



1  
00:00:00,000 --> 00:00:02,460  
this is Atlas launch control we're now

2  
00:00:02,460 --> 00:00:05,339  
at a mission elapse time of 1 hour 30

3  
00:00:05,339 --> 00:00:09,300  
minutes 43 seconds and all of the

4  
00:00:09,300 --> 00:00:13,320  
activities onboard the Cygnus continue

5  
00:00:13,320 --> 00:00:16,350  
to go well in preparation for the solar

6  
00:00:16,350 --> 00:00:19,320  
array deployment but right now joining

7  
00:00:19,320 --> 00:00:21,900  
us is our Center Director Bob Cabana

8  
00:00:21,900 --> 00:00:24,660  
director Kennedy Space Center and I

9  
00:00:24,660 --> 00:00:28,199  
think first of all Bob you got to watch

10  
00:00:28,199 --> 00:00:31,349  
the launch liven up close what was your

11  
00:00:31,349 --> 00:00:34,590  
thought is you know I was going to ask

12  
00:00:34,590 --> 00:00:36,750  
you do you ever get you know feel kind

13  
00:00:36,750 --> 00:00:38,550

of like secluded in the booth all the

14

00:00:38,550 --> 00:00:40,079

time never get enough does you never get

15

00:00:40,079 --> 00:00:43,020

to see a launch I know it's I was trying

16

00:00:43,020 --> 00:00:44,579

to figure out last time I actually was

17

00:00:44,579 --> 00:00:47,399

outside and saw one ok so what somehow

18

00:00:47,399 --> 00:00:50,070

involved in the in the countdown for in

19

00:00:50,070 --> 00:00:53,879

some way and so but I remember a long

20

00:00:53,879 --> 00:00:56,430

time ago Jim Womack who was our director

21

00:00:56,430 --> 00:00:59,010

of expendable vehicles you know way back

22

00:00:59,010 --> 00:01:02,129

a long time ago when he retired and he

23

00:01:02,129 --> 00:01:03,629

worked all the way that to Allison the

24

00:01:03,629 --> 00:01:05,640

mercury days and he'd never seen a lot

25

00:01:05,640 --> 00:01:08,340

she was always in the blockhouse so when

26

00:01:08,340 --> 00:01:09,869

he retired he said this the first time

27

00:01:09,869 --> 00:01:11,790

I've ever seen a lot to look at what he

28

00:01:11,790 --> 00:01:14,640

was so so it was an awesome lunch it was

29

00:01:14,640 --> 00:01:16,259

just what a beautiful day for a launch

30

00:01:16,259 --> 00:01:19,380

in the atmosphere everything it was

31

00:01:19,380 --> 00:01:21,600

great we were over in osb to with the

32

00:01:21,600 --> 00:01:23,549

VIP guess I missed sitting on console I

33

00:01:23,549 --> 00:01:25,500

miss having something you know being

34

00:01:25,500 --> 00:01:28,259

involved in seeing the data it was more

35

00:01:28,259 --> 00:01:31,829

real-time really but you know I was a

36

00:01:31,829 --> 00:01:33,420

beautiful launch the guests loved it

37

00:01:33,420 --> 00:01:36,000

absolutely special the you know the the

38

00:01:36,000 --> 00:01:39,570

first shuttle launch that I saw was mine

39

00:01:39,570 --> 00:01:42,030

I never got to see a shuttle launch

40

00:01:42,030 --> 00:01:44,009

before I actually got to launch on the

41

00:01:44,009 --> 00:01:46,200

shuttle at the time I was the deputy

42

00:01:46,200 --> 00:01:49,229

director chip of aircraft operations at

43

00:01:49,229 --> 00:01:52,200

the Johnson Space Center and the chief

44

00:01:52,200 --> 00:01:55,020

of aircraft operations joelle granny he

45

00:01:55,020 --> 00:01:57,540

always flew over to support the launch

46

00:01:57,540 --> 00:02:00,180

at the cape and he left me behind to run

47

