The NASA Armstrong Colloquium Series presents

THE FIRST MAN ON THE MOON

WHY NEIL ARMSTRONG?

GUEST SPEAKER:
Dr. James R. Hansen

August 2, 2017
7:00 PM
Antelope Valley College
Performing Arts Theater
3041 West Ave. K
Lancaster, CA 93536

August 3, 2017
2:00 PM
NASA ECF Auditorium
Building 4825
Lecture and
Book signing

1
00:00:03,436 --> 00:00:05,504
>> So, we're going to go
ahead and start the video.

2
00:00:05,504 --> 00:00:22,588
[Background Conversation]

3
00:00:30,029 --> 00:00:31,363
[Music]

4
00:00:31,363 --> 00:00:35,334
>> In 1955, Neil Armstrong
became a research pilot

5
00:00:35,334 --> 00:00:38,537
at NASA's Flight Research
Center in Edwards, California.

6
00:00:38,537 --> 00:00:41,640
[Music]

7
00:00:41,640 --> 00:00:45,478
Here, he flew almost all of the
century series of jet fighters,

8
00:00:45,478 --> 00:00:54,120
the F-100, the F-101, the
F-102, the F-104 and the F-105.

9
00:00:54,120 --> 00:01:00,926
He also piloted the F-5D,
the KC-135, the B-47,

10
00:01:00,926 --> 00:01:04,230
and his first flight
was in the P-51.

11
00:01:05,498 --> 00:01:07,566
During this time, he

served as a launch pilot

12
00:01:07,566 --> 00:01:10,603
on the extensively
modified B-29 that was used

13
00:01:10,603 --> 00:01:13,672
to air launch the X-1E.

14
00:01:13,672 --> 00:01:16,809
He also flew the X-5, the
first aircraft capable

15
00:01:16,809 --> 00:01:18,878
of sweeping its wings in flight.

16
00:01:18,878 --> 00:01:21,680
The technique in use on
the F-14 and B-1 today.

17
00:01:21,680 --> 00:01:24,783
While at the flight
research center,

18
00:01:24,783 --> 00:01:28,687
Neil made several flights in the
X-1B, a rocket-powered airplane

19
00:01:28,687 --> 00:01:32,925
that eventually reached speeds
of up to 1600 miles per hour.

20
00:01:32,925 --> 00:01:37,163
And in 1958, he was named as
one of the original seven pilots

21
00:01:37,163 --> 00:01:40,266
for the X-15 program,
which was later acclaimed

22
00:01:40,266 --> 00:01:42,434
as the most successful
rocket-powered

23
00:01:42,434 --> 00:01:44,270
research aircraft.

24
00:01:44,270 --> 00:01:47,840
Specializing in stability and
control, Neil worked closely

25
00:01:47,840 --> 00:01:51,610
with engineers in developing an
adaptive flight control system,

26
00:01:51,610 --> 00:01:53,812
that would eventually
allow the X-15

27
00:01:53,812 --> 00:01:56,682
to fly near orbital altitudes.

28
00:01:56,682 --> 00:01:58,984
He piloted the first four
flights on this system

29
00:01:58,984 --> 00:02:00,686
in the number three X-15,

30
00:02:00,686 --> 00:02:04,924
and later received the AIAA's
prestigious Octave Chanute Award

31
00:02:04,924 --> 00:02:06,358
for this effort.

32
00:02:06,358 --> 00:02:08,827
Although originally
developed in the 1950s

33
00:02:08,827 --> 00:02:12,064
to increase man's knowledge
of hypersonic aeronautics,

34
00:02:12,064 --> 00:02:15,034
manned spaceflight was
the immediate beneficiary

35
00:02:15,034 --> 00:02:17,236
of the X-15 research program.

36
00:02:17,236 --> 00:02:19,738
The program dramatically
demonstrated the capability

37
00:02:19,738 --> 00:02:22,841
of the human pilot for
employing a fantastic variety

38
00:02:22,841 --> 00:02:25,811
of acquired skills,
sensing, judging,

39
00:02:25,811 --> 00:02:27,980
and coping with the unexpected.

40
00:02:27,980 --> 00:02:30,382
The X-15 was air
launched from as far

41
00:02:30,382 --> 00:02:32,918
as 300 miles from
its destination.

42
00:02:32,918 --> 00:02:35,487
The rocket engine would
only burn for 90 seconds

43

00:02:35,487 --> 00:02:38,924
until its fuel was exhausted,
and the aircraft would continue

44
00:02:38,924 --> 00:02:41,660
to cLEM, ballistically,
to altitudes in excess

45
00:02:41,660 --> 00:02:44,196
of 300,000 feet and speeds

46
00:02:44,196 --> 00:02:46,999
of over six times
the speed of sound.

47
00:02:46,999 --> 00:02:50,536
Yet barring any unforeseen
mechanical problems,

48
00:02:50,536 --> 00:02:52,104
the pilots were almost
always able

49
00:02:52,104 --> 00:02:55,307
to maneuver their
hypersonic glider to a landing

50
00:02:55,307 --> 00:02:57,543
within 1,000 feet of
their intended mark.

51
00:02:57,543 --> 00:03:03,215
[Music]

52
00:03:03,215 --> 00:03:07,219
In the early 1960s, Neil became
involved with the development

53
00:03:07,219 --> 00:03:09,989
and testing of a new concept

that was being considered

54
00:03:09,989 --> 00:03:13,425
for use as a possible method
of recovering both manned

55
00:03:13,425 --> 00:03:16,028
and unmanned spacecraft.

56
00:03:17,029 --> 00:03:18,998
Although the concept
showed promise,

57
00:03:18,998 --> 00:03:21,734
subsequent testing revealed
operational problems

58
00:03:21,734 --> 00:03:25,104
that made the paraglider
more suitable to hang gliders

59
00:03:25,104 --> 00:03:28,407
than spacecraft recovery.

60
00:03:28,407 --> 00:03:30,709
It was during this
same time that Neil,

61
00:03:30,709 --> 00:03:33,879
flying a prototype jetfighter,
developed a technique

62
00:03:33,879 --> 00:03:36,749
for the abort rescue of
a new manned spacecraft

63
00:03:36,749 --> 00:03:38,083
under consideration.

64

00:03:38,083 --> 00:03:41,020
It was called the X-20
Dinosaur, and it was built

65
00:03:41,020 --> 00:03:42,421
for the U.S. Air Force.

66
00:03:42,421 --> 00:03:49,061
It would have been launched into
space using a Titan III booster.

67
00:03:49,061 --> 00:03:52,164
Once in space, the X-20
would orbit the Earth using a

68
00:03:52,164 --> 00:03:54,633
principle called
dynamic soaring.

69
00:03:54,633 --> 00:03:56,068
Once the speed decreased,

70
00:03:56,068 --> 00:03:59,038
the spacecraft would re-enter
the Earth's atmosphere

71
00:03:59,038 --> 00:04:02,308
and land like a simple glider.

72
00:04:02,308 --> 00:04:07,680
In all, Neil logged 2,600
flight hours in over 900 flights

73
00:04:07,680 --> 00:04:12,284
at Edwards, and all before
becoming the most famous

74
00:04:12,284 --> 00:04:15,688
astronaut of all time.

75
00:04:15,688 --> 00:04:19,525
>> This was one of the
most exciting places

76
00:04:19,525 --> 00:04:21,327
in the world at that time.

77
00:04:21,327 --> 00:04:24,596
The flight-test world was
filled with excitement.

78
00:04:24,596 --> 00:04:26,932
Dozens and dozens
of new concepts

79
00:04:26,932 --> 00:04:29,535
and configurations and tests.

80
00:04:29,535 --> 00:04:33,305
Something new to talk about
every day, and I believe

81
00:04:33,305 --> 00:04:36,909
that whenever I have the
privilege of visiting here again

82
00:04:36,909 --> 00:04:41,613
and years ahead and
ask someone what's new?

83
00:04:41,613 --> 00:04:45,050
There will always be something.

84
00:04:47,519 --> 00:04:56,595
[Applause]

85
00:04:58,497 --> 00:05:00,065
>> Good afternoon and welcome

86
00:05:00,065 --> 00:05:02,034
to the Neil Armstrong
Flight Research Center.

87
00:05:02,034 --> 00:05:04,703
Before I get started,
a safety message

88
00:05:04,703 --> 00:05:06,038
for our guests here today.

89
00:05:06,038 --> 00:05:08,207
Should there be an alarm, just
exit to your left or right

90
00:05:08,207 --> 00:05:10,342
and gather in front
of the building.

91
00:05:10,342 --> 00:05:11,744
Thank you for that.

92
00:05:11,744 --> 00:05:16,215
So, today's speaker is Dr. James
R. Hansen who recently retired

93
00:05:16,215 --> 00:05:20,953
as a professor of history from
Auburn University in Alabama.

94
00:05:20,953 --> 00:05:24,022
Our own Dr. Christiansen
was one of his students.

95
00:05:24,022 --> 00:05:26,024
I don't if your wife
was as well.

96
00:05:28,060 --> 00:05:32,398

Okay. He has written books and
articles covering a wide variety

97
00:05:32,398 --> 00:05:35,167
of topics, ranging from
the early days of aviation,

98
00:05:35,167 --> 00:05:37,836
first nuclear fusion
reactors, the moon landings

99
00:05:37,836 --> 00:05:40,739
to the environmental
impact of golf courses.

100
00:05:40,739 --> 00:05:43,575
Dr. Hansen is an expert
in history of science

101
00:05:43,575 --> 00:05:46,812
and technology, especially
the early history of NACA.

102
00:05:46,812 --> 00:05:48,847
He's the author of
Engineer in Charge.

103
00:05:48,847 --> 00:05:52,151
This is a must-read
for NASA engineers.

104
00:05:52,151 --> 00:05:57,656
A seminal history of NACA from
its founding to what, 1958.

105
00:05:57,656 --> 00:05:59,725
Followed up by the
space-flight revolution,

106
00:05:59,725 --> 00:06:02,961

which was probably called
Headquarters in Charge.

107
00:06:02,961 --> 00:06:04,997
[Laughter]

108
00:06:04,997 --> 00:06:08,167
Engineer in Charge for the title
of the center director back

109
00:06:08,167 --> 00:06:12,337
in the old Langley days.

110
00:06:12,337 --> 00:06:15,707
His last visit here to the
center was in 2005, when he came

111
00:06:15,707 --> 00:06:17,476
to share his new book First Man,

112
00:06:17,476 --> 00:06:20,112
which remains the only
authorized biography

113
00:06:20,112 --> 00:06:21,180
of Neil Armstrong.

114
00:06:21,180 --> 00:06:23,248
You know, a lot has
happened since 2005.

115
00:06:23,248 --> 00:06:26,218
Our center's had the honor of
being named for Neil Armstrong.

116
00:06:26,218 --> 00:06:28,387
The book had a lot
to do with that.

117

00:06:28,387 --> 00:06:31,557
First Man told the
story of Neil's years

118
00:06:31,557 --> 00:06:33,959
as a test pilot here
in the High Desert.

119
00:06:33,959 --> 00:06:36,628
In the title section,
you saw it a lot of that

120
00:06:36,628 --> 00:06:38,764
in the video was the
real right stuff.

121
00:06:38,764 --> 00:06:42,234
Meanwhile, Dr. Hansen's been
busy writing other books

122
00:06:42,234 --> 00:06:45,471
about astronauts, space
shuttle, golf course architects

123
00:06:45,471 --> 00:06:48,307
and keeps himself
extremely busy.

124
00:06:48,307 --> 00:06:51,877
As we speak, a film adaptation
of First Man is in the works

125
00:06:51,877 --> 00:06:54,413
with Universal Studios
and Amblin Entertainment.

126
00:06:54,413 --> 00:06:58,150
The script is being written by
Academy Award winner Josh Singer

127

00:06:58,150 --> 00:07:01,153
of Spotlight fame,
and it'll be directed

128
00:07:01,153 --> 00:07:03,188
by Academy Award
winner Damien Chazelle,

129
00:07:03,188 --> 00:07:04,990
who directed La La Land.

130
00:07:04,990 --> 00:07:06,992
Today, Dr. Hansen will
explore the question,

131
00:07:06,992 --> 00:07:10,496
why was Neil Armstrong
chosen to command Apollo 11,

132
00:07:10,496 --> 00:07:13,432
and why did he become the
first astronaut to step

133
00:07:13,432 --> 00:07:14,766
out onto the lunar surface?

134
00:07:14,766 --> 00:07:17,469
Please join me in welcoming
Dr. James R. Hansen.

135
00:07:17,469 --> 00:07:20,205
[Applause]

136
00:07:20,205 --> 00:07:21,406
>> Thank you David.

137
00:07:21,406 --> 00:07:21,907
Thank You.

138

00:07:21,907 --> 00:07:23,342
Thank you.

139
00:07:23,342 --> 00:07:24,309
Thank you very much.

140
00:07:24,309 --> 00:07:27,212
Thanks. Thanks very
much for coming.

141
00:07:27,212 --> 00:07:29,414
It's a very special
place as you guys know.

142
00:07:29,414 --> 00:07:31,783
I really enjoyed my visit here

143
00:07:31,783 --> 00:07:34,186
when I was researching
First Man,

144
00:07:34,186 --> 00:07:36,488
and getting to talk
to a lot of people.

145
00:07:36,488 --> 00:07:38,790
Some of them, I think,
have passed on,

146
00:07:38,790 --> 00:07:41,627
some of the colleagues
that worked with Neil back

147
00:07:41,627 --> 00:07:44,263
in the 50s and early 60s.

148
00:07:44,263 --> 00:07:48,834
How many of you, I
always have to you know,

149
00:07:48,834 --> 00:07:51,837
as a 31-year veteran of the
classroom, I always have to find

150
00:07:51,837 --> 00:07:53,872
out where the troublemakers
are to begin with.

151
00:07:53,872 --> 00:07:59,945
So, how many of you, yeah,
I see a show of hands,

152
00:07:59,945 --> 00:08:03,015
how many of you were
alive on July 20th,

153
00:08:03,015 --> 00:08:07,553
1969 and remember what you were
doing and what you saw that day?

154
00:08:07,553 --> 00:08:11,156
Yeah. So, that's maybe about
a little less than half.

155
00:08:11,156 --> 00:08:14,660
And of course, time marches on,

156
00:08:14,660 --> 00:08:18,497
and I haven't done the
calculation recently,

157
00:08:18,497 --> 00:08:21,066
but I think it's somewhere
between 80 and 85 percent

158
00:08:21,066 --> 00:08:25,170
of the human population
living today weren't alive

159

00:08:25,170 --> 00:08:27,239
in July 1969.

160
00:08:27,239 --> 00:08:31,276
So it's, you know, it's
really history for those

161
00:08:31,276 --> 00:08:33,946
that are the young people,
and I'm so glad to see

162
00:08:33,946 --> 00:08:35,814
so many young people today.

163
00:08:35,814 --> 00:08:39,851
I've taught a lot of college
students, college-age freshmen

164
00:08:39,851 --> 00:08:42,588
in college all the
way to grad students.

165
00:08:42,588 --> 00:08:45,557
Christian was one of our
star graduate students,

166
00:08:45,557 --> 00:08:49,628
and Dr. Stephanie Smith
DeVito was a colleague of mine

167
00:08:49,628 --> 00:08:51,797
at Auburn teaching
history of technology.

168
00:08:51,797 --> 00:08:55,334
So I love to see them again.

169
00:08:55,334 --> 00:08:58,870
But, you know, teaching
about the space program

170
00:08:58,870 --> 00:09:01,506
and about the Apollo moon
landings, it's for them,

171
00:09:01,506 --> 00:09:04,109
students today, it's like
talking about, you know,

172
00:09:04,109 --> 00:09:07,179
The War of the Roses or
something, medieval history.

173
00:09:07,179 --> 00:09:09,848
It's so far back, and
they didn't experience it.

174
00:09:09,848 --> 00:09:11,950
They might have heard
about it from their parents

175
00:09:11,950 --> 00:09:13,151
or their grandparents.

176
00:09:13,151 --> 00:09:16,989
You know, only 12 human
beings have ever set foot

177
00:09:16,989 --> 00:09:19,157
on another heavenly body.

178
00:09:19,157 --> 00:09:22,894
Those were Apollo
astronauts, and of those 12,

179
00:09:22,894 --> 00:09:24,696
only six of them
are still living.

180

00:09:24,696 --> 00:09:30,102
And let's hope they stay
living for a while longer.

181
00:09:30,102 --> 00:09:33,772
They range in age from I
think 82, Charlie Duke,

182
00:09:33,772 --> 00:09:36,108
I think is 82, to Buzz Aldrin.

183
00:09:36,108 --> 00:09:38,210
Buzz is the oldest
surviving moonwalker.

184
00:09:38,210 --> 00:09:42,447
He's 87. Turned 87 in
January of this year.

185
00:09:42,447 --> 00:09:46,618
And of the commanders,
of the six commanders

186
00:09:46,618 --> 00:09:48,453
of successful landings,
there's only three

187
00:09:48,453 --> 00:09:50,389
of them are still alive.

188
00:09:50,389 --> 00:09:52,758
And so, you know, when we were
unfortunately going to come

189
00:09:52,758 --> 00:09:55,694
to a point in time in
history, it's just inevitable,

190
00:09:55,694 --> 00:10:00,065
that they'll be gone, and

we won't have replaced them.

191
00:10:00,065 --> 00:10:02,734
It doesn't look like, and
at least not for a while.

192
00:10:02,734 --> 00:10:08,740
The next moonwalkers may, in
fact, be Chinese astronauts.

193
00:10:08,740 --> 00:10:10,342
It's yet to be seen.

194
00:10:10,342 --> 00:10:14,813
But it's, I think we just
celebrated, I was in Wapakoneta,

195
00:10:14,813 --> 00:10:18,817
Ohio, Neil's hometown
a couple weeks ago,

196
00:10:18,817 --> 00:10:22,454
to celebrate the 48th
anniversary of Apollo 11,

197
00:10:22,454 --> 00:10:24,322
and there was a big event there.

198
00:10:24,322 --> 00:10:26,758
And Buzz came to talk.

199
00:10:26,758 --> 00:10:31,430
And it's sort of been,
my world sort of goes

200
00:10:31,430 --> 00:10:33,832
from one Armstrong
world to the next.

201

00:10:33,832 --> 00:10:35,967
Here I am at NASA Armstrong.

202
00:10:35,967 --> 00:10:37,636
You know, I was at
the Armstrong Museum

203
00:10:37,636 --> 00:10:41,006
in Wapakoneta giving a talk,
you know, two weeks ago.

204
00:10:41,006 --> 00:10:44,676
I was invited to the
Armstrong family reunion

205
00:10:44,676 --> 00:10:48,413
out on the farm outside
Wapakoneta.

206
00:10:48,413 --> 00:10:51,249
Both of his sons were there,
his sister was there, Jan.

207
00:10:51,249 --> 00:10:53,118
His first wife was there.

208
00:10:53,118 --> 00:10:58,223
A big cookout at the
farm where Neil was born.

209
00:10:58,223 --> 00:10:59,524
So, I was there.

