



MARSHALL
REMEMBERS APOLLO

1
00:00:01,130 --> 00:00:15,920

[Music]

2
00:00:20,430 --> 00:00:18,750

you know Pine Bluff Arkansas a little

3
00:00:23,640 --> 00:00:20,440

north of town they'll know what we call

4
00:00:25,980 --> 00:00:23,650

the neck McFadden road is on the

5
00:00:31,560 --> 00:00:25,990

Arkansas River that's why I was born

6
00:00:35,690 --> 00:00:31,570

there in 1932 and there we we all

7
00:00:39,720 --> 00:00:35,700

attended we call a one-room room

8
00:00:41,610 --> 00:00:39,730

classroom there we had what six first

9
00:00:43,830 --> 00:00:41,620

grade through this I thought it was a

10
00:00:46,049 --> 00:00:43,840

threat I believe it was and had one

11
00:00:47,460 --> 00:00:46,059

teacher and you and being the first

12
00:00:48,810 --> 00:00:47,470

grade you be listening to everything

13
00:00:51,390 --> 00:00:48,820

happening right over up to all the

14

00:00:52,920 --> 00:00:51,400

classes so you came out of pretty pretty

15

00:00:56,070 --> 00:00:52,930

educational little fellow you know after

16

00:00:58,760 --> 00:00:56,080

eight years there then from there we

17

00:01:01,800 --> 00:00:58,770

asked all the as up in the warned area

18

00:01:04,590 --> 00:01:01,810

my great-great-grandfather who donated

19

00:01:07,109 --> 00:01:04,600

that church whether the search was

20

00:01:10,140 --> 00:01:07,119

located to that to the community

21

00:01:11,910 --> 00:01:10,150

his name was a George Warren and then

22

00:01:14,910 --> 00:01:11,920

from there we move down to the city of

23

00:01:16,920 --> 00:01:14,920

Pine Bluff and they have our ten the

24

00:01:20,459 --> 00:01:16,930

first grade to the sixth graders were

25

00:01:22,739 --> 00:01:20,469

then called Merrill high school then I

26
00:01:25,559 --> 00:01:22,749
move out west and then in same little

27
00:01:27,419 --> 00:01:25,569
town Pine Bluff and in the walking

28
00:01:31,760 --> 00:01:27,429
Chopin School District in what we call

29
00:01:34,649 --> 00:01:31,770
the the Johnson County training school

30
00:01:36,779 --> 00:01:34,659
when I first got that if you go up

31
00:01:38,309 --> 00:01:36,789
through the 8th grade then you kept

32
00:01:40,770 --> 00:01:38,319
adding the grade when I got there so I

33
00:01:43,230 --> 00:01:40,780
stayed to the 12th grade and at the end

34
00:01:45,480 --> 00:01:43,240
of that they call it the Coburn high

35
00:01:48,809 --> 00:01:45,490
school and that's why I finished high

36
00:01:50,940 --> 00:01:48,819
school and went to you AP B at that time

37
00:01:56,810 --> 00:01:50,950
Khan unit University of Arkansas at Pine

38
00:02:03,530 --> 00:02:02,090

that hit us hard in he you are I'm

39

00:02:06,590 --> 00:02:03,540

saying I was in high school at that time

40

00:02:08,330 --> 00:02:06,600

then when I came here where you talking

41

00:02:09,850 --> 00:02:08,340

to the some of the older engineers that

42

00:02:12,290 --> 00:02:09,860

we could have done something like that

43

00:02:14,660 --> 00:02:12,300

earlier but we didn't I don't know why

44

00:02:16,790 --> 00:02:14,670

but anyway we didn't we

45

00:02:20,210 --> 00:02:16,800

but if we caught fire side moving and we

46

00:02:24,960 --> 00:02:20,220

I think we went ahead of them much ahead

47

00:02:30,330 --> 00:02:27,780

a good mathematic Department and you had

48

00:02:34,040 --> 00:02:30,340

some physics in chemistry area but I

49

00:02:40,940 --> 00:02:34,050

went into mathematics and I got my BS

50

00:02:46,940 --> 00:02:43,160

I start finish there the next year I

51
00:02:50,720 --> 00:02:46,950
taught high school math mathematics in

52
00:02:53,420 --> 00:02:50,730
the high school area in West Memphis

53
00:02:55,809 --> 00:02:53,430
Arkansas that's going right across the

54
00:02:59,630 --> 00:02:55,819
river for my Mississippi River from our

55
00:03:01,790 --> 00:02:59,640
Memphis area let's take a one-year then

56
00:03:04,510 --> 00:03:01,800