00:02:00,180 --> 00:02:04,409

everything at at JSC and then when I got

48

00:02:04,409 --> 00:02:06,299

into training I didn't have time to get

49

00:02:06,299 --> 00:02:09,209

over an ex lacy launch but you know I

50

00:02:09,209 --> 00:02:11,520

think I always tell folks don't take

51

00:02:11,520 --> 00:02:13,710

pictures you got to experience

52

00:02:13,710 --> 00:02:16,650

it's an emotional thing and watching it

53

00:02:16,650 --> 00:02:18,570

through the viewfinder ear canal just

54

00:02:18,570 --> 00:02:20,430

doesn't do it justice you need to feel

55

00:02:20,430 --> 00:02:23,670

it sense it here it experience it and

56

00:02:23,670 --> 00:02:25,950

anytime a rocket ship leaves planet

57

00:02:25,950 --> 00:02:28,530

Earth it's special on this one excellent

58

00:02:28,530 --> 00:02:30,870

launched today ula another great job

59

00:02:30,870 --> 00:02:32,910

with the Atlas 5 an orbital ATK the

60

00:02:32,910 --> 00:02:34,680

Cygnus vehicle looking forward to

61

00:02:34,680 --> 00:02:35,910

getting the solar rays out but

62

00:02:35,910 --> 00:02:38,430

performing well and some really critical

63

00:02:38,430 --> 00:02:39,660

supplies for the International Space

64

00:02:39,660 --> 00:02:41,850

Station well we had notice so we had

65

00:02:41,850 --> 00:02:43,230

some coverage from the from the beach

66

00:02:43,230 --> 00:02:44,700

and the Canaveral National Seashore

67

00:02:44,700 --> 00:02:46,860

really had a big turnout today they were

68

00:02:46,860 --> 00:02:48,540

able to I was talk to somebody and they

69

00:02:48,540 --> 00:02:51,630

said the roads around KSC it was like

70

00:02:51,630 --> 00:02:53,640

during the shuttle days as far as the

71

00:02:53,640 --> 00:02:54,960

traffic and everything with the number

72

00:02:54,960 --> 00:02:56,220

of people in that that's the kind of

73

00:02:56,220 --> 00:02:59,040

excitement that space Springs but but

74

00:02:59,040 --> 00:03:01,560

you're no stranger to that so you know

75

00:03:01,560 --> 00:03:03,750

George you've been doing this for 36

76  
00:03:03,750 --> 00:03:06,240  
years 33 years with NASA and through the

77  
00:03:06,240 --> 00:03:08,250  
contracts around Ford's of conchords

78  
00:03:08,250 --> 00:03:10,200  
account or as a car during the thirty

79  
00:03:10,200 --> 00:03:13,080  
seven areas for 37 years so write your

80  
00:03:13,080 --> 00:03:16,650  
first launch was an atlas off launch

81  
00:03:16,650 --> 00:03:18,840  
complex 36 right that you did commentary

82  
00:03:18,840 --> 00:03:20,850  
on I think it was a little sad it goes

83  
00:03:20,850 --> 00:03:23,610  
back far I can't quite remember for sure

84  
00:03:23,610 --> 00:03:26,820  
but I think it was an atlas off 36 36 a

85  
00:03:26,820 --> 00:03:29,490  
i think it was and you did all the

86  
00:03:29,490 --> 00:03:31,560  
Hubble servicing missions right I did I

87  
00:03:31,560 --> 00:03:33,990  
did lock the Hubble launch plus all five

88  
00:03:33,990 --> 00:03:35,970

servicing missions and you did the very

89

00:03:35,970 --> 00:03:39,120

last shuttle sts-135 Atlanta rest right

90

00:03:39,120 --> 00:03:41,490

so I mean you the head quite a history I

91

00:03:41,490 --> 00:03:43,680

don't know it folks know but but George

92

00:03:43,680 --> 00:03:47,670

is retiring this is Jorge's last time to

93

00:03:47,670 --> 00:03:50,670

