



1  
00:00:31,910 --> 00:00:30,230

[Music]

2  
00:00:34,229 --> 00:00:31,920

ladies and gentlemen thank you for

3  
00:00:36,950 --> 00:00:34,239

joining us for the u.s astronaut hall of

4  
00:00:39,190 --> 00:00:36,960

fame induction ceremony honoring our

5  
00:00:41,990 --> 00:00:39,200

nation's space heroes

6  
00:00:44,229 --> 00:00:42,000

please rise for a presentation of colors

7  
00:00:45,670 --> 00:00:44,239

by the merritt island high school junior

8  
00:00:47,910 --> 00:00:45,680

rotc

9  
00:01:07,109 --> 00:00:47,920

and the national anthem sung by naomi

10  
00:01:10,830 --> 00:01:08,789

oh say

11  
00:01:15,390 --> 00:01:10,840

can you

12  
00:01:17,190 --> 00:01:15,400

see by the dawn's early

13  
00:01:19,510 --> 00:01:17,200

light

14

00:01:20,590 --> 00:01:19,520

what so proudly

15

00:01:22,149 --> 00:01:20,600

we

16

00:01:24,630 --> 00:01:22,159

held

17

00:01:27,510 --> 00:01:24,640

at the twilight's

18

00:01:31,230 --> 00:01:27,520

last gleaming

19

00:01:36,109 --> 00:01:31,240

whose broad stripes and bright

20

00:01:37,830 --> 00:01:36,119

stars through the perilous

21

00:01:40,310 --> 00:01:37,840

fight

22

00:01:41,469 --> 00:01:40,320

or the ramp

23

00:01:43,030 --> 00:01:41,479

we

24

00:01:45,069 --> 00:01:43,040

watched

25

00:01:48,710 --> 00:01:45,079

were so

26  
00:01:50,030 --> 00:01:48,720  
gallantly streaming

27  
00:01:54,069 --> 00:01:50,040  
and the

28  
00:01:55,950 --> 00:01:54,079  
rockets red glare

29  
00:01:59,830 --> 00:01:55,960  
the bombs

30  
00:02:01,910 --> 00:01:59,840  
bursting in air

31  
00:02:03,270 --> 00:02:01,920  
gave proof

32  
00:02:05,350 --> 00:02:03,280  
through the

33  
00:02:09,029 --> 00:02:05,360  
night

34  
00:02:10,949 --> 00:02:09,039  
that our flag was still

35  
00:02:11,910 --> 00:02:10,959  
there

36  
00:02:18,070 --> 00:02:11,920  
oh

37  
00:02:21,360 --> 00:02:18,080  
same does that star spangled

38  
00:02:35,190 --> 00:02:21,680

[Applause]