210
00:10:59,524 --> 00:11:02,260
I spent a large part of my
summer at Purdue University

211
00:11:02,260 --> 00:11:06,031
in the archives where the Neil
Armstrong papers are located.

212
00:11:06,031 --> 00:11:09,801
So you know, Neil Armstrong
is still very much a part

213
00:11:09,801 --> 00:11:12,204
of my life and this movie.

214
00:11:12,204 --> 00:11:15,407
I should, perhaps, be
answering the question instead

215
00:11:15,407 --> 00:11:16,541
of why Neil Armstrong?

216
00:11:16,541 --> 00:11:19,411
Why in the world, why in
the heck would you turn

217
00:11:19,411 --> 00:11:21,546
over your book to Hollywood?

218
00:11:21,546 --> 00:11:25,317
You worked so hard to
get the facts straight.

219
00:11:25,317 --> 00:11:27,052
You know, and now
what do you do.

220
00:11:27,052 --> 00:11:29,254
You know, you turn
it over to Hollywood.

221
00:11:29,254 --> 00:11:33,492
But, I think this has the
chance of being a really,

222
00:11:33,492 --> 00:11:36,595

really great film, and
they have involved me

223
00:11:36,595 --> 00:11:39,164
from the start with the script.

224
00:11:39,164 --> 00:11:41,933
I worked with Josh Singer,

225
00:11:41,933 --> 00:11:45,270
who David mentioned,
the screenwriter.

226
00:11:45,270 --> 00:11:47,973
Dave Scott, the Gemini
8 and Apollo astronaut,

227
00:11:47,973 --> 00:11:51,343
one of the Apollo commanders
is a technical consultant.

228
00:11:51,343 --> 00:11:53,178
Mike Collins, the
command module pilot

229
00:11:53,178 --> 00:11:57,115
for Apollo 11 is reading the
script, as is Jim Lovell.

230
00:11:57,115 --> 00:11:58,717
Both the Armstrong boys have.

231
00:11:58,717 --> 00:12:01,553
Janet Armstrong has done so.

232
00:12:01,553 --> 00:12:03,288
They've tried really hard.

233
00:12:03,288 --> 00:12:04,456

They've dug deep.

234
00:12:04,456 --> 00:12:05,590
They've been out here.

235
00:12:05,590 --> 00:12:07,559
I think there's going
to be a shoot out here.

236
00:12:07,559 --> 00:12:10,495
At least a one-day shoot,
location shoot sometime

237
00:12:10,495 --> 00:12:11,730
in the next couple of months.

238
00:12:11,730 --> 00:12:13,031
I don't know exactly.

239
00:12:13,031 --> 00:12:14,800
They actually went
up into Juniper Hills

240
00:12:14,800 --> 00:12:18,303
and they were looking for
the cabin that Neil and Janet

241
00:12:18,303 --> 00:12:19,604
and his small family,

242
00:12:19,604 --> 00:12:22,140
young family lived
in when he was here.

243
00:12:22,140 --> 00:12:25,911
And they didn't have the
exact address or anything.

244
00:12:25,911 --> 00:12:27,145

I didn't plan to
tell this story,

245
00:12:27,145 --> 00:12:28,380
but they were driving around.

246
00:12:28,380 --> 00:12:30,315
They just wanted to
sort of get an idea

247
00:12:30,315 --> 00:12:34,352
of what the vantage point of the
desert was from up in the hills,

248
00:12:34,352 --> 00:12:37,556
and so this guy was
walking down the street.

249
00:12:37,556 --> 00:12:40,025
And so they stopped and they
thought well we'll just ask

250
00:12:40,025 --> 00:12:43,762
if he happens to know, you know,
where did Neil Armstrong live.

251
00:12:43,762 --> 00:12:45,864
Well, it turned out that the
guy owned, it was the guy

252
00:12:45,864 --> 00:12:47,833
that owned the Armstrong cabin.

253
00:12:47,833 --> 00:12:49,801
I mean, like what
are the chances?

254
00:12:49,801 --> 00:12:51,536
You know? And so he
said yeah, come on.

255
00:12:51,536 --> 00:12:54,639
So he brought them in the
house, and they took all kinds

256
00:12:54,639 --> 00:12:56,408
of pictures in the house.

257
00:12:56,408 --> 00:12:59,711
And down in the, kind
of not quite a basement,

258
00:12:59,711 --> 00:13:03,715
but kind of on a lower floor in
the concrete was the footprint,

259
00:13:03,715 --> 00:13:06,084
you know how people put
footprints in wet cement.

260
00:13:06,084 --> 00:13:09,688
There was a footprint and it
was either of Rick Armstrong,

261
00:13:09,688 --> 00:13:12,057
who was the first son of Neil,

262
00:13:12,057 --> 00:13:14,125
or it possibly could
have been little Karen.

263
00:13:14,125 --> 00:13:17,596
The little baby girl who
died of a brain cancer

264
00:13:17,596 --> 00:13:18,897
when she was two-years-old.

265
00:13:18,897 --> 00:13:23,935

And anyway, let's everybody
keep your fingers crossed,

266
00:13:23,935 --> 00:13:27,172
I think we could have
a really special movie.

267
00:13:27,172 --> 00:13:30,375
It's just going to cover
the years, it starts really

268
00:13:30,375 --> 00:13:34,779
with his last months working
here as a research pilot,

269
00:13:34,779 --> 00:13:35,780
and then takes it

270
00:13:35,780 --> 00:13:37,949
to the immediate
aftermath of Apollo 11.

271
00:13:37,949 --> 00:13:42,354
So, it's not a full bio-pic
as the Hollywood people say.

272
00:13:42,354 --> 00:13:45,924
It's just going to look
at those particular years.

273
00:13:45,924 --> 00:13:47,225
Why Neil Armstrong?

274
00:13:47,225 --> 00:13:50,395
I almost feel like I could
stop and just take questions

275
00:13:50,395 --> 00:13:55,901
at this point, because the film,
you know, in a way you can say

276
00:13:55,901 --> 00:14:02,173
in a nutshell, no one had
done, none of the astronauts,

277
00:14:02,173 --> 00:14:05,410
as accomplished as
they were, and it's not

278
00:14:05,410 --> 00:14:07,045
that the other commanders
couldn't have done the

279
00:14:07,045 --> 00:14:08,179
landing mission.

280
00:14:08,179 --> 00:14:10,482
I think they could have,
and I think the approach

281
00:14:10,482 --> 00:14:13,685
of NASA leadership at the time
was if you have good commanders

282
00:14:13,685 --> 00:14:17,822
and you train them up right,
get good crews together,

283
00:14:17,822 --> 00:14:19,257
that any of them
could have done it.

284
00:14:19,257 --> 00:14:21,726
And that was kind of the
mindset that I think, you know,

285
00:14:21,726 --> 00:14:23,962
that I have to try to
explain to you a bit.

286
00:14:23,962 --> 00:14:27,799
But the video itself, I
mean, when Neil applied

287
00:14:27,799 --> 00:14:31,736
for the second group of
astronauts in the spring

288
00:14:31,736 --> 00:14:34,839
of 1962, while he was here,

289
00:14:34,839 --> 00:14:37,742
his application actually
got in late.

290
00:14:37,742 --> 00:14:40,211
They sort of, a guy that knew
him there was a guy named Dick

291
00:14:40,211 --> 00:14:41,947
Day, and he shoved
it into the pile

292
00:14:41,947 --> 00:14:45,150
because he knew Neil
was special.

293
00:14:45,150 --> 00:14:48,853
But in my book, I interpret
this late application from Neil

294
00:14:48,853 --> 00:14:51,623
as showing a little bit
ambivalence on Neil's part.

295
00:14:51,623 --> 00:14:54,359
You know, that he wasn't
really sure, you know,

296

00:14:54,359 --> 00:14:58,129
he had been selected
as an X-20 pilot,

297
00:14:58,129 --> 00:15:00,198
so he had that possibility.

298
00:15:00,198 --> 00:15:02,500
He was flying the
X-15, you know.

299
00:15:02,500 --> 00:15:05,704
He might someday have been
chief test pilot here.

300
00:15:05,704 --> 00:15:08,773
So, he wasn't sure,
really, about this,

301
00:15:08,773 --> 00:15:10,909
but he made the decision.

302
00:15:10,909 --> 00:15:13,545
And I think the fact
he was the only one

303
00:15:13,545 --> 00:15:17,916
with any rocket-power flying
experience that had applied,

304
00:15:17,916 --> 00:15:21,119
and from the astronauts that
I've talked to that were part

305
00:15:21,119 --> 00:15:24,122
of his group, and some that
tried to get in the second group

306
00:15:24,122 --> 00:15:26,491
and didn't make it until the

third group of astronauts.

307
00:15:26,491 --> 00:15:31,029
What they told me in
interviews was that Neil,

308
00:15:31,029 --> 00:15:33,231
they kind of figured
Neil was a cinch.

309
00:15:33,231 --> 00:15:37,035
That he was, there's no question
that he was going to get picked,

310
00:15:37,035 --> 00:15:39,771
because he had this
background that you just saw

311
00:15:39,771 --> 00:15:42,607
in four minutes, that
none of them had anything

312
00:15:42,607 --> 00:15:45,043
that really approached that.

313
00:15:46,878 --> 00:15:49,781
But, nonetheless, I'm
going to try to address,

314
00:15:49,781 --> 00:15:52,150
it's a fairly complicated
historical question,

315
00:15:52,150 --> 00:15:53,385
why he was first.

316
00:15:53,385 --> 00:15:55,587
And I think it's a
significant question,

317
00:15:55,587 --> 00:16:00,658
because there's a lot of myth.

318
00:16:00,658 --> 00:16:04,462
There's a lot of myth
surrounding Armstrong generally,

319
00:16:04,462 --> 00:16:07,032
but there's a lot of
myth and misunderstanding

320
00:16:07,032 --> 00:16:09,234
about why he was first.

321
00:16:09,234 --> 00:16:12,670
When I put up slides, I'm not
going to read the slides to you.

322
00:16:12,670 --> 00:16:16,374
You guys, hopefully you
can see it well enough.

323
00:16:16,374 --> 00:16:20,211
But here are five things that
are still said about Neil

324
00:16:20,211 --> 00:16:22,313
and explanations you can find

325
00:16:22,313 --> 00:16:24,582
in different books
or on the internet.

326
00:16:24,582 --> 00:16:30,021
People believe that one of these
reasons was the real reason.

327
00:16:30,021 --> 00:16:33,858
And I'm going to say something

328
00:16:33,858 --> 00:16:35,927
about number one
and number five.

329
00:16:35,927 --> 00:16:40,131
And that was, I was at
a meeting at Ohio State

330
00:16:40,131 --> 00:16:44,169
where in the spring, when
there was a new Neil Armstrong

331
00:16:44,169 --> 00:16:46,971
professorship created in
the school of engineering.

332
00:16:46,971 --> 00:16:50,575
And Senator Rob Portman from
Ohio did the introduction,

333
00:16:50,575 --> 00:16:53,411
and he made the point, he said

334
00:16:53,411 --> 00:16:55,547
from the very beginning
it was clear to NASA

335
00:16:55,547 --> 00:16:57,782
that Neil Armstrong was
going to be the commander

336
00:16:57,782 --> 00:16:59,017
of the first landing mission.

337
00:16:59,017 --> 00:17:02,020
That he was so excellent
and so outstanding

338

00:17:02,020 --> 00:17:05,023
that he was sort of
preordained to be.

339
00:17:05,023 --> 00:17:07,392
Well, I wasn't about
to, you know,

340
00:17:07,392 --> 00:17:12,063
quarrel with Congressman
Portman, not about that anyway.

341
00:17:12,063 --> 00:17:14,399
I might quarrel with him
about some other things,

342
00:17:14,399 --> 00:17:17,702
but that just isn't true.

343
00:17:17,702 --> 00:17:21,372
I mean, it's not true, and
my talk today, hopefully,

344
00:17:21,372 --> 00:17:23,041
will lay that out for you.

345
00:17:23,041 --> 00:17:26,311
And then number five, which
I think is the one that is

346
00:17:26,311 --> 00:17:29,781
out there the most, because this
is what NASA said to the public,

347
00:17:29,781 --> 00:17:32,951
to the press, and even to their
own astronauts at the time.

348
00:17:32,951 --> 00:17:36,454
Is that what dictated

who got out first,

349
00:17:36,454 --> 00:17:37,956
so it's not just the issue

350
00:17:37,956 --> 00:17:40,525
of who's commanding the lunar
landing, but who's going

351
00:17:40,525 --> 00:17:42,427
to be the first one
out onto the surface,

352
00:17:42,427 --> 00:17:48,266
which became a big deal, that it
was all dictated by the layout

353
00:17:48,266 --> 00:17:51,469
of the interior of
the lunar module.

354
00:17:51,469 --> 00:17:53,204
With Neil standing
on the left side,

355
00:17:53,204 --> 00:17:55,240
of course there weren't
seats in the lunar module.

356
00:17:55,240 --> 00:17:56,774
Didn't need to have seats.

357
00:17:56,774 --> 00:17:58,943
And Buzz was standing on
the right, and the hatch was

358
00:17:58,943 --> 00:18:01,012
down here and opening
a certain way.

359
00:18:01,012 --> 00:18:03,414
And so what was explained to
them at the time, you know,

360
00:18:03,414 --> 00:18:06,684
if you ask Buzz Aldrin today
why Neil went out first,

361
00:18:06,684 --> 00:18:08,920
he would talk to you
about number five.

362
00:18:08,920 --> 00:18:12,090
It was really dictated by the
interior layout of the LEM.

363
00:18:12,090 --> 00:18:15,160
And how difficult it would
have been to change places

364
00:18:15,160 --> 00:18:17,295
and have Buzz go out first.

365
00:18:17,295 --> 00:18:20,832
My book and what I'll, in a
nutshell, I'll sort of try

366
00:18:20,832 --> 00:18:24,002
to get that far today in my
talk and explain that I think

367
00:18:24,002 --> 00:18:26,304
that was a smoke-screen.

368
00:18:26,304 --> 00:18:31,009
It really was, it wasn't the
reason that Neil went out first.

369
00:18:31,009 --> 00:18:32,777

It was other things.

370
00:18:32,777 --> 00:18:36,714
So, hopefully I'll have time
to address each one of these.

371
00:18:36,714 --> 00:18:41,352
Now the question, why was Neil
first is I think a significant

372
00:18:41,352 --> 00:18:43,721
historical question, and we
can learn a lot about NASA

373
00:18:43,721 --> 00:18:46,524
and about the Apollo
program by answering it.

374
00:18:46,524 --> 00:18:49,561
It's a different kind of
question than we might ask

375
00:18:49,561 --> 00:18:50,495
about the Wright brothers.

376
00:18:50,495 --> 00:18:51,963
Why Wilbur and Orville?

377
00:18:51,963 --> 00:18:54,299
Another very significant
question.

378
00:18:54,299 --> 00:18:57,335
I think historians have done
a great job answering that.

379
00:18:57,335 --> 00:19:00,471
I mean, how these two bicycle
mechanics from Dayton, Ohio,

380
00:19:00,471 --> 00:19:03,074
neither with a high
school degree managed

381
00:19:03,074 --> 00:19:05,510
to solve the problem
of the century.

382
00:19:05,510 --> 00:19:07,078
Figure out how to
design a heavier

383
00:19:07,078 --> 00:19:09,981
than air machine
that's effective.

384
00:19:09,981 --> 00:19:13,351
Why they were able to do it when
some of the greatest engineers

385
00:19:13,351 --> 00:19:15,853
and scientists around the
world who'd been attacking

386
00:19:15,853 --> 00:19:17,855
that problem failed at it.

387
00:19:17,855 --> 00:19:19,390
That's a very interesting
question,

388
00:19:19,390 --> 00:19:21,359
but it's not the
lecture for today.

389
00:19:21,359 --> 00:19:22,560
Christian could give
that lecture.

390

00:19:22,560 --> 00:19:25,730
You can have him
do it next week.

391
00:19:25,730 --> 00:19:27,565
Charles Lindbergh.

392
00:19:27,565 --> 00:19:28,866
Why Charles Lindbergh?

393
00:19:28,866 --> 00:19:30,201
You know, why was he first?

394
00:19:30,201 --> 00:19:33,471
Well, that's maybe not as
complicated question to answer,

395
00:19:33,471 --> 00:19:35,406
you know, in terms of
who all was trying to get

396
00:19:35,406 --> 00:19:36,874
across the Atlantic first.

397
00:19:36,874 --> 00:19:40,511
I think more significantly than
that question, why Lindbergh,

398
00:19:40,511 --> 00:19:45,116
why did Lindbergh have the
kind of impact on culture

399
00:19:45,116 --> 00:19:46,317
and society that he had?

400
00:19:46,317 --> 00:19:49,454
What was it about, you
know, about Lucky Lindy?

401

00:19:49,454 --> 00:19:54,792
About the solo performance
of crossing the Atlantic?

402
00:19:54,792 --> 00:19:58,763
Why, in 1927, was
there such a big deal

403
00:19:58,763 --> 00:20:01,032
that Lindbergh became
this iconic figure?

404
00:20:02,500 --> 00:20:05,336
I'll say more about Lindbergh
a little bit later in the talk,

405
00:20:05,336 --> 00:20:08,373
because there's a connection
between Lindbergh and Neil

406
00:20:08,373 --> 00:20:10,441
that becomes important.

407
00:20:10,441 --> 00:20:13,578
But why Neil is a
different sort of question.

408
00:20:13,578 --> 00:20:16,781
Neil and I, I actually talked in
one of my interviews with Neil.

409
00:20:16,781 --> 00:20:18,583
We talked about, you
know, the Wrights.

410
00:20:18,583 --> 00:20:20,151
We talked about Lindbergh,

411
00:20:20,151 --> 00:20:23,788
and as Neil was a very

good historian when it came

412
00:20:23,788 --> 00:20:27,625
to aviation history at
least, well-read generally.

413
00:20:27,625 --> 00:20:29,594
You know, he understood

414
00:20:29,594 --> 00:20:32,830
that Lindbergh's achievements
were very individual.

415
00:20:32,830 --> 00:20:34,132
The Wright brothers, in a way,

416
00:20:34,132 --> 00:20:38,102
not that they didn't have
the impact of Octave Chanute

417
00:20:38,102 --> 00:20:39,771
and the correspondence
that he had gathered.

418
00:20:39,771 --> 00:20:42,440
The Wrights learned a
lot from other people,

419
00:20:42,440 --> 00:20:47,211
but in a way their achievement
was pretty individual as well.

420
00:20:47,211 --> 00:20:51,215
Neil understood that
his, what he contributed,

421
00:20:51,215 --> 00:20:54,252
was in a different framework

422

00:20:54,252 --> 00:20:57,355
than those other two
great achievements.

423
00:20:57,355 --> 00:21:01,559
Because there had been
over 400,000 individuals

424
00:21:01,559 --> 00:21:05,930
in government, in industry
and academe that had all been,

425
00:21:05,930 --> 00:21:09,834
been a national program,
that the astronauts were just

426
00:21:09,834 --> 00:21:12,904
at the top of the
pyramid perhaps,

427
00:21:12,904 --> 00:21:14,539
but it was this huge pyramid.