actually do launch commentary live on

94

00:03:50,670 --> 00:03:52,920

console and George I don't have the gift

95

00:03:52,920 --> 00:03:54,810

with me now but I just want to say like

96

00:03:54,810 --> 00:03:56,850

you thank you for all your years of

97

00:03:56,850 --> 00:03:58,890

service and the outstanding job that you

98

00:03:58,890 --> 00:04:01,230

have done with launch commentary for

99

00:04:01,230 --> 00:04:03,630

NASA and our nation yeah absolutely

100

00:04:03,630 --> 00:04:06,480

outstanding George well appreciate that

101  
00:04:06,480 --> 00:04:09,900  
and it's it's so much fun I mean you

102  
00:04:09,900 --> 00:04:12,600  
know and I can't think you know when I

103  
00:04:12,600 --> 00:04:14,490  
started out on my career here I can't

104  
00:04:14,490 --> 00:04:16,320  
really think of very much that I haven't

105  
00:04:16,320 --> 00:04:18,450  
been able to do that I wanted to do and

106  
00:04:18,450 --> 00:04:20,489  
that's what's you'll really make it made

107  
00:04:20,489 --> 00:04:23,790  
it great and it's it certainly has

108  
00:04:23,790 --> 00:04:26,460  
certainly been fun but but now I'm you

109  
00:04:26,460 --> 00:04:27,480  
know I've hit the point when

110  
00:04:27,480 --> 00:04:28,920  
and even remember what the bird launch

111  
00:04:28,920 --> 00:04:32,070  
was it's you know back away I remember

112  
00:04:32,070 --> 00:04:33,960  
my first space shuttle one but I'm not

113  
00:04:33,960 --> 00:04:37,650

sure I remember my first auto back in

114

00:04:37,650 --> 00:04:42,030

1986 wasn't it SDS 28 the 27 yeah I did

115

00:04:42,030 --> 00:04:44,220

27 now that there was a department of

116

00:04:44,220 --> 00:04:46,470

defense mission and they put me on that

117

00:04:46,470 --> 00:04:47,640

one because you couldn't say anything

118

00:04:47,640 --> 00:04:50,430

much anyway to get lost i knew i would

119

00:04:50,430 --> 00:04:53,070

blow that one so that's completely that

120

00:04:53,070 --> 00:04:55,620

was my first one so George didn't I was

121

00:04:55,620 --> 00:04:57,570

going to recognize him today but I could

122

00:04:57,570 --> 00:05:00,270

not let this opportunity pass you've

123

00:05:00,270 --> 00:05:02,430

just done an outstanding job and we're

124

00:05:02,430 --> 00:05:04,530

really really going to miss hearing your

125

00:05:04,530 --> 00:05:07,140

your golden voice on console during

126

00:05:07,140 --> 00:05:09,360

launch George well thanks thanks so much

127

00:05:09,360 --> 00:05:12,600

and i'm sure you know what I'm retired

128

00:05:12,600 --> 00:05:14,670

and up in the mountain somewhere there's

129

00:05:14,670 --> 00:05:16,500

a launch going it'll be hard not to tune

130

00:05:16,500 --> 00:05:20,190

it in some way on satellite radio or you

131

00:05:20,190 --> 00:05:22,140

know something to see it expanding your

132

00:05:22,140 --> 00:05:23,730

blood in it well are you know how you

133

00:05:23,730 --> 00:05:25,110

get rid of it can take the boy out of

134

00:05:25,110 --> 00:05:26,700

the launch but you can't take the launch

135

00:05:26,700 --> 00:05:28,860

out of the boys how's it spelled like

136

00:05:28,860 --> 00:05:31,620

I'm going to be after I'm not yeah 3 so

137

00:05:31,620 --> 00:05:34,830

yeah it's it's it's certainly fun and

138

00:05:34,830 --> 00:05:38,760

but I think you know for me the

139

