



**Mike Fincke**

STS-134 MISSION SPECIALIST



1  
00:00:09,750 --> 00:00:07,749  
each member of the crew for space

2  
00:00:11,589 --> 00:00:09,760  
shuttle endeavour's final flight has

3  
00:00:13,990 --> 00:00:11,599  
been to space before

4  
00:00:15,749 --> 00:00:14,000  
in fact sts-134

5  
00:00:18,470 --> 00:00:15,759  
is the fourth trip to the international

6  
00:00:20,950 --> 00:00:18,480  
space station for u.s navy captain mark

7  
00:00:22,230 --> 00:00:20,960  
kelly tying the record for the most

8  
00:00:24,630 --> 00:00:22,240  
visits

9  
00:00:27,750 --> 00:00:24,640  
kelly was born in orange new jersey and

10  
00:00:29,830 --> 00:00:27,760  
grew up in west orange as a young boy

11  
00:00:32,069 --> 00:00:29,840  
watching the apollo moon landings he

12  
00:00:33,990 --> 00:00:32,079  
thought about becoming an astronaut but

13  
00:00:35,270 --> 00:00:34,000

as he got older it seemed out of the

14

00:00:36,709 --> 00:00:35,280

question

15

00:00:38,630 --> 00:00:36,719

after high school kelly won an

16

00:00:41,910 --> 00:00:38,640

appointment to the u.s merchant marine

17

00:00:44,549 --> 00:00:41,920

academy with a plan for a career at sea

18

00:00:46,869 --> 00:00:44,559

then he made a trip on a grain carrier

19

00:00:49,029 --> 00:00:46,879

going from seattle to a place called

20

00:00:51,350 --> 00:00:49,039

savage egypt it's in the southern part

21

00:00:52,470 --> 00:00:51,360

of egypt on the red sea

22

00:00:54,389 --> 00:00:52,480

and

23

00:00:56,389 --> 00:00:54,399

getting across the pacific that ship

24

00:00:58,549 --> 00:00:56,399

went 12 knots

25

00:01:00,229 --> 00:00:58,559

and it took us over a month

26  
00:01:02,709 --> 00:01:00,239  
to get across the pacific ocean and get

27  
00:01:04,070 --> 00:01:02,719  
us to singapore and i thought oh this is

28  
00:01:05,270 --> 00:01:04,080  
way too slow

29  
00:01:07,750 --> 00:01:05,280  
so that's when i started thinking about

30  
00:01:09,910 --> 00:01:07,760  
flying airplanes in the navy

31  
00:01:11,670 --> 00:01:09,920  
when he finished his bachelor's degrees

32  
00:01:14,230 --> 00:01:11,680  
in marine engineering and marine

33  
00:01:15,990 --> 00:01:14,240  
transportation at the academy kelly took

34  
00:01:18,390 --> 00:01:16,000  
his commission and went to the navy

35  
00:01:20,630 --> 00:01:18,400  
flight school he made two deployments

36  
00:01:22,710 --> 00:01:20,640  
during operation desert storm and flew

37  
00:01:24,070 --> 00:01:22,720  
39 combat missions

38  
00:01:25,910 --> 00:01:24,080

earned a master of science in

39

00:01:28,390 --> 00:01:25,920

aeronautical engineering at the navy

40

00:01:30,550 --> 00:01:28,400

postgraduate school and then went to the

41

00:01:33,030 --> 00:01:30,560

navy test pilot school where the

42

00:01:34,710 --> 00:01:33,040

astronaut bug bit him again you know

43

00:01:37,190 --> 00:01:34,720

being a test pilot is fun you get to

44

00:01:39,590 --> 00:01:37,200

test new things and sometimes fly new

45

00:01:43,190 --> 00:01:39,600

airplanes and the space shuttle you know

46

00:01:45,109 --> 00:01:43,200

after sts-134 only has 134 flights it's

47

00:01:46,469 --> 00:01:45,119

still more or less in a test program

48

00:01:49,030 --> 00:01:46,479

even though we've been flying it for

49

00:01:51,030 --> 00:01:49,040

nearly 30 years now so it's like the

50

00:01:53,030 --> 00:01:51,040

ultimate test pilot job

51  
00:01:54,550 --> 00:01:53,040  
kelly was an instructor at test pilot

52  
00:01:57,350 --> 00:01:54,560  
school when he was picked for the

53  
00:01:59,190 --> 00:01:57,360  
astronaut corps in 1996.