I was hired back at the high school that

57
00:03:09,130 --> 00:03:04,520
I finished from then I stayed there

58
00:03:12,229 --> 00:03:09,140
about five years and then national

59
00:03:14,840 --> 00:03:12,239
National Science Foundation it is

60
00:03:17,570 --> 00:03:14,850
amazing that high school at that time

61
00:03:20,900 --> 00:03:17,580
was paying small amount and when I got

62
00:03:23,150 --> 00:03:20,910
the granted about trip of my serie for a

63
00:03:25,430 --> 00:03:23,160

year I was that wicked that next 63 they

64

00:03:26,840 --> 00:03:25,440

said hey you got this year's study at

65

00:03:31,460 --> 00:03:26,850

the universe of Arkansas I'll to work on

66

00:03:34,070 --> 00:03:31,470

your master's degree then they gave me

67

00:03:36,680 --> 00:03:34,080

my family up there we stayed up in

68

00:03:38,660 --> 00:03:36,690

Fayetteville for a year and and enjoyed

69

00:03:40,509 --> 00:03:38,670

it you know and increasing Sara like I

70

00:03:43,430 --> 00:03:40,519

told you before was tremendous you know

71

00:03:46,610 --> 00:03:43,440

so I went after universe Arkansas and

72

00:03:49,910 --> 00:03:46,620

worked on mathematics and what we call

73

00:03:53,030 --> 00:03:49,920

applied mathematics then was there NASA

74

00:03:55,580 --> 00:03:53,040

came through recruiting and you probably

75

00:03:57,020 --> 00:03:55,590

run into Charles smoochy-smooch were up

76
00:03:58,699 --> 00:03:57,030
there and I've never met him before and

77
00:04:00,920 --> 00:03:58,709
he was recruiting and he was telling

78
00:04:03,470 --> 00:04:00,930
about the he had Marshall Space Flight

79
00:04:05,690 --> 00:04:03,480
Center and von Braun was the center

80
00:04:08,390 --> 00:04:05,700
director and of course we heard about

81
00:04:12,410 --> 00:04:08,400
von Braun but not Marshall Space Flight

82
00:04:13,970 --> 00:04:12,420
Center at that time then that's what

83
00:04:16,250 --> 00:04:13,980
it's like dying in Alabama now we'd

84
00:04:18,949 --> 00:04:16,260
heard about your governor know those

85
00:04:20,930 --> 00:04:18,959
people you know and he said well he's

86
00:04:23,420 --> 00:04:20,940
you know he's from Birmingham he said

87
00:04:25,430 --> 00:04:23,430
well you know it's gonna be in hunts

88
00:04:26,960 --> 00:04:25,440

field and then about a mile north of

89

00:04:29,409 --> 00:04:26,970

Birmingham it's a little bit different I

90

00:04:32,600 --> 00:04:29,419

said well how much different you know

91

00:04:35,270 --> 00:04:32,610

what smoochy came in he told me about

92

00:04:37,969 --> 00:04:35,280

the work they had here you know that

93

00:04:39,469 --> 00:04:37,979

kind of thing then I went back and told

94

00:04:41,330 --> 00:04:39,479

my wife that you ought to go to Alabama

95

00:04:43,550 --> 00:04:41,340

said no at that time you know we had

96

00:04:45,680 --> 00:04:43,560

they had a governor here she said no I

97

00:04:47,950 --> 00:04:45,690

don't do an Alabama I said well like

98

00:04:49,520 --> 00:04:47,960

what I got offered to go down to

99

00:04:52,190 --> 00:04:49,530

Huntsville Alabama

100

00:04:53,790 --> 00:04:52,200

and she said you sure you want to go

101

00:04:57,360 --> 00:04:53,800

that's a let's give it a try

102

00:04:59,100 --> 00:04:57,370

so I came over we came over they gave me

103

00:05:02,219 --> 00:04:59,110

a trip over here to visit look around

104

00:05:05,760 --> 00:05:02,229

look for housing whatever and I did that

105

00:05:07,710 --> 00:05:05,770

and it was a little bit different what

106

00:05:10,559 --> 00:05:07,720

we thought it was here in North Alabama

107

00:05:13,640 --> 00:05:10,569

it put we had had framing our mine

108

00:05:16,890 --> 00:05:13,650

whatever gonna be like you know then

109

00:05:20,070 --> 00:05:16,900

convinced us that we should go and so we

110

00:05:22,860 --> 00:05:20,080

came over in June the 64 in your mind at

111

00:05:25,439 --> 00:05:22,870