00:05:38,760 --> 00:05:41,160

highlight has been when I look at all

140

00:05:41,160 --> 00:05:43,260

the different kind of spacecraft

141

00:05:43,260 --> 00:05:45,210

missions payloads that I've had a chance

142

00:05:45,210 --> 00:05:47,340

to work that's really been the highlight

143

00:05:47,340 --> 00:05:51,360

for me and that the launch is fantastic

144

00:05:51,360 --> 00:05:52,950

because that's how we get the mission

145

00:05:52,950 --> 00:05:54,990

going but the mission itself some of

146

00:05:54,990 --> 00:05:57,150

these spacecraft I mean you know to be

147

00:05:57,150 --> 00:05:59,460

within five feet of something that's

148

00:05:59,460 --> 00:06:01,770

going to another planet I mean to me

149

00:06:01,770 --> 00:06:04,260

that's mean really it's really good yeah

150

00:06:04,260 --> 00:06:06,390

I was in the clean room with the

151  
00:06:06,390 --> 00:06:08,670  
Curiosity rover before it launched on an

152  
00:06:08,670 --> 00:06:10,260  
atlas 5 to go to Mars and now that

153  
00:06:10,260 --> 00:06:11,490  
things were running around on Mars and

154  
00:06:11,490 --> 00:06:13,410  
to say hey you know that that's really

155  
00:06:13,410 --> 00:06:15,810  
cool i'm with you yeah and and so now

156  
00:06:15,810 --> 00:06:17,640  
we've got Cassini getting ready to

157  
00:06:17,640 --> 00:06:20,250  
reenter and and I was part of that and

158  
00:06:20,250 --> 00:06:22,800  
up close with the spacecraft it just

159  
00:06:22,800 --> 00:06:25,290  
when you think back on the lock you can

160  
00:06:25,290 --> 00:06:27,630  
you can definitely remember the launch

161  
00:06:27,630 --> 00:06:29,520  
but then when you and it gets the planet

162  
00:06:29,520 --> 00:06:33,000  
and you think you know I was part of you

163  
00:06:33,000 --> 00:06:34,530

know what yeah he's working with the

164

00:06:34,530 --> 00:06:37,080

test team to get that ready to go so

165

00:06:37,080 --> 00:06:38,760

you've seen a lot of change at the

166

00:06:38,760 --> 00:06:40,330

Kennedy Space Center in

167

00:06:40,330 --> 00:06:41,409

your time that you've been here doing

168

00:06:41,409 --> 00:06:43,270

launch commentaries and stuff I well I I

169

00:06:43,270 --> 00:06:46,210

think for me is that the change in the

170

00:06:46,210 --> 00:06:47,800

direction that the shuttle program

171

00:06:47,800 --> 00:06:50,110

eventually took from where we were

172

00:06:50,110 --> 00:06:53,830

launching a lot of different things both

173

00:06:53,830 --> 00:06:56,650

you know our NASA missions that were

174

00:06:56,650 --> 00:06:59,770

planetary things that you know to

175

00:06:59,770 --> 00:07:04,330

commercial flights you know launching

176

00:07:04,330 --> 00:07:06,370

satellites all that kind of thing and

177

00:07:06,370 --> 00:07:08,080

then we reordered ourselves to

178

00:07:08,080 --> 00:07:10,419

constructing the space station but when

179

00:07:10,419 --> 00:07:12,340

you think about it the history of the

180

00:07:12,340 --> 00:07:14,710

chief space shuttle program it did

181

00:07:14,710 --> 00:07:17,319

everything gets set out to do I mean

182

00:07:17,319 --> 00:07:20,379

didn't watch us frequently no but did it

183

00:07:20,379 --> 00:07:22,719

do what what the things that we needed

184

00:07:22,719 --> 00:07:26,440

to do the NASA needed to do it did and I

185

00:07:26,440 --> 00:07:27,969

