecraft

229

00:08:41,430 --> 00:08:39,919

going backwards along our path just as

230

00:08:43,509 --> 00:08:41,440

we were cutting in front of the moon

231

00:08:45,190 --> 00:08:43,519

like like high schoolers trying to

232

00:08:47,430 --> 00:08:45,200

outrace the train

233

00:08:50,070 --> 00:08:47,440

uh in their jalopy and

234

00:08:52,310 --> 00:08:50,080

beating it by a yard

235

00:08:53,990 --> 00:08:52,320

it we went into the shadow of the moon

236

00:08:55,670 --> 00:08:54,000

where we were both in the shadow of the

237

00:08:58,870 --> 00:08:55,680

moon from the sun and the shadow of the

238

00:09:01,430 --> 00:08:58,880

moon from earth shine and it was dark i

239

00:09:03,910 --> 00:09:01,440

mean it was it had been kind of

240

00:09:05,509 --> 00:09:03,920

just the sky was sort of a gray you

241

00:09:08,070 --> 00:09:05,519

couldn't see stars very well but it

242

00:09:10,150 --> 00:09:08,080

wasn't dark coming to the moon but now

243

00:09:11,590 --> 00:09:10,160

it was black there were stars everywhere

244

00:09:13,190 --> 00:09:11,600

you couldn't tell which ones they were

245

00:09:15,269 --> 00:09:13,200

there were so many

246

00:09:16,630 --> 00:09:15,279

and i remember looking back

247

00:09:18,470 --> 00:09:16,640

and uh

248

00:09:21,750 --> 00:09:18,480

seeing all these stars and suddenly

249

00:09:23,190 --> 00:09:21,760

there was this big black hole

250

00:09:24,949 --> 00:09:23,200

and i got to tell you the hair went up

251

00:09:26,150 --> 00:09:24,959

on the back of my neck because that was

252

00:09:28,389 --> 00:09:26,160

the moon

253

00:09:30,310 --> 00:09:28,399

and uh when we popped out of that shadow

254

00:09:32,070 --> 00:09:30,320

and relit our engines we were in lunar

255

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

orbit

256

00:09:36,070 --> 00:09:33,680

that was one of the major decisions we

257

00:09:37,670 --> 00:09:36,080

had to make because you know if we were

258

00:09:39,350 --> 00:09:37,680

had any problems at all

259

00:09:41,590 --> 00:09:39,360

we'd circumnavigate the moon and come

260

00:09:44,470 --> 00:09:41,600

back again so one of the decisions and

261

00:09:46,790 --> 00:09:44,480

what we had to do behind the moon with

262

00:09:48,550 --> 00:09:46,800

no communication with the earth was to

263

00:09:50,389 --> 00:09:48,560

of course light the engine to slow down

264

00:09:52,550 --> 00:09:50,399

and once we did that and everything

265

00:09:55,509 --> 00:09:52,560

looked perfect and then when we looked

266

00:09:57,350 --> 00:09:55,519

at the computer uh it it showed that we

267

00:09:59,430 --> 00:09:57,360

were in the exact orbit

268

00:10:01,750 --> 00:09:59,440

i think at that time it was about 60 by

269

00:10:03,350 --> 00:10:01,760

160 miles in a sort of elliptical orbit

270

00:10:05,350 --> 00:10:03,360

to begin with