54  
00:02:03,109 --> 00:01:59,200  
kelly was the pilot on shuttle mission

55  
00:02:05,990 --> 00:02:03,119  
sts-108 in 2001 and the second return to

56  
00:02:08,790 --> 00:02:06,000  
flight test mission in 2006 and he

57  
00:02:11,750 --> 00:02:08,800  
commanded the 2008 flight that delivered

58  
00:02:13,589 --> 00:02:11,760  
the kibo laboratory module

59  
00:02:17,030 --> 00:02:13,599  
air force colonel mike fink has been to

60  
00:02:19,589 --> 00:02:17,040  
the station twice before for a year on

61  
00:02:21,830 --> 00:02:19,599  
two long duration missions and he'll set

62  
00:02:24,869 --> 00:02:21,840  
a new record for time spent in space by

63  
00:02:27,190 --> 00:02:24,879

an american at the end of this flight

64

00:02:29,990 --> 00:02:27,200

fink was born in pittsburgh pennsylvania

65

00:02:31,830 --> 00:02:30,000

and grew up in the suburb of emsworth

66

00:02:33,670 --> 00:02:31,840

i was the oldest of nine kids we didn't

67

00:02:35,430 --> 00:02:33,680

have a lot of money but we're still able

68

00:02:38,229 --> 00:02:35,440

to spend time in planetariums and the

69

00:02:39,830 --> 00:02:38,239

museums and the science centers that are

70

00:02:40,949 --> 00:02:39,840

all over the city

71

00:02:43,110 --> 00:02:40,959

had a

72

00:02:44,869 --> 00:02:43,120

benefit and blessing to be able to

73

00:02:46,470 --> 00:02:44,879

to go to

74

00:02:48,070 --> 00:02:46,480

a private high school

75

00:02:50,790 --> 00:02:48,080

i had to work on the weekends to make it

76  
00:02:53,030 --> 00:02:50,800  
happen but the school made it work too

77  
00:02:53,990 --> 00:02:53,040  
and i had a great excellent education in

78  
00:02:55,670 --> 00:02:54,000  
high school

79  
00:02:57,509 --> 00:02:55,680  
studying science and math and all the

80  
00:02:59,990 --> 00:02:57,519  
things that really excited me

81  
00:03:02,309 --> 00:03:00,000  
fink won an air force rotc scholarship

82  
00:03:04,790 --> 00:03:02,319  
to mit where he earned bachelor's

83  
00:03:07,030 --> 00:03:04,800  
degrees in aeronautics and astronautics

84  
00:03:08,229 --> 00:03:07,040  
and earth atmospheric and planetary

85  
00:03:10,070 --> 00:03:08,239  
sciences

86  
00:03:11,830 --> 00:03:10,080  
that summer he attended an exchange

87  
00:03:14,390 --> 00:03:11,840  
program with the moscow aviation

88  
00:03:15,910 --> 00:03:14,400

institute before heading to stanford for

89

00:03:17,270 --> 00:03:15,920

a masters in aeronautics and

90

00:03:20,070 --> 00:03:17,280

astronautics

91

00:03:22,390 --> 00:03:20,080

then he started an abbreviated career as

92

00:03:24,070 --> 00:03:22,400

a fighter pilot and it turns out after

93

00:03:25,750 --> 00:03:24,080

six or seven months

94

00:03:27,910 --> 00:03:25,760

the air force and i both agreed that i

95

00:03:29,350 --> 00:03:27,920

wasn't going to be the god's gift to to

96

00:03:31,670 --> 00:03:29,360

aviation that i thought it was going to

97

00:03:33,589 --> 00:03:31,680

be and i wasn't destined to become a

98

00:03:34,470 --> 00:03:33,599

fighter pilot so i washed out of pilot

99

00:03:36,949 --> 00:03:34,480

training

100

00:03:39,270 --> 00:03:36,959

fink found his niche as an engineer and

101  
00:03:41,270 --> 00:03:39,280  
then a flight test engineer attending

102  
00:03:43,430 --> 00:03:41,280  
the air force test pilot school and

103  
00:03:46,070 --> 00:03:43,440  
serving at posts in southern california

104  
00:03:47,910 --> 00:03:46,080  
and later in japan but he never gave up

105  
00:03:50,630 --> 00:03:47,920  