39

00:02:40,120 --> 00:02:37,589

of the

40

00:02:51,030 --> 00:02:40,130

brave

41

00:02:55,430 --> 00:02:52,630

ladies and gentlemen please welcome

42

00:02:57,030 --> 00:02:55,440

today's master of ceremonies former cnn

43

00:03:04,309 --> 00:02:57,040

correspondent and award-winning

44

00:03:12,630 --> 00:03:05,190

good

45

00:03:15,509 --> 00:03:12,640

thank you merritt island high school

46

00:03:17,430 --> 00:03:15,519

junior rotc and ms bradshaw

47

00:03:21,589 --> 00:03:17,440

that was spectacular thank you very much

48

00:03:27,110 --> 00:03:24,789

it is such an honor to once again serve

49

00:03:29,110 --> 00:03:27,120

as your master of ceremonies for the

50

00:03:31,589 --> 00:03:29,120

united states astronaut hall of fame

51  
00:03:34,229 --> 00:03:31,599  
induction everybody doing okay

52  
00:03:36,070 --> 00:03:34,239  
doing good all you folks up there don't

53  
00:03:38,789 --> 00:03:36,080  
throw anything down on me

54  
00:03:41,509 --> 00:03:38,799  
don't you do it

55  
00:03:43,430 --> 00:03:41,519  
today we are here to honor two intrepid

56  
00:03:45,110 --> 00:03:43,440  
space explorers

57  
00:03:47,589 --> 00:03:45,120  
both of whom have flown multiple

58  
00:03:50,710 --> 00:03:47,599  
missions both of whom who have made

59  
00:03:52,309 --> 00:03:50,720  
significant impacts in the sciences and

60  
00:03:54,550 --> 00:03:52,319  
in space travel

61  
00:03:57,910 --> 00:03:54,560  
both of whom have made the history books

62  
00:04:01,030 --> 00:03:57,920  
as firsts in their fields and both of

63  
00:04:03,350 --> 00:04:01,040

whom have flown aboard this very space

64

00:04:05,990 --> 00:04:03,360

shuttle atlantis

65

00:04:07,350 --> 00:04:06,000

in fact these astronauts even flew

66

00:04:09,830 --> 00:04:07,360

together

67

00:04:12,309 --> 00:04:09,840

on an atlantis mission

68

00:04:15,670 --> 00:04:12,319

together michael fall and ellen ochoa

69

00:04:17,670 --> 00:04:15,680

comprise the 16th class of space shuttle

70

00:04:19,749 --> 00:04:17,680

astronauts to be inducted into the

71

00:04:27,270 --> 00:04:19,759

united states astronaut

72

00:04:32,790 --> 00:04:29,909

but before we learn more about our two

73

00:04:34,390 --> 00:04:32,800

honorees today we are fortunate to have

74

00:04:35,749 --> 00:04:34,400

many distinguished guests who have

75

00:04:37,990 --> 00:04:35,759

joined us

76

00:04:40,150 --> 00:04:38,000

we would like to recognize those in

77

00:04:42,950 --> 00:04:40,160

attendance from the johnson space center

78

00:04:45,270 --> 00:04:42,960

today as well as nasa representatives

79

00:04:47,430 --> 00:04:45,280

from our own backyard

80

00:04:50,070 --> 00:04:47,440

we'd also like to welcome patrick gavin

81

00:04:52,710 --> 00:04:50,080

from congressman bill posey's office

82

00:04:54,469 --> 00:04:52,720

thank you all for joining us

83

00:04:56,230 --> 00:04:54,479

i'd like to introduce to you some of our

84

00:04:57,909 --> 00:04:56,240

special guests the astronauts in

85

00:05:00,710 --> 00:04:57,919

attendance today

86

00:05:03,670 --> 00:05:00,720

he logged nearly 13 days in space and is

87

00:05:07,749 --> 00:05:03,680

now acting deputy director of flight

88

00:05:11,189 --> 00:05:07,759

operations gregory c johnson

89

00:05:14,469 --> 00:05:11,199

a veteran of two space flights sts-127

90

00:05:16,790 --> 00:05:14,479

and expedition 35 and currently serving

91

00:05:19,990 --> 00:05:16,800

as chief of the astronaut office

92

00:05:21,830 --> 00:05:20,000

christopher j cassidy

93

00:05:23,749 --> 00:05:21,840

he served as flight engineer aboard the

94

00:05:25,909 --> 00:05:23,759

international space station for

95

00:05:28,150 --> 00:05:25,919

expedition 41

96

00:05:31,430 --> 00:05:28,160

g reed weissman

97

00:05:33,670 --> 00:05:31,440

he has logged over 605 hours in space as

98

00:05:36,150 --> 00:05:33,680

a veteran of three space flights and

99

00:05:39,749 --> 00:05:36,160

served as commander of his third on

100

00:05:41,990 --> 00:05:39,759

space shuttle atlantis for sts-66

101  
00:05:44,629 --> 00:05:42,000  
don mcmonagle

102  
00:05:46,870 --> 00:05:44,639  
this three-time flyer served as pilot on

103  
00:05:47,749 --> 00:05:46,880  
his second mission and commander on his

104  
00:05:49,830 --> 00:05:47,759  
third

105  
00:05:52,950 --> 00:05:49,840  
michael bloomfield

106  
00:05:54,950 --> 00:05:52,960  
he is a veteran of four space flights

107  
00:05:58,950 --> 00:05:54,960  
twice serving as pilot

108  
00:06:03,189 --> 00:06:01,270  
also here to welcome our inductees are

109  
00:06:06,150 --> 00:06:03,199  
several of the current members of the

110  
00:06:07,590 --> 00:06:06,160  
united states astronaut hall of fame

111  
00:06:09,510 --> 00:06:07,600  
these are the men and women who have

112  
00:06:11,670 --> 00:06:09,520  
joined the ranks of this prestigious

113  
00:06:14,390 --> 00:06:11,680

group of space explorers

114

00:06:16,550 --> 00:06:14,400

they will be introduced in flight order

115

00:06:18,469 --> 00:06:16,560

and will pause for a brief moment

116

00:06:22,309 --> 00:06:18,479

in front of the stage before they take

117

00:06:28,710 --> 00:06:25,110

the command module pilot for apollo 15

118

00:06:30,870 --> 00:06:28,720

is 38-minute spacewalk made history as

119

00:06:34,550 --> 00:06:30,880

the first spacewalk made from a command

120

00:06:42,150 --> 00:06:34,560

module during a trans-earth coast al

121

00:06:48,230 --> 00:06:45,029

he was the lunar module pilot on apollo

122

00:06:51,830 --> 00:06:48,240

16's mission the fifth mission to land

123

00:07:01,270 --> 00:06:51,840

humans on the moon and spent a record 71

124

00:07:07,589 --> 00:07:05,029

in 1981 this astronaut piloted sts-1

125

00:07:09,749 --> 00:07:07,599

colombia the very first space shuttle

126

00:07:11,990 --> 00:07:09,759

mission he went on to command three more

127

00:07:14,150 --> 00:07:12,000

missions and later served as director of

128

00:07:20,309 --> 00:07:14,160

nasa's kennedy space center robert

129

00:07:24,870 --> 00:07:22,309

he served as pilot during the maiden

130

00:07:27,430 --> 00:07:24,880

voyage of sts-6 challenger then

131

00:07:28,189 --> 00:07:27,440

commander of sts-51d

132

00:07:31,189 --> 00:07:28,199

and

133

00:07:38,230 --> 00:07:31,199

sts-51j the first flight of space

134

00:07:43,189 --> 00:07:40,309

a veteran of four space shuttle missions

135

00:07:45,589 --> 00:07:43,199

he piloted sts-8 the first mission with

136

00:07:47,589 --> 00:07:45,599

a night launch and landing and later

137

00:07:49,350 --> 00:07:47,599

commanded sts-49

138

00:07:50,469 --> 00:07:49,360

the maiden flight of space shuttle

139

00:07:56,950 --> 00:07:50,479

endeavour

140

00:08:02,070 --> 00:07:59,589

logging more than 500 hours in space on

141

00:08:04,309 --> 00:08:02,080

three missions this pilot and commander

142

00:08:06,869 --> 00:08:04,319

also led the space shuttle orbiter

143

00:08:09,189 --> 00:08:06,879

return to flight team following the

144

00:08:14,710 --> 00:08:09,199

challenger tragedy brewster shaw

145

00:08:19,430 --> 00:08:16,869

he piloted the first shuttle flight to

146

00:08:21,510 --> 00:08:19,440

land on kennedy space center's runway

147

00:08:23,589 --> 00:08:21,520

then went on to command four more

148

00:08:25,749 --> 00:08:23,599

flights including the first shuttle

149

00:08:33,190 --> 00:08:25,759

mission to dock with the russian space

150

00:08:38,790 --> 00:08:35,190

a veteran of three space flights he has

151  
00:08:41,350 --> 00:08:38,800  
logged more than 463 hours in space as a

152  
00:08:43,430 --> 00:08:41,360  
pilot and commander he also served as

153  
00:08:49,910 --> 00:08:43,440  
director of nasa's johnson space center

154  
00:08:53,110 --> 00:08:51,590  
a veteran of three space shuttle

155  
00:08:56,230 --> 00:08:53,120  
missions he served as commander of

156  
00:08:59,910 --> 00:08:56,240  
sts-31 which deployed the hubble space

157  
00:09:02,470 --> 00:08:59,920  
telescope from 1997 to 2000 he served as

158  
00:09:08,070 --> 00:09:02,480  
deputy director of nasa's kennedy space

159  
00:09:12,910 --> 00:09:10,230  
he has logged more than 1

160  
00:09:17,230 --> 00:09:12,920  
211 hours and

161  
00:09:20,070 --> 00:09:17,240  
21.5 million miles in space including

162  
00:09:23,590 --> 00:09:20,080  
sts-75 in which he became the first

163  
00:09:29,509 --> 00:09:23,600

astronaut to log 1 000 hours aboard the

164

00:09:34,550 --> 00:09:31,750

she's a veteran of three space shuttle

165

00:09:37,910 --> 00:09:34,560

missions including two space lab flights

166

00:09:40,310 --> 00:09:37,920

and ultimately logged more than 722

167

00:09:42,800 --> 00:09:40,320

hours in space during her astronaut

168

00:09:46,150 --> 00:09:42,810

career ray sudden

169

00:09:51,110 --> 00:09:47,990

he is a veteran of three space shuttle

170

00:09:54,870 --> 00:09:51,120

missions logging more than 455 hours in

171

00:09:57,430 --> 00:09:54,880

space he served as pilot on sts-51b

172

00:10:01,670 --> 00:09:57,440

space lab 3 and was the spacecraft

173

00:10:04,620 --> 00:10:01,680

commander on sts 33 and sts-44 fred

174

00:10:06,710 --> 00:10:04,630

gregory

175

00:10:09,190 --> 00:10:06,720

[Applause]

176

00:10:11,670 --> 00:10:09,200

a veteran of four space shuttle flights

177

00:10:12,430 --> 00:10:11,680

this pilot and commander logged more

178

00:10:16,310 --> 00:10:12,440

than

179

00:10:19,030 --> 00:10:16,320

680 hours in orbit he retired in january

180

00:10:26,790 --> 00:10:19,040

after six and a half years as nasa

181

00:10:30,829 --> 00:10:29,110

she flew four space shuttle missions and

182

00:10:34,630 --> 00:10:30,839

logged more than

183

00:10:38,470 --> 00:10:34,640

975 hours in space including more than

184

00:10:43,509 --> 00:10:38,480

21 hours of extra vehicular activity

185

00:10:48,550 --> 00:10:45,829

this six-time space shuttle flyer was

186

00:10:51,030 --> 00:10:48,560

the first american to command five space

187

00:10:52,949 --> 00:10:51,040

missions including the first u.s flight

188

00:10:57,400 --> 00:10:52,959

operations with the russian space

189

00:11:01,190 --> 00:10:59,110

[Applause]

190

00:11:03,750 --> 00:11:01,200

he is a veteran of four space flights

191

00:11:06,710 --> 00:11:03,760

-serving as pilot for two and commander

192

00:11:09,190 --> 00:11:06,720

for two ultimately logging 38 days in

193

00:11:11,430 --> 00:11:09,200

space he is currently center director

194

00:11:16,310 --> 00:11:11,440

here at nasa's kennedy space center

195

00:11:22,310 --> 00:11:18,630

he has flown three space missions and

196

00:11:24,949 --> 00:11:22,320

logged over 144 days in space as shuttle

197

00:11:27,840 --> 00:11:24,959

commander pilot and station commander

198

00:11:29,030 --> 00:11:27,850

frank galbertson

199

00:11:30,949 --> 00:11:29,040

[Applause]

200

00:11:33,350 --> 00:11:30,959

during his four space shuttle missions

201  
00:11:36,150 --> 00:11:33,360  
he served twice as a pilot and twice as

202  
00:11:39,269 --> 00:11:36,160  
a commander logging more than 40 days in

203  
00:11:42,890 --> 00:11:39,279  
space he walked this red carpet as one

204  
00:11:46,630 --> 00:11:42,900  
of last year's inductees brian duffy

205  
00:11:51,870 --> 00:11:49,350  
he served as pilot on two missions then

206  
00:11:54,790 --> 00:11:51,880  
commander on two more launching on

207  
00:11:56,550 --> 00:11:54,800  
sts-113 he lived for five and a half

208  
00:11:59,990 --> 00:11:56,560  
months aboard the international space

209  
00:12:02,990 --> 00:12:00,000  
station as commander of expedition six

210  
00:12:04,949 --> 00:12:03,000  
ken bowsox

211  
00:12:07,350 --> 00:12:04,959  
[Applause]

212  
00:12:09,670 --> 00:12:07,360  
he is a veteran of six total

213  
00:12:12,389 --> 00:12:09,680

spaceflights serving three times as

214

00:12:14,389 --> 00:12:12,399

pilot and three times as commander

215

00:12:17,450 --> 00:12:14,399

including two missions to repair the

216

00:12:20,710 --> 00:12:17,460

hubble space telescope curtis brown

217

00:12:22,550 --> 00:12:20,720

[Applause]

218

00:12:25,350 --> 00:12:22,560

he is a five-time space shuttle

219

00:12:27,670 --> 00:12:25,360

astronaut who has logged more than 1600

220

00:12:30,870 --> 00:12:27,680

hours in space he flew as mission

221

00:12:32,870 --> 00:12:30,880

commander on two including sts 96 the

222

00:12:35,430 --> 00:12:32,880

first ever docking of a space shuttle to

223

00:12:44,949 --> 00:12:35,440

the international space station kent

224

00:12:48,629 --> 00:12:46,550

thanks to all of the distinguished

225

00:12:50,310 --> 00:12:48,639

astronauts who have taken the time to

226

00:12:52,710 --> 00:12:50,320

join us today

227

00:12:57,870 --> 00:12:52,720

let's have one more round of applause

228

00:12:57,880 --> 00:13:16,949

[Applause]

229

00:13:21,430 --> 00:13:19,670

before we move on with our ceremony

230

00:13:22,870 --> 00:13:21,440

let us take a moment

231

00:13:24,710 --> 00:13:22,880

to pay tribute

232

00:13:25,670 --> 00:13:24,720

to the three astronauts who have passed

233

00:13:28,470 --> 00:13:25,680

away

234

00:13:30,629 --> 00:13:28,480

since our last induction ceremony

235

00:13:32,230 --> 00:13:30,639

he was one of the original mercury seven

236

00:13:34,870 --> 00:13:32,240

astronauts who went on to serve in the

237

00:13:37,990 --> 00:13:34,880

united states senate before returning to

238

00:13:39,030 --> 00:13:38,000

flight 36 years later aboard the space

239

00:13:41,189 --> 00:13:39,040

shuttle

240

00:13:43,030 --> 00:13:41,199

he was also one of the founding members

241

00:13:43,829 --> 00:13:43,040

of the united states astronaut hall of

242

00:13:46,710 --> 00:13:43,839

fame

243

00:13:49,269 --> 00:13:46,720

the incomparable john glenn

244

00:13:52,790 --> 00:13:49,279

hegemony and apollo astronaut

245

00:13:55,030 --> 00:13:52,800

he spent 73 hours on the lunar surface

246

00:13:57,750 --> 00:13:55,040

and has the distinction of being the

247

00:13:59,189 --> 00:13:57,760

last man to walk on the moon eugene

248

00:14:01,189 --> 00:13:59,199

cernan

249

00:14:05,189 --> 00:14:01,199

he was a three-time space shuttle

250

00:14:07,110 --> 00:14:05,199

astronaut and space walker who spent 43

251  
00:14:09,910 --> 00:14:07,120  
hours conducting extra vehicular

252  
00:14:12,870 --> 00:14:09,920  
activities pierce sellers

253  
00:14:15,590 --> 00:14:12,880  
each of these extraordinarily brave men

254  
00:14:17,910 --> 00:14:15,600  
made remarkable contributions to the

255  
00:14:23,600 --> 00:14:17,920  
exploration of space

256  
00:14:23,610 --> 00:15:23,189  
[Music]