the time that you knew about the Jim

112

00:05:28,020 --> 00:05:25,449

Crow you knew about the whole state of

113

00:05:29,700 --> 00:05:28,030

Alabama which we thought you know but

114

00:05:32,460 --> 00:05:29,710

it's totally you're different when we

115

00:05:34,020 --> 00:05:32,470

got here to northern part of Alabama you

116

00:05:36,330 --> 00:05:34,030

know I'm not saying that it was all

117

00:05:37,860 --> 00:05:36,340

peaches and cream but it was totally

118

00:05:46,650 --> 00:05:37,870

different what we had framing our miles

119

00:05:51,540 --> 00:05:49,860

that time we had about 700 science

120

00:05:54,450 --> 00:05:51,550

engineer and winter you support

121

00:05:56,040 --> 00:05:54,460

contractors and now Hausman was our

122

00:05:59,190 --> 00:05:56,050

director and I came to work for the

123

00:06:00,720 --> 00:05:59,200

division chief of Brooks more you've

124

00:06:05,280 --> 00:06:00,730

probably heard of Brooks boy he was the

125

00:06:07,140 --> 00:06:05,290

first nun German to head that up so he

126
00:06:10,740 --> 00:06:07,150
became later on became the lab director

127
00:06:14,730 --> 00:06:10,750
and house was very quiet guy but he's

128
00:06:16,980 --> 00:06:14,740
all science he's all headed for the

129
00:06:17,550 --> 00:06:16,990
mission we was enjoyable to work with

130
00:06:22,080 --> 00:06:17,560
him

131
00:06:25,470 --> 00:06:22,090
very quiet few words at that time we had

132
00:06:27,450 --> 00:06:25,480
the control system for the s4b

133
00:06:31,260 --> 00:06:27,460
and we've been working the control

134
00:06:34,680 --> 00:06:31,270
system and I was citing to the at the

135
00:06:38,160 --> 00:06:34,690
time we the organization was the law was

136
00:06:40,560 --> 00:06:38,170
the unit section then branch then from

137
00:06:45,980 --> 00:06:40,570
branch went to the division and I was in

138
00:06:48,450 --> 00:06:45,990

a unit at that time that my unit chief

139

00:06:52,350 --> 00:06:48,460

was Herman height

140

00:06:54,720 --> 00:06:52,360

we called him h cube h HQ after this you

141

00:06:57,390 --> 00:06:54,730

know we was working with the control

142

00:06:59,610 --> 00:06:57,400

system and we were we were doing the

143

00:07:01,530 --> 00:06:59,620

working with the hardware of it test it

144

00:07:04,770 --> 00:07:01,540

and I what we call our lab downstairs

145

00:07:06,390 --> 00:07:04,780

area and to see that it was working and

146

00:07:08,580 --> 00:07:06,400

we went into a tremendous amount of

147

00:07:11,190 --> 00:07:08,590

testing on it before you would say hey

148

00:07:14,790 --> 00:07:11,200

this thing is ready to fly at that time

149

00:07:17,190 --> 00:07:14,800

was using the IBM computers and the

150

00:07:19,170 --> 00:07:17,200

order that was had those big of vacuum

151
00:07:21,180 --> 00:07:19,180
tubes and everything at one room was

152
00:07:23,910 --> 00:07:21,190
that the computer as amazing when you

153
00:07:25,830 --> 00:07:23,920
look at that then and look at what we

154
00:07:28,680 --> 00:07:25,840
got now when you got fill out this thing

155
00:07:30,210 --> 00:07:28,690
and you go to you with what you got in

156
00:07:32,460 --> 00:07:30,220
your pocket would do just as much as

157
00:07:34,590 --> 00:07:32,470
what we could do with that whole room

158
00:07:37,880 --> 00:07:34,600
area keeping it a condition and keeping

159
00:07:41,400 --> 00:07:37,890
every up going and that was what we had

160
00:07:44,550 --> 00:07:41,410
and it was amazing but step by step

161
00:07:47,100 --> 00:07:44,560
everything began to move and was able to

162
00:07:49,260 --> 00:07:47,110
do put that together and they put able

163
00:07:54,090 --> 00:07:49,270

to fly that particular crew system on

164

00:07:56,190 --> 00:07:54,100

that swabby stage it was good work we

165

00:07:56,879 --> 00:07:56,200

enjoyed it we worked long hours you know

166

00:08:02,219 --> 00:07:56,889