his childhood dream

106  
00:03:52,949 --> 00:03:50,640  
when i was three years old i remember

107  
00:03:54,949 --> 00:03:52,959  
watching people walk on the moon

108  
00:03:57,030 --> 00:03:54,959  
and i knew right then and there that's

109  
00:03:58,949 --> 00:03:57,040  
something i wanted to do

110  
00:04:00,630 --> 00:03:58,959  
fink was selected as an astronaut in

111  
00:04:02,869 --> 00:04:00,640  
1996

112  
00:04:04,550 --> 00:04:02,879  
he spent six months as flight engineer

113  
00:04:07,910 --> 00:04:04,560

on the international space station's

114

00:04:09,190 --> 00:04:07,920

expedition 9 in 2004 and performed four

115

00:04:11,750 --> 00:04:09,200

spacewalks

116

00:04:14,470 --> 00:04:11,760

then another six months as commander of

117

00:04:15,910 --> 00:04:14,480

expedition 18 and performed two more

118

00:04:17,749 --> 00:04:15,920

evas

119

00:04:20,069 --> 00:04:17,759

one of his crewmates from that flight is

120

00:04:22,710 --> 00:04:20,079

with him again on this one

121

00:04:25,110 --> 00:04:22,720

dr greg shamitoff was born in montreal

122

00:04:26,870 --> 00:04:25,120

canada and had a father he describes as

123

00:04:29,110 --> 00:04:26,880

a space fanatic

124

00:04:31,670 --> 00:04:29,120

chamothof remembers watching star trek

125

00:04:33,270 --> 00:04:31,680

as a little boy and being intrigued but

126

00:04:34,950 --> 00:04:33,280

then we went on a family vacation to

127

00:04:36,310 --> 00:04:34,960

florida and it was the time of apollo

128

00:04:38,950 --> 00:04:36,320

11. so we got to see the launch of

129

00:04:41,590 --> 00:04:38,960

apollo 11 on a family vacation there i

130

00:04:44,310 --> 00:04:41,600

was six and um

131

00:04:45,510 --> 00:04:44,320

and that was it that i told my dad

132

00:04:47,670 --> 00:04:45,520

at that point

133

00:04:48,629 --> 00:04:47,680

i wanted to do that and never changed my

134

00:04:50,550 --> 00:04:48,639

mind

135

00:04:52,870 --> 00:04:50,560

the family moved to the united states

136

00:04:55,590 --> 00:04:52,880

and settled in san jose california when

137

00:04:57,909 --> 00:04:55,600

chamitov was 11. he graduated from high

138

00:05:00,310 --> 00:04:57,919

school there and went to cal poly in san

139

00:05:01,990 --> 00:05:00,320

luis obispo to study physics

140

00:05:04,629 --> 00:05:02,000

the launch of the first space shuttle

141

00:05:07,189 --> 00:05:04,639

mission during his freshman year changed

142

00:05:08,950 --> 00:05:07,199

his focus and i just remember so vividly

143

00:05:11,830 --> 00:05:08,960

being in the dormitory you know people

144

00:05:13,029 --> 00:05:11,840

gathered to watch this the first flight

145

00:05:14,950 --> 00:05:13,039

and um

146

00:05:17,350 --> 00:05:14,960

and and for me you know i'd i'd want to

147

00:05:19,510 --> 00:05:17,360

do this all my life but there wasn't uh

148

00:05:22,230 --> 00:05:19,520

there yet wasn't any um

149

00:05:24,710 --> 00:05:22,240

urgency or sense of direction you know

150

00:05:25,670 --> 00:05:24,720

of how to do it

151  
00:05:27,110 --> 00:05:25,680  
and

152  
00:05:28,870 --> 00:05:27,120  
as soon as that happened i said i got

153  
00:05:29,749 --> 00:05:28,880  
called asa and asked him what i have to

154  
00:05:31,670 --> 00:05:29,759  
do

155  
00:05:33,990 --> 00:05:31,680  
when he got interested in robots he

156  
00:05:35,909 --> 00:05:34,000  
changed his major and earned a bachelor

157  
00:05:38,950 --> 00:05:35,919  
of science in electrical engineering at

158  
00:05:41,110 --> 00:05:38,960  
