



Roberto Vittori

STS-134 MISSION SPECIALIST

1
00:00:05,749 --> 00:00:03,830
each member of the crew for space

2
00:00:07,590 --> 00:00:05,759
shuttle endeavour's final flight has

3
00:00:09,990 --> 00:00:07,600
been to space before

4
00:00:11,830 --> 00:00:10,000
in fact sts-134

5
00:00:14,549 --> 00:00:11,840
is the fourth trip to the international

6
00:00:16,950 --> 00:00:14,559
space station for u.s navy captain mark

7
00:00:18,230 --> 00:00:16,960
kelly tying the record for the most

8
00:00:20,630 --> 00:00:18,240
visits

9
00:00:23,750 --> 00:00:20,640
kelly was born in orange new jersey and

10
00:00:25,830 --> 00:00:23,760
grew up in west orange as a young boy

11
00:00:28,070 --> 00:00:25,840
watching the apollo moon landings he

12
00:00:29,990 --> 00:00:28,080
thought about becoming an astronaut but

13
00:00:31,269 --> 00:00:30,000

as he got older it seemed out of the

14

00:00:32,709 --> 00:00:31,279

question

15

00:00:34,630 --> 00:00:32,719

after high school kelly won an

16

00:00:37,910 --> 00:00:34,640

appointment to the u.s merchant marine

17

00:00:40,549 --> 00:00:37,920

academy with a plan for a career at sea

18

00:00:42,869 --> 00:00:40,559

then he made a trip on a grain carrier

19

00:00:45,029 --> 00:00:42,879

going from seattle to a place called

20

00:00:47,350 --> 00:00:45,039

savage egypt it's in the southern part

21

00:00:48,470 --> 00:00:47,360

of egypt on the red sea

22

00:00:50,389 --> 00:00:48,480

and

23

00:00:52,389 --> 00:00:50,399

getting across the pacific that ship

24

00:00:54,549 --> 00:00:52,399

went 12 knots

25

00:00:56,229 --> 00:00:54,559

and it took us over a month

26
00:00:58,709 --> 00:00:56,239
to get across the pacific ocean and get

27
00:01:00,069 --> 00:00:58,719
us to singapore and i thought oh this is

28
00:01:01,270 --> 00:01:00,079
way too slow

29
00:01:03,750 --> 00:01:01,280
so that's when i started thinking about

30
00:01:05,910 --> 00:01:03,760
flying airplanes in the navy

31
00:01:07,670 --> 00:01:05,920
when he finished his bachelor's degrees

32
00:01:10,230 --> 00:01:07,680
in marine engineering and marine

33
00:01:11,990 --> 00:01:10,240
transportation at the academy kelly took

34
00:01:14,390 --> 00:01:12,000
his commission and went to the navy

35
00:01:16,630 --> 00:01:14,400
flight school he made two deployments

36
00:01:18,710 --> 00:01:16,640
during operation desert storm and flew

37
00:01:20,070 --> 00:01:18,720
39 combat missions

38
00:01:21,910 --> 00:01:20,080

earned a master of science in

39

00:01:24,390 --> 00:01:21,920

aeronautical engineering at the navy

40

00:01:26,550 --> 00:01:24,400

postgraduate school and then went to the

41

00:01:29,030 --> 00:01:26,560

navy test pilot school where the

42

00:01:30,710 --> 00:01:29,040

astronaut bug bit him again you know

43

00:01:33,190 --> 00:01:30,720

being a test pilot is fun you get to

44

00:01:35,590 --> 00:01:33,200

test new things and sometimes fly new

45

00:01:39,190 --> 00:01:35,600

airplanes and the space shuttle you know

46

00:01:41,109 --> 00:01:39,200

after sts-134 only has 134 flights it's

47

00:01:42,469 --> 00:01:41,119

still more or less in a test program

48

00:01:45,030 --> 00:01:42,479

even though we've been flying it for

49

00:01:47,030 --> 00:01:45,040

nearly 30 years now so it's like the

50

00:01:49,030 --> 00:01:47,040

ultimate test pilot job

51
00:01:50,550 --> 00:01:49,040
kelly was an instructor at test pilot

52
00:01:53,350 --> 00:01:50,560
school when he was picked for the

53
00:01:55,190 --> 00:01:53,360
astronaut corps in 1996.

