



1
00:00:16,790 --> 00:00:15,430
frank let me start with you if i may in

2
00:00:19,189 --> 00:00:16,800
september

3
00:00:23,590 --> 00:00:19,199
i if if my research is correct it was in

4
00:00:25,910 --> 00:00:23,600
september of 1968 the unmanned russian

5
00:00:28,390 --> 00:00:25,920
uh what was that zone 5

6
00:00:31,349 --> 00:00:28,400
john 5 uh made an orbit of the moon did

7
00:00:32,790 --> 00:00:31,359
this affect your mission

8
00:00:36,150 --> 00:00:32,800
i'm not certain whether it affect our

9
00:00:38,549 --> 00:00:36,160
mission or not i i was told that the cia

10
00:00:40,709 --> 00:00:38,559
had intelligence that uh they were

11
00:00:42,950 --> 00:00:40,719
russians were going to try to put a man

12
00:00:44,389 --> 00:00:42,960
around it before the end of the year and

13
00:00:46,310 --> 00:00:44,399

that was the reason for the change in

14

00:00:48,389 --> 00:00:46,320

our mind because after all the apollo

15

00:00:50,150 --> 00:00:48,399

program was just a battle in the cold

16

00:00:51,830 --> 00:00:50,160

war that's what it was fundamentally a

17

00:00:54,150 --> 00:00:51,840

battle in the cold war boy you hammered

18

00:00:56,470 --> 00:00:54,160

it you hammered the the whole theme of

19

00:00:58,549 --> 00:00:56,480

my series of questions here

20

00:00:59,590 --> 00:00:58,559

that's great

21

00:01:01,830 --> 00:00:59,600

no

22

00:01:04,789 --> 00:01:01,840

all i have to do is shut up points

23

00:01:06,950 --> 00:01:04,799

shut up the uh james what was the

24

00:01:08,950 --> 00:01:06,960

original mission how did it change the

25

00:01:12,630 --> 00:01:08,960

original mission actually uh was an

26

00:01:14,310 --> 00:01:12,640

earth orbital mission uh to test the uh

27

00:01:16,310 --> 00:01:14,320

command module again and the lunar

28

00:01:17,990 --> 00:01:16,320

module for the first time

29

00:01:19,590 --> 00:01:18,000

and to make sure that both of them will

30

00:01:21,830 --> 00:01:19,600

work before we committed them to the

31

00:01:24,390 --> 00:01:21,840

moon and we'll also do a high-speed

32

00:01:25,670 --> 00:01:24,400

re-entry uh

33

00:01:28,630 --> 00:01:25,680

just like we would come back from the

34

00:01:31,030 --> 00:01:28,640

moon to test out the reentry procedure

35

00:01:32,710 --> 00:01:31,040

of this super circular type of reentry

36

00:01:35,590 --> 00:01:32,720

uh and of course uh

37

00:01:38,789 --> 00:01:35,600

when apollo 7 went 11 days was

38

00:01:40,630 --> 00:01:38,799

successful and we had some ideas that

39

00:01:42,310 --> 00:01:40,640

frank mentioned that the

40

00:01:43,590 --> 00:01:42,320

russians were going to put a man around

41

00:01:45,670 --> 00:01:43,600

the moon

42

00:01:49,190 --> 00:01:45,680

and the lunar module was not ready by

43

00:01:51,510 --> 00:01:49,200

1968 then a very bold decision on the

44

00:01:53,030 --> 00:01:51,520

part of nasa management

45

00:01:55,270 --> 00:01:53,040

decided to

46

00:01:57,510 --> 00:01:55,280

take apollo 8 around the moon well bold

47

00:01:58,469 --> 00:01:57,520

it was uh uh

48

00:02:01,510 --> 00:01:58,479

billy

49

00:02:03,190 --> 00:02:01,520

what would you think the odds of success

50

00:02:04,789 --> 00:02:03,200

for this bold mission did you did you

51
00:02:07,590 --> 00:02:04,799
calculate that at all

52
00:02:09,749 --> 00:02:07,600
well frankly uh i thought

53
00:02:12,070 --> 00:02:09,759