257  
00:15:23,199 --> 00:15:29,440  
hmm

258  
00:15:29,450 --> 00:15:58,629  
[Music]

259  
00:16:03,189 --> 00:16:00,870  
please if you will bow your heads to

260  
00:16:09,430 --> 00:16:03,199  
observe a moment of silence in their

261  
00:16:13,749 --> 00:16:11,350  
thank you ladies and gentlemen

262  
00:16:16,550 --> 00:16:13,759  
now here to say a few words on behalf of

263  
00:16:19,829 --> 00:16:16,560

the kennedy space center visitor complex

264

00:16:24,640 --> 00:16:19,839

is chief operating officer mr tharon

265

00:16:31,350 --> 00:16:29,509

[Applause]

266

00:16:34,470 --> 00:16:31,360

it's always hard to follow john he's

267

00:16:36,069 --> 00:16:34,480

such a phenomenal emcee

268

00:16:38,150 --> 00:16:36,079

and the great tribute that we had those

269

00:16:39,910 --> 00:16:38,160

three fallen astronauts

270

00:16:42,790 --> 00:16:39,920

good afternoon and welcome to today's

271

00:16:45,189 --> 00:16:42,800

ceremony on behalf of more than 60 000

272

00:16:46,949 --> 00:16:45,199

delaware north associates worldwide

273

00:16:49,189 --> 00:16:46,959

including the entire team here at the

274

00:16:51,670 --> 00:16:49,199

kennedy space center visitor complex

275

00:16:53,430 --> 00:16:51,680

thank you for joining us today it is our

276

00:16:56,230 --> 00:16:53,440

honor to host today's ceremony to

277

00:16:59,110 --> 00:16:56,240

welcome nasa astronauts michael fole

278

00:17:01,430 --> 00:16:59,120

ellen ochoa into this elite group right

279

00:17:03,189 --> 00:17:01,440

in front of us and in the space to be

280

00:17:05,350 --> 00:17:03,199

the space board space explorers and

281

00:17:07,110 --> 00:17:05,360

pioneers of today

282

00:17:08,710 --> 00:17:07,120

at kennedy space center visitor complex

283

00:17:10,789 --> 00:17:08,720

our goal is to tell the nasa story in

284

00:17:14,150 --> 00:17:10,799

the most compelling and immersive way

285

00:17:16,470 --> 00:17:14,160

possible to give everyone of any age the

286

00:17:18,549 --> 00:17:16,480

chance to truly understand the value of

287

00:17:20,309 --> 00:17:18,559

achievements that space travel has

288

00:17:22,949 --> 00:17:20,319

brought to humankind

289

00:17:25,669 --> 00:17:22,959

astronauts are an important part of the

290

00:17:28,470 --> 00:17:25,679

nasa story through their eyes and their

291

00:17:30,950 --> 00:17:28,480

experiences we have all had a chance to

292

00:17:32,870 --> 00:17:30,960

appreciate space flight as an insider

293

00:17:34,950 --> 00:17:32,880

those stories are now brought to life in

294

00:17:37,110 --> 00:17:34,960

an entirely new way here at the kennedy

295

00:17:39,669 --> 00:17:37,120

space center visitor complex last

296

00:17:41,830 --> 00:17:39,679

november we opened heroes and legends

297

00:17:44,150 --> 00:17:41,840

featuring the ash the u.s astronaut hall

298

00:17:45,830 --> 00:17:44,160

of fame presented by boeing through

299

00:17:47,590 --> 00:17:45,840

state of the art

300

00:17:50,070 --> 00:17:47,600

guests have the opportunity to virtually

301  
00:17:52,310 --> 00:17:50,080  
interact with every astronaut the heroes

302  
00:17:54,950 --> 00:17:52,320  
and experience the thrills of our space

303  
00:17:56,549 --> 00:17:54,960  
program like never before today's

304  
00:17:58,870 --> 00:17:56,559  
induction is even more meaningful

305  
00:18:00,630 --> 00:17:58,880  
because this is the first class of

306  
00:18:02,870 --> 00:18:00,640  
inductees to join the astronaut hall of

307  
00:18:04,789 --> 00:18:02,880  
fame since this beautiful home opened

308  
00:18:06,789 --> 00:18:04,799  
last november right here at this

309  
00:18:08,630 --> 00:18:06,799  
facility if you haven't experienced

310  
00:18:10,789 --> 00:18:08,640  
heroes and legends and the new hall of

311  
00:18:12,870 --> 00:18:10,799  
fame yet please take time to visit while

312  
00:18:15,110 --> 00:18:12,880  
you're here today

313  
00:18:16,950 --> 00:18:15,120

another great exhibit was on january

314

00:18:19,750 --> 00:18:16,960

27th of this year on the 50th

315

00:18:22,070 --> 00:18:19,760

anniversary we opened a new apollo one

316

00:18:24,789 --> 00:18:22,080

tribute called a rough road leads to the

317

00:18:27,190 --> 00:18:24,799

stars their permanent exhibit excuse me

318

00:18:29,430 --> 00:18:27,200

their permanent exhibit at the apollo 75

319

00:18:31,590 --> 00:18:29,440

center is dedicated to the lives the

320

00:18:33,590 --> 00:18:31,600

accomplishments and the memories of the

321

00:18:36,870 --> 00:18:33,600

three astronauts who perished 50 years

322

00:18:40,470 --> 00:18:36,880

earlier in the apollo 1 launch pad fire

323

00:18:42,310 --> 00:18:40,480

gus grissom ed white and roger chaffee

324

00:18:44,230 --> 00:18:42,320

the tribute serves as a testament to the

325

00:18:46,950 --> 00:18:44,240

human spirit and

326

00:18:48,789 --> 00:18:46,960

that despite this terrible tragedy we as

327

00:18:51,590 --> 00:18:48,799

americans did not let those brave men

328

00:18:53,510 --> 00:18:51,600

die in vain but instead continued our

329

00:18:54,950 --> 00:18:53,520

mission to explore the moon

330

00:18:57,029 --> 00:18:54,960

it's an incredibly moving and

331

00:18:58,870 --> 00:18:57,039

informative tribute that i hope all of

332

00:19:00,230 --> 00:18:58,880

you will take time to visit

333

00:19:02,070 --> 00:19:00,240

and a lot of other great things that are

334

00:19:03,270 --> 00:19:02,080

happening at the kennedy space center

335

00:19:05,110 --> 00:19:03,280

visitor complex this year we're

336

00:19:07,590 --> 00:19:05,120

launching summer of mars

337

00:19:09,350 --> 00:19:07,600

we're sending out a free ticket to the

338

00:19:11,909 --> 00:19:09,360

kennedy space center visitor complex to

339

00:19:13,029 --> 00:19:11,919

every fifth grader in the united states

340

00:19:15,190 --> 00:19:13,039

why

341

00:19:16,710 --> 00:19:15,200

because that is our mars generation that

342

00:19:20,210 --> 00:19:16,720

is our next group of

343

00:19:25,510 --> 00:19:23,110

[Applause]