54
00:01:59,109 --> 00:01:55,200
kelly was the pilot on shuttle mission

55
00:02:01,990 --> 00:01:59,119
sts-108 in 2001 and the second return to

56
00:02:04,789 --> 00:02:02,000
flight test mission in 2006 and he

57
00:02:07,670 --> 00:02:04,799
commanded the 2008 flight that delivered

58
00:02:09,589 --> 00:02:07,680
the kibo laboratory module

59
00:02:13,030 --> 00:02:09,599
air force colonel mike fink has been to

60
00:02:15,589 --> 00:02:13,040
the station twice before for a year on

61
00:02:17,830 --> 00:02:15,599
two long duration missions and he'll set

62
00:02:20,869 --> 00:02:17,840
a new record for time spent in space by

63
00:02:23,190 --> 00:02:20,879

an american at the end of this flight

64

00:02:25,990 --> 00:02:23,200

fink was born in pittsburgh pennsylvania

65

00:02:27,830 --> 00:02:26,000

and grew up in the suburb of emsworth

66

00:02:29,670 --> 00:02:27,840

i was the oldest of nine kids we didn't

67

00:02:31,430 --> 00:02:29,680

have a lot of money but we're still able

68

00:02:34,229 --> 00:02:31,440

to spend time in planetariums and the

69

00:02:35,830 --> 00:02:34,239

museums and the science centers that are

70

00:02:36,949 --> 00:02:35,840

all over the city

71

00:02:39,110 --> 00:02:36,959

had a

72

00:02:40,949 --> 00:02:39,120

benefit and blessing to be able to

73

00:02:42,470 --> 00:02:40,959

to to go to

74

00:02:44,070 --> 00:02:42,480

a private high school

75

00:02:46,790 --> 00:02:44,080

i had to work on the weekends to make it

76
00:02:49,030 --> 00:02:46,800
happen but the school made it work too

77
00:02:51,350 --> 00:02:49,040
and i had a great excellent education in

78
00:02:52,710 --> 00:02:51,360
high school studying science and math

79
00:02:53,509 --> 00:02:52,720
and all the things that really excited

80
00:02:55,990 --> 00:02:53,519
me

81
00:02:58,309 --> 00:02:56,000
fink won an air force rotc scholarship

82
00:03:00,790 --> 00:02:58,319
to mit where he earned bachelor's

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

84
00:03:05,589 --> 00:03:03,040
and earth atmospheric and planetary

85
00:03:07,270 --> 00:03:05,599
sciences that summer he attended an

86
00:03:09,589 --> 00:03:07,280
exchange program with the moscow

87
00:03:11,830 --> 00:03:09,599
aviation institute before heading to

88
00:03:13,270 --> 00:03:11,840

stanford for a masters in aeronautics

89

00:03:16,070 --> 00:03:13,280

and astronautics

90

00:03:18,390 --> 00:03:16,080

then he started an abbreviated career as

91

00:03:20,070 --> 00:03:18,400

a fighter pilot and it turns out after

92

00:03:21,750 --> 00:03:20,080

six or seven months

93

00:03:23,910 --> 00:03:21,760

the air force and i both agreed that i

94

00:03:25,350 --> 00:03:23,920

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

95

00:03:27,670 --> 00:03:25,360

aviation that i thought it was going to

96

00:03:29,589 --> 00:03:27,680

be and i wasn't destined to become a

97

00:03:30,470 --> 00:03:29,599

fighter pilot so i washed out a pilot

98

00:03:32,949 --> 00:03:30,480

training

99

00:03:35,270 --> 00:03:32,959

fink found his niche as an engineer and

100

00:03:37,270 --> 00:03:35,280

then a flight test engineer attending

101

00:03:39,430 --> 00:03:37,280

the air force test pilot school and

102

00:03:42,070 --> 00:03:39,440

serving at posts in southern california

103

00:03:43,910 --> 00:03:42,080

and later in japan but he never gave up

104

00:03:46,630 --> 00:03:43,920

his childhood dream

105

00:03:48,949 --> 00:03:46,640

when i was three years old i remember

106

00:03:50,949 --> 00:03:48,959

watching people walk on the moon

107

00:03:53,030 --> 00:03:50,959

and i knew right then and there that's

108

00:03:54,949 --> 00:03:53,040

something i wanted to do

109

00:03:56,630 --> 00:03:54,959

fink was selected as an astronaut in

110

00:03:58,869 --> 00:03:56,640

1996.