we had about a one chance in three of

54
00:02:13,990 --> 00:02:12,080
having a successful mission

55
00:02:15,910 --> 00:02:14,000
another one chance in three of having a

56
00:02:18,309 --> 00:02:15,920
mission like apollo 13 where they made

57
00:02:19,750 --> 00:02:18,319
it back but weren't able to accomplish

58
00:02:21,510 --> 00:02:19,760
the landing

59
00:02:23,270 --> 00:02:21,520
then maybe one chance in three of not

60
00:02:25,030 --> 00:02:23,280
making it back

61
00:02:27,270 --> 00:02:25,040
well that's pretty chilling those aren't

62
00:02:28,869 --> 00:02:27,280
very good odds are they well keep in

63
00:02:30,710 --> 00:02:28,879

mind as frank said

64

00:02:33,670 --> 00:02:30,720

this was not a program to explore the

65

00:02:35,750 --> 00:02:33,680

moon or develop technology it was a

66

00:02:37,190 --> 00:02:35,760

program to demonstrate to the world and

67

00:02:39,350 --> 00:02:37,200

to ourselves

68

00:02:41,110 --> 00:02:39,360

that american tech technology was

69

00:02:43,430 --> 00:02:41,120

preeminent and that we could beat the

70

00:02:46,390 --> 00:02:43,440

soviets in that regard and that's where

71

00:02:48,550 --> 00:02:46,400

the new saturn rocket came into this mix

72

00:02:49,670 --> 00:02:48,560

saturn rocket was necessary in order to

73

00:02:51,270 --> 00:02:49,680

do this

74

00:02:52,869 --> 00:02:51,280

the um

75

00:02:54,630 --> 00:02:52,879

of course they were

76
00:02:57,270 --> 00:02:54,640
one things and one believes and one has

77
00:02:59,589 --> 00:02:57,280
been told that the nasa always been very

78
00:03:00,790 --> 00:02:59,599
fastidious about testing before sending

79
00:03:03,670 --> 00:03:00,800
any humans

80
00:03:05,350 --> 00:03:03,680
out on these kinds of missions

81
00:03:07,589 --> 00:03:05,360
what were there were there concerns

82
00:03:09,670 --> 00:03:07,599
about using the new saturn after just

83
00:03:11,509 --> 00:03:09,680
such limited testing

84
00:03:13,509 --> 00:03:11,519
let me ask you i i didn't have any

85
00:03:14,949 --> 00:03:13,519
concern with that one of the each

86
00:03:17,110 --> 00:03:14,959
astronaut had a special they might

87
00:03:18,550 --> 00:03:17,120
happen to be boosters so i spent a lot

88
00:03:21,110 --> 00:03:18,560

of time at huntsville

89

00:03:23,110 --> 00:03:21,120
and helped to to develop the crew escape

90

00:03:25,430 --> 00:03:23,120
system and so on and they the people at

91

00:03:27,990 --> 00:03:25,440
huntsville were confident that they had

92

00:03:29,910 --> 00:03:28,000
been able to correct the difficulties

93

00:03:31,270 --> 00:03:29,920
that were experienced on the first two

94

00:03:33,030 --> 00:03:31,280
saturn five flights there had been two

95

00:03:35,910 --> 00:03:33,040
unmanned flights before

96

00:03:37,830 --> 00:03:35,920
and the second one was almost a disaster

97

00:03:39,910 --> 00:03:37,840
but uh they it happened i didn't

98

00:03:42,789 --> 00:03:39,920
remember well they had a engine shut

99

00:03:44,789 --> 00:03:42,799
down they had an enormous pogo the uh an

100

00:03:47,110 --> 00:03:44,799
18-inch beam was uh

101
00:03:48,710 --> 00:03:47,120
vibrating over a foot it was a real

102
00:03:49,910 --> 00:03:48,720
disaster but

103
00:03:52,070 --> 00:03:49,920
they they

104
00:03:53,509 --> 00:03:52,080
convinced the nasa management and i was

105
00:03:55,270 --> 00:03:53,519
convinced that they they knew how to

106