344

00:19:27,669 --> 00:19:25,520

and we want to inspire those young

345

00:19:29,990 --> 00:19:27,679

children of our next generation to seek

346

00:19:32,230 --> 00:19:30,000

the stars or just to join the space

347

00:19:35,830 --> 00:19:32,240

industry we're also having a lot of fun

348

00:19:38,310 --> 00:19:35,840

here we just built a concept mars rover

349

00:19:40,470 --> 00:19:38,320

that is uh larger than life i'll just

350

00:19:42,230 --> 00:19:40,480

say it's a huge vehicle that's going to

351  
00:19:44,150 --> 00:19:42,240  
go on tour throughout the eastern united

352  
00:19:46,789 --> 00:19:44,160  
states here next month

353  
00:19:48,230 --> 00:19:46,799  
and it is designed for one purpose only

354  
00:19:49,830 --> 00:19:48,240  
inspiration

355  
00:19:51,430 --> 00:19:49,840  
so that when a child looks at it and

356  
00:19:53,029 --> 00:19:51,440  
thinks that they may be able to drive

357  
00:19:54,789 --> 00:19:53,039  
something like that in the future that's

358  
00:19:55,590 --> 00:19:54,799  
that's going to inspire them to really

359  
00:19:56,630 --> 00:19:55,600  
seek

360  
00:19:58,470 --> 00:19:56,640  
the great

361  
00:20:00,630 --> 00:19:58,480  
science technology engineering and math

362  
00:20:05,669 --> 00:20:00,640  
that our education system is providing

363  
00:20:08,950 --> 00:20:07,029

there are even more innovations on the

364

00:20:11,029 --> 00:20:08,960

horizon and we are so excited about the

365

00:20:13,350 --> 00:20:11,039

future of this complex today's children

366

00:20:15,350 --> 00:20:13,360

need to have fun while learning science

367

00:20:17,350 --> 00:20:15,360

technology engineering and math in order

368

00:20:19,510 --> 00:20:17,360

to become tomorrow's explorers

369

00:20:21,190 --> 00:20:19,520

that is also why we're creating an new

370

00:20:23,990 --> 00:20:21,200

astronaut training experience which will

371

00:20:26,470 --> 00:20:24,000

open up this fall of this year

372

00:20:28,549 --> 00:20:26,480

the all-new atx for astronaut training

373

00:20:30,470 --> 00:20:28,559

experience will provide guests of all

374

00:20:32,870 --> 00:20:30,480

ages and the opportunity to train like

375

00:20:35,029 --> 00:20:32,880

astronauts for their missions to mars

376

00:20:37,350 --> 00:20:35,039

thanks to full motion and virtual

377

00:20:39,909 --> 00:20:37,360

reality simulators that let them feel

378

00:20:41,669 --> 00:20:39,919

they are really landing walking driving

379

00:20:42,710 --> 00:20:41,679

and living on the red planet they will

380

00:20:44,870 --> 00:20:42,720

learn how to

381

00:20:47,190 --> 00:20:44,880

to grow plants they will learn how

382

00:20:48,789 --> 00:20:47,200

operations through robotics engineering

383

00:20:50,470 --> 00:20:48,799

and this new program will be the gold

384

00:20:51,669 --> 00:20:50,480

standard and experience astronaut

385

00:20:54,710 --> 00:20:51,679

training

386

00:20:57,190 --> 00:20:54,720

going to go on to the second program

387

00:20:59,110 --> 00:20:57,200

which is a now called mars base one

388

00:21:01,830 --> 00:20:59,120

which invites guests to participate in

389

00:21:05,110 --> 00:21:01,840

fully immersive uh missions to mars and

390

00:21:06,870 --> 00:21:05,120

experience life on a prototype mars base

391

00:21:08,870 --> 00:21:06,880

they will operate robotics conduct

392

00:21:10,710 --> 00:21:08,880

experiments solve many engineering

393

00:21:12,470 --> 00:21:10,720

challenges involved in living and

394

00:21:14,950 --> 00:21:12,480

working on mars

395

00:21:17,190 --> 00:21:14,960

short of joining nasa's astronaut corps

396

00:21:19,029 --> 00:21:17,200

which we hope they do or just enter the

397

00:21:20,549 --> 00:21:19,039

space industry you simply can't

398

00:21:22,789 --> 00:21:20,559

experience astronaut training or

399

00:21:24,950 --> 00:21:22,799

immersive mars simulations like this

400

00:21:27,270 --> 00:21:24,960

anywhere else on earth we look forward

401  
00:21:29,430 --> 00:21:27,280  
to opening these new programs this fall

402  
00:21:30,950 --> 00:21:29,440  
and so much more again continues to come

403  
00:21:32,710 --> 00:21:30,960  
in the future

404  
00:21:34,390 --> 00:21:32,720  
i would like to take a moment to

405  
00:21:36,789 --> 00:21:34,400  
recognize the astronaut scholarship

406  
00:21:39,270 --> 00:21:36,799  
foundation and its board of directors

407  
00:21:41,750 --> 00:21:39,280  
board chairman dan brandenstein

408  
00:21:43,200 --> 00:21:41,760  
an amazing man thank you bran thank you

409  
00:21:45,830 --> 00:21:43,210  
dan

410  
00:21:47,909 --> 00:21:45,840  
[Applause]

411  
00:21:49,350 --> 00:21:47,919  
executive director tammy sudler and her

412  
00:21:51,350 --> 00:21:49,360  
staff and volunteers for their

413  
00:21:54,070 --> 00:21:51,360

tremendous contributions for today's

414

00:21:56,630 --> 00:21:54,080

ceremony it is a true honor to be a

415

00:21:58,390 --> 00:21:56,640

partner with asf on behalf of kennedy

416

00:22:00,310 --> 00:21:58,400

space center visitor complex and all of

417

00:22:02,310 --> 00:22:00,320

our associates thank you for your years

418

00:22:04,390 --> 00:22:02,320

of dedicated service and the incredible

419

00:22:05,350 --> 00:22:04,400

job you have done and will continue to

420

00:22:08,510 --> 00:22:05,360

do

421

00:22:10,230 --> 00:22:08,520

and to honor our nation's astronauts

422

00:22:11,990 --> 00:22:10,240

[Applause]

423

00:22:14,390 --> 00:22:12,000

thank you for paving the way to the next

424

00:22:16,390 --> 00:22:14,400

generation's road to the stars once

425

00:22:19,190 --> 00:22:16,400

again congratulations to this year's

426  
00:22:21,190 --> 00:22:19,200  
inductees michael foale and ellen ochoa

427  
00:22:22,700 --> 00:22:21,200  
thank you so much and john you're back

428  
00:22:29,510 --> 00:22:22,710  
up

429  
00:22:36,630 --> 00:22:33,590  
you got the keys to that rover theron

430  
00:22:39,430 --> 00:22:36,640  
take al's of course al's got him

431  
00:22:41,270 --> 00:22:39,440  
why am i not surprised

432  
00:22:44,149 --> 00:22:41,280  
thanks there and it certainly sounds

433  
00:22:46,390 --> 00:22:44,159  
like a tremendous uh future and exciting

434  
00:22:48,070 --> 00:22:46,400  
things ahead here at the visitor complex

435  
00:22:49,750 --> 00:22:48,080  
and now ladies and gentlemen please

436  
00:22:51,510 --> 00:22:49,760  
welcome hall of fame astronaut and

437  
00:22:54,860 --> 00:22:51,520  
astronaut scholarship foundation

438  
00:23:03,669 --> 00:22:54,870

chairman dan brandenstein dan

439

00:23:05,430 --> 00:23:03,679

[Applause]