cal poly then a masters in aeronautical

159  
00:05:43,350 --> 00:05:41,120  
engineering at caltech

160  
00:05:45,830 --> 00:05:43,360  
on a fellowship at draper laboratory in

161  
00:05:47,830 --> 00:05:45,840  
cambridge massachusetts shemitoff worked

162  
00:05:50,390 --> 00:05:47,840  
on spacecraft guidance controls for

163  
00:05:51,909 --> 00:05:50,400

several nasa projects while earning his

164

00:05:54,070 --> 00:05:51,919

doctorate in aeronautics and

165

00:05:56,150 --> 00:05:54,080

aeronautics at mit

166

00:05:58,309 --> 00:05:56,160

then he taught aeronautical engineering

167

00:06:00,150 --> 00:05:58,319

at the university of sydney before he

168

00:06:03,909 --> 00:06:00,160

came to work at the johnson space center

169

00:06:05,830 --> 00:06:03,919

in 1995 developing software applications

170

00:06:10,230 --> 00:06:05,840

he was picked for the astronaut corps in

171

00:06:12,870 --> 00:06:10,240

1998 and spent 183 days in space as part

172

00:06:15,590 --> 00:06:12,880

of the space station's expedition 17 and

173

00:06:17,350 --> 00:06:15,600

18 cruise

174

00:06:19,990 --> 00:06:17,360

italian air force colonel roberto

175

00:06:21,670 --> 00:06:20,000

vittori of the european space agency has

176

00:06:24,070 --> 00:06:21,680

made two previous trips to the

177

00:06:26,710 --> 00:06:24,080

international space station but he spent

178

00:06:29,350 --> 00:06:26,720

less than three weeks in space

179

00:06:32,629 --> 00:06:29,360

vittori was born in viterbo and grew up

180

00:06:35,830 --> 00:06:32,639

in nearby bomarsso in central italy very

181

00:06:38,230 --> 00:06:35,840

small in the middle of a beautiful

182

00:06:41,270 --> 00:06:38,240

forest in countryside

183

00:06:43,510 --> 00:06:41,280

and i grew up playing soccer outside my

184

00:06:45,430 --> 00:06:43,520

my school i was

185

00:06:46,390 --> 00:06:45,440

very good in defense

186

00:06:52,790 --> 00:06:46,400

and

187

00:06:55,110 --> 00:06:52,800

woods with my my friends

188

00:06:57,189 --> 00:06:55,120

he left bomarzo for college to study

189

00:06:59,589 --> 00:06:57,199

physics but his boyhood interest in

190

00:07:01,430 --> 00:06:59,599

flying reasserted itself

191

00:07:03,510 --> 00:07:01,440

vittori earned a bachelor's degree in

192

00:07:05,990 --> 00:07:03,520

aeronautical science at the italian air

193

00:07:08,390 --> 00:07:06,000

force academy and completed his basic

194

00:07:10,950 --> 00:07:08,400

pilot training with the u.s air force at

195

00:07:12,950 --> 00:07:10,960

reese air force base in texas and then

196

00:07:13,909 --> 00:07:12,960

flew operationally in the italian air

197

00:07:16,150 --> 00:07:13,919

force

198

00:07:18,629 --> 00:07:16,160

next stop was the u.s navy test pilot

199

00:07:22,070 --> 00:07:18,639

school and a post-graduation trip with

200

00:07:24,230 --> 00:07:22,080

his classmates to visit nasa all my

201  
00:07:26,390 --> 00:07:24,240  
colleagues american colleagues were

202  
00:07:28,390 --> 00:07:26,400  
thinking about becoming an astronaut and

203  
00:07:29,589 --> 00:07:28,400  
i was thinking bad luck that i am not

204  
00:07:31,670 --> 00:07:29,599  
u.s

205  
00:07:34,710 --> 00:07:31,680  
obviously in italy

206  
00:07:36,309 --> 00:07:34,720  
it's not that easy to have opportunities

207  
00:07:38,150 --> 00:07:36,319  
for astronauts

208  
00:07:40,710 --> 00:07:38,160  
two years later while vittori was

209  
00:07:42,710 --> 00:07:40,720  
working as a test pilot in italy he put

210  
00:07:45,110 --> 00:07:42,720  
