



1
00:00:08,470 --> 00:00:04,710
the international space station's

2
00:00:10,709 --> 00:00:08,480
expedition 23 crew includes a doctor an

3
00:00:13,110 --> 00:00:10,719
air force pilot who's studying the law

4
00:00:14,870 --> 00:00:13,120
an engineer a chemistry professor who

5
00:00:17,430 --> 00:00:14,880
used to be an electrician

6
00:00:19,349 --> 00:00:17,440
a soldier and a paratrooper turned

7
00:00:20,870 --> 00:00:19,359
police officer turned spacecraft

8
00:00:23,269 --> 00:00:20,880
engineer

9
00:00:26,710 --> 00:00:23,279
dr oleg kotov is a russian air force

10
00:00:28,470 --> 00:00:26,720
colonel born in simferopol in the crimea

11
00:00:30,950 --> 00:00:28,480
since his father was in the soviet

12
00:00:36,310 --> 00:00:30,960
military kotov's childhood was spread

13
00:00:41,750 --> 00:00:38,389

the geography

14

00:00:42,830 --> 00:00:41,760

is pretty big for me i lived in ukraine

15

00:00:44,630 --> 00:00:42,840

in

16

00:00:46,150 --> 00:00:44,640

moldova

17

00:00:49,110 --> 00:00:46,160

in leningrad

18

00:00:52,630 --> 00:00:49,120

currently saint petersburg in moscow and

19

00:00:55,270 --> 00:00:52,640

i graduated from high school in moscow

20

00:00:57,430 --> 00:00:55,280

then kotov fulfilled a family tradition

21

00:00:58,869 --> 00:00:57,440

by studying at the kirov military

22

00:01:01,029 --> 00:00:58,879

medical academy

23

00:01:04,149 --> 00:01:01,039

when he graduated with his medical

24

00:01:05,990 --> 00:01:04,159

degree and his pilot's wings his next

25

00:01:08,390 --> 00:01:06,000

career step was influenced by the

26
00:01:10,950 --> 00:01:08,400
childhood desire to become the next yuri

27
00:01:15,030 --> 00:01:10,960
gagarin

28
00:01:16,230 --> 00:01:15,040
after i graduated from the academy i was

29
00:01:19,190 --> 00:01:16,240
um

30
00:01:22,070 --> 00:01:19,200
i started working in the uh cosmonaut

31
00:01:25,350 --> 00:01:22,080
training center in the star city and i

32
00:01:31,350 --> 00:01:28,390
test surgeon and i also worked as an

33
00:01:33,590 --> 00:01:31,360
instructor with a specialty of space

34
00:01:36,469 --> 00:01:33,600
medicine investigating how the human

35
00:01:38,149 --> 00:01:36,479
body responds in the absence of gravity

36
00:01:41,109 --> 00:01:38,159
kotov was selected for cosmonaut

37
00:01:44,550 --> 00:01:41,119
training himself in 1996 and when he

38
00:01:46,550 --> 00:01:44,560

made his first flight in 2007 as soyuz

39

00:01:48,630 --> 00:01:46,560

commander and flight engineer on the

40

00:01:51,670 --> 00:01:48,640

international space station's expedition

41

00:01:55,510 --> 00:01:51,680

15 he fulfilled the childhood dream to

42

00:01:58,069 --> 00:01:55,520

fly higher and explore the unknown

43

00:01:59,830 --> 00:01:58,079

i wish the same like to all those young

44

00:02:01,749 --> 00:01:59,840

guys who dream

45

00:02:04,149 --> 00:02:01,759

to reach the stars there are no

46

00:02:06,069 --> 00:02:04,159

limitations it's all in your hands

47

00:02:07,670 --> 00:02:06,079

you're capable of doing it and nothing

48

00:02:09,910 --> 00:02:07,680

is impossible

49

00:02:11,910 --> 00:02:09,920

soichi naguchi was one of those young

50

00:02:14,070 --> 00:02:11,920

guys with such dreams

51
00:02:16,550 --> 00:02:14,080
the yokohama native raised in nearby

52
00:02:19,190 --> 00:02:16,560
chigasaki got hooked on space and