440

00:23:07,190 --> 00:23:05,440

well good afternoon and uh thanks to

441

00:23:09,590 --> 00:23:07,200

everyone for coming out for this for

442

00:23:11,510 --> 00:23:09,600

this great salvation celebration

443

00:23:14,630 --> 00:23:11,520

obviously we're very pleased

444

00:23:17,990 --> 00:23:14,640

to be inducting mike and ellen into the

445

00:23:18,789 --> 00:23:18,000

astronaut hall of fame and it's

446

00:23:20,149 --> 00:23:18,799

our

447

00:23:21,270 --> 00:23:20,159

great pleasure that they could be here

448

00:23:22,390 --> 00:23:21,280

with us too

449

00:23:25,110 --> 00:23:22,400

as a chairman of the astronaut

450

00:23:27,350 --> 00:23:25,120

scholarship foundation it gives me great

451  
00:23:29,190 --> 00:23:27,360  
pride to be part of this great

452  
00:23:30,390 --> 00:23:29,200  
celebration and induction into the hall

453  
00:23:33,270 --> 00:23:30,400  
of fame

454  
00:23:35,590 --> 00:23:33,280  
back in the 1980s the mercury astronauts

455  
00:23:37,669 --> 00:23:35,600  
decided there should be a place to

456  
00:23:40,230 --> 00:23:37,679  
recognize and celebrate the astronauts

457  
00:23:42,470 --> 00:23:40,240  
accomplishments and share the human side

458  
00:23:43,669 --> 00:23:42,480  
of space flight in a unique and personal

459  
00:23:45,269 --> 00:23:43,679  
way

460  
00:23:47,269 --> 00:23:45,279  
their dream of the astronaut hall of

461  
00:23:49,510 --> 00:23:47,279  
fame became a reality

462  
00:23:51,029 --> 00:23:49,520  
and look where it's gotten us today it's

463  
00:23:54,390 --> 00:23:51,039

really great and thanks to tharon and

464

00:23:56,470 --> 00:23:54,400

his team it continues to get better

465

00:23:59,110 --> 00:23:56,480

the hall of fame seeks to celebrate and

466

00:24:01,350 --> 00:23:59,120

inspire but more than that a goal to

467

00:24:05,269 --> 00:24:01,360

keep america in the leading edge of

468

00:24:07,990 --> 00:24:05,279

technology and innovation that means

469

00:24:09,510 --> 00:24:08,000

encouraging students to aim high

470

00:24:11,430 --> 00:24:09,520

to dream big

471

00:24:14,549 --> 00:24:11,440

and to pursue their careers in science

472

00:24:15,909 --> 00:24:14,559

technology engineering and math

473

00:24:19,029 --> 00:24:15,919

and that's where the astronaut

474

00:24:21,830 --> 00:24:19,039

scholarship foundation comes in the asf

475

00:24:23,510 --> 00:24:21,840

awards merit-based scholarships to the

476  
00:24:25,430 --> 00:24:23,520  
best and brightest students around the

477  
00:24:26,789 --> 00:24:25,440  
country majoring in those critical

478  
00:24:29,350 --> 00:24:26,799  
fields

479  
00:24:31,590 --> 00:24:29,360  
the prestigious astronaut scholarship

480  
00:24:33,110 --> 00:24:31,600  
is known nationwide being among the

481  
00:24:35,269 --> 00:24:33,120  
highest scholarships awarded to

482  
00:24:36,310 --> 00:24:35,279  
undergraduate level student stem

483  
00:24:38,789 --> 00:24:36,320  
students

484  
00:24:41,430 --> 00:24:38,799  
and since its inception and counting

485  
00:24:43,350 --> 00:24:41,440  
this year's class we have almost 500

486  
00:24:44,630 --> 00:24:43,360  
scholars that have received this

487  
00:24:47,430 --> 00:24:44,640  
scholarship

488  
00:24:48,870 --> 00:24:47,440

and we have don't given uh over four and

489

00:24:51,830 --> 00:24:48,880

a half million dollars worth of uh

490

00:24:53,269 --> 00:24:51,840

scholarships so it's uh really great uh

491

00:24:55,510 --> 00:24:53,279

that uh

492

00:24:57,190 --> 00:24:55,520

these scholars have this opportunity and

493

00:24:58,710 --> 00:24:57,200

believe me they are some tremendous

494

00:25:01,269 --> 00:24:58,720

people those of us that have the

495

00:25:04,070 --> 00:25:01,279

opportunity to do the evaluations and

496

00:25:05,669 --> 00:25:04,080

make the selections uh see some truly

497

00:25:07,350 --> 00:25:05,679

fantastic people

498

00:25:09,669 --> 00:25:07,360

and we're lucky to have some of them

499

00:25:11,510 --> 00:25:09,679

here today so we'd like to recognize the

500

00:25:12,710 --> 00:25:11,520

recipients of the astronaut scholarship

501  
00:25:14,710 --> 00:25:12,720  
in the past

502  
00:25:30,390 --> 00:25:14,720  
and currently if they please stand and

503  
00:25:34,149 --> 00:25:32,390  
thank you very much uh

504  
00:25:36,710 --> 00:25:34,159  
as i said there's some truly amazing

505  
00:25:39,669 --> 00:25:36,720  
young people and we're very proud

506  
00:25:41,750 --> 00:25:39,679  
to have them as part of our team and

507  
00:25:43,430 --> 00:25:41,760  
help them in their careers

508  
00:25:45,110 --> 00:25:43,440  
we don't do this alone though the

509  
00:25:47,430 --> 00:25:45,120  
support we receive from all the

510  
00:25:50,070 --> 00:25:47,440  
supporters and around the country the

511  
00:25:52,149 --> 00:25:50,080  
astronauts our friends at nasa including

512  
00:25:53,750 --> 00:25:52,159  
bob cabana center director

513  
00:25:55,830 --> 00:25:53,760

as well as sharon pratzi who you heard

514

00:25:58,149 --> 00:25:55,840

previously in the space center of the

515

00:26:00,950 --> 00:25:58,159

kennedy space center visitor complex

516

00:26:05,750 --> 00:26:00,960

their help is invaluable and we truly

517

00:26:10,470 --> 00:26:08,630

so uh with that uh

518

00:26:12,870 --> 00:26:10,480

john i think we're back to you thank you

519

00:26:14,549 --> 00:26:12,880

again for coming and uh

520

00:26:26,149 --> 00:26:14,559

we hope to see many of you at the gala

521

00:26:30,390 --> 00:26:27,590

thank you chairman

522

00:26:32,710 --> 00:26:30,400

and now i'd like to introduce nasa

523

00:26:42,950 --> 00:26:32,720

kennedy space center director and hall

524

00:26:42,960 --> 00:26:47,110

your speech here no i'm good

525

00:26:50,149 --> 00:26:48,310

thanks john

526

00:26:51,750 --> 00:26:50,159

this is a great partnership that we have

527

00:26:53,510 --> 00:26:51,760

between the visitors complex and the

528

00:26:55,029 --> 00:26:53,520

astronaut scholarship foundation i think

529

00:26:56,230 --> 00:26:55,039

it's outstanding

530

00:26:58,470 --> 00:26:56,240

good afternoon and welcome to the

531

00:27:00,870 --> 00:26:58,480

kennedy space center for this 2017

532

00:27:02,310 --> 00:27:00,880

astronaut hall of fame induction and to

533

00:27:04,310 --> 00:27:02,320

ellen and michael

534

00:27:06,710 --> 00:27:04,320

my sincere congratulations on this

535

00:27:08,630 --> 00:27:06,720

recognition it's most well deserved

536

00:27:11,269 --> 00:27:08,640

this is an exciting time here on the

537

00:27:13,990 --> 00:27:11,279

space coast as ksc has established

538

00:27:16,390 --> 00:27:14,000

itself as a true multi-user spaceport

539

00:27:19,430 --> 00:27:16,400

and nasa once again is preparing to

540

00:27:20,870 --> 00:27:19,440

explore beyond our home planet with sls

541

00:27:23,110 --> 00:27:20,880

and orion

542

00:27:25,350 --> 00:27:23,120

a lot's happened since the wheels came

543

00:27:28,470 --> 00:27:25,360

to a stop on atlantis back in july of

544

00:27:30,710 --> 00:27:28,480

2011 much has changed around here

545

00:27:33,430 --> 00:27:30,720

you know in all of human history

546

00:27:35,430 --> 00:27:33,440

only three nations have sent humans to

547

00:27:37,590 --> 00:27:35,440

space the united states russia and china

548

00:27:40,389 --> 00:27:37,600

but today here at the kennedy space

549

00:27:42,710 --> 00:27:40,399

center there are four united states

550

00:27:45,590 --> 00:27:42,720

companies building hardware and

551  
00:27:46,950 --> 00:27:45,600  
infrastructure to launch humans to orbit

552  
00:27:48,789 --> 00:27:46,960  
lockheed martin with the orion

553  
00:27:50,230 --> 00:27:48,799  
spacecraft over in the operations and

554  
00:27:52,789 --> 00:27:50,240  
checkout building

555  
00:27:56,470 --> 00:27:52,799  
spacex with the crew dragon on a falcon

556  
00:27:59,430 --> 00:27:56,480  
9 launching from pad 39a taking crews to

557  
00:28:02,389 --> 00:27:59,440  
the international space station in 2018

558  
00:28:04,070 --> 00:28:02,399  
boeing with the cst-100 starliner over

559  
00:28:06,389 --> 00:28:04,080  
in the commercial crew and cargo

560  
00:28:09,029 --> 00:28:06,399  
processing facility launching on an

561  
00:28:10,870 --> 00:28:09,039  
atlas 5 rocket off launch complex 41

562  
00:28:13,590 --> 00:28:10,880  
also taking crews to the international

563  
00:28:15,830 --> 00:28:13,600

space station in 2018

564

00:28:18,149 --> 00:28:15,840

and now blue origin is building a huge

565

00:28:19,990 --> 00:28:18,159

manufacturing facility right here at

566

00:28:23,029 --> 00:28:20,000

exploration park at the kennedy space

567

00:28:25,750 --> 00:28:23,039

center launching off launch pad 36 over

568

00:28:28,710 --> 00:28:25,760

cape side also taking humans to orbit i

569

00:28:31,909 --> 00:28:28,720

think that's pretty darned amazing

570

00:28:32,710 --> 00:28:31,919

you know uh in top of that on top of

571

00:28:34,789 --> 00:28:32,720

that

572

00:28:35,750 --> 00:28:34,799

at the end of this year this calendar

573

00:28:37,269 --> 00:28:35,760

year

574

00:28:40,070 --> 00:28:37,279

the construction of all the

575

00:28:42,870 --> 00:28:40,080

infrastructure and facilities necessary

576  
00:28:44,710 --> 00:28:42,880  
to process and launch the space launch

577  
00:28:48,870 --> 00:28:44,720  
system in orion are going to be complete

578  
00:28:50,950 --> 00:28:48,880  
here at ksc launching off pad 39b

579  
00:28:53,590 --> 00:28:50,960  
i i can't say enough about the good

580  
00:28:57,029 --> 00:28:53,600  
things that have gone on here

581  
00:28:58,630 --> 00:28:57,039  
it truly is an amazing time i hope that

582  
00:29:01,110 --> 00:28:58,640  
while you're here at our visitors

583  
00:29:03,430 --> 00:29:01,120  
complex you take the opportunity to

584  
00:29:05,830 --> 00:29:03,440  
explore our past but you also learn

585  
00:29:08,070 --> 00:29:05,840  
about our future and see firsthand the

586  
00:29:10,310 --> 00:29:08,080  
progress that we've made in making our

587  
00:29:12,310 --> 00:29:10,320  
vision a reality

588  
00:29:13,909 --> 00:29:12,320

thank you for coming today and again to

589

00:29:16,160 --> 00:29:13,919

michael and ellen my sincere

590

00:29:24,070 --> 00:29:16,170

congratulations thank you

591

00:29:25,750 --> 00:29:24,080

[Applause]

592

00:29:27,269 --> 00:29:25,760

thank you mr cabana

593

00:29:29,269 --> 00:29:27,279

ladies and gentlemen

594

00:29:31,909 --> 00:29:29,279

it's time to begin the induction of the

595

00:29:34,549 --> 00:29:31,919

16th class of space shuttle astronauts

596

00:29:37,990 --> 00:29:34,559

into the u.s astronaut hall of fame

597

00:29:39,990 --> 00:29:38,000

the 2017 inductees were selected by a

598

00:29:42,470 --> 00:29:40,000

committee of current hall of fame

599

00:29:44,950 --> 00:29:42,480

astronauts former nasa officials

600

00:29:46,630 --> 00:29:44,960

historians and journalists

601  
00:29:48,950 --> 00:29:46,640  
the process is administered by the

602  
00:29:51,269 --> 00:29:48,960  
astronaut scholarship foundation

603  
00:29:55,350 --> 00:29:51,279  
to be eligible an astronaut must have

604  
00:29:58,630 --> 00:29:55,360  
made his or her first flight at least 17

605  
00:30:01,430 --> 00:29:58,640  
years before the induction year and must

606  
00:30:03,350 --> 00:30:01,440  
be retired at least five years from the

607  
00:30:06,230 --> 00:30:03,360  
nasa astronaut corps

608  
00:30:08,950 --> 00:30:06,240  
candidates must be a u.s citizen nasa

609  
00:30:11,350 --> 00:30:08,960  
trained commander pilot or mission

610  
00:30:14,230 --> 00:30:11,360  
specialist and must have orbited the

611  
00:30:17,909 --> 00:30:14,240  
earth at least once and made significant

612  
00:30:25,000 --> 00:30:17,919  
contributions to the study of space

613  
00:31:06,149 --> 00:30:34,850

[Music]

614

00:31:07,990 --> 00:31:06,159

this is looking up at your rocket and uh

615

00:31:13,190 --> 00:31:08,000

this sends shivers down my spine every

616

00:31:16,549 --> 00:31:14,549

we can basically point it out of the

617

00:31:18,549 --> 00:31:16,559

window and pull the trigger and i get a

618

00:31:24,060 --> 00:31:18,559

readout on the back of it as to how far

619

00:31:38,950 --> 00:31:35,970

[Music]