in an application when the italian space

211  
00:07:47,189 --> 00:07:45,120  
agency was looking for astronauts he was

212  
00:07:49,749 --> 00:07:47,199  
selected and became a european space

213  
00:07:52,150 --> 00:07:49,759

agency astronaut and trained as a member

214

00:07:54,230 --> 00:07:52,160

of the 1998 class of astronauts at

215

00:07:56,070 --> 00:07:54,240

nasa's johnson space center

216

00:07:59,589 --> 00:07:56,080

vettori flew to the international space

217

00:08:01,830 --> 00:07:59,599

station on a soyuz taxi flight in 2002

218

00:08:05,430 --> 00:08:01,840

and then on a 10-day science flight in

219

00:08:06,469 --> 00:08:05,440

2005 during the expedition 10 to 11 crew

220

00:08:08,469 --> 00:08:06,479

exchange

221

00:08:11,110 --> 00:08:08,479

he later served as an italian air force

222

00:08:13,510 --> 00:08:11,120

liaison officer and completed master's

223

00:08:16,309 --> 00:08:13,520

degrees in aeronautical sciences at the

224

00:08:19,029 --> 00:08:16,319

university of naples and in physics at

225

00:08:20,950 --> 00:08:19,039

the university of perugia

226

00:08:22,869 --> 00:08:20,960

this flight is the second station trip

227

00:08:23,909 --> 00:08:22,879

for retired air force colonel greg

228

00:08:28,469 --> 00:08:23,919

johnson

229

00:08:29,830 --> 00:08:28,479

united kingdom and raised all over the

230

00:08:31,749 --> 00:08:29,840

united states

231

00:08:33,190 --> 00:08:31,759

he was inspired to become an astronaut

232

00:08:35,430 --> 00:08:33,200

during a family visit to his

233

00:08:37,670 --> 00:08:35,440

grandparents in traverse city michigan

234

00:08:40,149 --> 00:08:37,680

when they all watched the apollo 11 moon

235

00:08:41,750 --> 00:08:40,159

landing i was seven my brother was nine

236

00:08:43,029 --> 00:08:41,760

my sister was eleven

237

00:08:45,990 --> 00:08:43,039

and uh

238

00:08:48,310 --> 00:08:46,000

we um were amazed and i said wow that

239

00:08:50,389 --> 00:08:48,320

i'd love to be an astronaut so that was

240

00:08:51,990 --> 00:08:50,399

kind of the bit that was set way back

241

00:08:53,910 --> 00:08:52,000

when i was seven

242

00:08:56,310 --> 00:08:53,920

johnson graduated from high school in

243

00:08:58,230 --> 00:08:56,320

fairborn ohio and went to the air force

244

00:08:59,350 --> 00:08:58,240

academy to become a pilot and an

245

00:09:01,030 --> 00:08:59,360

engineer

246

00:09:03,430 --> 00:09:01,040

after graduating with a bachelor of

247

00:09:05,430 --> 00:09:03,440

science in aeronautical engineering and

248

00:09:07,829 --> 00:09:05,440

earning a masters in flight structures

249

00:09:09,590 --> 00:09:07,839

engineering at columbia johnson was

250

00:09:12,310 --> 00:09:09,600

assigned to reese air force base as a

251

00:09:14,470 --> 00:09:12,320

pilot and then a pilot instructor

252

00:09:17,030 --> 00:09:14,480

he flew combat missions in operations

253

00:09:18,630 --> 00:09:17,040

desert storm and southern watch before

254

00:09:21,190 --> 00:09:18,640

attending the air force test pilot

255

00:09:23,190 --> 00:09:21,200

school which rejuvenated the engineer in

256

00:09:26,150 --> 00:09:23,200

him and made him think about his

257

00:09:28,710 --> 00:09:26,160

childhood dream of becoming an astronaut

258

00:09:30,470 --> 00:09:28,720

i'm flying really cool stuff and they

259

00:09:32,949 --> 00:09:30,480

like to hire test pilots because each

260

00:09:34,870 --> 00:09:32,959

shuttle mission really is a test flight

261

00:09:37,750 --> 00:09:34,880

and so i went ahead and threw my name in