but

167

00:08:07,850 --> 00:08:02,229

way the whole division was was dedicated

168

00:08:13,670 --> 00:08:10,640

then then I got into the navigation

169

00:08:15,740 --> 00:08:13,680

system for the what we call the lunar

170

00:08:18,800 --> 00:08:15,750

roving vehicle and that was enjoy

171

00:08:23,080 --> 00:08:18,810

because they had taken you from s4b

172

00:08:26,839 --> 00:08:23,090

into that and that was excited and I I

173

00:08:28,689 --> 00:08:26,849

think I got a NASA or accommodation

174

00:08:33,639 --> 00:08:28,699

medal and I got a Snoopy on that because

175

00:08:38,029 --> 00:08:33,649

the on the Astro video and we we flew

176
00:08:41,149 --> 00:08:38,039
what three three flights on that and one

177
00:08:44,209 --> 00:08:41,159
of them was the year the very first one

178
00:08:47,780 --> 00:08:44,219
we had had to had the lunar rover

179
00:08:49,880 --> 00:08:47,790
vehicle on that launch and the astronaut

180
00:08:52,610 --> 00:08:49,890
would take it and then you go out and

181
00:08:54,079 --> 00:08:52,620
locate different location we had but

182
00:08:55,579 --> 00:08:54,089
mapped out for the got there you know

183
00:08:59,329 --> 00:08:55,589
and then look at this and this and this

184
00:09:02,810 --> 00:08:59,339
and at the end we told Scott I think

185
00:09:04,850 --> 00:09:02,820
Scott was a was the lead guy on that so

186
00:09:06,860 --> 00:09:04,860
when you finished up just go up at

187
00:09:08,360 --> 00:09:06,870
special Ken and I see some rooster tail

188
00:09:11,120 --> 00:09:08,370

what they look like so we get some

189

00:09:13,430 --> 00:09:11,130

information on that he did dad that was

190

00:09:17,150 --> 00:09:13,440

excited she was when they came back we

191

00:09:19,010 --> 00:09:17,160

flew down to JSC Johnson Space Center

192

00:09:22,730 --> 00:09:19,020

Donnie you know we would interview those

193

00:09:24,769 --> 00:09:22,740

guys to get some feedback real-time know

194

00:09:27,170 --> 00:09:24,779

for what the system worked what it did

195

00:09:30,319 --> 00:09:27,180

what it didn't do was install coming so

196

00:09:32,180 --> 00:09:30,329

we could take that in an increase for

197

00:09:37,860 --> 00:09:32,190

the next time we flew three of those

198

00:09:43,290 --> 00:09:40,170

we build a mall when it's closer we

199

00:09:46,080 --> 00:09:43,300

could a 3d type model and we could

200

00:09:48,450 --> 00:09:46,090

pinpoint we call a traverses those of

201
00:09:52,860 --> 00:09:48,460
the the path you would take traverses

202
00:09:56,910 --> 00:09:52,870
and we will locate different landmarks

203
00:09:58,770 --> 00:09:56,920
that we could to get those coordinates

204
00:10:02,430 --> 00:09:58,780
on those where they can set those in and

205
00:10:04,230 --> 00:10:02,440
they navigate in sea and in doing that

206
00:10:06,420 --> 00:10:04,240
you know you would run into some

207
00:10:07,680 --> 00:10:06,430
problems so in the real time now we had

208
00:10:09,380 --> 00:10:07,690
to support those people in real time I

209
00:10:12,930 --> 00:10:09,390
was the copper lab over here we call it

210
00:10:16,410 --> 00:10:12,940
and we would had a direct line up to to

211
00:10:17,820 --> 00:10:16,420
the Houston guy who's there we talked to

212
00:10:20,700 --> 00:10:17,830
and he were talking to relate to the

213
00:10:22,320 --> 00:10:20,710

astronaut we was given the points you

214

00:10:24,930 --> 00:10:22,330

know and all those things and it's

215

00:10:27,870 --> 00:10:24,940

amazing how that had worked but we did a

216

00:10:29,970 --> 00:10:27,880

lot of ground testing though a lot of it

217

00:10:32,930 --> 00:10:29,980

if you didn't you wouldn't make it

218

00:10:35,970 --> 00:10:32,940

matter of fact we went to took tube a

219

00:10:39,510 --> 00:10:35,980

vehicle wasn't he on the LRV buddy yeah

220

00:10:41,840 --> 00:10:39,520

that's six wheel vehicle out to to