620

00:31:44,780 --> 00:31:38,960

[Applause]

621

00:31:44,790 --> 00:31:49,830

[Music]

622

00:31:52,310 --> 00:31:51,190

when we thought there was a collision

623

00:31:53,750 --> 00:31:52,320

imminent

624

00:31:55,430 --> 00:31:53,760

the thought in our minds was we are

625

00:31:57,029 --> 00:31:55,440

going to have to bail out then as it

626  
00:31:59,590 --> 00:31:57,039  
became apparent that it wasn't a

627  
00:32:02,070 --> 00:31:59,600  
devastating puncture of the hull of

628  
00:32:04,950 --> 00:32:02,080  
spectre module so we then proceeded to

629  
00:32:05,750 --> 00:32:04,960  
work together to clear cables and hold

630  
00:32:07,909 --> 00:32:05,760  
the

631  
00:32:14,460 --> 00:32:07,919  
hatch in place over that module's

632  
00:33:09,820 --> 00:32:27,860  
[Music]

633  
00:33:18,950 --> 00:33:17,350  
[Applause]

634  
00:33:21,509 --> 00:33:18,960  
i really don't need to read any of this

635  
00:33:24,630 --> 00:33:21,519  
it's all but you saw it all

636  
00:33:29,269 --> 00:33:24,640  
a veteran of six space missions dr

637  
00:33:31,990 --> 00:33:29,279  
michael fall has spent more than 374

638  
00:33:33,110 --> 00:33:32,000

days in space not hours

639

00:33:36,549 --> 00:33:33,120

days

640

00:33:39,350 --> 00:33:36,559

more than one year of his life in space

641

00:33:40,789 --> 00:33:39,360

let that sink in for a moment

642

00:33:43,669 --> 00:33:40,799

of that year

643

00:33:47,190 --> 00:33:43,679

nearly 23 hours were spent outside the

644

00:33:49,110 --> 00:33:47,200

spacecraft conducting spacewalks

645

00:33:50,789 --> 00:33:49,120

his track towards space travel began at

646

00:33:52,789 --> 00:33:50,799

the university of cambridge queens

647

00:33:55,029 --> 00:33:52,799

college where he earned his bachelor of

648

00:33:57,029 --> 00:33:55,039

arts in physics before moving on to

649

00:33:58,630 --> 00:33:57,039

complete a doctorate in laboratory

650

00:34:00,549 --> 00:33:58,640

astrophysics

651  
00:34:03,269 --> 00:34:00,559  
following his graduate work he moved to

652  
00:34:04,870 --> 00:34:03,279  
houston to pursue a career in the u.s

653  
00:34:07,110 --> 00:34:04,880  
space program

654  
00:34:09,190 --> 00:34:07,120  
a job at mcdonald douglas working on

655  
00:34:11,990 --> 00:34:09,200  
space shuttle navigation led him to

656  
00:34:14,470 --> 00:34:12,000  
nasa's johnson space center to work as a

657  
00:34:16,069 --> 00:34:14,480  
payload officer in the mission control

658  
00:34:18,869 --> 00:34:16,079  
center

659  
00:34:21,349 --> 00:34:18,879  
four years later michael was selected as

660  
00:34:24,149 --> 00:34:21,359  
an astronaut candidate

661  
00:34:27,510 --> 00:34:24,159  
he flew for the first time aboard sts-45

662  
00:34:29,669 --> 00:34:27,520  
in 1992 the first of the atlas series

663  
00:34:31,349 --> 00:34:29,679

missions to study the atmosphere and

664

00:34:34,069 --> 00:34:31,359

solar interactions

665

00:34:36,710 --> 00:34:34,079

the following year he flew on sts sts-56

666

00:34:39,270 --> 00:34:36,720

which carried the atlas 2 and spartan

667

00:34:41,109 --> 00:34:39,280

retrievable satellite his third flight

668

00:34:42,710 --> 00:34:41,119

sts-63

669

00:34:45,669 --> 00:34:42,720

marked the first rendezvous with the

670

00:34:48,790 --> 00:34:45,679

russian space station mir it was during

671

00:34:50,869 --> 00:34:48,800

this flight in 1995 that he made his

672

00:34:55,030 --> 00:34:50,879

first spacewalk

673

00:34:57,829 --> 00:34:55,040

he launched again on sts-84 in 1997 and

674

00:34:59,990 --> 00:34:57,839

joined the mir 23 crew

675

00:35:03,270 --> 00:35:00,000

conducting science experiments as well

676  
00:35:05,670 --> 00:35:03,280  
as a six-hour spacewalk to help repair

677  
00:35:07,750 --> 00:35:05,680  
mir following that collision with a

678  
00:35:11,430 --> 00:35:07,760  
progress resupply ship

679  
00:35:14,710 --> 00:35:11,440  
he spent a total of 145 days living

680  
00:35:17,510 --> 00:35:14,720  
aboard the russian space station

681  
00:35:20,950 --> 00:35:17,520  
two years later in 1999 michael was back

682  
00:35:22,390 --> 00:35:20,960  
in space having launched aboard sts-103

683  
00:35:24,790 --> 00:35:22,400  
the highlight of that mission was an

684  
00:35:27,510 --> 00:35:24,800  
eight-hour spacewalk to make repairs to

685  
00:35:29,910 --> 00:35:27,520  
the ailing hubble space telescope his

686  
00:35:31,349 --> 00:35:29,920  
final flight was aboard a soyuz rocket

687  
00:35:33,510 --> 00:35:31,359  
which took him to the international

688  
00:35:35,230 --> 00:35:33,520

space station where he would spend an

689

00:35:40,150 --> 00:35:35,240

additional

690

00:35:43,270 --> 00:35:40,160

194 days and 18 hours living in space as

691

00:35:45,030 --> 00:35:43,280

commander of expedition 8.