53
00:02:21,350 --> 00:02:19,200
adventures early on he was just in the

54
00:02:22,470 --> 00:02:21,360
first grade when he explained his future

55
00:02:24,630 --> 00:02:22,480
dreams

56
00:02:26,390 --> 00:02:24,640
i want to become a rocket pilot because

57
00:02:27,750 --> 00:02:26,400
i want to know various things about

58
00:02:30,550 --> 00:02:27,760
space

59
00:02:31,670 --> 00:02:30,560
well i really like

60
00:02:33,509 --> 00:02:31,680
all the

61
00:02:36,550 --> 00:02:33,519
rockets and

62
00:02:39,110 --> 00:02:36,560
spacecraft and space adventures when i

63
00:02:42,150 --> 00:02:39,120

was a childhood i watched all the movies

64

00:02:44,869 --> 00:02:42,160

like star wars or star treks or the

65

00:02:47,190 --> 00:02:44,879

japanese anime which uh

66

00:02:49,509 --> 00:02:47,200

when thing was the space adventure

67

00:02:51,990 --> 00:02:49,519

naguchi kept his interest in space as he

68

00:02:54,070 --> 00:02:52,000

grew up in the 70s and early 80s and

69

00:02:56,390 --> 00:02:54,080

that interest came into focus one day

70

00:03:00,070 --> 00:02:56,400

during his freshman year in high school

71

00:03:02,710 --> 00:03:00,080

i saw the the space shuttle sts-1 go up

72

00:03:05,589 --> 00:03:02,720

on television and i thought wow this is

73

00:03:09,190 --> 00:03:05,599

a great carrier great profession i

74

00:03:10,390 --> 00:03:09,200

wonder if i can be someday like a space

75

00:03:12,550 --> 00:03:10,400

traveler

76
00:03:13,430 --> 00:03:12,560
there weren't any japanese astronauts

77
00:03:15,830 --> 00:03:13,440
then

78
00:03:18,390 --> 00:03:15,840
but naguchi got his pilot's license and

79
00:03:20,470 --> 00:03:18,400
concentrated on space-related technology

80
00:03:22,229 --> 00:03:20,480
in his studies for a bachelor's and a

81
00:03:25,190 --> 00:03:22,239
master's degree in aeronautical

82
00:03:27,350 --> 00:03:25,200
engineering at the university of tokyo

83
00:03:29,670 --> 00:03:27,360
japanese astronauts did finally fly in

84
00:03:31,990 --> 00:03:29,680
space during naguchi's five years in

85
00:03:33,509 --> 00:03:32,000
private industry designing and testing

86
00:03:36,309 --> 00:03:33,519
aircraft engines

87
00:03:38,309 --> 00:03:36,319
in 1996 the japanese space agency

88
00:03:40,869 --> 00:03:38,319

selected him for astronaut training at

89

00:03:43,190 --> 00:03:40,879

nasa's johnson space center in houston

90

00:03:45,030 --> 00:03:43,200

his first trip to space was on the space

91

00:03:48,789 --> 00:03:45,040

shuttle's return to flight mission in

92

00:03:50,949 --> 00:03:48,799

2005 when he made three spacewalks what

93

00:03:53,110 --> 00:03:50,959

we are doing is definitely motivate the

94

00:03:55,509 --> 00:03:53,120

uh the young kids like

95

00:03:56,949 --> 00:03:55,519

i wasn't motivated by watching the

96

00:03:59,270 --> 00:03:56,959

shuttle go up

97

00:04:01,350 --> 00:03:59,280

and pursue my scientific

98

00:04:03,509 --> 00:04:01,360

career so

99

00:04:06,869 --> 00:04:03,519

i hope that the younger generation by

100

00:04:09,990 --> 00:04:06,879

watching us and the space station

101
00:04:14,149 --> 00:04:10,000
motivated yet motivated and pursue their

102
00:04:16,629 --> 00:04:14,159
career for the science and technology

103
00:04:18,229 --> 00:04:16,639
u.s army colonel t.j creamer had a

104