think there will be whole books written

186

00:07:27,969 --> 00:07:30,639

about what shuttle did likely will be

187

00:07:30,639 --> 00:07:32,469

whole books written about whether you're

188

00:07:32,469 --> 00:07:34,389

the moon program sure I think when you

189

00:07:34,389 --> 00:07:36,819

look at the diversity of the missions

190

00:07:36,819 --> 00:07:39,039

that shuttle did and it was the only

191

00:07:39,039 --> 00:07:40,389

thing that gave us that kind of

192

00:07:40,389 --> 00:07:42,490

capability and I don't know when we'll

193

00:07:42,490 --> 00:07:45,550

ever see that again next so well you

194

00:07:45,550 --> 00:07:47,349

talk about diversity one of the things

195

00:07:47,349 --> 00:07:49,210

that I say about the spatial one of the

196

00:07:49,210 --> 00:07:51,370

most important contributions was it

197

00:07:51,370 --> 00:07:52,900

brought diversity to America's space

198

00:07:52,900 --> 00:07:54,610

program if you look at prior to this

199

00:07:54,610 --> 00:07:57,759

shuttle you know Apollo Mercury Gemini

200

00:07:57,759 --> 00:08:00,069

you know it was white military test

201  
00:08:00,069 --> 00:08:02,110  
pilots with a few scientists thrown in

202  
00:08:02,110 --> 00:08:04,060  
at the end and the shuttle opened the

203  
00:08:04,060 --> 00:08:06,610  
doors from the fifth percentile female

204  
00:08:06,610 --> 00:08:10,180  
to the 95th percentile male and that 78

205  
00:08:10,180 --> 00:08:12,610  
class that first class of so astronauts

206  
00:08:12,610 --> 00:08:14,289  
there were men women black white

207  
00:08:14,289 --> 00:08:18,190  
Hispanic Asian military civilian in it

208  
00:08:18,190 --> 00:08:19,719  
was opened the door to space for

209  
00:08:19,719 --> 00:08:21,400  
everybody here and our international

210  
00:08:21,400 --> 00:08:23,139  
partners started absolutely absolutely

211  
00:08:23,139 --> 00:08:26,020  
it's just all kind of carried through to

212  
00:08:26,020 --> 00:08:27,969  
what we're doing so how about the latest

213  
00:08:27,969 --> 00:08:29,830

direction at KSC with the shuttle

214

00:08:29,830 --> 00:08:32,260

retired now as we move into this you

215

00:08:32,260 --> 00:08:34,149

know public-private partnerships

216

00:08:34,149 --> 00:08:36,969

enabling commercial operations and still

217

00:08:36,969 --> 00:08:38,829

working on sls and orion to get us

218

00:08:38,829 --> 00:08:41,469

beyond planet Earth well I think my

219

00:08:41,469 --> 00:08:43,839

thought on is is the the commercial

220

00:08:43,839 --> 00:08:47,170

aspect is kind of a logical evolution

221

00:08:47,170 --> 00:08:50,079

for us at this point but if I look yo if

222

00:08:50,079 --> 00:08:53,050

I was going to be here another 15 years

223

00:08:53,050 --> 00:08:54,170

what would I

224

00:08:54,170 --> 00:08:57,800

to work on and space launch system is

225

00:08:57,800 --> 00:09:01,279

very attractive you analyze we are going

226

00:09:01,279 --> 00:09:03,380

i mean it just i look at the

227

00:09:03,380 --> 00:09:05,029

infrastructure that we're putting in

228

00:09:05,029 --> 00:09:06,740

place and i look at the crawler

229

00:09:06,740 --> 00:09:08,690

transporter that has been upgraded to

230

00:09:08,690 --> 00:09:09,889

support the heavier weights and

231

00:09:09,889 --> 00:09:12,050

everything I see the high bay I see the

232