221

00:10:46,650 --> 00:10:41,850

Arizona a little above north of our

222

00:10:47,940 --> 00:10:46,660

Flagstaff and ran up in that those that

223

00:10:49,620 --> 00:10:47,950

cinder he was prettier

224

00:10:51,990 --> 00:10:49,630

he wasn't like on the surface but it was

225

00:10:54,270 --> 00:10:52,000

give you a little bit closer that and we

226

00:10:56,100 --> 00:10:54,280

had and you had slippage you know you

227

00:10:57,600 --> 00:10:56,110

you drive the car you'll get slippage

228

00:10:59,580 --> 00:10:57,610

but you don't see realized where how

229

00:11:01,380 --> 00:10:59,590

much it is to you started using that as

230

00:11:03,750 --> 00:11:01,390

part of your system to keep you accurate

231

00:11:06,510 --> 00:11:03,760

and it was amazing that you get a lot of

232

00:11:08,850 --> 00:11:06,520

slippage in your wheels when you spin or

233

00:11:11,250 --> 00:11:08,860

whatever that it knock off for you are

234

00:11:13,230 --> 00:11:11,260

your accuracy because one time I think

235

00:11:15,270 --> 00:11:13,240

they lost the one a little little

236

00:11:17,790 --> 00:11:15,280

fenders on that thing we are on our team

237

00:11:19,110 --> 00:11:17,800

sign that thing on there and that thing

238

00:11:24,410 --> 00:11:19,120

end up in the museum somewhere I don't

239

00:11:35,250 --> 00:11:28,340

percentage while we was very very low

240

00:11:37,380 --> 00:11:35,260

the four in in a strike laboratory of

241

00:11:42,450 --> 00:11:37,390

engineer type I came in as an aerospace

242

00:11:45,450 --> 00:11:42,460

engineer when too many there if if more

243

00:11:48,330 --> 00:11:45,460

than myself I don't know but as time

244

00:11:51,360 --> 00:11:48,340

passed by I began to the the problem we

245

00:11:54,450 --> 00:11:51,370

had at some of the universities where

246

00:11:56,580 --> 00:11:54,460

you had were called you know black

247

00:11:58,380 --> 00:11:56,590

universities of college whatever they

248

00:12:00,960 --> 00:11:58,390

didn't they thought like say you taught

249

00:12:03,150 --> 00:12:00,970

math but you couldn't have you didn't

250

00:12:05,490 --> 00:12:03,160

have the right your scopes and her in

251
00:12:07,200 --> 00:12:05,500
your lap so you couldn't hire them in as

252
00:12:09,360 --> 00:12:07,210
an engineer so they had to go some other

253
00:12:11,910 --> 00:12:09,370
like Georgia Tech somewhere for a couple

254
00:12:14,820 --> 00:12:11,920
years for we could hire though me in for

255
00:12:18,120 --> 00:12:14,830
an answer which was surprised that we

256
00:12:19,650 --> 00:12:18,130
was a - we was in a meeting with duck at

257
00:12:21,480 --> 00:12:19,660
that time dr. Luther was a center

258
00:12:26,130 --> 00:12:21,490
director and we talked with the

259
00:12:28,350 --> 00:12:26,140
president of Alabama A&M and and I

260
00:12:31,020 --> 00:12:28,360
mentioned this to him and doc was

261
00:12:33,510 --> 00:12:31,030
surprised that he thought we could hire

262
00:12:36,180 --> 00:12:33,520
them out but you couldn't system didn't

263
00:12:37,500 --> 00:12:36,190

they wasn't engineer so there was a what

264

00:12:39,390 --> 00:12:37,510

mathematician you brought them in a

265

00:12:43,800 --> 00:12:39,400

different that's the difference set up a

266

00:12:46,410 --> 00:12:43,810

scale suit you know look I came in as g7

267

00:12:48,510 --> 00:12:46,420

elevated GSMA as an aerospace engineer

268

00:12:50,310 --> 00:12:48,520

then then you bring them in and then

269

00:12:53,040 --> 00:12:50,320

after you work and they get for me with

270

00:13:00,630 --> 00:12:53,050

the job and whatever then thing went to

271

00:13:06,510 --> 00:13:03,240

I guess you could push your buttons had

272

00:13:08,790 --> 00:13:06,520

it happens from yesterday to the day but

273

00:13:09,329 --> 00:13:08,800

he was done within his means what he

274

00:13:11,250 --> 00:13:09,339

could do

275