00:04:21,189 --> 00:04:18,239
boyhood interest in science and

105
00:04:22,390 --> 00:04:21,199
technology but the astronaut part came

106
00:04:25,189 --> 00:04:22,400
much later

107
00:04:27,749 --> 00:04:25,199
he was born at fort huachuca arizona

108
00:04:29,830 --> 00:04:27,759
just the first of dozens of homes for a

109
00:04:31,270 --> 00:04:29,840
child of the military well i started

110
00:04:34,070 --> 00:04:31,280
bouncing around with dad because dad was

111
00:04:35,670 --> 00:04:34,080
in the army and to complete that thought

112
00:04:36,629 --> 00:04:35,680
i think i've moved 23 times to get to

113
00:04:38,310 --> 00:04:36,639

houston

114

00:04:39,189 --> 00:04:38,320

with his military career and my military

115

00:04:41,430 --> 00:04:39,199

career

116

00:04:43,270 --> 00:04:41,440

by the time his parents retired and the

117

00:04:45,670 --> 00:04:43,280

family settled in upper marlboro

118

00:04:47,749 --> 00:04:45,680

maryland creamer was taking steps on a

119

00:04:49,670 --> 00:04:47,759

road that would lead to his career

120

00:04:51,990 --> 00:04:49,680

in elementary intermediate and high

121

00:04:54,310 --> 00:04:52,000

school my instructors

122

00:04:55,350 --> 00:04:54,320

my teachers urged me into the math and

123

00:04:57,990 --> 00:04:55,360

sciences

124

00:05:00,390 --> 00:04:58,000

i had an act i enjoyed it they pushed me

125

00:05:02,230 --> 00:05:00,400

in towards the scientific realm i'm old

126
00:05:03,909 --> 00:05:02,240
enough to actually have seen neil

127
00:05:06,070 --> 00:05:03,919
armstrong walk on the moon so there's

128
00:05:08,150 --> 00:05:06,080
another yet another spark

129
00:05:10,550 --> 00:05:08,160
after finishing his bachelor's degree in

130
00:05:13,270 --> 00:05:10,560
chemistry at loyola college in baltimore

131
00:05:15,510 --> 00:05:13,280
while a member of the rotc creamer

132
00:05:18,070 --> 00:05:15,520
started his army career in the armor

133
00:05:19,670 --> 00:05:18,080
branch before completing army aviation

134
00:05:22,070 --> 00:05:19,680
school and being assigned as a

135
00:05:24,390 --> 00:05:22,080
helicopter pilot he later earned a

136
00:05:27,029 --> 00:05:24,400
masters in physics at mit

137
00:05:28,550 --> 00:05:27,039
and taught physics at west point

138
00:05:31,029 --> 00:05:28,560

and when he chose research and

139

00:05:32,629 --> 00:05:31,039

development as a secondary specialty

140

00:05:33,909 --> 00:05:32,639

creamer began receiving a new

141

00:05:36,230 --> 00:05:33,919

publication

142

00:05:37,270 --> 00:05:36,240

the first issue i got the inside back

143

00:05:39,590 --> 00:05:37,280

cover

144

00:05:41,909 --> 00:05:39,600

had an article that was entitled the

145

00:05:43,749 --> 00:05:41,919

typical profile of an army astronaut and

146

00:05:45,430 --> 00:05:43,759

i read through that article and those

147

00:05:47,270 --> 00:05:45,440

little sparks all along the way they

148

00:05:48,310 --> 00:05:47,280

kind of erupted into a flame and i went

149

00:05:50,710 --> 00:05:48,320

ooh

150

00:05:53,430 --> 00:05:50,720

this sounds very close to what i've been

151

00:05:55,270 --> 00:05:53,440

tracking and doing it unknowingly

152

00:05:57,830 --> 00:05:55,280

he was assigned to the johnson space

153

00:06:00,469 --> 00:05:57,840

center in 1995 as a space shuttle

154

00:06:02,710 --> 00:06:00,479