00:03:56,869 --> 00:03:55,280
solve it and they did

107
00:03:59,190 --> 00:03:56,879
going back to that film we just saw

108
00:04:01,030 --> 00:03:59,200
there uh jim you were obviously the

109
00:04:02,710 --> 00:04:01,040
first uh

110
00:04:04,789 --> 00:04:02,720
men to both leave the earth's

111
00:04:06,470 --> 00:04:04,799
gravitation and see the dark side of the

112
00:04:07,670 --> 00:04:06,480
moon you were the first ones to ever do

113
00:04:13,509 --> 00:04:07,680

that

114

00:04:15,429 --> 00:04:13,519

you have at the time before you went on

115

00:04:16,870 --> 00:04:15,439

that mission

116

00:04:19,590 --> 00:04:16,880

well i think i really didn't have much

117

00:04:21,349 --> 00:04:19,600

concern i i was sort of happy that that

118

00:04:23,749 --> 00:04:21,359

decision was made

119

00:04:26,070 --> 00:04:23,759

and i agree with frank that i didn't

120

00:04:27,030 --> 00:04:26,080

have any apprehensions about the saturn

121

00:04:29,990 --> 00:04:27,040

v

122

00:04:32,629 --> 00:04:30,000

i uh since apollo 7 went around the

123

00:04:35,590 --> 00:04:32,639

earth for 11 days i thought going to the

124

00:04:36,710 --> 00:04:35,600

moon would be a natural follow-on

125

00:04:39,030 --> 00:04:36,720

and

126
00:04:41,270 --> 00:04:39,040
you know we were three explorers doing

127
00:04:44,150 --> 00:04:41,280
something entirely different

128
00:04:46,550 --> 00:04:44,160
we're going the entire distance 240 000

129
00:04:48,230 --> 00:04:46,560
miles and we're gonna see the far side

130
00:04:50,790 --> 00:04:48,240
of the moon which we never see the far

131
00:04:53,110 --> 00:04:50,800
side of course from the earth and so i

132
00:04:56,070 --> 00:04:53,120
was quite excited about it

133
00:04:57,510 --> 00:04:56,080
uh it was though and the

134
00:04:58,870 --> 00:04:57,520
morning when we got to the top of the

135
00:05:00,790 --> 00:04:58,880
gantry

136
00:05:03,590 --> 00:05:00,800
and my two companions went into the

137
00:05:05,270 --> 00:05:03,600
spacecraft first it was still dark out

138
00:05:07,830 --> 00:05:05,280

and the press

139

00:05:09,270 --> 00:05:07,840

car started to come and man the station

140

00:05:10,629 --> 00:05:09,280

and i looked at him and i looked down at

141

00:05:11,909 --> 00:05:10,639

the ground

142

00:05:13,990 --> 00:05:11,919

and i said these people are really

143

00:05:16,790 --> 00:05:14,000

serious

144

00:05:18,629 --> 00:05:16,800

this is not another earth orbital flight

145

00:05:22,230 --> 00:05:18,639

going to the moon and that maybe was the

146

00:05:23,830 --> 00:05:22,240

time when i said well here we go

147

00:05:25,749 --> 00:05:23,840

i guess you all said here i want to get

148

00:05:27,350 --> 00:05:25,759

to that picture uh uh bill you were

149

00:05:28,469 --> 00:05:27,360

talking about this before

150

00:05:30,550 --> 00:05:28,479

in the uh

151
00:05:34,070 --> 00:05:30,560
in that film we just saw

152
00:05:35,510 --> 00:05:34,080
uh that the the earth rising above the

153
00:05:36,469 --> 00:05:35,520
horizon

154
00:05:37,510 --> 00:05:36,479
of the

155
00:05:40,550 --> 00:05:37,520
moon

156
00:05:42,790 --> 00:05:40,560
uh we saw two pictures there i believe

157
00:05:43,990 --> 00:05:42,800
of that shot which one was yours or were

158
00:05:45,670 --> 00:05:44,000
they both yours

159
00:05:47,510 --> 00:05:45,680
well first of all i like to say that if

160
00:05:50,710 --> 00:05:47,520