00:13:15,840 --> 00:13:11,260

yeah and within the system that he's

276

00:13:17,880 --> 00:13:15,850

working in because you start a new

277

00:13:19,350 --> 00:13:17,890

engineers and type you got to look at

278

00:13:25,030 --> 00:13:19,360

the other state schools what they done

279

00:13:34,360 --> 00:13:28,600

we look at graduate out of Tuskegee they

280

00:13:36,879 --> 00:13:34,370

had a good school down there and your we

281

00:13:38,920 --> 00:13:36,889

had some out of Tennessee State or they

282

00:13:40,990 --> 00:13:38,930

were teaching engineer type stuff you

283

00:13:43,360 --> 00:13:41,000

know you could hire those people because

284

00:13:46,810 --> 00:13:43,370

I never went out on recruiting team but

285

00:13:48,939 --> 00:13:46,820

I don't know how you sold that it's a

286

00:13:50,290 --> 00:13:48,949

challenge ourselves why do you come to

287

00:13:51,850 --> 00:13:50,300

Alabama you know first thing you get

288

00:13:54,129 --> 00:13:51,860

when you said it with Alabama just scare

289

00:13:55,329 --> 00:13:54,139

half of the way you know but once you

290

00:13:59,470 --> 00:13:55,339

get them here it's a whole different

291

00:14:02,230 --> 00:13:59,480

ballgame it was it went through

292

00:14:04,090 --> 00:14:02,240

evolution type of thing to me because

293

00:14:06,819 --> 00:14:04,100

you could see it by living here you

294

00:14:12,790 --> 00:14:06,829

could see that progress see when I move

295

00:14:15,759 --> 00:14:12,800

here we had three sons I guess and the

296

00:14:18,970 --> 00:14:15,769

youngest one was a one-year-old baby or

297

00:14:21,879 --> 00:14:18,980

and then we we put him in the college

298

00:14:23,620 --> 00:14:21,889

the Catholic school st. Joseph's cast

299

00:14:27,040 --> 00:14:23,630

the screw and then when they graduate

300

00:14:28,509 --> 00:14:27,050

from there the two of them decided to go

301
00:14:30,879 --> 00:14:28,519
to head white didn't if we went from it

302
00:14:33,460 --> 00:14:30,889
white to but alone you know and when I

303
00:14:34,689 --> 00:14:33,470
went straight from Catholic school at

304
00:14:38,199 --> 00:14:34,699
that time when they added that ninth

305
00:14:39,879 --> 00:14:38,209
grade to the high school he went over

306
00:14:45,250 --> 00:14:39,889
there and to Berlin it straight over

307
00:14:52,360 --> 00:14:45,260
there and and at that time this one was

308
00:14:58,170 --> 00:14:55,019
working on my control system for the s4b

309
00:15:01,650 --> 00:14:58,180
working on the navigation system only

310
00:15:05,290 --> 00:15:01,660
LRV called the moon become an LRA

311
00:15:07,929 --> 00:15:05,300
mid-90s I made the branch chief but they

312
00:15:10,360 --> 00:15:07,939
had opening for the deputy director for

313
00:15:12,999 --> 00:15:10,370

sale lab so I apply for that and I got

314

00:15:16,179 --> 00:15:13,009

that so I worked at for many years so

315

00:15:18,879 --> 00:15:16,189

didn't Jim Mike who was the director at

316

00:15:22,239 --> 00:15:18,889

the time said a Stronach I need a deputy

317

00:15:24,519 --> 00:15:22,249

over there so I came over as the deputy

318

00:15:27,129 --> 00:15:24,529

to Joelle class selling laughs - that's

319

00:15:31,360 --> 00:15:27,139

the laboratory that I started in then

320

00:15:33,730 --> 00:15:31,370

Jill retired in mid 90s I guess then I

321

00:15:34,900 --> 00:15:33,740

applied and got the director of the

322

00:15:37,299 --> 00:15:34,910

astronaut laboratory

323

00:15:41,019 --> 00:15:37,309

that's McGann beginning and end you know

324

00:15:44,259 --> 00:15:41,029

so that was a great feeling there

325

00:15:48,220 --> 00:15:44,269

looking back it was fantastic it was

326

00:15:52,480 --> 00:15:48,230

fantastic I remember some of the people

327

00:15:56,350 --> 00:15:52,490

that was my boss when I got here in

328

00:16:00,579 --> 00:15:56,360

networking in my lap when I left that's