428
00:21:14,539 --> 00:21:19,544
Or maybe a better metaphor
is kind of like an iceberg

429
00:21:19,544 --> 00:21:22,947
where you only see the
part out of the water.

430
00:21:22,947 --> 00:21:25,450
But that mass under the water

431
00:21:25,450 --> 00:21:29,987
which doesn't get seen
is actually larger.

432
00:21:29,987 --> 00:21:34,659
Neil understood that there were

people that made contributions

433
00:21:34,659 --> 00:21:37,695
that were so significant, and
it bothered him that he got

434
00:21:37,695 --> 00:21:40,431
as much attention as he did.

435
00:21:40,431 --> 00:21:42,934
He did one interview
with 60 Minutes

436
00:21:42,934 --> 00:21:45,470
when the book came out in 2005.

437
00:21:45,470 --> 00:21:47,105
He was interviewed
by Ed Bradley.

438
00:21:47,105 --> 00:21:49,340
Actually, Walter Cronkite came

439
00:21:49,340 --> 00:21:51,275
down to be part of
the interview.

440
00:21:51,275 --> 00:21:55,012
They met at Cape Canaveral,
and during that interview,

441
00:21:55,012 --> 00:21:59,417
which was really delightfully
done, and I think everybody

442
00:21:59,417 --> 00:22:02,053
that watched it and
that knew Neil well felt

443

00:22:02,053 --> 00:22:09,293
that it was classic Neil,
and it was great to see him.

444
00:22:09,293 --> 00:22:12,096
I wasn't chosen to be
first, I was just chosen

445
00:22:12,096 --> 00:22:13,698
to command that flight.

446
00:22:13,698 --> 00:22:16,934
Circumstance put me in
that particular role.

447
00:22:16,934 --> 00:22:20,972
And to some, that might just
seem like his modesty speaking,

448
00:22:20,972 --> 00:22:23,374
and he was a modest
man, so I'm not saying

449
00:22:23,374 --> 00:22:24,809
that wasn't part of it.

450
00:22:24,809 --> 00:22:28,913
But I think, even more than the
modesty was he understood the

451
00:22:28,913 --> 00:22:31,682
reality of how this
actually happened.

452
00:22:31,682 --> 00:22:34,886
What the reality of
the Apollo program was.

453
00:22:34,886 --> 00:22:39,357
And he knew that there wasn't

anything that preordained him

454
00:22:39,357 --> 00:22:41,993
to be the Apollo 11 commander.

455
00:22:41,993 --> 00:22:46,664
He was just one of the
commanders in line with a crew,

456
00:22:46,664 --> 00:22:49,434
and depending how
things developed,

457
00:22:49,434 --> 00:22:53,271
and things might develop in
a very logical, you know,

458
00:22:53,271 --> 00:22:55,239
in a way that one could expect.

459
00:22:55,239 --> 00:22:58,342
Or there could be a lot of wild
cards and accidents and things

460
00:22:58,342 --> 00:22:59,877
that happened to change.

461
00:22:59,877 --> 00:23:02,013
And Neil understood all of that,

462
00:23:02,013 --> 00:23:05,983
so that's when he said
I just don't deserve it.

463
00:23:05,983 --> 00:23:09,420
I mean, he understood his role
as the commander of Apollo 11

464
00:23:09,420 --> 00:23:10,755

and first man on the moon.

465
00:23:10,755 --> 00:23:15,860
But to have the kind of focused
attention and hero worship

466
00:23:15,860 --> 00:23:19,864
and iconography that
came with Armstrong.

467
00:23:19,864 --> 00:23:23,568
And a lot of it that he would
have loved to have lived

468
00:23:23,568 --> 00:23:26,971
without in his years after 1969.

469
00:23:26,971 --> 00:23:28,406
You know, he was
just being honest

470
00:23:28,406 --> 00:23:32,009
when he said I just don't
deserve that much attention.

471
00:23:33,511 --> 00:23:35,346
Here again, in the
case of Apollo,

472
00:23:35,346 --> 00:23:37,315
it was an effort
of national will.

473
00:23:37,315 --> 00:23:39,584
Hundreds of thousands
of people involved.

474
00:23:39,584 --> 00:23:43,221
Just one very short anecdote.

475
00:23:43,221 --> 00:23:46,190
You know, when I started
research for the book,

476
00:23:46,190 --> 00:23:49,160
you know one thing I asked him
at one point, it wasn't one

477
00:23:49,160 --> 00:23:52,363
of the early, because I sort of
went through this his whole life

478
00:23:52,363 --> 00:23:54,031
from his family background.

479
00:23:54,031 --> 00:23:55,867
So, I didn't talk about Apollo

480
00:23:55,867 --> 00:23:58,703
for probably 30 hours
of tape recording.

481
00:23:58,703 --> 00:24:01,205
But, I asked him, I was going
down to Houston and I said,

482
00:24:01,205 --> 00:24:02,773
who should I talk to in Houston?

483
00:24:02,773 --> 00:24:05,443
And I thought he was
going to say, you know,

484
00:24:05,443 --> 00:24:10,615
go find you know, Gene Krantz.

485
00:24:10,615 --> 00:24:12,884
You know, go find Gene Cernan.

486
00:24:12,884 --> 00:24:14,652
Go find Chris Craft.

487
00:24:14,652 --> 00:24:17,955
And I did want to go find all
those guys, but Neil said,

488
00:24:17,955 --> 00:24:21,859
first and foremost, you need
to talk to Emil Schiesser.

489
00:24:24,729 --> 00:24:22,927
Emil Schiesser?

490
00:24:24,729 --> 00:24:27,131
I had no idea who he was,

491
00:24:27,131 --> 00:24:29,166
and I thought he was
just pulling my leg.

492
00:24:29,166 --> 00:24:32,970
But Emil Schiesser
worked in mission planning

493
00:24:32,970 --> 00:24:36,974
and was this really, really
brilliant, probably genius man

494
00:24:36,974 --> 00:24:39,010
who worked in mission planning.

495
00:24:39,010 --> 00:24:41,279
And Neil was totally serious.

496
00:24:41,279 --> 00:24:44,415
You need to talk to Emil
Schiesser, and here was a guy

497
00:24:44,415 --> 00:24:47,652
that nobody had ever probably
interviewed for the purposes

498
00:24:47,652 --> 00:24:49,620
of learning about
the Apollo program.

499
00:24:49,620 --> 00:24:53,190
But from Neil's point-of-view,
he was one of the unsung heroes

500
00:24:53,190 --> 00:24:55,693
that was critically
important to it.

501
00:24:55,693 --> 00:24:58,796
And there are others, I mean,
the names of people he gave me,

502
00:24:58,796 --> 00:25:03,301
you know, was not a list that
anybody could've expected.

503
00:25:03,301 --> 00:25:07,405
The story of how the
circumstances lead

504
00:25:07,405 --> 00:25:11,609
to Armstrong being in the
right place to be commander

505
00:25:11,609 --> 00:25:17,114
of Apollo 11 really comes down
to this person, Deke Slayton.

506
00:25:17,114 --> 00:25:19,016
And if you're a young person

507

00:25:19,016 --> 00:25:21,485
and you haven't studied the
Apollo history very well,

508
00:25:21,485 --> 00:25:23,988
Deke Slayton is a crucial part

509
00:25:23,988 --> 00:25:27,291
of the early US-manned
space program.

510
00:25:27,291 --> 00:25:29,927
He was one of the seven
original astronauts,

511
00:25:29,927 --> 00:25:33,097
along with Gus Grissom and
John Glenn and Al Shepard

512
00:25:33,097 --> 00:25:36,934
and Carpenter and so forth.

513
00:25:36,934 --> 00:25:41,939
But he had, the doctors found
that he had a heart condition.

514
00:25:41,939 --> 00:25:45,810
A murmur that needed to, he
essentially got grounded.

515
00:25:45,810 --> 00:25:47,745
And so he didn't get to fly.

516
00:25:47,745 --> 00:25:49,280
And he was the one
Mercury astronaut

517
00:25:49,280 --> 00:25:50,748
that didn't get to fly.

518
00:25:50,748 --> 00:25:53,651
He later got, eventually,
into space as part

519
00:25:53,651 --> 00:25:57,088
of the Apollo Soyuz
mission in the mid-70s.

520
00:25:57,088 --> 00:26:00,858
The docking with the cosmonauts.

521
00:26:00,858 --> 00:26:04,428
But what they gave him
was a more important role

522
00:26:04,428 --> 00:26:07,465
than he probably would've
ever had as an astronaut,

523
00:26:07,465 --> 00:26:10,568
and that was he became the
chief of the astronaut corps.

524
00:26:10,568 --> 00:26:13,304
And he was in charge of
putting the crews together.

525
00:26:13,304 --> 00:26:15,106
Here you see him with
Wally Schirra one

526
00:26:15,106 --> 00:26:17,541
of the other original seven.

527
00:26:17,541 --> 00:26:20,544
And Deke's principle,
you can see here,

528
00:26:20,544 --> 00:26:24,482

how I lay it out in the book.

529
00:26:24,482 --> 00:26:28,552
His idea was that you get a
qualified commander, you know,

530
00:26:28,552 --> 00:26:30,421
when you're putting
crews together, you know,

531
00:26:30,421 --> 00:26:33,624
on the top line, you're
picking your very best guys.

532
00:26:33,624 --> 00:26:35,426
You know, here are
your commanders.

533
00:26:35,426 --> 00:26:37,862
You know, once you've
got the commanders,

534
00:26:37,862 --> 00:26:39,330
you know then you can fill in

535
00:26:39,330 --> 00:26:41,599
and get the crews
underneath them.

536
00:26:41,599 --> 00:26:43,901
But, first and foremost,
you want the guys,

537
00:26:43,901 --> 00:26:47,204
and the commanders
are almost co-equals.

538
00:26:47,204 --> 00:26:50,641
From Deke's point-of-view,
they were all, they were going

539
00:26:50,641 --> 00:26:53,277
to be trained up for special
missions, so it wasn't

540
00:26:53,277 --> 00:26:56,447
like they all ended up doing
exactly the same thing.

541
00:26:56,447 --> 00:26:58,816
But the idea was
that they were all

542
00:26:58,816 --> 00:27:01,318
of the same general
abilities and capacities

543
00:27:01,318 --> 00:27:05,356
and leadership that, you
know, you could put them up

544
00:27:05,356 --> 00:27:07,124
and if missions got shifted

545
00:27:07,124 --> 00:27:10,027
where you thought you had them
here but then that didn't work

546
00:27:10,027 --> 00:27:12,129
out and you have to
move to the next one.

547
00:27:12,129 --> 00:27:15,266
If you get the right commanders,
you know, you're a long way

548
00:27:15,266 --> 00:27:18,636
down the path towards
being successful.

549
00:27:18,636 --> 00:27:22,440
In Slayton's memoir, which
was published and finished

550
00:27:22,440 --> 00:27:26,177
after he died, so we still
need a really good book

551
00:27:26,177 --> 00:27:27,311
on Deke Slayton.

552
00:27:27,311 --> 00:27:30,815
I think a real biography
of Slayton is necessary,

553
00:27:30,815 --> 00:27:35,586
but in that memoir, Deke
makes the comment that,

554
00:27:35,586 --> 00:27:37,621
you know of course, Gus
Grissom had been one

555
00:27:37,621 --> 00:27:39,757
of the original seven
astronauts,

556
00:27:39,757 --> 00:27:42,159
and he'd flown Mercury, Gemini.

557
00:27:42,159 --> 00:27:43,861
He was part of Apollo 1.

558
00:27:43,861 --> 00:27:48,799
Of course he's going to die
in the fire on the launch pad

559
00:27:48,799 --> 00:27:53,070
in January 1967 along with

Roger Chaffee and Ed White.

560
00:27:53,070 --> 00:27:57,441
And in the memoir,
Deke Slayton says,

561
00:27:57,441 --> 00:28:03,581
if Grissom had been alive I
would've been strongly inclined

562
00:28:03,581 --> 00:28:08,152
to make him, put him in command
of the first landing mission.

563
00:28:08,152 --> 00:28:11,222
Now, some historians
have taken that to mean

564
00:28:11,222 --> 00:28:14,492
that Deke would've virtually,
would really have done that.

565
00:28:14,492 --> 00:28:19,463
Would've made sure that
Gus would've been the first

566
00:28:19,463 --> 00:28:21,365
commander of a lunar
landing mission.

567
00:28:21,365 --> 00:28:24,001
I don't think that's
what Slayton meant.

568
00:28:24,001 --> 00:28:27,538
I think he actually had
a fondness and he felt

569
00:28:27,538 --> 00:28:31,976
that Gus was a great commander,

would be a great commander,

570
00:28:31,976 --> 00:28:34,512
but I don't think
Deke's principle

571
00:28:34,512 --> 00:28:38,215
that we just looked at, I
think he would've been just one

572
00:28:38,215 --> 00:28:40,718
of those under commanders
and he would not have,

573
00:28:40,718 --> 00:28:44,555
Deke would not have manipulated
the scheduling of the crews

574
00:28:44,555 --> 00:28:47,491
or the missions to
make sure that Gus got

575
00:28:47,491 --> 00:28:49,160
to be the lunar landing
commander.

576
00:28:49,160 --> 00:28:51,462
I just don't think
that was what it was,

577
00:28:51,462 --> 00:28:55,933
but he did have a special feel
for Deke, between Deke and Gus.

578
00:28:55,933 --> 00:29:00,204
So, here it could have been
any of these Apollo commanders.

579
00:29:00,204 --> 00:29:02,873
Any of these guys in

Deke's point-of-view.

580
00:29:02,873 --> 00:29:05,676
Frank Borman, Jim
McDivet, Tom Stafford,

581
00:29:05,676 --> 00:29:09,847
Pete Conrad, Jim Lovell.

582
00:29:09,847 --> 00:29:16,654
And April 1967, this is a few
months after the Apollo fire.

583
00:29:16,654 --> 00:29:19,590
Of course the fire is
a significant moment

584
00:29:19,590 --> 00:29:22,059
in NASA history.

585
00:29:22,059 --> 00:29:24,762
Some felt, I mean there were
congressional investigations

586
00:29:24,762 --> 00:29:25,696
into this.

587
00:29:25,696 --> 00:29:26,997
Some thought that, you know,

588
00:29:26,997 --> 00:29:29,667
maybe the Apollo program
should have the plug pulled.

589
00:29:29,667 --> 00:29:33,437
It was just, because it had made
such an apparently big mistake.

590
00:29:33,437 --> 00:29:34,839

It had killed three astronauts

591
00:29:34,839 --> 00:29:38,375
on the launchpad
down in Florida.

592
00:29:39,510 --> 00:29:45,583
The fire meant that the
Apollo command module

593
00:29:45,583 --> 00:29:47,284
that North America
was building had

594
00:29:47,284 --> 00:29:49,920
to be totally redesigned,
and it was.

595
00:29:49,920 --> 00:29:53,257
But it wasn't just the redesign
of the Apollo command module,

596
00:29:53,257 --> 00:29:55,526
it really gave pause
to the program

597
00:29:55,526 --> 00:29:57,194
for about a year and a half.

598
00:29:57,194 --> 00:29:59,029
Where they could go back
and look at everything.

599
00:29:59,029 --> 00:30:02,166
You know, they had been moving
along so fast from Mercury

600
00:30:02,166 --> 00:30:06,270
through the Gemini missions
and into the start of Apollo.

601
00:30:06,270 --> 00:30:10,341
Now, they had to call time
out, let's pause and refresh.

602
00:30:10,341 --> 00:30:11,642
Let's rethink.

603
00:30:11,642 --> 00:30:14,278
Let's get things, make
sure we got things right.

604
00:30:14,278 --> 00:30:17,781
But they couldn't wait around in
terms of their mission planning

605
00:30:17,781 --> 00:30:20,951
because they wanted to get
this done before the end

606
00:30:20,951 --> 00:30:22,253
of the decade.

607
00:30:22,253 --> 00:30:24,822
President Kennedy had made
this speech in May of 1961.

608
00:30:24,822 --> 00:30:27,024
Land astronauts on the
moon, return them safely

609
00:30:27,024 --> 00:30:28,392
by the end of the decade.

610
00:30:28,392 --> 00:30:32,329
So that was the mandate
that NASA was working with,

611
00:30:32,329 --> 00:30:37,434

but this is the way that
it was being laid out.

612
00:30:37,434 --> 00:30:40,471
Certainly, the way the
astronaut office looked at it

613
00:30:40,471 --> 00:30:42,773
and how the crews were going
to have to put together.

614
00:30:42,773 --> 00:30:46,510
Virtually, you know, it
didn't go A through Z,

615
00:30:46,510 --> 00:30:48,913
but you saw what the A
mission was supposed to be.

616
00:30:48,913 --> 00:30:52,249
The B mission was going to be
an unmanned test of the LEM.

617
00:30:52,249 --> 00:30:55,185
C, the first command module
test in low Earth orbit.

618
00:30:55,185 --> 00:30:57,521
D, the manned command
service module

619
00:30:57,521 --> 00:30:59,757
and lunar module
in low Earth orbit.

620
00:30:59,757 --> 00:31:02,826
E mission, the first landing
was going to be the G mission,

621
00:31:02,826 --> 00:31:07,331

and then there were plans beyond
that, H and I and J. You know,

622
00:31:07,331 --> 00:31:09,066
which were going
to be the missions

623
00:31:09,066 --> 00:31:11,969
when exploration
got more extensive.

624
00:31:11,969 --> 00:31:15,139
So, all this was laid out,
and the idea was, you know,

625
00:31:15,139 --> 00:31:18,943
we do A successfully, then
we move on to B. We do that.

626
00:31:18,943 --> 00:31:21,312
Move on to C. It's an
incremental approach,

627
00:31:21,312 --> 00:31:24,448
systematic, you know, make sure
we know what we're doing before

628
00:31:24,448 --> 00:31:27,051
we move on to the next step.

629
00:31:30,287 --> 00:31:32,356
Well, in terms of
the crew assignments,

630
00:31:32,356 --> 00:31:39,830
this is how it looked
in 1967 after the fire.

631
00:31:39,830 --> 00:31:41,932
You know, what Deke had

in mind for the crews.

632
00:31:41,932 --> 00:31:43,600
Now, it's going to
not turn out exactly

633
00:31:43,600 --> 00:31:46,070
like this, but that's my point.

634
00:31:46,070 --> 00:31:53,210
At that point in time, Apollo
7 was going to be the C mission

635
00:31:53,210 --> 00:31:55,980
with Eisele, Schirra
and Cunningham.

636
00:31:55,980 --> 00:31:58,349
Then 8 was going to
do the D mission.

637
00:31:58,349 --> 00:32:02,386
That's Dave Scott there, so my
captions don't follow the order

638
00:32:02,386 --> 00:32:04,588
of the appearances necessarily.

639
00:32:04,588 --> 00:32:07,858
Apollo 9, interestingly,
this was going to be Borman,

640
00:32:07,858 --> 00:32:10,894
Anders and Mike Collins.

641
00:32:10,894 --> 00:32:13,230
And then, these are
the backup crews.