00:09:12,050 --> 00:09:13,670

mobile launcher I look at the launchpad

233

00:09:13,670 --> 00:09:15,230

that's going to be complete here in

234

00:09:15,230 --> 00:09:17,779

august and i say that that mobile

235

00:09:17,779 --> 00:09:19,850

launcher that crawler-transporter it's

236

00:09:19,850 --> 00:09:21,769

going to roll out that pathway to pad be

237

00:09:21,769 --> 00:09:23,839

it's going to take us to Mars that's

238

00:09:23,839 --> 00:09:25,070

going to be the beginning of an awesome

239

00:09:25,070 --> 00:09:27,290

trip you know when it rolls out of the

240

00:09:27,290 --> 00:09:29,839

VA be with that rocket on it that is

241

00:09:29,839 --> 00:09:31,339

just amazing to think that we're

242

00:09:31,339 --> 00:09:33,320

actually enabling that and you know I

243

00:09:33,320 --> 00:09:34,970

kind of experience that when we were

244

00:09:34,970 --> 00:09:37,010

first getting ready for shuttle and we

245

00:09:37,010 --> 00:09:38,899

did a lot of these things to get get the

246

00:09:38,899 --> 00:09:40,430

shuttle ready to get the Vehicle

247

00:09:40,430 --> 00:09:42,199

Assembly Building ready we had our first

248

00:09:42,199 --> 00:09:44,420

roll out i think was on the fourth of

249

00:09:44,420 --> 00:09:47,209

July if i'm not mistaken but at a rate

250

00:09:47,209 --> 00:09:48,949

that it's the same kind of thing will go

251  
00:09:48,949 --> 00:09:50,930  
through space launch system is you know

252  
00:09:50,930 --> 00:09:52,670  
I could start my whole career rightful

253  
00:09:52,670 --> 00:09:56,240  
again I can't wait come with you hi I'm

254  
00:09:56,240 --> 00:09:58,160  
not dead yet I got a more years left now

255  
00:09:58,160 --> 00:09:59,510  
I'm hanging in there I want to see this

256  
00:09:59,510 --> 00:10:03,680  
yeah so those would be George see fun so

257  
00:10:03,680 --> 00:10:05,180  
thank you for having me on console with

258  
00:10:05,180 --> 00:10:07,160  
yes I kid or always a pleasure and an

259  
00:10:07,160 --> 00:10:09,470  
honor it's 1 i'm going to remember i got

260  
00:10:09,470 --> 00:10:13,070  
to speak with the George Diller thanks

261  
00:10:13,070 --> 00:10:15,380  
your thanks so much so it has been fun

262  
00:10:15,380 --> 00:10:17,269  
you know for this mission you know to go

263  
00:10:17,269 --> 00:10:19,250

out on this one you're working with

264

00:10:19,250 --> 00:10:22,339

orbital ATK is just wonderful because

265

00:10:22,339 --> 00:10:25,880

they are so orient oriented toward their

266

00:10:25,880 --> 00:10:27,620

mindset toward getting the message out

267

00:10:27,620 --> 00:10:30,320

that we're trying to convey about what

268

00:10:30,320 --> 00:10:32,089

we can do in space and and how

269

00:10:32,089 --> 00:10:34,550

commercial space can contribute to that

270

00:10:34,550 --> 00:10:36,620

I've been wonderful to work through all

271

00:10:36,620 --> 00:10:38,660

the way through these ones that they've

272

00:10:38,660 --> 00:10:41,149

done down here at the Cape so so I'm

273

00:10:41,149 --> 00:10:43,190

glad I'm going out on this one I know

274

00:10:43,190 --> 00:10:46,130

right all right thank you very much

275

00:10:46,130 --> 00:10:48,079

thank you George mana our center

276

00:10:48,079 --> 00:10:50,630

director at Kennedy Space Center and

277

00:10:50,630 --> 00:10:52,370

we're now to admission elapsed time of