111

00:04:00,550 --> 00:03:58,879

he spent six months as flight engineer

112

00:04:03,910 --> 00:04:00,560

on the international space station's

113

00:04:05,190 --> 00:04:03,920

expedition 9 in 2004 and performed four

114

00:04:07,750 --> 00:04:05,200

spacewalks

115

00:04:10,470 --> 00:04:07,760

then another six months as commander of

116

00:04:11,910 --> 00:04:10,480

expedition 18 and performed two more

117

00:04:13,750 --> 00:04:11,920

evas

118

00:04:16,069 --> 00:04:13,760

one of his crewmates from that flight is

119

00:04:18,710 --> 00:04:16,079

with him again on this one

120

00:04:21,110 --> 00:04:18,720

dr greg shamatoff was born in montreal

121

00:04:22,870 --> 00:04:21,120

canada and had a father he describes as

122

00:04:25,270 --> 00:04:22,880

a space fanatic

123

00:04:27,749 --> 00:04:25,280

shemitah remembers watching star trek as

124

00:04:29,270 --> 00:04:27,759

a little boy and being intrigued but

125

00:04:30,950 --> 00:04:29,280

then we went on a family vacation to

126

00:04:32,310 --> 00:04:30,960

florida and it was the time of apollo

127

00:04:34,950 --> 00:04:32,320

11. so we got to see the launch of

128

00:04:37,590 --> 00:04:34,960

apollo 11 on a family vacation there i

129

00:04:40,310 --> 00:04:37,600

was six and um

130

00:04:41,510 --> 00:04:40,320

and that was it that i told my dad

131

00:04:43,670 --> 00:04:41,520

at that point

132

00:04:44,629 --> 00:04:43,680

i wanted to do that and never changed my

133

00:04:46,550 --> 00:04:44,639

mind

134

00:04:48,870 --> 00:04:46,560

the family moved to the united states

135

00:04:51,670 --> 00:04:48,880

and settled in san jose california when

136

00:04:53,909 --> 00:04:51,680

chamitov was 11. he graduated from high

137

00:04:56,870 --> 00:04:53,919

school there and went to cal poly in san

138

00:04:58,469 --> 00:04:56,880

luis obispo to study physics the launch

139

00:05:00,790 --> 00:04:58,479

of the first space shuttle mission

140

00:05:03,189 --> 00:05:00,800

during his freshman year changed his

141

00:05:04,950 --> 00:05:03,199

focus and i just remember so vividly

142

00:05:07,830 --> 00:05:04,960

being in the dormitory you know people

143

00:05:09,029 --> 00:05:07,840

gathered to watch this the first flight

144

00:05:13,350 --> 00:05:09,039

and

145

00:05:15,510 --> 00:05:13,360

do this all my life but there wasn't uh

146

00:05:18,230 --> 00:05:15,520

there yet wasn't any um

147

00:05:19,749 --> 00:05:18,240

urgency or sense of direction you know

148

00:05:20,710 --> 00:05:19,759

of how to do it

149

00:05:22,629 --> 00:05:20,720

um

150

00:05:24,469 --> 00:05:22,639

and uh and as soon as that happened i

151
00:05:25,749 --> 00:05:24,479
said i got called asa and asked him what

152
00:05:27,670 --> 00:05:25,759
i have to do

153
00:05:29,990 --> 00:05:27,680
when he got interested in robots he

154
00:05:31,909 --> 00:05:30,000
changed his major and earned a bachelor

155
00:05:34,950 --> 00:05:31,919
of science in electrical engineering at

156
00:05:37,110 --> 00:05:34,960
cal poly then a masters in aeronautical

157
00:05:39,350 --> 00:05:37,120
engineering at cal tech

158
00:05:41,830 --> 00:05:39,360
on a fellowship at draper laboratory in

159
00:05:43,830 --> 00:05:41,840
cambridge massachusetts shematoff worked

160
00:05:46,390 --> 00:05:43,840
on spacecraft guidance controls for

161
00:05:47,909 --> 00:05:46,400