642

00:32:13,230 --> 00:32:15,632
Cernan, Conrad, Armstrong.

643
00:32:15,632 --> 00:32:17,401
Armstrong was in a backup.

644
00:32:17,401 --> 00:32:21,238
Borman on the Apollo 9, which
was going to be the E mission.

645
00:32:21,238 --> 00:32:25,743
Okay, now that was what
the thought was going into,

646
00:32:25,743 --> 00:32:29,313
as they were moving
past the fire

647
00:32:29,313 --> 00:32:32,116
and projecting what we were
going to need to be moving

648
00:32:32,116 --> 00:32:34,685
on quickly once 1968
comes around.

649
00:32:34,685 --> 00:32:37,988
And then actually get
this done in 1969.

650
00:32:37,988 --> 00:32:41,825
The later crews at this point,
10, 11 and 12 to do the E,

651
00:32:41,825 --> 00:32:44,862
F and G mission were
still undecided.

652
00:32:44,862 --> 00:32:47,531
Oftentimes it seemed

like, you know,

653
00:32:47,531 --> 00:32:51,301
if somebody did 8 then three
missions later it would probably

654
00:32:51,301 --> 00:32:53,637
be that crew's mission again.

655
00:32:53,637 --> 00:32:55,239
So, one could kind
of anticipate,

656
00:32:55,239 --> 00:32:59,076
but a lot of things could get
in the way to mess that up.

657
00:32:59,076 --> 00:33:01,779
Now, here was the first
wild card that came

658
00:33:01,779 --> 00:33:04,715
in that kind of blew
up the plan.

659
00:33:04,715 --> 00:33:08,018
The lunar module,
which was being built

660
00:33:08,018 --> 00:33:10,287
by Grumman wasn't ready.

661
00:33:10,287 --> 00:33:14,491
And of course, the mission,
the D mission called

662
00:33:14,491 --> 00:33:17,428
for the lunar module to
be tested in Earth orbit.

663
00:33:17,428 --> 00:33:18,829
Well, it's not ready.

664
00:33:18,829 --> 00:33:20,197
It's not ready to fly.

665
00:33:20,197 --> 00:33:24,668
So, do you sit around and wait
for the LEM to get finished?

666
00:33:24,668 --> 00:33:26,904
Do you pause the program?

667
00:33:26,904 --> 00:33:29,206
Or do you do something else?

668
00:33:29,206 --> 00:33:30,974
And here comes a guy
named George Low.

669
00:33:30,974 --> 00:33:35,612
One of the real giants
of NASA's management.

670
00:33:35,612 --> 00:33:40,084
A great engineer from Rensselaer
Polytechnic Institute,

671
00:33:40,084 --> 00:33:44,154
managing the space-flight, the
manned space-flight operations.

672
00:33:44,154 --> 00:33:48,058
Low comes up with this proposal,
okay the LEMs not ready,

673
00:33:48,058 --> 00:33:49,860
so why don't we just
put a command

674
00:33:49,860 --> 00:33:52,863
and service module
together and fly that sucker

675
00:33:52,863 --> 00:33:54,898
around the moon and back?

676
00:33:54,898 --> 00:33:58,635
Let's do a circumlunar flight,
and when he makes this proposal,

677
00:33:58,635 --> 00:34:00,104
I mean, I use the
word audacious.

678
00:34:00,104 --> 00:34:02,406
It's just that, I
mean, we haven't been

679
00:34:02,406 --> 00:34:04,174
out of Earth orbit yet.

680
00:34:04,174 --> 00:34:07,845
You know, we've just had a
command module, you know,

681
00:34:07,845 --> 00:34:11,515
a few months back that caught on
fire because they were testing

682
00:34:11,515 --> 00:34:13,250
in 100% oxygen atmosphere

683
00:34:13,250 --> 00:34:15,185
when they shouldn't have been
doing it and they had all kinds

684
00:34:15,185 --> 00:34:16,320

of combustible stuff

685
00:34:16,320 --> 00:34:18,188
that shouldn't have been
laying around either.

686
00:34:18,188 --> 00:34:22,192
So, they were still
concerned about the redesign,

687
00:34:22,192 --> 00:34:24,161
but Low comes up and says,

688
00:34:24,161 --> 00:34:27,197
because the Russians are
thinking about, you know,

689
00:34:27,197 --> 00:34:30,467
they're still planning on
getting to the moon ahead of us.

690
00:34:30,467 --> 00:34:32,035
There is this thing
called the space race.

691
00:34:32,035 --> 00:34:34,171
The Cold War was still going on.

692
00:34:34,171 --> 00:34:36,340
So, Low said, you
know, we'd better,

693
00:34:36,340 --> 00:34:39,009
you know let's do
this as a stop gap.

694
00:34:39,009 --> 00:34:42,513
And so, that gets embraced.

695

00:34:42,513 --> 00:34:45,249
NASA says yeah, let's
go for that.

696
00:34:45,249 --> 00:34:47,951
And that becomes Apollo 8.

697
00:34:47,951 --> 00:34:50,854
So the order of things
gets changed,

698
00:34:50,854 --> 00:34:54,091
and what had been
the Apollo 9 crew,

699
00:34:54,091 --> 00:34:57,895
and the Apollo 9 backup
crew becomes the crew

700
00:34:57,895 --> 00:34:59,796
and backup crew of Apollo 8.

701
00:34:59,796 --> 00:35:02,166
We have Borman, Anders
and Jim Lovell.

702
00:35:02,166 --> 00:35:04,835
Armstrong, Aldrin
and Fred Haise.

703
00:35:04,835 --> 00:35:06,570
So they get put together
to train

704
00:35:06,570 --> 00:35:08,305
for the circumlunar mission

705
00:35:08,305 --> 00:35:11,275
which takes place
in December 1968.

706
00:35:11,275 --> 00:35:15,045
And for those of you that are
living, are old geezers like me

707
00:35:15,045 --> 00:35:17,614
that remember Christmas 1968.

708
00:35:17,614 --> 00:35:20,184
A very memorable Christmas Eve.

709
00:35:20,184 --> 00:35:21,518
They're orbiting from the moon.

710
00:35:21,518 --> 00:35:24,454
We have televisions from
the spacecraft looking

711
00:35:24,454 --> 00:35:26,190
down at the lunar surface.

712
00:35:26,190 --> 00:35:28,125
They're reading from
the book of Genesis,

713
00:35:28,125 --> 00:35:30,460
which ends up causing
controversy.

714
00:35:30,460 --> 00:35:33,697
There's a famous American
atheist, Madalyn Murray O'Hair

715
00:35:33,697 --> 00:35:37,134
who thinks government
money shouldn't be spent

716
00:35:37,134 --> 00:35:39,570
on astronauts going and reading

from the book of Genesis.

717
00:35:39,570 --> 00:35:45,375
So that gets part of the hoo-hah
after the mission's over.

718
00:35:45,375 --> 00:35:46,710
But it's a beautiful mission.

719
00:35:46,710 --> 00:35:50,447
1968, for those of you
who lived through it,

720
00:35:50,447 --> 00:35:52,516
I was a junior in high school.

721
00:35:52,516 --> 00:35:56,887
[Laughter]

722
00:35:56,887 --> 00:36:00,224
Was a really, you want to
say it's an awful year.

723
00:36:00,224 --> 00:36:01,558
Robert Kennedy is assassinated.

724
00:36:01,558 --> 00:36:02,893
Martin Luther King's
assassinated.

725
00:36:02,893 --> 00:36:05,662
The democratic convention
in Chicago goes to hell.

726
00:36:05,662 --> 00:36:09,299
You know, Vietnam, I think
Tet offensive is '68.

727
00:36:09,299 --> 00:36:11,969

So we're starting to lose
more people in Vietnam.

728
00:36:11,969 --> 00:36:13,437
The protests against it.

729
00:36:13,437 --> 00:36:14,771
There's race riots.

730
00:36:14,771 --> 00:36:17,741
You know, it's a
really, really bad year.

731
00:36:17,741 --> 00:36:20,611
But some people say
because of this mission,

732
00:36:20,611 --> 00:36:23,814
I forget the newsman
or columnist

733
00:36:23,814 --> 00:36:24,948
who first made the comment,

734
00:36:24,948 --> 00:36:28,986
but it said that
Apollo 8 saved 1968.

735
00:36:28,986 --> 00:36:33,457
You know, that it was such an
uplifting moment, you know,

736
00:36:33,457 --> 00:36:37,327
and I don't think anything
could've saved 1968

737
00:36:37,327 --> 00:36:39,229
from all of that tragedy.

738

00:36:39,229 --> 00:36:45,602
But it was a very strong,
emotional, successful mission.

739
00:36:45,602 --> 00:36:47,704
They do circumnavigate.

740
00:36:47,704 --> 00:36:49,406
They do get back safely.

741
00:36:49,406 --> 00:36:53,577
It's a wonderful mission,
and people remember it.

742
00:36:53,577 --> 00:36:58,949
So, after 8's over, now we go
to a 9 that's a redefined 9,

743
00:36:58,949 --> 00:37:01,485
with Dave Scott, McDivett
and Rusty Schweickart.

744
00:37:01,485 --> 00:37:03,520
And this is doing the
E mission, which is,

745
00:37:03,520 --> 00:37:06,323
the lunar module's finally
ready, so let's go and test it.

746
00:37:06,323 --> 00:37:09,126
We're going to test it in
Earth orbit, you know, first.

747
00:37:09,126 --> 00:37:11,995
Make sure it's working in
Earth orbit before we take off

748
00:37:11,995 --> 00:37:13,330
for the moon with it.

749
00:37:13,330 --> 00:37:16,700
So, that's successful
in March of 1969.

750
00:37:16,700 --> 00:37:20,103
Then May, we have number
10, which is really kind

751
00:37:20,103 --> 00:37:23,974
of a complete dress
rehearsal for 11.

752
00:37:23,974 --> 00:37:28,111
It is basically doing everything
you need to do to land.

753
00:37:28,111 --> 00:37:31,581
Descending, you know, detaching
from the command module,

754
00:37:31,581 --> 00:37:34,251
taking the lunar module
down to within, what,

755
00:37:34,251 --> 00:37:37,154
50,000 feet of the
lunar surface.

756
00:37:37,154 --> 00:37:40,557
And then realizing, well,
we don't get to land.

757
00:37:40,557 --> 00:37:42,326
We've done everything,
but we don't get to land.

758
00:37:42,326 --> 00:37:44,761
And so, that's the
dress rehearsal,

759
00:37:44,761 --> 00:37:46,563
and that was very successful.

760
00:37:46,563 --> 00:37:50,167
So again, that's May,
and now it's become clear

761
00:37:50,167 --> 00:37:51,568
for the first time.

762
00:37:51,568 --> 00:37:56,707
That you've moved through F, the
G mission's the landing, so now,

763
00:37:56,707 --> 00:38:01,478
the next crew is going to be
the one to do the landing.

764
00:38:01,478 --> 00:38:05,248
If these other missions hadn't
worked the way that they did.

765
00:38:05,248 --> 00:38:07,684
If they had to repeat
something, you know.

766
00:38:07,684 --> 00:38:12,756
If 8 hadn't become the audacious
circumlunar mission in fact,

767
00:38:12,756 --> 00:38:16,059
then it's very possible that
11, it might not have been 11.

768
00:38:16,059 --> 00:38:18,161
Eleven might have done
the dress rehearsal,

769

00:38:18,161 --> 00:38:20,530
12 might have been the
landing, in that case,

770
00:38:20,530 --> 00:38:22,566
Pete Conrad would have
been the commander.

771
00:38:22,566 --> 00:38:26,803
There are two factors changing
crew assignments that are worth,

772
00:38:26,803 --> 00:38:28,372
that's worth mentioning.

773
00:38:28,372 --> 00:38:32,642
Frank Borman, after Apollo 8,
resigns for personal reasons.

774
00:38:32,642 --> 00:38:35,245
You know, his wife,
Susan is kind of tired

775
00:38:35,245 --> 00:38:37,881
of Frank being in danger.

776
00:38:37,881 --> 00:38:40,650
Taking all this time
away from the family.

777
00:38:40,650 --> 00:38:45,322
And Frank decides, you know,
and he goes on to, you know,

778
00:38:45,322 --> 00:38:49,826
a pretty extraordinary career
as an ambassador and then also

779
00:38:49,826 --> 00:38:51,928
as president of Eastern

Airlines.

780
00:38:51,928 --> 00:38:54,097
That doesn't go so
well, actually.

781
00:38:54,097 --> 00:38:59,636
And then, you have a
surgery for Mike Collins.

782
00:38:59,636 --> 00:39:02,706
Collins has a spinal
issue that needs surgery,

783
00:39:02,706 --> 00:39:06,443
and so he had done a
really good Gemini mission,

784
00:39:06,443 --> 00:39:09,646
and Deke Slayton liked him a
lot, but he had to take him

785
00:39:09,646 --> 00:39:11,448
out of the rotation for a while.

786
00:39:11,448 --> 00:39:15,519
But then the idea, so, the
original schedule for 9,

787
00:39:15,519 --> 00:39:20,023
remember, this was the group
that was 9, then became 8.

788
00:39:20,023 --> 00:39:24,394
Originally, it was going to
be Borman, Anders and Collins,

789
00:39:24,394 --> 00:39:27,531
but Collins' back surgery
meant he couldn't do it,

790
00:39:27,531 --> 00:39:29,666
and that's how Lovell came in.

791
00:39:29,666 --> 00:39:33,003
So, if Collins hadn't had the
back surgery, he would have gone

792
00:39:33,003 --> 00:39:37,741
on 8, and Lovell would have had
to been placed somewhere else.

793
00:39:37,741 --> 00:39:41,311
Well, knowing that
Collins gets placed on 11,

794
00:39:41,311 --> 00:39:45,048
Lovell could've been placed
on 11 if it had not been

795
00:39:45,048 --> 00:39:48,018
for the back problem
for Collins.

796
00:39:50,620 --> 00:39:52,722
So, here again, Lovell
originally scheduled as part

797
00:39:52,722 --> 00:39:57,160
of the Apollo 9 backup,
then he moves to the 8 prime

798
00:39:57,160 --> 00:40:01,631
because of the Collins surgery.

799
00:40:01,631 --> 00:40:03,300
Deke wants to get Collins back

800
00:40:03,300 --> 00:40:06,436

into the rotation as
quickly as he can.

801
00:40:06,436 --> 00:40:11,475
So, as soon as he's healed
from the surgery, Deke puts him

802
00:40:11,475 --> 00:40:14,144
into the prime crew
for Apollo 11.

803
00:40:14,144 --> 00:40:20,317
Now this is an interesting
story that I tell in the book,

804
00:40:20,317 --> 00:40:24,154
which believe it or
not, the only two people

805
00:40:24,154 --> 00:40:26,523
who knew this story
until Neil told it

806
00:40:26,523 --> 00:40:29,025
to me was Deke Slayton and Neil.

807
00:40:29,025 --> 00:40:33,597
The night of Christmas Eve
during Apollo 8 when Lovell,

808
00:40:33,597 --> 00:40:37,834
Borman and Anders were
circling the moon,

809
00:40:37,834 --> 00:40:41,137
at mission control Houston,
Deke pulls Neil into one

810
00:40:41,137 --> 00:40:44,975
of the back rooms and says,

something that Neil kind

811
00:40:44,975 --> 00:40:48,044
of expected given the way
that crews were put together.

812
00:40:48,044 --> 00:40:51,381
But that, you are
going to command 11.

813
00:40:51,381 --> 00:40:54,851
And 11, very likely,
if things work out,

814
00:40:54,851 --> 00:40:57,187
11 could be the landing.

815
00:40:57,187 --> 00:40:59,589
So, Deke has this
conversation with Neil.

816
00:40:59,589 --> 00:41:02,025
Neil knows he's going
to command 11.

817
00:41:04,227 --> 00:41:06,763
Deke wants to know
who he wants for 11.

818
00:41:06,763 --> 00:41:08,164
Of course, he's been training.

819
00:41:08,164 --> 00:41:10,534
He's had Aldrin with him.

820
00:41:10,534 --> 00:41:13,203
He's had Fred Haise with him.

821
00:41:13,203 --> 00:41:15,171

Deke doesn't think
Haise is ready

822
00:41:15,171 --> 00:41:18,208
for the prime crew assignment,

823
00:41:18,208 --> 00:41:20,844
and Collins is now healthy
again, so Deke wants

824
00:41:20,844 --> 00:41:22,712
to put Collins into the picture.

825
00:41:22,712 --> 00:41:26,016
So that's how Collins
becomes part of Neil's crew,

826
00:41:26,016 --> 00:41:30,720
and Haise gets pushed back.

827
00:41:30,720 --> 00:41:33,590
The other interesting
thing that was said,

828
00:41:33,590 --> 00:41:35,458
I have to see what
my slide says here.

829
00:41:35,458 --> 00:41:36,960
Yeah, here we go.

830
00:41:36,960 --> 00:41:41,431
That same night, when he told
Neil he was going to command 11,

831
00:41:41,431 --> 00:41:48,705
he asked Neil do you want
to have Lovell on your crew?

832

00:41:48,705 --> 00:41:53,043
In which case, we'll put
Lovell in Buzz Aldrin's place.

833
00:41:54,945 --> 00:41:56,980
And I think there's two
things going on there.

834
00:41:56,980 --> 00:41:59,849
One, high respect for Lovell.

835
00:41:59,849 --> 00:42:03,720
Two, not every commander
wanted to work with Buzz.

836
00:42:03,720 --> 00:42:05,455
Let's just face the facts.

837
00:42:05,455 --> 00:42:08,858
Frank Borman had made it clear
to Deke and made it clear to me

838
00:42:08,858 --> 00:42:11,695
when I interviewed him down
in Las Cruces, New Mexico.

839
00:42:11,695 --> 00:42:15,031
Borman had told Deke, do
not put Aldrin on my crew.

840
00:42:15,031 --> 00:42:17,434
I'm not going to work with him.

841
00:42:17,434 --> 00:42:18,735
And there were other commanders

842
00:42:18,735 --> 00:42:20,870
who had reservations
about Aldrin too.

843
00:42:20,870 --> 00:42:24,874
Not because Buzz was
incompetent, he was hardly that.

844
00:42:24,874 --> 00:42:28,578
A very competent and intelligent
astronaut, but there are aspects

845
00:42:28,578 --> 00:42:30,647
of Buzz's personality

846
00:42:30,647 --> 00:42:33,750
that bothered a lot
of the commanders.

847
00:42:33,750 --> 00:42:37,721
So, here it is, what Deke
is giving Neil is a chance

848
00:42:37,721 --> 00:42:41,257
to bump Buzz off of his crew.

849
00:42:41,257 --> 00:42:42,559
And what does Neil say?

850
00:42:42,559 --> 00:42:45,629
I think this was
illuminating, Neil tells Deke

851
00:42:45,629 --> 00:42:49,299
that night, can I
think about it?

852
00:42:49,299 --> 00:42:51,935
Can I think about it overnight?

853
00:42:51,935 --> 00:42:53,436
Well, you know, that sort

854
00:42:53,436 --> 00:42:56,373
of tells you something
significant right there.