vehicle integration test engineer and in

155

00:06:04,070 --> 00:06:02,720

1998 he was selected to join the

156

00:06:05,670 --> 00:06:04,080

astronaut corps

157

00:06:09,830 --> 00:06:05,680

this trip to the international space

158

00:06:11,590 --> 00:06:09,840

station is creamer's first space flight

159

00:06:14,070 --> 00:06:11,600

russian air force colonel alexander

160

00:06:16,309 --> 00:06:14,080

skvortsov was born in shelkavo near

161

00:06:18,790 --> 00:06:16,319

moscow because his father's job had

162

00:06:21,510 --> 00:06:18,800

brought the family to star city a town

163

00:06:22,790 --> 00:06:21,520

with no hospital

164

00:06:26,390 --> 00:06:22,800

my father

165

00:06:28,790 --> 00:06:26,400

was a member of the cosmonaut corps not

166

00:06:30,309 --> 00:06:28,800

for too long because he had health

167

00:06:32,390 --> 00:06:30,319

issues but

168

00:06:36,070 --> 00:06:32,400

still i heard many good things

169

00:06:39,510 --> 00:06:38,150

the idea of space has always been very

170

00:06:41,350 --> 00:06:39,520

strong and

171

00:06:42,469 --> 00:06:41,360

strongly present in our

172

00:06:45,270 --> 00:06:42,479

families

173

00:06:47,270 --> 00:06:45,280

skvortsov's ambition to fly was nurtured

174

00:06:49,670 --> 00:06:47,280

growing up in a military family that

175

00:06:51,990 --> 00:06:49,680

moved from city to city and led to what

176
00:06:52,950 --> 00:06:52,000
he calls a pretty standard educational

177
00:06:54,950 --> 00:06:52,960
path

178
00:06:56,870 --> 00:06:54,960
after high school in morshansk he

179
00:06:59,189 --> 00:06:56,880
completed study at the stavropol air

180
00:07:01,029 --> 00:06:59,199
force pilot and navigator school

181
00:07:02,469 --> 00:07:01,039
spent seven years in the national air

182
00:07:04,550 --> 00:07:02,479
defense force

183
00:07:06,390 --> 00:07:04,560
then studied at the military red banner

184
00:07:09,430 --> 00:07:06,400
air defense academy

185
00:07:11,110 --> 00:07:09,440
scorchoff graduated the academy in 1997

186
00:07:13,510 --> 00:07:11,120
the same year he was selected for the

187
00:07:20,150 --> 00:07:13,520
cosmonaut corps and started training to

188
00:07:25,670 --> 00:07:23,189

this spirit that makes them strive for

189

00:07:27,749 --> 00:07:25,680

discoveries for research to go higher to

190

00:07:37,589 --> 00:07:27,759

go deeper that is something that allows

191

00:07:42,230 --> 00:07:39,430

in the years he's been preparing for

192

00:07:44,309 --> 00:07:42,240

this first space flight skv's also been

193

00:07:49,110 --> 00:07:44,319

studying at the russian academy of civil

194

00:07:51,990 --> 00:07:50,469

my

195

00:07:53,909 --> 00:07:52,000

college finals

196

00:07:56,309 --> 00:07:53,919

coincide with the fact that i will have

197

00:07:58,550 --> 00:07:56,319

to find space so i'll have to take a

198

00:08:00,710 --> 00:07:58,560

short break and i guess graduate the

199

00:08:03,029 --> 00:08:00,720

after that when we did inspections every

200

00:08:05,589 --> 00:08:03,039

night tracy caldwell dyson was born in

201

00:08:08,309 --> 00:08:05,599

arcadia california and thinks of all of

202

00:08:10,230 --> 00:08:08,319

southern california as her hometown

203

00:08:12,309 --> 00:08:10,240

she remembers dreaming about space as a

204

00:08:14,230 --> 00:08:12,319