franken had told me about this vibration

161
00:05:55,909 --> 00:05:53,830
first i heard about it

162
00:05:59,590 --> 00:05:55,919
the pogo i didn't have i did have my

163
00:06:04,150 --> 00:06:01,749

actually it's my understanding that the

164

00:06:07,510 --> 00:06:04,160

uh the first shot was the apollo 11

165

00:06:10,550 --> 00:06:07,520

earthrise and that the still picture

166

00:06:12,950 --> 00:06:10,560

was the apollo 8 earthrise

167

00:06:15,909 --> 00:06:12,960

it must have lent itself to some grand

168

00:06:18,150 --> 00:06:15,919

thoughts when you saw that the earth

169

00:06:20,150 --> 00:06:18,160

rising above the horizon of the moon

170

00:06:21,749 --> 00:06:20,160

what struck me i mean i think we were

171

00:06:23,510 --> 00:06:21,759

all uh

172

00:06:25,909 --> 00:06:23,520

you know taken aback because there had

173

00:06:27,990 --> 00:06:25,919

been no planning discussion

174

00:06:29,990 --> 00:06:28,000

of seeing the earth

175

00:06:32,469 --> 00:06:30,000

we were trained

176

00:06:35,430 --> 00:06:32,479

to a degree to explore the moon to

177

00:06:37,189 --> 00:06:35,440

comment on the topography and geology if

178

00:06:39,510 --> 00:06:37,199

you will of the moon

179

00:06:42,309 --> 00:06:39,520

and when i saw the earth rise and then

180

00:06:43,990 --> 00:06:42,319

also pictures of the small earth from

181

00:06:46,070 --> 00:06:44,000

lunar distance

182

00:06:49,189 --> 00:06:46,080

it crossed my mind that you know here we

183

00:06:50,870 --> 00:06:49,199

spent all this time studying the moon

184

00:06:52,870 --> 00:06:50,880

and what we were doing was discovering

185

00:06:56,309 --> 00:06:52,880

the earth

186

00:07:00,070 --> 00:06:58,230

tagging onto that then taking it to the

187

00:07:01,589 --> 00:07:00,080

next step

188

00:07:03,909 --> 00:07:01,599

which one of you

189

00:07:06,790 --> 00:07:03,919

or did you do this together decide

190

00:07:10,070 --> 00:07:06,800

decided to read from genesis

191

00:07:11,589 --> 00:07:10,080

well the genesis reading about six weeks

192

00:07:13,589 --> 00:07:11,599

before the flight

193

00:07:15,350 --> 00:07:13,599

i got a call from julian sher who was

194

00:07:18,790 --> 00:07:15,360

the head of the

195

00:07:21,029 --> 00:07:18,800

pio for nasa and his widow is here today

196

00:07:21,990 --> 00:07:21,039

somewhere i saw her there she is right

197

00:07:24,790 --> 00:07:22,000

there

198

00:07:26,710 --> 00:07:24,800

and if you can imagine this julian said

199

00:07:28,550 --> 00:07:26,720

frank

200

00:07:30,870 --> 00:07:28,560

you're going to have the largest tv

201
00:07:32,469 --> 00:07:30,880
audience that's ever listened to a man

202
00:07:33,670 --> 00:07:32,479
on that broadcast from the moon on

203
00:07:35,510 --> 00:07:33,680
christmas eve

204
00:07:38,230 --> 00:07:35,520
i said gee that's nice julian what

205
00:07:40,390 --> 00:07:38,240
should we do he said anything that's

206
00:07:41,909 --> 00:07:40,400
appropriate

207
00:07:44,230 --> 00:07:41,919
you know right there that that was the

208
00:07:45,589 --> 00:07:44,240
essence of this country we if we'd have

209
00:07:47,749 --> 00:07:45,599
been soviets we'd have been talking

210
00:07:49,189 --> 00:07:47,759
about lenin or this or that and i got

211
00:07:51,270 --> 00:07:49,199
the instructions to tell the crew would

212
00:07:53,749 --> 00:07:51,280
just do what's appropriate and so i