262

00:09:41,030 --> 00:09:37,760

the hat johnson was selected by nasa in

263

00:09:44,389 --> 00:09:41,040

1998 earned an mba from the university

264

00:09:46,870 --> 00:09:44,399

of texas at austin in 2005 and piloted

265

00:09:49,110 --> 00:09:46,880

the 2008 shuttle flight that delivered

266

00:09:51,670 --> 00:09:49,120

the first components of japan's kibo

267

00:09:54,230 --> 00:09:51,680

laboratory complex

268

00:09:56,470 --> 00:09:54,240

dr drew feustel's first space flight got

269

00:09:59,190 --> 00:09:56,480

him nowhere near the international space

270

00:10:01,190 --> 00:09:59,200

station but he got up close to something

271

00:10:02,470 --> 00:10:01,200

that none of his crewmates has ever seen

272

00:10:04,230 --> 00:10:02,480

before

273

00:10:07,110 --> 00:10:04,240

feustel was born and raised in lake

274

00:10:09,350 --> 00:10:07,120

orion michigan north of detroit you have

275

00:10:10,949 --> 00:10:09,360

fond memories of summer and winter you

276

00:10:13,350 --> 00:10:10,959

know i think winters were quite

277

00:10:16,150 --> 00:10:13,360

enjoyable uh we used to do a lot of

278

00:10:19,590 --> 00:10:16,160

snowmobiling and snow skiing and in the

279

00:10:22,949 --> 00:10:19,600

summers we spent our time water skiing

280

00:10:24,790 --> 00:10:22,959

and being a suburb of detroit motor city

281

00:10:25,829 --> 00:10:24,800

i became interested in automobiles at an

282

00:10:28,069 --> 00:10:25,839

early age

283

00:10:30,790 --> 00:10:28,079

feustel raced motorcycles and go-karts

284

00:10:32,550 --> 00:10:30,800

as a boy and he had cars in mind after

285

00:10:34,630 --> 00:10:32,560

high school when he went to oakland

286

00:10:37,030 --> 00:10:34,640

community college specializing in

287

00:10:39,910 --> 00:10:37,040

geology with a minor in industrial

288

00:10:41,829 --> 00:10:39,920

design so you could say i was pursuing

289

00:10:44,230 --> 00:10:41,839

two careers one is a scientist one is an

290

00:10:46,470 --> 00:10:44,240

automotive designer while working as an

291

00:10:48,710 --> 00:10:46,480

automotive restoration mechanic

292

00:10:50,710 --> 00:10:48,720

after he finished his associate's degree

293

00:10:53,030 --> 00:10:50,720

he went to purdue for a bachelor's in

294

00:10:56,150 --> 00:10:53,040

solid earth sciences and a master's in

295

00:10:57,750 --> 00:10:56,160

geophysics and was the team cart driver

296

00:11:00,069 --> 00:10:57,760

for his fraternity

297

00:11:02,310 --> 00:11:00,079

and then he earned a phd in geological

298

00:11:04,630 --> 00:11:02,320

sciences at queen's university in

299

00:11:06,790 --> 00:11:04,640

kingston ontario he worked as a

300

00:11:09,269 --> 00:11:06,800

geophysicist in canada and then for

301

00:11:11,269 --> 00:11:09,279

exxon mobil exploration in houston

302

00:11:14,550 --> 00:11:11,279

before he was picked as an astronaut in

303

00:11:16,310 --> 00:11:14,560

2000 feustel completed three spacewalks

304

00:11:19,430 --> 00:11:16,320

during the final servicing mission to

305

00:11:21,590 --> 00:11:19,440

the hubble space telescope in 2009

306

00:11:24,550 --> 00:11:21,600

i think for humans it's always been

307

00:11:26,470 --> 00:11:24,560

about what's out there are we alone

308

00:11:29,030 --> 00:11:26,480

could we be the only ones in this

309

00:11:30,550 --> 00:11:29,040

infinite universe and i think the only

310

00:11:32,389 --> 00:11:30,560

way we're going to find out is if we

311

00:11:34,230 --> 00:11:32,399

keep pushing the boundary and trying to