692

00:35:46,950 --> 00:35:45,040

quite a career

693

00:35:48,550 --> 00:35:46,960

but that's not all no no no we're not

694

00:35:50,710 --> 00:35:48,560

done yet

695

00:35:53,190 --> 00:35:50,720

during his 30-year career with nasa dr

696

00:35:55,430 --> 00:35:53,200

fall has held numerous other positions

697

00:35:57,750 --> 00:35:55,440

there including assistant director

698

00:36:00,550 --> 00:35:57,760

technical of johnson space center and

699

00:36:03,270 --> 00:36:00,560

most recently chief of the soyuz branch

700

00:36:05,109 --> 00:36:03,280

astronaut office he retired from nasa in

701  
00:36:08,150 --> 00:36:05,119  
2013

702  
00:36:10,829 --> 00:36:08,160  
to pursue one of his passions developing

703  
00:36:13,829 --> 00:36:10,839  
eco-friendly aviation

704  
00:36:17,750 --> 00:36:13,839  
solutions among the many honors to his

705  
00:36:21,030 --> 00:36:17,760  
name in 2005 the queen awarded him

706  
00:36:22,630 --> 00:36:21,040  
commander of the most excellent order of

707  
00:36:25,430 --> 00:36:22,640  
the british empire

708  
00:36:27,510 --> 00:36:25,440  
that just sounds cool doesn't it

709  
00:36:30,150 --> 00:36:27,520  
this distinction rewarded his

710  
00:36:33,589 --> 00:36:30,160  
contribution to science and public

711  
00:36:35,430 --> 00:36:33,599  
service outside the civil service

712  
00:36:37,270 --> 00:36:35,440  
most excellent

713  
00:36:39,589 --> 00:36:37,280

michael fall is the first person from

714

00:36:41,589 --> 00:36:39,599

the united kingdom to walk in space and

715

00:36:44,550 --> 00:36:41,599

still holds the cumulative time and

716

00:36:46,790 --> 00:36:44,560

space record for a british citizen

717

00:36:49,190 --> 00:36:46,800

he is also the only american citizen to

718

00:36:52,150 --> 00:36:49,200

have lived on both mir and the

719

00:36:54,710 --> 00:36:52,160

international space station although dr

720

00:36:57,829 --> 00:36:54,720

fall holds dual citizenship in both the

721

00:37:00,310 --> 00:36:57,839

united states and england the stars and

722

00:37:02,950 --> 00:37:00,320

stripes have always been displayed

723

00:37:06,150 --> 00:37:02,960

proudly on his flight suit

724

00:37:07,770 --> 00:37:06,160

ladies and gentlemen the most excellent

725

00:37:38,390 --> 00:37:07,780

michael fall

726

00:37:41,829 --> 00:37:38,400

into the hall of fame

727

00:37:49,990 --> 00:37:41,839

astronaut and former nasa administrator

728

00:37:54,390 --> 00:37:51,750

it's uh quite a privilege and an honor

729

00:37:56,310 --> 00:37:54,400

for me to have to be here to uh

730

00:37:58,630 --> 00:37:56,320

introduce my dear friend colin michael

731

00:38:02,230 --> 00:37:58,640

foale for induction as a member of the

732

00:38:03,910 --> 00:38:02,240

2017 class of the astronaut hall of fame

733

00:38:07,589 --> 00:38:03,920

as you've already heard a british-born

734

00:38:09,589 --> 00:38:07,599

astronaut mike retired from nasa in 2013

735

00:38:12,230 --> 00:38:09,599

following an amazing career that saw him

736

00:38:15,349 --> 00:38:12,240

fly on six space shuttle missions a sius

737

00:38:18,390 --> 00:38:15,359

and two space stations

738

00:38:20,630 --> 00:38:18,400

what did i say

739

00:38:22,310 --> 00:38:20,640

five shuttle missions one saw use and

740

00:38:23,990 --> 00:38:22,320

two space stations

741

00:38:25,670 --> 00:38:24,000

all right

742

00:38:27,349 --> 00:38:25,680

mike was an air cadet with the air

743

00:38:29,030 --> 00:38:27,359

training corps when he accepted an

744

00:38:30,150 --> 00:38:29,040

opportunity to work in the space shuttle

745

00:38:31,589 --> 00:38:30,160

program

746

00:38:33,670 --> 00:38:31,599

moving to houston to work with the

747

00:38:36,550 --> 00:38:33,680

orbiter's navigation system at mcdonnell

748

00:38:38,870 --> 00:38:36,560

douglas he later joined jsc's mission

749

00:38:42,230 --> 00:38:38,880

control mission operations directorate

750

00:38:44,390 --> 00:38:42,240

in 1983 working as a payload officer on

751  
00:38:46,150 --> 00:38:44,400  
four shuttle missions and this is when i

752  
00:38:47,750 --> 00:38:46,160  
first met michael because one of his

753  
00:38:50,310 --> 00:38:47,760  
shuttle missions that he worked was my

754  
00:38:52,550 --> 00:38:50,320  
first with sts-61c

755  
00:38:55,109 --> 00:38:52,560  
ever persistent mike saw his application

756  
00:38:56,870 --> 00:38:55,119  
to become an astronaut rejected twice

757  
00:38:59,510 --> 00:38:56,880  
before being selected to join astronaut

758  
00:39:02,470 --> 00:38:59,520  
corps in 1987. kathy sullivan asked me

759  
00:39:04,069 --> 00:39:02,480  
to remind you that uh your persistence

760  
00:39:05,589 --> 00:39:04,079  
in getting into the astronaut office was

761  
00:39:08,870 --> 00:39:05,599  
like your persistence in trying to beat

762  
00:39:10,870 --> 00:39:08,880  
her in racket in uh squash which you

763  
00:39:13,510 --> 00:39:10,880

finally did a number of times

764

00:39:14,710 --> 00:39:13,520

mike's first flight was as ms3

765

00:39:18,069 --> 00:39:14,720

hey

766

00:39:19,589 --> 00:39:18,079

on sts-45 atlas one nasa's first mission

767

00:39:21,109 --> 00:39:19,599

to planet earth

768

00:39:23,430 --> 00:39:21,119

although mike's nasa career was

769

00:39:26,710 --> 00:39:23,440

extraordinary in the breadth of his

770

00:39:28,710 --> 00:39:26,720

flight experiences his cool under stress

771

00:39:31,910 --> 00:39:28,720

was brilliantly demonstrated during his

772

00:39:34,550 --> 00:39:31,920

mir 2324 mission when a russian progress

773

00:39:36,550 --> 00:39:34,560

supply resupply vehicle crashed into the

774

00:39:39,109 --> 00:39:36,560

mir station during a manually controlled

775

00:39:40,950 --> 00:39:39,119

redocking test of the progress

776

00:39:42,790 --> 00:39:40,960

while his russian crewmates inspected

777

00:39:43,990 --> 00:39:42,800

for collision damage to the inside of

778

00:39:45,990 --> 00:39:44,000

the station

779

00:39:48,230 --> 00:39:46,000

mike used his expertise in physics to

780

00:39:50,150 --> 00:39:48,240

aid the russian ground controllers in

781

00:39:52,870 --> 00:39:50,160

correcting the attitude misalignments

782

00:39:55,109 --> 00:39:52,880

that had resulted from the collision he

783

00:39:56,550 --> 00:39:55,119

later joined russian mission commander

784

00:39:57,589 --> 00:39:56,560

anatoly

785

00:40:00,069 --> 00:39:57,599

solyev

786

00:40:03,750 --> 00:40:00,079

to conduct a six-hour eva in a russian

787

00:40:06,309 --> 00:40:03,760

orlan space suit to inspect the exterior

788

00:40:07,349 --> 00:40:06,319

damage to mir's spectre module

789

00:40:13,190 --> 00:40:07,359

as

790

00:40:15,589 --> 00:40:13,200

american to serve on both mir and iss

791

00:40:18,710 --> 00:40:15,599

in night in october of 2003 when he

792

00:40:20,870 --> 00:40:18,720

launched aboard sy used tma-3 to the iss

793

00:40:22,710 --> 00:40:20,880

as a member of expedition 8.