several nasa projects while earning his

162
00:05:50,070 --> 00:05:47,919
doctorate in aeronautics and

163
00:05:52,150 --> 00:05:50,080

astronautics at mit

164

00:05:54,310 --> 00:05:52,160

then he taught aeronautical engineering

165

00:05:56,150 --> 00:05:54,320

at the university of sydney before he

166

00:05:59,990 --> 00:05:56,160

came to work at the johnson space center

167

00:06:01,830 --> 00:06:00,000

in 1995 developing software applications

168

00:06:06,230 --> 00:06:01,840

he was picked for the astronaut corps in

169

00:06:08,790 --> 00:06:06,240

1998 and spent 183 days in space as part

170

00:06:11,590 --> 00:06:08,800

of the space station's expedition 17 and

171

00:06:13,350 --> 00:06:11,600

18 cruise

172

00:06:15,990 --> 00:06:13,360

italian air force colonel roberto

173

00:06:17,670 --> 00:06:16,000

vittori of the european space agency has

174

00:06:20,070 --> 00:06:17,680

made two previous trips to the

175

00:06:22,710 --> 00:06:20,080

international space station but he spent

176

00:06:25,350 --> 00:06:22,720

less than three weeks in space

177

00:06:28,629 --> 00:06:25,360

vittori was born in viterbo and grew up

178

00:06:31,830 --> 00:06:28,639

in nearby bomarzo in central italy very

179

00:06:34,950 --> 00:06:31,840

small in the middle of a beautiful

180

00:06:38,629 --> 00:06:34,960

forest in countryside and i grew up

181

00:06:39,510 --> 00:06:38,639

playing soccer outside my my school i

182

00:06:41,430 --> 00:06:39,520

was

183

00:06:44,070 --> 00:06:41,440

very good in defense

184

00:06:47,110 --> 00:06:44,080

and uh and there was a

185

00:06:48,790 --> 00:06:47,120

and then i was i loved playing the woods

186

00:06:51,110 --> 00:06:48,800

with my friends

187

00:06:53,189 --> 00:06:51,120

he left bomarzo for college to study

188

00:06:55,589 --> 00:06:53,199

physics but his boyhood interest in

189

00:06:57,430 --> 00:06:55,599

flying reasserted itself

190

00:06:59,510 --> 00:06:57,440

vittori earned a bachelor's degree in

191

00:07:01,990 --> 00:06:59,520

aeronautical science at the italian air

192

00:07:04,390 --> 00:07:02,000

force academy and completed his basic

193

00:07:06,950 --> 00:07:04,400

pilot training with the us air force at

194

00:07:08,950 --> 00:07:06,960

reese air force base in texas and then

195

00:07:09,909 --> 00:07:08,960

flew operationally in the italian air

196

00:07:12,150 --> 00:07:09,919

force

197

00:07:14,550 --> 00:07:12,160

next stop was the u.s navy test pilot

198

00:07:18,070 --> 00:07:14,560

school and a post graduation trip with

199

00:07:20,230 --> 00:07:18,080

his classmates to visit nasa all my

200

00:07:22,390 --> 00:07:20,240

colleagues american colleagues were

201
00:07:24,390 --> 00:07:22,400
thinking about becoming an astronaut and

202
00:07:25,589 --> 00:07:24,400
i was thinking bad luck that i am not

203
00:07:27,670 --> 00:07:25,599
u.s

204
00:07:30,710 --> 00:07:27,680
obviously in italy

205
00:07:32,309 --> 00:07:30,720
it's not that easy to have opportunities

206
00:07:34,150 --> 00:07:32,319
for astronauts

207
00:07:36,629 --> 00:07:34,160
two years later while the tory was

208
00:07:38,710 --> 00:07:36,639
working as a test pilot in italy he put

209
00:07:41,110 --> 00:07:38,720
in an application when the italian space

210
00:07:43,189 --> 00:07:41,120
agency was looking for astronauts he was

211
00:07:45,749 --> 00:07:43,199
selected and became a european space