young girl but she first thought of it

205

00:08:16,469 --> 00:08:14,240

as a career when she was a high school

206

00:08:19,189 --> 00:08:16,479

student who saw a teacher christa

207

00:08:20,950 --> 00:08:19,199

mcauliffe prepare for her space flight

208

00:08:23,670 --> 00:08:20,960

you start to realize that i've got

209

00:08:25,270 --> 00:08:23,680

something in common with this person and

210

00:08:26,950 --> 00:08:25,280

a teacher has the right stuff and a

211

00:08:28,390 --> 00:08:26,960

teacher is teaching me

212

00:08:31,189 --> 00:08:28,400

all day long i spend more time with my

213

00:08:33,110 --> 00:08:31,199

teachers than i do my parents

214

00:08:34,790 --> 00:08:33,120

then it became very

215

00:08:36,949 --> 00:08:34,800

interesting to me

216

00:08:38,310 --> 00:08:36,959

nearing graduation and unsure of what

217

00:08:40,389 --> 00:08:38,320

she wanted to be

218

00:08:42,230 --> 00:08:40,399

dyson took her parents advice and made a

219

00:08:45,110 --> 00:08:42,240

list of things she liked

220

00:08:47,269 --> 00:08:45,120

being athletic studying science working

221

00:08:48,389 --> 00:08:47,279

with tools learning languages and

222

00:08:49,910 --> 00:08:48,399

cultures

223

00:08:51,829 --> 00:08:49,920

when i looked at that list and then i

224

00:08:53,030 --> 00:08:51,839

looked at what astronauts were were

225

00:08:54,949 --> 00:08:53,040

doing

226

00:08:56,150 --> 00:08:54,959

it seemed like a pretty good match and

227

00:08:58,389 --> 00:08:56,160

that was the

228

00:09:00,790 --> 00:08:58,399

diving board that i sprang from into

229

00:09:02,630 --> 00:09:00,800

college and graduate school and

230

00:09:04,389 --> 00:09:02,640

the path that i took

231

00:09:06,790 --> 00:09:04,399

dyson earned her bachelor's degree in

232

00:09:08,710 --> 00:09:06,800

chemistry at california state university

233

00:09:10,870 --> 00:09:08,720

at fullerton where she was a sprinter

234

00:09:12,470 --> 00:09:10,880

and long jumper on the track team while

235

00:09:14,470 --> 00:09:12,480

working as an electrician for her

236

00:09:16,630 --> 00:09:14,480

father's contracting company

237

00:09:19,030 --> 00:09:16,640

she completed her doctorate in chemistry

238

00:09:21,030 --> 00:09:19,040

at the university of california at davis

239

00:09:22,389 --> 00:09:21,040

and won a postdoctoral fellowship in

240

00:09:24,470 --> 00:09:22,399

environmental science

241

00:09:26,070 --> 00:09:24,480

before being selected as an astronaut in

242

00:09:27,910 --> 00:09:26,080

1998

243

00:09:29,910 --> 00:09:27,920

she made her first space flight on the

244

00:09:32,070 --> 00:09:29,920

shuttle mission that delivered the s-5

245

00:09:33,829 --> 00:09:32,080

trust to the international space station

246

00:09:35,590 --> 00:09:33,839

and thinks the planet would be in better

247

00:09:36,710 --> 00:09:35,600

shape if more people could make that

248

00:09:38,790 --> 00:09:36,720

trip

249

00:09:40,470 --> 00:09:38,800

you know you take the firmest believer

250

00:09:44,470 --> 00:09:40,480

in

251
00:09:45,910 --> 00:09:44,480
launch them and you tick them

252
00:09:48,710 --> 00:09:45,920
take them right in front of a window and

253
00:09:52,070 --> 00:09:48,720
have them look at that beautiful plump

254
00:09:54,070 --> 00:09:52,080
pink and blue planet as it turns from