855
00:42:56,373 --> 00:42:59,275
I mean, Neil's going
to think about this.

856
00:42:59,275 --> 00:43:02,612
He comes back to Deke the
next night, next day or night,

857
00:43:02,612 --> 00:43:04,648
and he tells Deke two things.

858
00:43:04,648 --> 00:43:08,852
He says, one you know, Buzz has
been working with our crew fine,

859
00:43:08,852 --> 00:43:11,755
you know, I'm okay with Buzz.

860
00:43:11,755 --> 00:43:17,661
And I think Neil was probably
the best commander for Buzz

861
00:43:17,661 --> 00:43:19,162
to be put under honestly.

862
00:43:19,162 --> 00:43:21,164
I think, that Neil's
personality was

863
00:43:21,164 --> 00:43:24,701
such that he could handle Buzz
I think better than maybe some

864
00:43:24,701 --> 00:43:28,538
of the other commanders

could do it.

865
00:43:28,538 --> 00:43:31,207
So, that was part one, but I
think the really important part

866
00:43:31,207 --> 00:43:33,543
of Neil's answer
was, he told Deke,

867
00:43:33,543 --> 00:43:36,946
Lovell deserves a
command of his own.

868
00:43:36,946 --> 00:43:40,984
Instead of making him lunar
module pilot for me, for 11,

869
00:43:40,984 --> 00:43:43,820
when he gets back from 8, you
need to make him a commander.

870
00:43:43,820 --> 00:43:45,689
That's my advice to you.

871
00:43:45,689 --> 00:43:47,490
So, I think as much as wanting

872
00:43:47,490 --> 00:43:52,529
to make sure Buzz
doesn't get bumped,

873
00:43:52,529 --> 00:43:56,366
I think Neil was more concerned
that Lovell got a command.

874
00:43:56,366 --> 00:43:59,536
Lovell knew nothing
about this conversation,

875
00:43:59,536 --> 00:44:01,438
and of course Buzz, none
of them did, as I said.

876
00:44:01,438 --> 00:44:04,407
Neil never told this
story to anybody

877
00:44:04,407 --> 00:44:06,309
and Deke never wrote about it.

878
00:44:06,309 --> 00:44:09,779
And when Neil told me
about a month later,

879
00:44:09,779 --> 00:44:12,148
I interviewed Lovell
at the Astronaut Hall

880
00:44:12,148 --> 00:44:14,818
of Fame banquet in Dayton, Ohio.

881
00:44:14,818 --> 00:44:17,353
And I asked Lovell if he knew

882
00:44:17,353 --> 00:44:19,289
that this conversation
had taken place

883
00:44:19,289 --> 00:44:23,193
and that he had had a chance,
if Neil had agreed to become one

884
00:44:23,193 --> 00:44:25,495
of those who walked
on the moon first.

885
00:44:25,495 --> 00:44:28,031
And Lovell said he

knew nothing about it.

886
00:44:28,031 --> 00:44:30,100
Neil had never told
him that story.

887
00:44:30,100 --> 00:44:32,769
And I asked him, I said, well
you know, given what happens,

888
00:44:32,769 --> 00:44:35,772
that you're going to command
Apollo 13 and you don't get

889
00:44:35,772 --> 00:44:37,874
to the moon, you
have an accident.

890
00:44:37,874 --> 00:44:40,076
I said, wouldn't you have
preferred to be on the crew

891
00:44:40,076 --> 00:44:43,179
with Neil and be on the crew
that landed first on the moon.

892
00:44:43,179 --> 00:44:45,615
And he said well,
that's a tempting

893
00:44:45,615 --> 00:44:48,251
and very attractive notion,

894
00:44:48,251 --> 00:44:51,821
but I think maybe I
was on 13 for a reason.

895
00:44:51,821 --> 00:44:55,425
You know? And of course, we
know he did a remarkable job,

896
00:44:55,425 --> 00:44:58,695
as did his other crew members.

897
00:44:58,695 --> 00:45:03,199
But I think that's
an interesting story.

898
00:45:03,199 --> 00:45:06,903
So, it became Armstrong,
Collins, Aldrin.

899
00:45:06,903 --> 00:45:10,673
The backup for 11 was
Lovell, Anders and Fred Haise,

900
00:45:10,673 --> 00:45:14,043
and so they now after
10's successful,

901
00:45:14,043 --> 00:45:17,547
they move forward
with the plan to.

902
00:45:17,547 --> 00:45:20,316
They know that they're going
to give this landing a try,

903
00:45:20,316 --> 00:45:24,487
you know, and it's going
to be done in July.

904
00:45:24,487 --> 00:45:27,757
And again, to put this back into
context, you've seen the slide,

905
00:45:27,757 --> 00:45:34,063
you know, Neil is aware of all
of these contingent developments

906
00:45:34,063 --> 00:45:37,634
that lead up to his
crew and him being

907
00:45:37,634 --> 00:45:39,669
in the right place
at the right time.

908
00:45:39,669 --> 00:45:41,504
But he knew that it
was circumstances

909
00:45:41,504 --> 00:45:42,839
that put himself there.

910
00:45:42,839 --> 00:45:45,475
That if circumstances
had been different,

911
00:45:45,475 --> 00:45:47,911
it could've easily been one
of the other commanders.

912
00:45:47,911 --> 00:45:51,815
And so, that explains
Neil's position.

913
00:45:51,815 --> 00:45:53,983
That he just doesn't
deserve the kind of focus

914
00:45:53,983 --> 00:45:58,288
that a lot of people gave him.

915
00:45:58,288 --> 00:46:03,960
Now, up to this point, and
taking almost all of my time,

916
00:46:03,960 --> 00:46:07,630

is explaining the
contingencies that resulted

917
00:46:07,630 --> 00:46:09,399
in Armstrong being, you know,

918
00:46:09,399 --> 00:46:11,868
being the commander
of Apollo 11.

919
00:46:11,868 --> 00:46:14,537
And it was the first
landing attempt.

920
00:46:14,537 --> 00:46:17,373
You know, having said all
that, I certainly don't want,

921
00:46:17,373 --> 00:46:21,010
I need to emphasize that Neil
was certainly a great choice.

922
00:46:21,010 --> 00:46:25,415
I mean, as I said to you
about your four-minute video.

923
00:46:25,415 --> 00:46:28,117
I mean, you look at
that, and you go, duh,

924
00:46:28,117 --> 00:46:30,420
I mean this guy's
really prepared.

925
00:46:30,420 --> 00:46:33,156
Could anybody be better
prepared than him given the type

926
00:46:33,156 --> 00:46:35,325
of flying that he'd been doing?

927
00:46:35,325 --> 00:46:37,594
You know, especially
in the X-15,

928
00:46:37,594 --> 00:46:38,995
but this guy had proven himself.

929
00:46:38,995 --> 00:46:42,131
He was a true, he was
the real right stuff.

930
00:46:42,131 --> 00:46:46,469
He was a research
pilot, you know.

931
00:46:46,469 --> 00:46:49,138
There was one line in,
and I love your video,

932
00:46:49,138 --> 00:46:51,241
so I'm not quarreling with
the video, but I'm trying

933
00:46:51,241 --> 00:46:52,508
to use it to make a point.

934
00:46:52,508 --> 00:46:54,310
There's one line in
there about how it said,

935
00:46:54,310 --> 00:46:58,948
Neil approached the
engineers or talked

936
00:46:58,948 --> 00:47:01,885
to the engineers
about this or that.

937

00:47:01,885 --> 00:47:04,020
My objection to that phrasing

938
00:47:04,020 --> 00:47:07,891
in that narration is
Neil was an engineer.

939
00:47:07,891 --> 00:47:10,260
It isn't like he went over to
talk to people he didn't know

940
00:47:10,260 --> 00:47:12,095
who they were or how they think.

941
00:47:12,095 --> 00:47:14,964
He was, first and foremost,
and engineer himself.

942
00:47:14,964 --> 00:47:16,900
So, when he went to
talk to engineers,

943
00:47:16,900 --> 00:47:19,102
they weren't just talking to
a pilot, they were talking

944
00:47:19,102 --> 00:47:22,405
to a guy who had an aeronautical
engineering degree from Purdue

945
00:47:22,405 --> 00:47:25,074
and knew engineering
very, very well.

946
00:47:25,074 --> 00:47:27,110
So, he was one of
them, you know.

947
00:47:27,110 --> 00:47:30,013
It wasn't like he was doing

anything out of the ordinary.

948
00:47:32,649 --> 00:47:36,152
My biography, of course, goes
all the way to the beginning,

949
00:47:36,152 --> 00:47:38,321
and that's what biographies
need to do.

950
00:47:38,321 --> 00:47:43,059
And if you're really trying to
explain why Neil was qualified

951
00:47:43,059 --> 00:47:46,296
and why he was in the position
to be the first man on the moon,

952
00:47:46,296 --> 00:47:51,467
you know I believe that the
child is the father of the man.

953
00:47:51,467 --> 00:47:55,838
You know, you have to
understand how Neil grew up.

954
00:47:55,838 --> 00:47:57,740
What kind of community
he came from.

955
00:47:57,740 --> 00:47:59,442
What his parents were like.

956
00:47:59,442 --> 00:48:01,077
I mean, I think all
of that helps to,

957
00:48:01,077 --> 00:48:03,579
you can't understand the
development of personality

958
00:48:03,579 --> 00:48:06,249
of an individual without
going through all of that.

959
00:48:06,249 --> 00:48:08,017
One point I want to make with
this, you know we're going

960
00:48:08,017 --> 00:48:09,786
to be celebrating his
birthday on the 65th

961
00:48:09,786 --> 00:48:11,921
of August, right, couple days.

962
00:48:11,921 --> 00:48:13,990
He would've turned 87.

963
00:48:13,990 --> 00:48:17,627
He was born in August 5th 1930.

964
00:48:17,627 --> 00:48:26,703
One thing that, I say this half
seriously, you could not be

965
00:48:27,470 --> 00:48:28,538
on the first crew to land

966
00:48:28,538 --> 00:48:32,642
on the moon unless
you were born in 1930.

967
00:48:32,642 --> 00:48:35,912
You had to be born in
1930, that's just a fact,

968
00:48:35,912 --> 00:48:40,683
because Aldrin, Collins and

Armstrong were all born in 1930.

969
00:48:40,683 --> 00:48:43,152
Now, you could say, well
Dr. Hansen's just joking

970
00:48:43,152 --> 00:48:46,189
with us here, but the
bigger point is, you know,

971
00:48:46,189 --> 00:48:50,693
where all of us are born in a
particular continuum of time

972
00:48:50,693 --> 00:48:55,264
and space, and if they
had been born in 1925,

973
00:48:55,264 --> 00:48:59,635
I think Glenn was born around
that time, mid 20s, you know,

974
00:48:59,635 --> 00:49:02,905
they would have probably
been a little too old

975
00:49:02,905 --> 00:49:04,507
for the lunar mission.

976
00:49:04,507 --> 00:49:07,043
If they'd been born in 1935,

977
00:49:07,043 --> 00:49:09,078
they would have been a
little too young for it.

978
00:49:09,078 --> 00:49:12,982
They were born at a time
when, okay, the 1930,

979
00:49:12,982 --> 00:49:17,520
World War II begins for
the United States in 1941.

980
00:49:17,520 --> 00:49:19,822
They were 11, so they
don't have to go to war.

981
00:49:19,822 --> 00:49:21,157
They're not in the
second World War,

982
00:49:21,157 --> 00:49:22,759
but they have that
experience as.

983
00:49:22,759 --> 00:49:25,728
I mean, Neil's a part of the
Boy Scouts that's identifying

984
00:49:25,728 --> 00:49:29,298
airplanes for civil
defense all during the war.

985
00:49:29,298 --> 00:49:30,666
You know, and then
he goes to college

986
00:49:30,666 --> 00:49:33,069
in an immediate post-war period.

987
00:49:33,069 --> 00:49:36,272
Then Korea breaks
out, of course,

988
00:49:36,272 --> 00:49:38,574
by that time he's
become really passionate

989

00:49:38,574 --> 00:49:41,244
about airplanes,
building models.

990
00:49:41,244 --> 00:49:43,913
He got his pilot's
license at age 16.

991
00:49:43,913 --> 00:49:47,183
This is what the little grass
airfield looks like today

992
00:49:47,183 --> 00:49:51,487
where he learned how to fly when
he was just a young teenager.

993
00:49:51,487 --> 00:49:53,723
He goes to Purdue in 1947.

994
00:49:53,723 --> 00:49:56,059
He had skipped a year
of school because he was

995
00:49:56,059 --> 00:49:58,327
so smart and so well read.

996
00:49:58,327 --> 00:50:00,029
I think he skipped second grade.

997
00:50:00,029 --> 00:50:04,100
So he graduated, he
entered Purdue at 17.

998
00:50:04,100 --> 00:50:08,471
He is on a scholarship from
the navy, so he you know,

999
00:50:08,471 --> 00:50:12,608
has to take some
special courses.

1000
00:50:12,608 --> 00:50:15,478
And more importantly, when
the Korean conflict breaks

1001
00:50:15,478 --> 00:50:18,548
out in 1950, he has
to stop his education.

1002
00:50:18,548 --> 00:50:22,485
He gets called on to Pensacola,
he does naval aviation training.

1003
00:50:22,485 --> 00:50:24,987
He becomes a naval
aviator, and this is one

1004
00:50:24,987 --> 00:50:27,290
of my very favorite
pictures of Neil.

1005
00:50:27,290 --> 00:50:32,228
This is what he looked like on
March 2nd, 1950, 19-years-old,

1006
00:50:32,228 --> 00:50:35,031
after his very first
carrier landing.

1007
00:50:35,031 --> 00:50:38,468
I wish I had a close-up of
his face there, but he looks

1008
00:50:38,468 --> 00:50:41,704
like he's about, what,
12 or 13-years-old,

1009
00:50:41,704 --> 00:50:45,108
but it's just a remarkable
picture.

1010
00:50:45,108 --> 00:50:49,712
And he then goes on, he gets put
into fighter squadron 51, VF-51.

1011
00:50:49,712 --> 00:50:53,516
He's the youngest member of that
squadron, and he goes to Korea

1012
00:50:53,516 --> 00:50:57,620
and he flies 78 combat missions.

1013
00:50:57,620 --> 00:51:01,224
This is a point that, if
there's anybody in the air force

1014
00:51:01,224 --> 00:51:05,528
out there today, you're just
going to have to deal with this.

1015
00:51:05,528 --> 00:51:08,598
It's just a fact, that six of
the seven commanders selected

1016
00:51:08,598 --> 00:51:11,234
for the lunar landings
were naval aviators.

1017
00:51:11,234 --> 00:51:13,569
Dave Scott was the
one exception.

1018
00:51:13,569 --> 00:51:17,306
And the man who picked
those commanders, remember,

1019
00:51:17,306 --> 00:51:19,842
was Deke Slayton, and what
service did he come from?

1020
00:51:19,842 --> 00:51:21,410
United States Air Force.

1021
00:51:21,410 --> 00:51:24,380
So, you know, make
what you want of this.

1022
00:51:24,380 --> 00:51:27,884
I had a really nasty letter
from an air force pilot

1023
00:51:27,884 --> 00:51:29,218
after my book came out.

1024
00:51:29,218 --> 00:51:33,389
He said, you know, that he
didn't see any reason why naval

1025
00:51:33,389 --> 00:51:35,625
aviators were any better

1026
00:51:35,625 --> 00:51:38,694
or couldn't have done
just as good a job.

1027
00:51:38,694 --> 00:51:43,065
And I didn't argue with
him, I just here's the fact.

1028
00:51:43,065 --> 00:51:44,467
Deal with it.

1029
00:51:44,467 --> 00:51:47,270
For some reason, you know, is
there something in the training

1030
00:51:47,270 --> 00:51:49,739
of a naval aviator,
especially the carrier,

1031
00:51:49,739 --> 00:51:52,375
landing on carriers.

1032
00:51:52,375 --> 00:51:55,244
You know, maybe there
was something there,

1033
00:51:55,244 --> 00:51:56,979
but that's just what happened.

1034
00:51:56,979 --> 00:51:59,048
So, here's Neil as
a jetfighter pilot.

1035
00:51:59,048 --> 00:52:01,717
He flew panther jets in Korea.

1036
00:52:01,717 --> 00:52:04,287
Little arrow's pointing to him.

1037
00:52:04,287 --> 00:52:06,222
Incredible experience.

1038
00:52:06,222 --> 00:52:09,625
Extremely formative, and
I tell you, his feelings

1039
00:52:09,625 --> 00:52:12,995
for his squadron mates that were
in Korea with him on the Sea

1040
00:52:12,995 --> 00:52:17,133
of Japan when these raids and
bombing raids and strafing

1041
00:52:17,133 --> 00:52:21,070
and all they did in North Korea.

1042
00:52:21,070 --> 00:52:24,807
Neil would go to every reunion
of his fighter squadron mates.

1043
00:52:24,807 --> 00:52:27,643
He was a very reluctant attendee

1044
00:52:27,643 --> 00:52:29,845
at the reunions of
the astronauts.

1045
00:52:29,845 --> 00:52:32,782
He really had a strong
feeling for these guys.

1046
00:52:32,782 --> 00:52:34,817
They took such great
care of him.

1047
00:52:34,817 --> 00:52:37,687
And then, of course,
we have his story here.

1048
00:52:37,687 --> 00:52:40,022
And since you know
a lot about that.

1049
00:52:44,026 --> 00:52:45,995
Again, the only one
of his astronaut class

1050
00:52:45,995 --> 00:52:48,397
who had done any flying in
rocket-powered aircraft.

1051
00:52:48,397 --> 00:52:52,034
This is one of the larger points
I make, and I'll stop with this

1052

00:52:52,034 --> 00:52:53,302
and get questions from you.

1053
00:52:53,302 --> 00:52:54,971
I mean, I could go on.

1054
00:52:54,971 --> 00:52:57,573
You could spend the
rest of the day with me,

1055
00:52:57,573 --> 00:52:59,175
but I don't think you're
allowed to do that.

1056
00:52:59,175 --> 00:53:01,210
[Laughter]

1057
00:53:01,210 --> 00:53:06,749
But you know, in literature
about Armstrong, in particular,

1058
00:53:06,749 --> 00:53:11,754
you get these stories that,
you know, this idea that going

1059
00:53:11,754 --> 00:53:14,757
to the moon came out of
an impulse, you know,

1060
00:53:14,757 --> 00:53:19,195
that was looking at the stars
and looking through telescopes

1061
00:53:19,195 --> 00:53:22,832
and dreaming about other worlds.

1062
00:53:22,832 --> 00:53:24,967
And there were stories
that turned out not

1063
00:53:24,967 --> 00:53:28,604
to be true stories that people
told about Neil as a boy.

1064
00:53:28,604 --> 00:53:30,473
That Neil was really
into science-fiction

1065
00:53:30,473 --> 00:53:33,643
and that he was going to
a neighbor's house to look

1066
00:53:33,643 --> 00:53:35,578
through telescopes every night.

1067
00:53:35,578 --> 00:53:38,648
Turns out that these stories
are made-up by people who wanted

1068
00:53:38,648 --> 00:53:40,650
to be part of Neil's story.