212
00:07:48,150 --> 00:07:45,759
agency astronaut and trained as a member

213
00:07:50,230 --> 00:07:48,160

of the 1998 class of astronauts at

214

00:07:52,070 --> 00:07:50,240

nasa's johnson space center

215

00:07:55,589 --> 00:07:52,080

vittori flew to the international space

216

00:07:57,830 --> 00:07:55,599

station on a soyuz taxi flight in 2002

217

00:08:01,430 --> 00:07:57,840

and then on a 10-day science flight in

218

00:08:02,469 --> 00:08:01,440

2005 during the expedition 10 to 11 crew

219

00:08:04,469 --> 00:08:02,479

exchange

220

00:08:07,110 --> 00:08:04,479

he later served as an italian air force

221

00:08:09,510 --> 00:08:07,120

liaison officer and completed master's

222

00:08:12,309 --> 00:08:09,520

degrees in aeronautical sciences at the

223

00:08:15,029 --> 00:08:12,319

university of naples and in physics at

224

00:08:16,950 --> 00:08:15,039

the university of perugia

225

00:08:18,869 --> 00:08:16,960

this flight is the second station trip

226

00:08:19,909 --> 00:08:18,879

for retired air force colonel greg

227

00:08:24,469 --> 00:08:19,919

johnson

228

00:08:27,029 --> 00:08:24,479

united kingdom and raised all over the

229

00:08:29,029 --> 00:08:27,039

united states he was inspired to become

230

00:08:30,710 --> 00:08:29,039

an astronaut during a family visit to

231

00:08:32,630 --> 00:08:30,720

his grandparents in traverse city

232

00:08:35,350 --> 00:08:32,640

michigan when they all watched the

233

00:08:37,750 --> 00:08:35,360

apollo 11 moon landing i was seven my

234

00:08:39,029 --> 00:08:37,760

brother was nine my sister was 11

235

00:08:44,470 --> 00:08:39,039

and

236

00:08:46,630 --> 00:08:44,480

love to be an astronaut so that was kind

237

00:08:47,990 --> 00:08:46,640

of the bit that was set way back when i

238

00:08:49,910 --> 00:08:48,000

was seven

239

00:08:52,310 --> 00:08:49,920

johnson graduated from high school in

240

00:08:54,230 --> 00:08:52,320

fairborn ohio and went to the air force

241

00:08:55,350 --> 00:08:54,240

academy to become a pilot and an

242

00:08:57,030 --> 00:08:55,360

engineer

243

00:08:59,430 --> 00:08:57,040

after graduating with a bachelor of

244

00:09:01,430 --> 00:08:59,440

science in aeronautical engineering and

245

00:09:03,750 --> 00:09:01,440

earning a masters in flight structures

246

00:09:05,590 --> 00:09:03,760

engineering at columbia johnson was

247

00:09:08,389 --> 00:09:05,600

assigned to reese air force base as a

248

00:09:10,470 --> 00:09:08,399

pilot and then a pilot instructor he

249

00:09:13,030 --> 00:09:10,480

flew combat missions in operations

250

00:09:14,630 --> 00:09:13,040

desert storm and southern watch before

251
00:09:17,190 --> 00:09:14,640
attending the air force test pilot

252
00:09:19,190 --> 00:09:17,200
school which rejuvenated the engineer in

253
00:09:22,070 --> 00:09:19,200
him and made him think about his

254
00:09:24,710 --> 00:09:22,080
childhood dream of becoming an astronaut

255
00:09:26,470 --> 00:09:24,720
i'm flying really cool stuff and they

256
00:09:28,949 --> 00:09:26,480
like to hire test pilots because each

257
00:09:30,870 --> 00:09:28,959
shuttle mission really is a test flight

258
00:09:31,910 --> 00:09:30,880
and so i went ahead and threw my name in

259
00:09:35,030 --> 00:09:31,920
the hat

260
00:09:37,110 --> 00:09:35,040
johnson was selected by nasa in 1998

261
00:09:40,550 --> 00:09:37,120