255
00:09:55,829 --> 00:09:54,080
sunrise to sunset

256
00:09:58,949 --> 00:09:55,839
and

257
00:10:01,030 --> 00:09:58,959
they they'll change their mind

258
00:10:03,430 --> 00:10:01,040
mikhail kornienko was born in the city

259
00:10:06,230 --> 00:10:03,440
of cejuan on the volga river in western

260
00:10:09,030 --> 00:10:06,240
samara just a year before yuri gagarin's

261
00:10:11,590 --> 00:10:09,040
space flight changed the world

262
00:10:12,790 --> 00:10:11,600
and then the space exploration was only

263
00:10:14,150 --> 00:10:12,800

starting

264

00:10:16,389 --> 00:10:14,160

and every

265

00:10:17,670 --> 00:10:16,399

young boy was dreaming of being a

266

00:10:19,750 --> 00:10:17,680

cosmonaut

267

00:10:21,590 --> 00:10:19,760

and i was not an exception

268

00:10:22,790 --> 00:10:21,600

especially because

269

00:10:26,470 --> 00:10:22,800

my father

270

00:10:28,470 --> 00:10:26,480

was a rescue helicopter pilot

271

00:10:31,350 --> 00:10:28,480

his father's military job took the

272

00:10:33,750 --> 00:10:31,360

family to yujnayarolsk and when konienko

273

00:10:35,670 --> 00:10:33,760

was six his father died in a helicopter

274

00:10:37,350 --> 00:10:35,680

crash during a rescue

275

00:10:39,509 --> 00:10:37,360

the young boy lived with his grandmother

276

00:10:41,430 --> 00:10:39,519

for a few years and then joined his

277

00:10:43,590 --> 00:10:41,440

mother and brother in chayabinsk when he

278

00:10:45,509 --> 00:10:43,600

started the seventh grade one year

279

00:10:48,470 --> 00:10:45,519

before he was old enough to enroll at

280

00:10:51,910 --> 00:10:48,480

the young cosmonaut school there

281

00:11:08,230 --> 00:10:51,920

yeah and i joined that school

282

00:11:14,470 --> 00:11:11,269

and also we were allowed to

283

00:11:16,389 --> 00:11:14,480

do some parachute jumping after high

284

00:11:18,230 --> 00:11:16,399

school kornienko worked in a radio

285

00:11:21,350 --> 00:11:18,240

equipment plant before joining the

286

00:11:23,269 --> 00:11:21,360

soviet army and serving as a paratrooper

287

00:11:25,190 --> 00:11:23,279

then he joined the moscow militia or

288

00:11:27,269 --> 00:11:25,200

police force while studying at the

289

00:11:29,110 --> 00:11:27,279

moscow aviation institute

290

00:11:30,790 --> 00:11:29,120

he worked as a mechanical engineering

291

00:11:32,630 --> 00:11:30,800

designer before getting on at the

292

00:11:35,269 --> 00:11:32,640

baikonur cosmodrome as a launch

293

00:11:37,350 --> 00:11:35,279

equipment specialist where for a time he

294

00:11:39,430 --> 00:11:37,360

led the team responsible for servicing

295

00:11:41,110 --> 00:11:39,440

the buron spacecraft

296

00:11:43,269 --> 00:11:41,120

kornienko joined the rocket space

297

00:11:44,790 --> 00:11:43,279

corporation in nergia as an engineer in

298

00:11:46,630 --> 00:11:44,800

1995.

299

00:11:49,509 --> 00:11:46,640

he was selected for the cosmonaut corps

300

00:11:55,670 --> 00:11:49,519

in 1998 and has worked as an eva

301

00:12:00,470 --> 00:11:57,190

and of spaceflight we are going to

302

00:12:00,480 --> 00:12:07,910

planets that are close to us

303

00:12:13,269 --> 00:12:11,350

forward-looking scientists

304

00:12:16,230 --> 00:12:13,279

and other specialists

305

00:12:19,590 --> 00:12:16,240

is that we do have to continue the space