1069
00:53:40,650 --> 00:53:42,118
Neil didn't do those things.

1070
00:53:42,118 --> 00:53:44,954
Neil was the, remember
the picture I showed you

1071
00:53:44,954 --> 00:53:46,689
of the passion for airplanes.

1072
00:53:46,689 --> 00:53:48,591
He was the model-builder.

1073
00:53:48,591 --> 00:53:52,261
You know, he was the guy having
his little brother and sister,

1074
00:53:52,261 --> 00:53:55,631
taking some of the models
that weren't his best ones,

1075
00:53:55,631 --> 00:53:57,566
he turned them into
flight articles.

1076
00:53:57,566 --> 00:53:58,868
Test-flight articles.

1077
00:53:58,868 --> 00:54:01,304
He had taken them up to
the upstairs bedroom window

1078
00:54:01,304 --> 00:54:04,407
and told them how he wanted
them tossed out of the window.

1079
00:54:04,407 --> 00:54:06,309
And so his little brother
and sister are tossing

1080
00:54:06,309 --> 00:54:10,012
out his models, and he's
down on the grass driveway

1081
00:54:10,012 --> 00:54:12,014
with popsicle sticks marking

1082
00:54:12,014 --> 00:54:14,717
where the glide path
ends for each one.

1083
00:54:14,717 --> 00:54:17,687
And keeping track in a
notebook, you know, how they do.

1084
00:54:17,687 --> 00:54:20,756

And then picking them all up,
running them back up again.

1085
00:54:20,756 --> 00:54:23,359
And then sometimes if they
got really bad, he'd set them

1086
00:54:23,359 --> 00:54:25,895
on fire and he'd throw them
out the window on fire.

1087
00:54:25,895 --> 00:54:28,831
I mean, that was beyond
the test program I think.

1088
00:54:28,831 --> 00:54:31,500
You know, test program
was over at that point.

1089
00:54:31,500 --> 00:54:34,203
But here he was, a
little proto-engineer

1090
00:54:34,203 --> 00:54:36,072
at age eight or nine-years-old.

1091
00:54:36,072 --> 00:54:40,810
He became, his path
and our country's path

1092
00:54:40,810 --> 00:54:44,547
to the moon landings wasn't
really a path of the dreamers

1093
00:54:44,547 --> 00:54:47,316
and the science-fiction
people, it was the path

1094
00:54:47,316 --> 00:54:51,954
of the technology of flight as

it was developing from the 1930s

1095
00:54:51,954 --> 00:54:54,223
through the second World War.

1096
00:54:54,223 --> 00:54:56,359
The arrival of jets and rockets.

1097
00:54:56,359 --> 00:54:59,895
The capabilities of
moving up farther

1098
00:54:59,895 --> 00:55:02,631
and faster into the atmosphere.

1099
00:55:02,631 --> 00:55:06,702
Doing the X-15 program,
and then having rockets

1100
00:55:06,702 --> 00:55:10,439
that could take spacecraft
into orbit and beyond.

1101
00:55:10,439 --> 00:55:13,709
Neil was part, and that's why
I go back to this born in 1930,

1102
00:55:13,709 --> 00:55:18,080
he was like perfectly, those
folks were perfectly timed to go

1103
00:55:18,080 --> 00:55:21,784
with the evolution
of the technology.

1104
00:55:21,784 --> 00:55:25,855
And so, that helps to
explain as much as anything.

1105

00:55:25,855 --> 00:55:30,626
Now I want to go back to
the very start and I can,

1106
00:55:30,626 --> 00:55:32,361
because I started
with this and I feel

1107
00:55:32,361 --> 00:55:34,029
like I have to stop with it.

1108
00:55:38,100 --> 00:55:40,302
Here we go.

1109
00:55:40,302 --> 00:55:41,937
Which one of these do
you want me to take care

1110
00:55:41,937 --> 00:55:44,340
of in questions and answers.

1111
00:55:44,340 --> 00:55:48,010
Maybe I should at least say
something about number five.

1112
00:55:50,446 --> 00:55:53,516
The way that the interior of
the layout of the LEM was,

1113
00:55:53,516 --> 00:55:56,552
the way it was set
up, there was concern

1114
00:55:56,552 --> 00:56:00,189
about how two astronauts
inside of it could move around.

1115
00:56:00,189 --> 00:56:02,725
Once they had their EVA
backpacks on, you know,

1116
00:56:02,725 --> 00:56:05,361
which were pretty
bulky and sizable.

1117
00:56:05,361 --> 00:56:08,564
The wall of the LEM was so
thin you could stick a pencil

1118
00:56:08,564 --> 00:56:09,799
through it at different places.

1119
00:56:09,799 --> 00:56:11,634
And it had fuses and
switches and levers

1120
00:56:11,634 --> 00:56:14,537
and there was a real concern
that two astronauts walking

1121
00:56:14,537 --> 00:56:17,573
around inside the LEM, if
there was too much movement

1122
00:56:17,573 --> 00:56:19,041
that they could damage
the spacecraft.

1123
00:56:19,041 --> 00:56:20,109
And they didn't want to do that.

1124
00:56:20,109 --> 00:56:21,844
They didn't want to do that.

1125
00:56:21,844 --> 00:56:27,917
So when Slayton explains to the
press and then to the astronauts

1126
00:56:27,917 --> 00:56:32,221

as to why the commander
is going to go out first,

1127
00:56:32,221 --> 00:56:35,724
he uses this technical
explanation.

1128
00:56:35,724 --> 00:56:39,495
Well, the way the hatch
opens up, it's easiest

1129
00:56:39,495 --> 00:56:42,832
for the commander to go out,
if the lunar module pilot has

1130
00:56:42,832 --> 00:56:45,734
to go around, you know,
that could cause a problem.

1131
00:56:45,734 --> 00:56:48,471
So we're just doing
it on that basis.

1132
00:56:48,471 --> 00:56:50,906
And the reason it was an issue
at all was one would think,

1133
00:56:50,906 --> 00:56:53,275
well, doesn't the commander
always go out first?

1134
00:56:53,275 --> 00:56:56,245
Well there had been a precedent
set in the Gemini program

1135
00:56:56,245 --> 00:56:58,347
where the first space
walks took place

1136
00:56:58,347 --> 00:57:02,384

in the United States program,
where the precedent was

1137
00:57:02,384 --> 00:57:04,487
that the commander
stayed in the spacecraft,

1138
00:57:04,487 --> 00:57:08,491
and the other guy went
out and did the EVA.

1139
00:57:08,491 --> 00:57:10,693
The commander was supposed
to stay with the spacecraft.

1140
00:57:10,693 --> 00:57:13,229
So, as they moved
into Apollo there was

1141
00:57:13,229 --> 00:57:15,364
that precedence set by Gemini.

1142
00:57:15,364 --> 00:57:18,400
And in the press, and even among
the astronauts, they're kind

1143
00:57:18,400 --> 00:57:21,103
of thinking well, you know, this
is the way we did it in Gemini.

1144
00:57:21,103 --> 00:57:23,873
Maybe we'll do it in
Apollo that way as well.

1145
00:57:23,873 --> 00:57:25,674
And Buzz liked that precedent.

1146
00:57:25,674 --> 00:57:27,443
He thought that was a
really good precedent.

1147
00:57:27,443 --> 00:57:29,845
And he thought that's
how it should be done.

1148
00:57:29,845 --> 00:57:34,817
Well, the fact of the matter is,
two facts, two family and facts,

1149
00:57:34,817 --> 00:57:37,520
and then I'll stop
for questions.

1150
00:57:37,520 --> 00:57:40,389
I interviewed Alan
Bean about this issue.

1151
00:57:40,389 --> 00:57:44,493
And Bean was Buzz Aldrin
for Apollo 12, right.

1152
00:57:44,493 --> 00:57:46,929
He was Pete Conrad's Buzz.

1153
00:57:46,929 --> 00:57:50,299
And I said to him, well,
didn't the interior layout

1154
00:57:50,299 --> 00:57:53,168
of the LEM dictate
how this was done?

1155
00:57:53,168 --> 00:57:55,938
He said Jim, that was all BS.

1156
00:57:55,938 --> 00:57:57,740
He said it would
have been very easy.

1157

00:57:57,740 --> 00:58:01,410
If they wanted the lunar
module pilot to go out first,

1158
00:58:01,410 --> 00:58:06,549
we would have just, before we
don the outfit, with the gear,

1159
00:58:06,549 --> 00:58:08,851
with the backpack,
to go out, you know,

1160
00:58:08,851 --> 00:58:12,488
when we're still just kind of in
cities, inside the spacecraft,

1161
00:58:12,488 --> 00:58:14,590
we'd just walk and
change places.

1162
00:58:14,590 --> 00:58:17,192
And then we put on our stuff.

1163
00:58:17,192 --> 00:58:19,395
I could have been on that
side putting on my stuff

1164
00:58:19,395 --> 00:58:20,663
and could have been right out.

1165
00:58:20,663 --> 00:58:22,798
So there was no reason in
the world that the layout

1166
00:58:22,798 --> 00:58:27,202
of the LEM, if they wanted
the module pilot out first,

1167
00:58:27,202 --> 00:58:29,672
it could have happened,

no problem.

1168
00:58:29,672 --> 00:58:31,440
So that's one point.

1169
00:58:31,440 --> 00:58:34,009
Second point, and this
was something also

1170
00:58:34,009 --> 00:58:36,078
that was a revelation
in my book.

1171
00:58:36,078 --> 00:58:41,450
There was a meeting between
four key people in Houston,

1172
00:58:41,450 --> 00:58:44,153
George Low, who you've
heard mentioned before,

1173
00:58:44,153 --> 00:58:46,855
the audacious proposal
for Apollo 8.

1174
00:58:46,855 --> 00:58:49,024
Bob Gilruth, the head of
the Spacecraft Center,

1175
00:58:49,024 --> 00:58:52,061
that king Johnson Space Center.

1176
00:58:52,061 --> 00:58:55,397
Chris Craft who was
earliest flight director.

1177
00:58:55,397 --> 00:58:58,500
And Deke Slayton, chief
of the astronauts.

1178
00:58:58,500 --> 00:59:01,670
And they had this
meeting, and Craft has,

1179
00:59:01,670 --> 00:59:03,672
you know, told me about this.

1180
00:59:03,672 --> 00:59:07,743
That it was a meeting about
what was going to happen

1181
00:59:07,743 --> 00:59:09,778
to the guy that was first out.

1182
00:59:09,778 --> 00:59:13,415
And they knew that
whoever it was was going

1183
00:59:13,415 --> 00:59:16,585
to be world famous, was going
to become a historic figure.

1184
00:59:16,585 --> 00:59:18,554
He's going to be on
all the history books,

1185
00:59:18,554 --> 00:59:21,557
one to step out on
another heavenly body.

1186
00:59:21,557 --> 00:59:24,593
It was going to be another
Lindbergh that's going to,

1187
00:59:24,593 --> 00:59:26,061
who knew what all
was going to happen.

1188
00:59:26,061 --> 00:59:28,263

But they were convinced
it was going to be,

1189
00:59:28,263 --> 00:59:30,933
this person was going to
be under the spotlight

1190
00:59:30,933 --> 00:59:33,102
for the rest of his life.

1191
00:59:33,102 --> 00:59:35,237
And who did they
have to choose from?

1192
00:59:35,237 --> 00:59:39,408
Neil Armstrong, modest, no ego.

1193
00:59:39,408 --> 00:59:42,144
They were confident he would
never try to take advantage

1194
00:59:42,144 --> 00:59:45,948
or exploit the celebrity,
the position.

1195
00:59:45,948 --> 00:59:49,952
Or you had Buzz Aldrin,
who they knew fairly well

1196
00:59:49,952 --> 00:59:52,755
that Buzz was a quite
different sort of person.

1197
00:59:52,755 --> 00:59:57,493
And it was unanimous, they
didn't really even have to,

1198
00:59:57,493 --> 00:59:59,561
there wasn't like a
vote taken or anything.

1199
00:59:59,561 --> 01:00:02,498
They all agreed, it
has to be Armstrong.

1200
01:00:02,498 --> 01:00:04,733
Neil's the perfect guy for this.

1201
01:00:04,733 --> 01:00:05,868
You know, we can trust him.

1202
01:00:05,868 --> 01:00:08,537
He'll handle this
extremely well.

1203
01:00:08,537 --> 01:00:13,575
Buzz, he's, we don't know
what he'll do, you know.

1204
01:00:13,575 --> 01:00:15,611
And so there was this decision.

1205
01:00:15,611 --> 01:00:18,814
And of course, Deke
Slayton couldn't come out of

1206
01:00:18,814 --> 01:00:21,517
that meeting and tell,

1207
01:00:21,517 --> 01:00:24,253
well really tell anybody
the truth of the matter.

1208
01:00:24,253 --> 01:00:26,055
He couldn't go to the
press and say, yes,

1209
01:00:26,055 --> 01:00:27,823
we've decided it's going

to be Commander Armstrong

1210
01:00:27,823 --> 01:00:30,325
because we just don't
trust Aldrin to go do this.

1211
01:00:30,325 --> 01:00:32,194
I mean, you can't
say that, right.

1212
01:00:32,194 --> 01:00:33,829
And you can't go
to the astronauts.

1213
01:00:33,829 --> 01:00:35,631
I mean if you're going
to get Buzz to calm down,

1214
01:00:35,631 --> 01:00:38,867
because he had been going to
Collins' office and other people

1215
01:00:38,867 --> 01:00:41,804
and trying to campaign behind
the scenes as to why he thought,

1216
01:00:41,804 --> 01:00:44,206
well shouldn't that Gemini
president still be in place?

1217
01:00:44,206 --> 01:00:46,475
And, you know, I'm a lot
more talkative than Neil.

1218
01:00:46,475 --> 01:00:50,079
Neil's not going to go out there
and be articulate and, you know,

1219
01:00:50,079 --> 01:00:53,215
the space program needs

somebody to really speak it up.

1220
01:00:53,215 --> 01:00:55,751
And so Buzz, behind the scenes,
was kind of pushing this.

1221
01:00:55,751 --> 01:00:59,922
Although he denies a lot of
this, and has denied a lot

1222
01:00:59,922 --> 01:01:02,091
of this in later years.

1223
01:01:02,091 --> 01:01:05,728
But, you know, Slayton couldn't
go to Buzz and say Buzz,

1224
01:01:05,728 --> 01:01:06,695
we just don't trust you.

1225
01:01:06,695 --> 01:01:08,797
You know, it's got to be Neil.

1226
01:01:08,797 --> 01:01:12,167
So they stayed with
the technical reason.

1227
01:01:12,167 --> 01:01:14,670
They stayed with, oh it's just
the, you know, we're dictated

1228
01:01:14,670 --> 01:01:16,438
by the interior of the LEM.

1229
01:01:16,438 --> 01:01:19,608
And, you know, it's,
Al Bean knows it's BS.

1230
01:01:19,608 --> 01:01:21,610

And I think a lot of
other people know it's BS.

1231
01:01:21,610 --> 01:01:24,847
But it's amazing, again, if
you talk to Buzz about it.

1232
01:01:24,847 --> 01:01:27,983
And even if you talk
to Neil about it.

1233
01:01:27,983 --> 01:01:31,353
When I did talk to Neil about
it, Neil would always sort

1234
01:01:31,353 --> 01:01:33,288
of focus on that
explanation too.

1235
01:01:33,288 --> 01:01:36,658
Because he didn't, I guess
he just, maybe he didn't know

1236
01:01:36,658 --> 01:01:38,327
about the story of
the private meeting.

1237
01:01:38,327 --> 01:01:41,897
Because that did come
a little bit later.

1238
01:01:43,031 --> 01:01:44,733
Civilian, that's the
last thing I'll say.

1239
01:01:44,733 --> 01:01:47,536
There are still people
who say NASA picked him

1240
01:01:47,536 --> 01:01:49,004

because he was a civilian.

1241
01:01:49,004 --> 01:01:51,874
Well, he was a civilian at
the time of the program,

1242
01:01:51,874 --> 01:01:53,809
the Apollo 11 mission.

1243
01:01:53,809 --> 01:01:57,312
But he had been a combat
pilot, you know, in Korea.

1244
01:01:57,312 --> 01:02:01,450
And he had, you know, resigned
his officer's commission

1245
01:02:01,450 --> 01:02:03,619
in the late 50s early 60s.

1246
01:02:03,619 --> 01:02:06,054
So he was an active military.

1247
01:02:06,054 --> 01:02:09,391
And there was, the
press did kind of think,

1248
01:02:09,391 --> 01:02:10,492
well this makes sense.

1249
01:02:10,492 --> 01:02:11,960
We're in the Cold War.

1250
01:02:11,960 --> 01:02:14,029
NASA's a civilian agency.

1251
01:02:14,029 --> 01:02:16,465
Apollo's not a military program.

1252
01:02:16,465 --> 01:02:20,369
So it must make sense for
NASA to put out Armstrong

1253
01:02:20,369 --> 01:02:22,638
as the main figure
of this mission,

1254
01:02:22,638 --> 01:02:24,773
first man on the moon, civilian.

1255
01:02:24,773 --> 01:02:26,074
Well, the historians
who've looked

1256
01:02:26,074 --> 01:02:29,344
into this are quite confident
that that had nothing

1257
01:02:29,344 --> 01:02:30,846
to do with the choice.

1258
01:02:30,846 --> 01:02:34,583
It really had to do, you know,
with those contingent factors

1259
01:02:34,583 --> 01:02:37,519
of how those crews lined
up and whose turn it was

1260
01:02:37,519 --> 01:02:39,655
and why mission needed
to be done.

1261
01:02:39,655 --> 01:02:43,225
Now, it maybe had some
beneficial side effects,

1262
01:02:43,225 --> 01:02:45,427

unintended benefits
of being able to say,

1263
01:02:45,427 --> 01:02:46,962
you know, he's a civilian.

1264
01:02:46,962 --> 01:02:49,431
But NASA never really
promoted that,

1265
01:02:49,431 --> 01:02:52,434
and it was just really
picked up in the press

1266
01:02:52,434 --> 01:02:55,804
as something they thought
must have been a factor.

1267
01:02:55,804 --> 01:02:57,472
So, I'm out of time.

1268
01:02:57,472 --> 01:02:58,941
I'm beyond time, I think.

1269
01:02:58,941 --> 01:03:02,344
So, you know, my wife when I
was writing the book I talked

1270
01:03:02,344 --> 01:03:03,712
about nothing but Neil.

1271
01:03:03,712 --> 01:03:05,881
She gave me this rule
that I could only talk

1272
01:03:05,881 --> 01:03:07,716
about him once per meal.

1273
01:03:07,716 --> 01:03:11,220

But she didn't give
me a time limit.

1274
01:03:11,220 --> 01:03:16,758
So, even with time limits, you
know, it doesn't work too well.

1275
01:03:16,758 --> 01:03:19,394
So Cam, is there time for
questions, or do I need

1276
01:03:19,394 --> 01:03:21,230
to tell them to go back to work?

1277
01:03:21,230 --> 01:03:24,066
>> I wouldn't make them
go back to work anyway.