earned an mba from the university of

262
00:09:43,030 --> 00:09:40,560
texas at austin in 2005 and piloted the

263
00:09:45,110 --> 00:09:43,040

2008 shuttle flight that delivered the

264

00:09:47,670 --> 00:09:45,120

first components of japan's kibo

265

00:09:50,230 --> 00:09:47,680

laboratory complex

266

00:09:52,470 --> 00:09:50,240

dr drew feustel's first space flight got

267

00:09:55,190 --> 00:09:52,480

him nowhere near the international space

268

00:09:57,190 --> 00:09:55,200

station but he got up close to something

269

00:09:58,470 --> 00:09:57,200

that none of his crewmates has ever seen

270

00:10:00,230 --> 00:09:58,480

before

271

00:10:03,110 --> 00:10:00,240

feustel was born and raised in lake

272

00:10:05,350 --> 00:10:03,120

orion michigan north of detroit you have

273

00:10:06,949 --> 00:10:05,360

fond memories of summer and winter you

274

00:10:09,350 --> 00:10:06,959

know i think winters were quite

275

00:10:12,150 --> 00:10:09,360

enjoyable we used to do a lot of

276
00:10:14,069 --> 00:10:12,160
snowmobiling and snow skiing and in the

277
00:10:15,590 --> 00:10:14,079
summers we spent our time

278
00:10:18,949 --> 00:10:15,600
water skiing

279
00:10:20,790 --> 00:10:18,959
and being a suburb of detroit motor city

280
00:10:21,829 --> 00:10:20,800
i became interested in automobiles at an

281
00:10:23,990 --> 00:10:21,839
early age

282
00:10:26,710 --> 00:10:24,000
feustel raced motorcycles and go-karts

283
00:10:28,550 --> 00:10:26,720
as a boy and he had cars in mind after

284
00:10:30,630 --> 00:10:28,560
high school when he went to oakland

285
00:10:33,030 --> 00:10:30,640
community college specializing in

286
00:10:35,829 --> 00:10:33,040
geology with a minor in industrial

287
00:10:37,829 --> 00:10:35,839
design so you could say i was pursuing

288
00:10:40,150 --> 00:10:37,839

two careers one is a scientist one is an

289

00:10:42,470 --> 00:10:40,160

automotive designer while working as an

290

00:10:44,710 --> 00:10:42,480

automotive restoration mechanic

291

00:10:46,710 --> 00:10:44,720

after he finished his associate's degree

292

00:10:49,030 --> 00:10:46,720

he went to purdue for a bachelor's in

293

00:10:52,150 --> 00:10:49,040

solid earth sciences and masters in

294

00:10:53,670 --> 00:10:52,160

geophysics and was the team cart driver

295

00:10:56,069 --> 00:10:53,680

for his fraternity

296

00:10:58,310 --> 00:10:56,079

and then he earned a phd in geological

297

00:11:00,550 --> 00:10:58,320

sciences at queen's university in

298

00:11:02,790 --> 00:11:00,560

kingston ontario he worked as a

299

00:11:05,269 --> 00:11:02,800

geophysicist in canada and then for

300

00:11:07,190 --> 00:11:05,279

exxon mobil exploration in houston

301
00:11:10,550 --> 00:11:07,200
before he was picked as an astronaut in

302
00:11:12,230 --> 00:11:10,560
2000 feustel completed three spacewalks

303
00:11:15,430 --> 00:11:12,240
during the final servicing mission to

304
00:11:17,590 --> 00:11:15,440
the hubble space telescope in 2009

305
00:11:20,550 --> 00:11:17,600
i think for humans it's always been

306
00:11:22,470 --> 00:11:20,560
about what's out there are we alone

307
00:11:24,230 --> 00:11:22,480
could we be the only ones in this

308
00:11:25,509 --> 00:11:24,240
infinite universe

309
00:11:27,350 --> 00:11:25,519
and i think the only way we're going to

310
00:11:29,190 --> 00:11:27,360
find out is if we keep pushing the