213
00:07:55,589 --> 00:07:53,759

i uh frankly i think we were all really

214

00:07:57,110 --> 00:07:55,599

busy with the flight plan that was the

215

00:07:59,270 --> 00:07:57,120

last thing on my mind i don't know about

216

00:08:02,550 --> 00:07:59,280

you guys but i

217

00:08:04,390 --> 00:08:02,560

contacted a friend of mine cyborg and

218

00:08:06,390 --> 00:08:04,400

about two weeks before the flight he

219

00:08:09,110 --> 00:08:06,400

came back with the idea of maybe reading

220

00:08:11,589 --> 00:08:09,120

from genesis and we all liked it

221

00:08:12,950 --> 00:08:11,599

and that's how it happened

222

00:08:14,869 --> 00:08:12,960

almost ad hoc

223

00:08:16,309 --> 00:08:14,879

but so appropriate

224

00:08:17,670 --> 00:08:16,319

well just as one of the ones that was

225

00:08:19,189 --> 00:08:17,680

back here watching

226

00:08:20,230 --> 00:08:19,199

i may i tell you that that was one of

227

00:08:21,510 --> 00:08:20,240

the most

228

00:08:22,790 --> 00:08:21,520

moving

229

00:08:25,510 --> 00:08:22,800

experiences

230

00:08:27,189 --> 00:08:25,520

of the entire entire nasa program and

231

00:08:28,790 --> 00:08:27,199

that is saying a lot that's a

232

00:08:30,950 --> 00:08:28,800

considerable thing to say

233

00:08:33,110 --> 00:08:30,960

let me explain a little bit more of what

234

00:08:34,949 --> 00:08:33,120

frank was talking about because

235

00:08:36,630 --> 00:08:34,959

cyborgine was trying to think up

236

00:08:38,790 --> 00:08:36,640

something to say that was appropriate

237

00:08:40,870 --> 00:08:38,800

which was genesis of course but he

238

00:08:42,230 --> 00:08:40,880

he went to a newspaper man

239

00:08:44,149 --> 00:08:42,240

joe layton

240

00:08:45,750 --> 00:08:44,159

and said look if you write

241

00:08:47,670 --> 00:08:45,760

articles all the time

242

00:08:50,150 --> 00:08:47,680

wrote write prose what would be

243

00:08:51,430 --> 00:08:50,160

appropriate for the following crew

244

00:08:52,630 --> 00:08:51,440

to say

245

00:08:54,550 --> 00:08:52,640

and so

246

00:08:55,750 --> 00:08:54,560

joe layton spent up most of the night

247

00:08:57,190 --> 00:08:55,760

trying to figure out what would be

248

00:08:59,509 --> 00:08:57,200

appropriate

249

00:09:02,790 --> 00:08:59,519

around the moon on christmas eve

250

00:09:03,910 --> 00:09:02,800

to say to millions of people

251

00:09:06,829 --> 00:09:03,920

all around

252

00:09:10,389 --> 00:09:06,839

the earth and finally his wife came

253

00:09:13,350 --> 00:09:10,399

down and she said what are you doing and

254

00:09:15,590 --> 00:09:13,360

he told her what his project was

255

00:09:18,230 --> 00:09:15,600

and she said well it's natural

256

00:09:20,470 --> 00:09:18,240

read the first 10 verses of genesis

257

00:09:22,150 --> 00:09:20,480

which is the foundation of most of the

258

00:09:24,070 --> 00:09:22,160

world's religions not just the christian

259

00:09:25,350 --> 00:09:24,080

relation but most of the people who be

260

00:09:27,829 --> 00:09:25,360

listened to you are probably not

261

00:09:28,949 --> 00:09:27,839

christian and that's how it finally came

262

00:09:30,310 --> 00:09:28,959

to pass

263

00:09:33,269 --> 00:09:30,320

well she should get

264

00:09:34,870 --> 00:09:33,279

a plaque somewhere i think she should

265

00:09:39,269 --> 00:09:34,880

and thank heaven she didn't say yes