1278
01:03:24,066 --> 01:03:26,134
So I do have a question for you.

1279
01:03:26,134 --> 01:03:26,835
>> Yeah.

1280
01:03:26,835 --> 01:03:28,303
>> You are the author

1281
01:03:28,303 --> 01:03:32,341
of the only authorized
biography of Neil Armstrong.

1282
01:03:32,341 --> 01:03:34,810
Did anybody else think
of writing the book?

1283
01:03:34,810 --> 01:03:36,778
And how did you get
to be that person?

1284

01:03:36,778 --> 01:03:39,681
>> Yeah, I think there were
lots, you know, in the years,

1285
01:03:39,681 --> 01:03:43,485
I'm still, I'm doing another
book on Neil that's, you know,

1286
01:03:43,485 --> 01:03:47,923
there are over 80,000 letters
to Neil, fan mail mostly,

1287
01:03:47,923 --> 01:03:49,658
in the archives at Purdue.

1288
01:03:49,658 --> 01:03:51,226
I'm going to publish book

1289
01:03:51,226 --> 01:03:55,264
in the anniversary year
called Dear Neil Armstrong,

1290
01:03:55,264 --> 01:03:57,232
Letters to the First
Man on the Moon.

1291
01:03:57,232 --> 01:04:00,702
So I've seen, I've read
through 80,000-some letters,

1292
01:04:00,702 --> 01:04:02,404
and some of them
are really amazing.

1293
01:04:02,404 --> 01:04:04,773
I mean, it gives you
a really good idea

1294
01:04:04,773 --> 01:04:06,241
of what he had to go through.

1295
01:04:06,241 --> 01:04:09,077
Because people were
asking him for everything.

1296
01:04:09,077 --> 01:04:11,246
I mean, they were never happy.

1297
01:04:11,246 --> 01:04:14,249
And if they didn't get what they
wanted they wrote nasty letters

1298
01:04:14,249 --> 01:04:15,918
back to him.

1299
01:04:15,918 --> 01:04:17,986
The letters are really,
really amazing.

1300
01:04:17,986 --> 01:04:19,254
They came from all
over the world.

1301
01:04:19,254 --> 01:04:20,689
And some of the letters
are fantastic.

1302
01:04:20,689 --> 01:04:23,125
I mean, they're wonderful
letters, nice letters.

1303
01:04:23,125 --> 01:04:27,796
But, to answer Cam's question,
is looking at the letters,

1304
01:04:27,796 --> 01:04:31,900
I found letters from, you
know, from Herman Wouk,

1305

01:04:31,900 --> 01:04:35,537
from James Michener,
from Stephen Ambrose,

1306
01:04:35,537 --> 01:04:38,407
from Norman Mailer
over the years,

1307
01:04:38,407 --> 01:04:41,944
wanting to write
Neil's life story.

1308
01:04:41,944 --> 01:04:48,216
So, authors much more qualified,
you know, better writers

1309
01:04:48,216 --> 01:04:50,752
than me, got turned on by Neil.

1310
01:04:50,752 --> 01:04:52,888
And I was turned on originally.

1311
01:04:52,888 --> 01:04:56,491
It's a long story, I won't
start as to how it ended

1312
01:04:56,491 --> 01:04:57,859
up that I got to do it.

1313
01:04:57,859 --> 01:05:02,230
I think in the end, bottom line,
is that he came to trust me.

1314
01:05:02,230 --> 01:05:06,268
And I had a background,
I had worked, you know,

1315
01:05:06,268 --> 01:05:09,838
David was kind enough to
hold up my Engineer in Charge

1316
01:05:09,838 --> 01:05:12,307
and Spaceflight Revolution
book on Langley's,

1317
01:05:12,307 --> 01:05:14,876
NAC and NASA Langley's
early history.

1318
01:05:14,876 --> 01:05:18,780
And I had shared
those books with Neil.

1319
01:05:18,780 --> 01:05:23,986
And I think Neil became
convinced that he,

1320
01:05:23,986 --> 01:05:26,488
some day he needed to
have a book like this.

1321
01:05:26,488 --> 01:05:28,757
He needed to agree to something
like this at some point.

1322
01:05:28,757 --> 01:05:32,661
He was 70, I think, when
I first contacted him.

1323
01:05:32,661 --> 01:05:36,231
And that I had a background
in writing about engineering

1324
01:05:36,231 --> 01:05:40,002
and writing about flight
research that he appreciated,

1325
01:05:40,002 --> 01:05:43,839
and he knew that I wasn't going
to sensationalize his story.

1326
01:05:43,839 --> 01:05:46,808
So I think, again,
timing is everything.

1327
01:05:46,808 --> 01:05:49,444
I think I caught him
at the right time.

1328
01:05:49,444 --> 01:05:53,715
I also grew up, you know, he
grew up in Northwestern Ohio.

1329
01:05:53,715 --> 01:05:55,584
I grew up in Northeastern
Indiana

1330
01:05:55,584 --> 01:05:58,387
about 50 miles from Wapakoneta.

1331
01:05:58,387 --> 01:06:04,359
And my accent even, and Neil's
accent, I mean, are similar.

1332
01:06:04,359 --> 01:06:06,495
And he came from
a farming family.

1333
01:06:06,495 --> 01:06:08,530
I came from a farming family.

1334
01:06:08,530 --> 01:06:10,699
He lived in Ohio,
went to Purdue.

1335
01:06:10,699 --> 01:06:12,934
I lived in Indiana,
went to Ohio State.

1336

01:06:12,934 --> 01:06:15,771
You know, and in fact,
the road from Fort Wayne

1337
01:06:15,771 --> 01:06:19,307
to Columbus goes right
past Wapakoneta, Ohio.

1338
01:06:19,307 --> 01:06:22,677
So all through graduate school
I was driving past the Armstrong

1339
01:06:22,677 --> 01:06:25,080
Museum, never thinking
that I would be doing this.

1340
01:06:25,080 --> 01:06:27,416
So it just, I just lucked out.

1341
01:06:27,416 --> 01:06:30,886
It was the biggest
moment in my career.

1342
01:06:30,886 --> 01:06:33,488
And getting to know him,
I mean, I had 55 hours

1343
01:06:33,488 --> 01:06:35,724
of tape recorded
interview with him.

1344
01:06:35,724 --> 01:06:36,858
You know, most people got lucky

1345
01:06:36,858 --> 01:06:38,627
to have any interview
time with him at all.

1346
01:06:38,627 --> 01:06:40,328
And if they did get it, I mean,

1347
01:06:40,328 --> 01:06:42,431
they had to immediately
ask what.

1348
01:06:42,431 --> 01:06:45,267
What did you feel like when
you stepped out on the moon?

1349
01:06:45,267 --> 01:06:47,502
And it was just like the last
thing in the world he'd want

1350
01:06:47,502 --> 01:06:51,106
to be asked for the
umpteenth millionth time.

1351
01:06:51,106 --> 01:06:52,874
Well I talked to
him for probably 30,

1352
01:06:52,874 --> 01:06:54,643
35 hours before I said anything

1353
01:06:54,643 --> 01:06:56,511
about the moon or
the space program.

1354
01:06:56,511 --> 01:06:58,146
We were talking about the navy.

1355
01:06:58,146 --> 01:07:00,582
We were talking about
what he was doing here.

1356
01:07:00,582 --> 01:07:04,686
And he'd much rather, some of
you that know him that are here,

1357

01:07:04,686 --> 01:07:07,355
know that he'd much rather talk
about airplanes than anything

1358
01:07:07,355 --> 01:07:09,057
to do with the space program.

1359
01:07:09,057 --> 01:07:11,960
And like I said, he would go
to his navy reunions, and,

1360
01:07:11,960 --> 01:07:14,029
you know, they'd have to
really badger him to try to get

1361
01:07:14,029 --> 01:07:16,364
to an astronaut event.

1362
01:07:16,364 --> 01:07:20,035
So I think I caught
him at the right time,

1363
01:07:20,035 --> 01:07:23,705
and for whatever reason,
I had the right toolkit.

1364
01:07:23,705 --> 01:07:26,908
I had the right toolkit and
the right attitude for it.

1365
01:07:26,908 --> 01:07:29,845
And the biggest compliment,
the only compliment he gave me,

1366
01:07:29,845 --> 01:07:32,614
which I think is a huge
compliment, if you know Neil.

1367
01:07:32,614 --> 01:07:35,851
This was his compliment to me

when we were done with the book.

1368
01:07:35,851 --> 01:07:39,554
And that was Jim, he shook
my hand, and he said, Jim,

1369
01:07:39,554 --> 01:07:43,592
you wrote exactly the book you
told me you were going to write.

1370
01:07:43,592 --> 01:07:45,927
That may not sound like
much of a compliment to you,

1371
01:07:45,927 --> 01:07:49,131
but you got to remember, this
was a guy who people had tried

1372
01:07:49,131 --> 01:07:52,167
to trick into, and
manipulate and exploit

1373
01:07:52,167 --> 01:07:54,169
and tell him one
thing and do another

1374
01:07:54,169 --> 01:07:57,305
for his whole life
post-Apollo 11.

1375
01:07:57,305 --> 01:08:00,208
And for somebody to do
an honest job for him

1376
01:08:00,208 --> 01:08:02,978
and do exactly what I told
him I was going to do,

1377
01:08:02,978 --> 01:08:05,914
and what's really remarkable

about Armstrong among the many,

1378
01:08:05,914 --> 01:08:10,185
many remarkable things, is
that once he gave me the okay,

1379
01:08:10,185 --> 01:08:12,521
all he did was answer
my questions.

1380
01:08:12,521 --> 01:08:15,056
He never said, now Jim I
want you to talk about this.

1381
01:08:15,056 --> 01:08:17,626
Or Jim, I don't want
you to talk about that.

1382
01:08:17,626 --> 01:08:19,361
He just answered my questions.

1383
01:08:19,361 --> 01:08:21,630
I would send the
questions in advance for two

1384
01:08:21,630 --> 01:08:23,798
or three days' worth
of interview.

1385
01:08:23,798 --> 01:08:25,934
You know, then we'd wait
another month or so.

1386
01:08:25,934 --> 01:08:27,636
I'd go back to Cincinnati.

1387
01:08:27,636 --> 01:08:30,972
And if I didn't, if I
hadn't been smart enough

1388
01:08:30,972 --> 01:08:33,542
and done enough research
in advance

1389
01:08:33,542 --> 01:08:37,045
to know what the
good questions were,

1390
01:08:37,045 --> 01:08:38,613
I wouldn't have gotten
the answers.

1391
01:08:38,613 --> 01:08:42,117
I mean Neil only answered
the questions I asked.

1392
01:08:42,117 --> 01:08:45,153
So if there was something that
I needed to know from his point

1393
01:08:45,153 --> 01:08:47,422
of view, well there
wasn't anything like that.

1394
01:08:47,422 --> 01:08:49,791
There was just, and that's
why, if you had taken,

1395
01:08:49,791 --> 01:08:52,327
and some people did,
take up the book to him.

1396
01:08:52,327 --> 01:08:56,231
There's this gorgeous picture of
a little boy, little blonde boy,

1397
01:08:56,231 --> 01:08:59,000
kind of looked like Neil as
a boy, walking with a copy

1398
01:08:59,000 --> 01:09:03,238
of my biography to Neil, you
know, and Neil's got this look

1399
01:09:03,238 --> 01:09:06,341
on his face is like,
I'm going to have

1400
01:09:06,341 --> 01:09:10,245
to tell this little boy I'm
not going to sign that book.

1401
01:09:10,245 --> 01:09:14,950
So if you wanted him
to sign First Man,

1402
01:09:14,950 --> 01:09:16,618
he would say, it's not my book.

1403
01:09:16,618 --> 01:09:17,552
It's Jim's book.

1404
01:09:17,552 --> 01:09:20,155
I don't sign Jim's
book, you know.

1405
01:09:20,155 --> 01:09:22,691
So that's just Neil.

1406
01:09:22,691 --> 01:09:25,227
And no other astronaut
that I know

1407
01:09:25,227 --> 01:09:29,764
of would have given an
author the independence

1408
01:09:29,764 --> 01:09:34,436
to write exactly what I wanted

to write without interference.

1409
01:09:34,436 --> 01:09:35,704
I mean, I got help from him.

1410
01:09:35,704 --> 01:09:37,072
I wanted his help.

1411
01:09:37,072 --> 01:09:39,074
I wanted to make sure I had
things as accurate as possible.

1412
01:09:39,074 --> 01:09:41,376
So we'd go over every chapter.

1413
01:09:41,376 --> 01:09:46,715
But he gave me an amazing
amount of autonomy.

1414
01:09:46,715 --> 01:09:48,917
And for that reason,
I think it's, I mean,

1415
01:09:48,917 --> 01:09:52,420
I think it's a special
book for that reason

1416
01:09:52,420 --> 01:09:55,323
because you just aren't going
to get other astronauts.

1417
01:09:55,323 --> 01:09:58,393
And not too many people,
generally celebrities who,

1418
01:09:58,393 --> 01:10:02,430
you know, just let some author
take off with their life story.

1419

01:10:02,430 --> 01:10:06,034
Any other questions?

1420
01:10:10,705 --> 01:10:14,276
>> So I want to ask on maybe
a reason that isn't up there,

1421
01:10:14,276 --> 01:10:18,980
any thought, of course Neil
did a lot of development of LL,

1422
01:10:18,980 --> 01:10:21,349
the training vehicle,
research vehicle.

1423
01:10:21,349 --> 01:10:22,317
>> Absolutely.

1424
01:10:22,317 --> 01:10:23,418
>> I think that was
his expertise.

1425
01:10:23,418 --> 01:10:26,254
So first time for a LEM,
landing on the moon.

1426
01:10:26,254 --> 01:10:28,023
I'd almost pick him.

1427
01:10:28,023 --> 01:10:29,891
>> Yeah, I agree with you.

1428
01:10:29,891 --> 01:10:33,161
And I would put that into
the package of slides

1429
01:10:33,161 --> 01:10:35,764
that where I was talking
about what he did here.

1430
01:10:35,764 --> 01:10:41,036
I mean, it's certainly no one
else had the hands-on intimacy,

1431
01:10:41,036 --> 01:10:43,071
not just with the
training vehicle.

1432
01:10:43,071 --> 01:10:46,141
I mean Neil will have a,
you know, an exciting time.

1433
01:10:46,141 --> 01:10:48,576
You know, he's going to have to
eject from the trainer in May

1434
01:10:48,576 --> 01:10:51,913
of 1968 before it explodes.

1435
01:10:51,913 --> 01:10:54,816
But he's involved
in the very genesis

1436
01:10:54,816 --> 01:10:58,053
of the lunar landing research
vehicle concept, you know.

1437
01:10:58,053 --> 01:11:01,589
And so that gives him
a special expertise

1438
01:11:01,589 --> 01:11:03,024
that the other ones didn't have.

1439
01:11:03,024 --> 01:11:05,627
Now I don't remember, I can't
recall any particular statement

1440
01:11:05,627 --> 01:11:10,498

from NASA ever that said
that linked that as a reason.

1441
01:11:10,498 --> 01:11:14,336
But certainly in the mix of
experience that Neil had,

1442
01:11:14,336 --> 01:11:18,006
that would be, you know,
right near the top.

1443
01:11:18,006 --> 01:11:20,342
So I think that's
an excellent point.

1444
01:11:20,342 --> 01:11:22,777
But even with all of that,
you know, having said that,

1445
01:11:22,777 --> 01:11:25,480
even though he was,
there's every good reason

1446
01:11:25,480 --> 01:11:29,851
to say he was maybe the best one
for this first landing mission,

1447
01:11:29,851 --> 01:11:33,722
I think from going back to
Deke Slayton's principle

1448
01:11:33,722 --> 01:11:37,225
that if it had worked out
where something flipped,

1449
01:11:37,225 --> 01:11:40,295
missions flipped, crew
assignments had to be changed,

1450
01:11:40,295 --> 01:11:42,397

I think Deke would have
had every confidence

1451
01:11:42,397 --> 01:11:48,169
in Pete Conrad doing it or
McDivitt doing it or, you know.

1452
01:11:48,169 --> 01:11:54,142
So as inevitable and ordained
and as appropriate as it seems

1453
01:11:54,142 --> 01:11:57,078
to us today that it
be Neil Armstrong,

1454
01:11:57,078 --> 01:11:59,881
one thing that I believe
deeply in history,

1455
01:11:59,881 --> 01:12:01,683
I think all historians do,

1456
01:12:01,683 --> 01:12:05,186
things didn't have
to happen at all.

1457
01:12:05,186 --> 01:12:08,022
And they certainly didn't have
to happen the way that they did.

1458
01:12:08,022 --> 01:12:09,357
There are reasons why they did.

1459
01:12:09,357 --> 01:12:13,228
And that's what historians
do, try to explain, you know,

1460
01:12:13,228 --> 01:12:17,298
all the different factors that
go into why something happened.

1461
01:12:17,298 --> 01:12:20,034
But sometimes you have to sort
of explain why it didn't happen.

1462
01:12:20,034 --> 01:12:23,071
Why the, the what ifs,
or the alternative paths,

1463
01:12:23,071 --> 01:12:24,272
why they weren't taken.

1464
01:12:24,272 --> 01:12:27,542
And I think history
becomes a lot more exciting

1465
01:12:27,542 --> 01:12:31,946
when you see it as almost
chaos theory, you know.

1466
01:12:31,946 --> 01:12:35,650
That things happen from
which unbelievably unexpected

1467
01:12:35,650 --> 01:12:37,051
events occur.

1468
01:12:37,051 --> 01:12:41,022
I mean what would have happened
if Sputnik had not been first?

1469
01:12:41,022 --> 01:12:43,425
What if the Americans had
launched the first satellite

1470
01:12:43,425 --> 01:12:46,294
and we would not have
had the Sputnik crisis,

1471

01:12:46,294 --> 01:12:50,198
which sort of launched
all of this, you know.

1472
01:12:50,198 --> 01:12:52,167
All kinds of things
would have been different

1473
01:12:52,167 --> 01:12:54,469
if Sputnik had not been first.

1474
01:12:54,469 --> 01:12:59,541
So that's a chaos moment.

1475
01:12:59,541 --> 01:13:00,108
Anybody else?

1476
01:13:00,108 --> 01:13:01,443
Yeah, over here.

1477
01:13:01,443 --> 01:13:02,911
>> So I was just curious,
you mentioned that there were

1478
01:13:02,911 --> 01:13:05,613
over 50 hours of interview time?

1479
01:13:05,613 --> 01:13:06,581
>> Yeah.

1480
01:13:06,581 --> 01:13:08,550
>> Are they available
for public?

1481
01:13:08,550 --> 01:13:09,384
>> They are.

1482
01:13:09,384 --> 01:13:10,685
They are in the Purdue archives.

1483
01:13:10,685 --> 01:13:14,189
All of my research
materials went to Purdue.

1484
01:13:14,189 --> 01:13:17,258
And all of Neil's
papers now are at Purdue.

1485
01:13:17,258 --> 01:13:19,093
And Purdue is digitizing.

1486
01:13:19,093 --> 01:13:21,863
All my recordings are
on microcassettes.

1487
01:13:21,863 --> 01:13:23,031
But they are digitizing.

1488
01:13:23,031 --> 01:13:24,532
They might be finished with it.

1489
01:13:24,532 --> 01:13:30,338
And I promoted a concept, and I
think they're thinking about it,

1490
01:13:30,338 --> 01:13:32,707
but you know, here was a guy
that was very hard to get

1491
01:13:32,707 --> 01:13:35,810
to through most of the years
of his life after Apollo 11.

1492
01:13:35,810 --> 01:13:36,978
Not doing interviews.

1493
01:13:36,978 --> 01:13:38,680
And he was hardly a recluse.

1494
01:13:38,680 --> 01:13:41,616
He made lots of appearances, but
he was kind of hard to get to.

1495
01:13:41,616 --> 01:13:43,818
And there was a lot
things he wouldn't,

1496
01:13:43,818 --> 01:13:45,353
didn't want to talk about.

1497
01:13:45,353 --> 01:13:49,357
But I had this idea that
you have now, put everything

1498
01:13:49,357 --> 01:13:51,459
that Neil ever said,
including my interviews

1499
01:13:51,459 --> 01:13:54,262
with him, make it digital.

1500
01:13:54,262 --> 01:13:57,332
Anybody from any computer
anywhere in the world could go

1501
01:13:57,332 --> 01:13:58,399
on to the Purdue website

1502
01:13:58,399 --> 01:14:01,336
and type a question
for Neil Armstrong.

1503
01:14:01,336 --> 01:14:05,907
And up would come Neil giving
you the answer on the audio

1504
01:14:05,907 --> 01:14:08,109

with maybe some supporting
documents.

1505
01:14:08,109 --> 01:14:10,378
Now, that would really
be maybe doing a,

1506
01:14:10,378 --> 01:14:13,248
me pulling a trick
on Neil, you know.

1507
01:14:13,248 --> 01:14:16,584
You weren't available to us
for four years, but by golly,

1508
01:14:16,584 --> 01:14:19,487
you know, we're going
to have instant,

1509
01:14:19,487 --> 01:14:21,556
your instant attention
from now on.

1510
01:14:21,556 --> 01:14:24,759
But Purdue thinks that's kind of
a cool idea to be able to have

1511
01:14:24,759 --> 01:14:27,061
that kind of immediate access.

1512
01:14:27,061 --> 01:14:31,633
So, and the technology is there
to do something like that.

1513
01:14:31,633 --> 01:14:36,304
>> Did Neil ever comment about
any disagreements that he had

1514
01:14:36,304 --> 01:14:38,907
with Buzz during the

mission or as they got close

1515
01:14:38,907 --> 01:14:42,043
to the landing time, or?

1516
01:14:42,043 --> 01:14:45,246
>> He was, I certainly
asked him a lot about Buzz.

1517
01:14:45,246 --> 01:14:49,851
And there were certain
issues for sure.

1518
01:14:49,851 --> 01:14:52,620
Their approach to simulations
was a little bit different.

1519
01:14:52,620 --> 01:14:54,455
There was one famous simulation

1520
01:14:54,455 --> 01:14:57,659
when the lunar landing
simulator crashes.

1521
01:14:57,659 --> 01:14:59,460
If you've ever seen
that, there's an episode

1522
01:14:59,460 --> 01:15:02,530
of the HBO mini-series
From the Earth to the Moon

1523
01:15:02,530 --> 01:15:04,899
where they actually
dramatized this time.

1524
01:15:04,899 --> 01:15:07,569
And Buzz had an approach
where he thought you needed

1525
01:15:07,569 --> 01:15:09,571
to win the simulation.

1526
01:15:09,571 --> 01:15:11,205
Neil thought you
needed to learn as much

1527
01:15:11,205 --> 01:15:13,207
from the simulation
as you could.

1528
01:15:13,207 --> 01:15:17,312
And so Neil would sometimes
let simulations run, you know,

1529
01:15:17,312 --> 01:15:19,514
farther than Buzz
thought they should go.

1530
01:15:19,514 --> 01:15:22,884
And there was one famous
instance where, you know,

1531
01:15:22,884 --> 01:15:25,453
the simulator crashes,
and you know,

1532
01:15:25,453 --> 01:15:27,956
it's clear that they're
dead in the simulation.

1533
01:15:27,956 --> 01:15:30,224
And Buzz is really
upset about this.

1534
01:15:30,224 --> 01:15:32,527
And Neil has to, you know,

1535
01:15:32,527 --> 01:15:35,063

Neil doesn't always
explain himself to people.

1536
01:15:35,063 --> 01:15:38,866
He didn't feel like he needed
to explain this really,

1537
01:15:38,866 --> 01:15:41,369
but this sort of
dragged into the evening.

1538
01:15:41,369 --> 01:15:43,771
And Buzz was telling
over a glass of scotch,

1539
01:15:43,771 --> 01:15:45,640
Buzz was talking to
Collins about this

1540
01:15:45,640 --> 01:15:47,008
and what had happened.

1541
01:15:47,008 --> 01:15:50,111
And it got noisy enough that
Neil comes out of his bedroom

1542
01:15:50,111 --> 01:15:52,180
and tells him to quiet it down.

1543
01:15:52,180 --> 01:15:56,184
And then sort of does
have to explain, well,

1544
01:15:56,184 --> 01:15:59,921
I pushed it as far as I did
because I needed to know how,

1545
01:15:59,921 --> 01:16:01,189
not only how we were
going to react

1546
01:16:01,189 --> 01:16:02,824
but how were the flight
directors going to react.

1547
01:16:02,824 --> 01:16:05,927
How is the whole mission
control going to react

1548
01:16:05,927 --> 01:16:07,729
if we kept pushing it?

1549
01:16:07,729 --> 01:16:10,198
You know, so we learned
what we needed to learn

1550
01:16:10,198 --> 01:16:12,867
from that simulation, and that's
why we're doing simulations is

1551
01:16:12,867 --> 01:16:15,203
not to win every simulation.

1552
01:16:15,203 --> 01:16:17,038
So there was that.

1553
01:16:17,038 --> 01:16:20,842
And I guess I could quickly show
you, there's one picture I think

1554
01:16:20,842 --> 01:16:25,980
that summarizes Neil's
relationship with Buzz.

1555
01:16:25,980 --> 01:16:29,450
Yeah, I may see it.

1556
01:16:29,450 --> 01:16:32,286
I'm sorry I'm going through a

lot of them fast, but this is,

1557
01:16:32,286 --> 01:16:35,156
this one I can't say
much better than this.

1558
01:16:35,156 --> 01:16:36,491
Yeah, there you go.

1559
01:16:36,491 --> 01:16:40,161
[Laughter]

1560
01:16:40,161 --> 01:16:41,796
That's kind of, you know,

1561
01:16:41,796 --> 01:16:45,600
although I would say it's
maybe not a totally accurate

1562
01:16:45,600 --> 01:16:49,037
portrayal, because I think
Buzz would be looking

1563
01:16:49,037 --> 01:16:51,639
at Neil wanting an answer.

1564
01:16:51,639 --> 01:16:55,176
And Neil would not, and
Neil wouldn't be answering,

1565
01:16:55,176 --> 01:16:56,277
you know, that.

1566
01:16:56,277 --> 01:16:58,413
And then there's, of
course there's the issue

1567
01:16:58,413 --> 01:17:01,282
that I won't be going into.

1568
01:17:01,282 --> 01:17:02,950
You can read about
it in the book.

1569
01:17:02,950 --> 01:17:04,819
But there's the issue,
of course,

1570
01:17:04,819 --> 01:17:06,688
I didn't get to a lot of slides.

1571
01:17:06,688 --> 01:17:09,090
There's the matter of
all the photographs taken

1572
01:17:09,090 --> 01:17:10,391
on the lunar surface.

1573
01:17:10,391 --> 01:17:14,028
Is that Neil or Buzz?

1574
01:17:14,028 --> 01:17:15,196
It's Buzz.

1575
01:17:19,333 --> 01:17:16,564
Is that Neil or Buzz?

1576
01:17:19,333 --> 01:17:21,869
Buzz. Whose footprint is that?

1577
01:17:21,869 --> 01:17:26,474
Buzz. Some people think

1578
01:17:26,474 --> 01:17:29,277
that Neil had the
camera the whole time

1579

01:17:29,277 --> 01:17:31,112
so Buzz couldn't take pictures.

1580
01:17:31,112 --> 01:17:32,780
Buzz had the camera, and
he took a lot of pictures.

1581
01:17:32,780 --> 01:17:34,315
He took pictures of
his own footprint.

1582
01:17:34,315 --> 01:17:38,219
You know, when I asked him
well why aren't there explicit

1583
01:17:38,219 --> 01:17:41,422
pictures of Neil that you
took on the lunar surface?

1584
01:17:41,422 --> 01:17:43,157
He took some great ones of you.

1585
01:17:43,157 --> 01:17:45,026
And Buzz said, I
should have done it,

1586
01:17:45,026 --> 01:17:46,928
but it wasn't in
the mission plan.

1587
01:17:46,928 --> 01:17:48,529
It wasn't in the mission plan.

1588
01:17:48,529 --> 01:17:50,331
And I said, well was
it in the mission plan

1589
01:17:50,331 --> 01:17:52,333
to take a picture of your foot?

1590
01:17:52,333 --> 01:17:54,836
No, that wasn't in the
mission plan, you know.

1591
01:17:54,836 --> 01:17:57,772
And this was Gene Kranz, when
I interviewed Gene about this,

1592
01:17:57,772 --> 01:17:59,974
Gene said, I don't
have an explanation.

1593
01:17:59,974 --> 01:18:02,176
To me, that's something
that's unacceptable,

1594
01:18:02,176 --> 01:18:04,946
that they didn't have, that
the first man on the moon,

1595
01:18:04,946 --> 01:18:07,248
and there are not
decent pictures of Neil.

1596
01:18:07,248 --> 01:18:08,483
Buzz didn't take any.

1597
01:18:08,483 --> 01:18:11,552
You're going to have,
and when I asked Neil

1598
01:18:11,552 --> 01:18:13,588
about that I said,
did that bother you?

1599
01:18:13,588 --> 01:18:18,559
He said oh, Buzz was a lot more
photogenic than me, you know.

1600

01:18:18,559 --> 01:18:21,429
Typical Armstrong
answer, you know.

1601
01:18:21,429 --> 01:18:26,267
And there's the story, if I had
time I could tell it, but it's,

1602
01:18:26,267 --> 01:18:27,935
you know, I'll just finish
up with the last few.

1603
01:18:27,935 --> 01:18:31,239
Here he is when he was NASA
associate administrator

1604
01:18:31,239 --> 01:18:33,007
for aeronautics.

1605
01:18:33,007 --> 01:18:38,346
Of course, he went to
Cincinnati to teach.

1606
01:18:38,346 --> 01:18:39,580
He was a key figure.

1607
01:18:39,580 --> 01:18:41,516
He was the vice-chair of
the Writer's Commission.

1608
01:18:41,516 --> 01:18:42,884
A very, very important role.

1609
01:18:42,884 --> 01:18:46,120
He really did a lot
for that commission.

1610
01:18:46,120 --> 01:18:49,056
Here he is at a shuttle
launch in '97

1611
01:18:49,056 --> 01:18:51,025
with his second wife, Carol.

1612
01:18:51,025 --> 01:18:54,962
Was he the best possible
first man?

1613
01:18:54,962 --> 01:18:58,099
Well, I think so.

1614
01:18:58,099 --> 01:19:01,369
Behind the icon was a
man, and that was I tried,

1615
01:19:01,369 --> 01:19:03,171
that's who I got to know.

1616
01:19:03,171 --> 01:19:07,175
He's very three-dimensional,
worthwhile person

1617
01:19:07,175 --> 01:19:10,244
to know beyond the icon.

1618
01:19:10,244 --> 01:19:11,646
A couple more pictures.

1619
01:19:11,646 --> 01:19:15,616
This is at the National
Cathedral after his death.

1620
01:19:15,616 --> 01:19:19,453
His wife, his son,
his step daughter.

1621
01:19:19,453 --> 01:19:20,388
Buzz is here.

1622
01:19:20,388 --> 01:19:22,089
John Glenn's in the picture.

1623
01:19:22,089 --> 01:19:23,825
I'm somewhere halfway back.

1624
01:19:23,825 --> 01:19:27,895
I attended both this and the
private funeral in Cincinnati.

1625
01:19:27,895 --> 01:19:30,198
That's my favorite
picture of him, you know.

1626
01:19:30,198 --> 01:19:33,201
Maybe you can't recognize
me anymore with the loss

1627
01:19:33,201 --> 01:19:34,902
of hair and the coloring.

1628
01:19:34,902 --> 01:19:39,874
But this was outside of
his house after, you know,

1629
01:19:39,874 --> 01:19:42,810
after the book was finished.

1630
01:19:42,810 --> 01:19:44,879
You know, I think as a
biographer you're supposed

1631
01:19:44,879 --> 01:19:46,914
to stay independent
and objective

1632
01:19:46,914 --> 01:19:49,150
and unemotional and
dispassionate.

1633
01:19:49,150 --> 01:19:51,018
But I really got
to love the guy.

1634
01:19:51,018 --> 01:19:57,358
And, you know, I hope it
doesn't bias the book too much.

1635
01:19:57,358 --> 01:19:59,527
I don't think it does.

1636
01:19:59,527 --> 01:20:03,731
But you know, I kind of
decided, a couple things,

1637
01:20:03,731 --> 01:20:06,667
one I don't have a lot
of books left in me.

1638
01:20:06,667 --> 01:20:08,936
They're hard work.

1639
01:20:08,936 --> 01:20:11,672
And secondly, I don't think
I'd ever do a biography

1640
01:20:11,672 --> 01:20:14,942
of somebody that's living unless
they're a really young man

1641
01:20:14,942 --> 01:20:16,777
that's not expected
to go for a while.

1642
01:20:16,777 --> 01:20:21,048
His death in 2012
really hit me hard.

1643

01:20:21,048 --> 01:20:25,653
And in my new edition of
First Man, which will come

1644
01:20:25,653 --> 01:20:28,789
out in a year or so, I'm dealing
with the last seven years

1645
01:20:28,789 --> 01:20:30,157
of his life and his death.

1646
01:20:30,157 --> 01:20:35,696
You know, he died after a heart
bypass surgery, and it was,

1647
01:20:35,696 --> 01:20:41,535
you know, the details of exactly
what happened are withheld,

1648
01:20:41,535 --> 01:20:44,972
have been withheld from
the public by the family.

1649
01:20:44,972 --> 01:20:47,642
And I certainly abide by that.

1650
01:20:47,642 --> 01:20:51,279
But it was tragedy to lose him.

1651
01:20:51,279 --> 01:20:54,015
And it would have been
great if the whole crew

1652
01:20:54,015 --> 01:20:56,651
of 11 could have
been around in 2019

1653
01:20:56,651 --> 01:21:00,121
when we celebrate
the 50th anniversary.

1654
01:21:00,121 --> 01:21:03,991
And so, thank you
very much for coming

1655
01:21:03,991 --> 01:21:06,761
and hope you learned a little
bit, not just about him

1656
01:21:06,761 --> 01:21:10,331
but about Apollo and about
the history of, I mean this is

1657
01:21:10,331 --> 01:21:11,666
such an incredible place.

1658
01:21:11,666 --> 01:21:16,137
You've had a major, major role,
if Neil had not been here,

1659
01:21:16,137 --> 01:21:20,441
you know, he probably wouldn't
have been the first man

1660
01:21:20,441 --> 01:21:21,742
on the moon.

1661
01:21:21,742 --> 01:21:25,746
This experience here was so
formative to what he did.

1662
01:21:25,746 --> 01:21:27,515
So, thank you very much.

1663
01:21:27,515 --> 01:21:36,457
[Applause]

1664
01:21:36,457 --> 01:21:38,659
>> Thank you Dr. Hansen,

that was fantastic.

1665
01:21:38,659 --> 01:21:40,428
We do have a couple
of things for you.

1666
01:21:40,428 --> 01:21:42,229
One is a Center Coin.

1667
01:21:42,229 --> 01:21:42,997
>> Oh, super.

1668
01:21:42,997 --> 01:21:43,931
>> Armstrong Center Coin.

1669
01:21:43,931 --> 01:21:44,632
>> Oh excellent.

1670
01:21:44,632 --> 01:21:45,333
Yeah, thank you.

1671
01:21:45,333 --> 01:21:46,467
>> You're very welcome.

1672
01:21:46,467 --> 01:21:49,136
That commemorates the
day of the name change.

1673
01:21:49,136 --> 01:21:51,072
>> Yeah, fantastic.

1674
01:21:56,444 --> 01:21:55,476
Oh my goodness.

1675
01:21:56,444 --> 01:21:58,245
>> It's a model for
you of the X-15.

1676

01:21:58,245 --> 01:22:02,416
It says to Dr. James R. Hansen
from your friends and colleagues

1677
01:22:02,416 --> 01:22:04,919
at the Neil A. Armstrong
Flight Research Center,

1678
01:22:04,919 --> 01:22:06,253
Edwards, California.

1679
01:22:06,253 --> 01:22:09,490
>> Oh my, I'll hold it for a
second here for [inaudible].

1680
01:22:09,490 --> 01:22:14,195
[Applause]

1681
01:22:14,195 --> 01:22:15,296
That is fantastic.

1682
01:22:15,296 --> 01:22:16,597
Thank you.

1683
01:22:16,597 --> 01:22:24,038
I had a conversation with
Joe Engle about a month ago,

1684
01:22:24,038 --> 01:22:25,840
and he was giving a
talk at this event

1685
01:22:25,840 --> 01:22:27,441
down in Arizona called
Space Fest.

1686
01:22:27,441 --> 01:22:30,044
And he had a model of the,
it wasn't this nice of one,

1687
01:22:30,044 --> 01:22:31,812
but he had a model of the X-15.

1688
01:22:31,812 --> 01:22:34,949
I was talking to him about
some of Neil's flights.

1689
01:22:34,949 --> 01:22:37,051
So he was moving the X-15 around

1690
01:22:37,051 --> 01:22:39,020
and turning it different
directions.

1691
01:22:39,020 --> 01:22:41,022
And so, oh this is terrific.

1692
01:22:41,022 --> 01:22:41,856
Thank you so much.

1693
01:22:41,856 --> 01:22:43,124
I appreciate it from everyone.

1694
01:22:43,124 --> 01:22:44,558
>> I think we'll have time
for you to sign some books

1695
01:22:44,558 --> 01:22:45,459
if you have a few minutes.

1696
01:22:45,459 --> 01:22:46,027
>> I'd be happy to, yeah.

1697
01:22:46,027 --> 01:22:47,428
>> So thank you.

1698
01:22:47,428 --> 01:22:49,830
This is the end of the program,

but we'll set up a table here

1699
01:22:49,830 --> 01:22:52,366
and have Dr. Hansen
available for you.

1700
01:22:52,366 --> 01:22:53,534
Thank you again.

1701
01:22:53,534 --> 01:22:58,439
[Applause]

1702
01:22:58,439 --> 01:22:59,340
>> That's terrific.