794

00:40:24,870 --> 00:40:22,720

we all know mike for his exceptional

795

00:40:27,589 --> 00:40:24,880

record of performance as a member of

796

00:40:29,670 --> 00:40:27,599

nasa's astronaut corps but in my mind

797

00:40:31,670 --> 00:40:29,680

the true measure of the man is the mark

798

00:40:35,670 --> 00:40:31,680

he leaves on his children

799

00:40:40,309 --> 00:40:37,589

in their absence

800

00:40:42,150 --> 00:40:40,319

so i'd like to wind up my introduction

801  
00:40:43,349 --> 00:40:42,160  
with a few remarks provided by his

802  
00:40:45,270 --> 00:40:43,359  
daughter jenna

803  
00:40:48,230 --> 00:40:45,280  
now a research assistant at cambridge

804  
00:40:49,990 --> 00:40:48,240  
university set to begin her phd work on

805  
00:40:53,349 --> 00:40:50,000  
jet engine combustion mathematical

806  
00:40:55,109 --> 00:40:53,359  
simulation in october his son ian

807  
00:40:57,190 --> 00:40:55,119  
student in computer engineering at the

808  
00:40:59,750 --> 00:40:57,200  
university of houston clear lake and his

809  
00:41:02,309 --> 00:40:59,760  
wife rhonda who is here with us now

810  
00:41:03,990 --> 00:41:02,319  
absorbed in geology and art jenna

811  
00:41:06,550 --> 00:41:04,000  
recalled and i quote

812  
00:41:08,550 --> 00:41:06,560  
daddy on the mirror had the reputation

813  
00:41:10,710 --> 00:41:08,560

of being macgyver

814

00:41:12,630 --> 00:41:10,720

christened by the mission control team

815

00:41:15,270 --> 00:41:12,640

from the tv character

816

00:41:17,430 --> 00:41:15,280

he could fix anything and think his way

817

00:41:18,630 --> 00:41:17,440

through difficult situations when in

818

00:41:20,390 --> 00:41:18,640

cambridge

819

00:41:22,470 --> 00:41:20,400

jenna's bike

820

00:41:25,750 --> 00:41:22,480

light doesn't work oh

821

00:41:28,870 --> 00:41:25,760

hand it to me pops it apart fiddles with

822

00:41:30,950 --> 00:41:28,880

the circuitry pops back in two minutes

823

00:41:33,430 --> 00:41:30,960

same with house porch lights

824

00:41:34,630 --> 00:41:33,440

wears a screwdriver fixes circuitry in

825

00:41:37,190 --> 00:41:34,640

three minutes

826

00:41:39,109 --> 00:41:37,200

jenna and her boyfriend kai

827

00:41:40,870 --> 00:41:39,119

came over to have dinner and get their

828

00:41:42,470 --> 00:41:40,880

bicycles fixed

829

00:41:44,550 --> 00:41:42,480

plumbing problem in grandma's house

830

00:41:47,430 --> 00:41:44,560

being new fixtures

831

00:41:49,910 --> 00:41:47,440

still macgyver unquote

832

00:41:53,750 --> 00:41:49,920

ian remembered and i quote daddy taught

833

00:41:55,750 --> 00:41:53,760

me binary at age eight

834

00:41:58,390 --> 00:41:55,760

he sat me down more recently and said

835

00:42:00,950 --> 00:41:58,400

let's learn some python programming

836

00:42:03,349 --> 00:42:00,960

his physics and hard science background

837

00:42:04,470 --> 00:42:03,359

has made him amazing at learning new

838

00:42:06,390 --> 00:42:04,480

things

839

00:42:08,470 --> 00:42:06,400

he looked at jenna's thesis material

840

00:42:09,829 --> 00:42:08,480

using cutting edge computational fluid

841

00:42:11,670 --> 00:42:09,839

dynamics

842

00:42:14,790 --> 00:42:11,680

learned the programming system himself

843

00:42:17,670 --> 00:42:14,800

and immediately subcontracted to jpl to

844

00:42:18,710 --> 00:42:17,680

develop an advanced rocket engine system

845

00:42:21,109 --> 00:42:18,720

ah

846

00:42:23,910 --> 00:42:21,119

and finally ronda

847

00:42:26,630 --> 00:42:23,920

and i quote mike has found a very happy

848

00:42:28,870 --> 00:42:26,640

niche in our tiny town in colorado with

849

00:42:30,950 --> 00:42:28,880

an intense spectrum of people

850

00:42:32,950 --> 00:42:30,960

he can be a mad scientist

851  
00:42:35,270 --> 00:42:32,960  
working on favorite software and

852  
00:42:36,950 --> 00:42:35,280  
aerospace projects and he can do some

853  
00:42:37,910 --> 00:42:36,960  
rocket engine testing in the mojave

854  
00:42:40,550 --> 00:42:37,920  
desert

855  
00:42:42,710 --> 00:42:40,560  
he inspires high school and university

856  
00:42:44,950 --> 00:42:42,720  
students as well as the public in

857  
00:42:45,829 --> 00:42:44,960  
science and engineering in europe and

858  
00:42:49,430 --> 00:42:45,839  
asia

859  
00:42:51,750 --> 00:42:49,440  
he sits in the tiny colorado coffee shop

860  
00:42:53,430 --> 00:42:51,760  
with gaggles of teenagers having

861  
00:42:55,270 --> 00:42:53,440  
personal conversations and giving

862  
00:42:58,550 --> 00:42:55,280  
educational guidance

863  
00:43:01,030 --> 00:42:58,560

he has also given me great i.t support

864

00:43:03,190 --> 00:43:01,040

in putting my film clip intensive

865

00:43:04,309 --> 00:43:03,200

geology presentations together for the

866

00:43:07,910 --> 00:43:04,319

public

867

00:43:09,190 --> 00:43:07,920

very supportive of all of our pursuits

868

00:43:11,270 --> 00:43:09,200

unquote

869

00:43:13,670 --> 00:43:11,280

in my farewell comments on mike's

870

00:43:16,390 --> 00:43:13,680

retirement from nasa i can remember i

871

00:43:18,470 --> 00:43:16,400

wrote and it was sort of like this

872

00:43:20,230 --> 00:43:18,480

we salute mike and his contributions to

873

00:43:21,589 --> 00:43:20,240

nasa as an accomplished member of the

874

00:43:23,349 --> 00:43:21,599

astronaut corps

875

00:43:25,190 --> 00:43:23,359

starting with his first flight shuttle

876

00:43:28,069 --> 00:43:25,200

mission sts-45

877

00:43:30,230 --> 00:43:28,079

and when we flew together in 1992

878

00:43:32,950 --> 00:43:30,240

mike has worked tirelessly to support

879

00:43:33,829 --> 00:43:32,960

nasa's quest to explore the unknown

880

00:43:35,910 --> 00:43:33,839

mike

881

00:43:39,030 --> 00:43:35,920

he continues to do that today ladies and

882

00:43:41,430 --> 00:43:39,040

gentlemen a great father a great husband

883

00:43:43,090 --> 00:43:41,440

my friend and former crewmate colin

884

00:44:21,750 --> 00:43:43,100

michael foale

885

00:44:26,230 --> 00:44:24,630

well thank you everybody uh for being

886

00:44:28,069 --> 00:44:26,240

here

887

00:44:29,589 --> 00:44:28,079

thank you for the honor thank you

888

00:44:31,430 --> 00:44:29,599

charlie for those

889

00:44:32,390 --> 00:44:31,440

really thoughtful

890

00:44:35,430 --> 00:44:32,400

personal

891

00:44:42,150 --> 00:44:40,150

i returned yesterday from uh the uk

892

00:44:45,829 --> 00:44:42,160

because my mum died

893

00:44:51,190 --> 00:44:49,270

but the good the happy part of this is

894

00:44:52,710 --> 00:44:51,200

she died in cambridge

895

00:44:57,349 --> 00:44:52,720

before she died

896

00:44:59,829 --> 00:44:58,630

and it was going to it's a great honor

897

00:45:00,950 --> 00:44:59,839

for me

898

00:45:03,349 --> 00:45:00,960

from

899

00:45:05,829 --> 00:45:03,359

my predecessors my peers

900

00:45:08,069 --> 00:45:05,839

and my colleagues who are here today and

901  
00:45:10,150 --> 00:45:08,079  
around me so thank you

902  
00:45:14,790 --> 00:45:10,160  
really on behalf of my mom and for me

903  
00:45:19,190 --> 00:45:16,470  
my journey

904  
00:45:20,309 --> 00:45:19,200  
to this day i guess um began when i was

905  
00:45:22,230 --> 00:45:20,319  
born

906  
00:45:25,349 --> 00:45:22,240  
um but

907  
00:45:33,349 --> 00:45:29,270  
when mom mary my mother as a u.s citizen

908  
00:45:35,589 --> 00:45:33,359  
decided to take a vacation to the uk

909  
00:45:37,430 --> 00:45:35,599  
and she met a royal air force pilot my

910  
00:45:39,670 --> 00:45:37,440  
father colin

911  
00:45:42,470 --> 00:45:39,680  
and she asked him for a light that's how

912  
00:45:44,390 --> 00:45:42,480  
they did it in those days

913  
00:45:50,630 --> 00:45:44,400

and i came along about well more than

914

00:45:53,990 --> 00:45:52,150

mothers are you know my mother was

915

00:45:55,430 --> 00:45:54,000

actually my dad was the hero pilot and

916

00:45:57,750 --> 00:45:55,440

obviously i was very very impressed by

917

00:45:59,349 --> 00:45:57,760

the flying and the noise and the

918

00:46:02,470 --> 00:45:59,359

contribution to global warming that he

919

00:46:05,589 --> 00:46:02,480

was making with his aircraft

920

00:46:07,670 --> 00:46:05,599

but it was mama at in minnesota in at

921

00:46:09,829 --> 00:46:07,680

the minneapolis saint paul it was the

922

00:46:10,790 --> 00:46:09,839

world state fair

923

00:46:13,270 --> 00:46:10,800

uh

924

00:46:15,109 --> 00:46:13,280

john glenn one of our first

925

00:46:17,270 --> 00:46:15,119

heroes of this

926  
00:46:19,670 --> 00:46:17,280  
assembly

927  
00:46:20,950 --> 00:46:19,680  
his capsule was right there friendship

928  
00:46:22,870 --> 00:46:20,960  
seven in front of me and i was a little

929  
00:46:24,230 --> 00:46:22,880  
six-year-old boy

930  
00:46:26,470 --> 00:46:24,240  
and uh

931  
00:46:28,390 --> 00:46:26,480  
you know parents always work hard to set

932  
00:46:30,550 --> 00:46:28,400  
the bit in the child's brain

933  
00:46:32,870 --> 00:46:30,560  
and my mother said to me michael would

934  
00:46:34,470 --> 00:46:32,880  
you like to be an astronaut you could

935  
00:46:36,470 --> 00:46:34,480  
fly in that

936  
00:46:39,910 --> 00:46:36,480  
and to me it looked a bit like a charred

937  
00:46:45,589 --> 00:46:42,390  
but i i kind of looked up to the ceiling

938  
00:46:47,430 --> 00:46:45,599

no kidding it really is a space shuttle

939

00:46:48,870 --> 00:46:47,440

but what i looked up to was a model of

940

00:46:50,470 --> 00:46:48,880

one

941

00:46:52,309 --> 00:46:50,480

and i think it may have been something

942

00:46:54,790 --> 00:46:52,319

like a dinosaur or something like that

943

00:46:56,550 --> 00:46:54,800

but it was i looked at that and i said

944

00:47:02,069 --> 00:46:56,560

well maybe i'd like to fly in that one

945

00:47:06,150 --> 00:47:03,829

my first visit to the johnson space

946

00:47:08,470 --> 00:47:06,160

center was in 1982

947

00:47:10,950 --> 00:47:08,480

and i met bob crippen

948

00:47:12,309 --> 00:47:10,960

and of course was a complete hero

949

00:47:15,270 --> 00:47:12,319

for any

950

00:47:18,150 --> 00:47:15,280

want to be astronaut

951  
00:47:19,829 --> 00:47:18,160  
and i was in the mcc i think being shown

952  
00:47:21,510 --> 00:47:19,839  
uh where i would work as a payload

953  
00:47:22,549 --> 00:47:21,520  
officer maybe

954  
00:47:25,190 --> 00:47:22,559  
one day

955  
00:47:27,030 --> 00:47:25,200  
and crypt just came down the aisle

956  
00:47:30,150 --> 00:47:27,040  
and uh he saw me i was

957  
00:47:32,710 --> 00:47:30,160  
completely tongue-tied i was frozen

958  
00:47:35,910 --> 00:47:32,720  
and he with his graciousness his smile

959  
00:47:37,750 --> 00:47:35,920  
his charm uh made me feel at ease

960  
00:47:38,549 --> 00:47:37,760  
and i've learned to understand that that

961  
00:47:41,190 --> 00:47:38,559  
is

962  
00:47:42,470 --> 00:47:41,200  
one of the fantastic qualities of the uh

963  
00:47:45,270 --> 00:47:42,480

the colleagues that i have in the

964

00:47:46,950 --> 00:47:45,280

astronaut office

965

00:47:48,549 --> 00:47:46,960

dan brandenstein

966

00:47:52,390 --> 00:47:48,559

um

967

00:47:54,069 --> 00:47:52,400

assigned me to my first flight sts-45

968

00:47:57,349 --> 00:47:54,079

um

969

00:48:00,230 --> 00:47:57,359

which i'm grateful dan

970

00:48:02,150 --> 00:48:00,240

but he gave me an even greater gift

971

00:48:04,150 --> 00:48:02,160

and that was charlie bolden as my first

972

00:48:07,030 --> 00:48:04,160

commander

973

00:48:08,309 --> 00:48:07,040

of atlas one

974

00:48:10,549 --> 00:48:08,319

charlie

975

00:48:12,710 --> 00:48:10,559

has become my model

976

00:48:14,630 --> 00:48:12,720

on how to respect

977

00:48:18,069 --> 00:48:14,640

other people

978

00:48:19,910 --> 00:48:18,079

how to listen to issues

979

00:48:21,670 --> 00:48:19,920

and how to make decisions to resolve

980

00:48:23,510 --> 00:48:21,680

them truly

981

00:48:25,190 --> 00:48:23,520

he is my model for leadership

982

00:48:27,589 --> 00:48:25,200

followership and all the other things

983

00:48:30,309 --> 00:48:27,599

that go on in making a team work so

984

00:48:32,069 --> 00:48:30,319

thank you charlie

985

00:48:33,750 --> 00:48:32,079

ellen ochoa i don't know if she's even

986

00:48:36,549 --> 00:48:33,760

here i think she may think i'm going on

987

00:48:41,190 --> 00:48:39,829

and i had great fun on sts 56

988

00:48:42,950 --> 00:48:41,200

trying to take a while and i just

989

00:48:45,750 --> 00:48:42,960

remember taking a well-exposed image of

990

00:48:47,510 --> 00:48:46,710

against

991

00:48:51,430 --> 00:48:47,520

the

992

00:48:53,030 --> 00:48:51,440

flute which was really quite remarkable

993

00:48:55,030 --> 00:48:53,040

for our crew

994

00:48:59,510 --> 00:48:55,040

jim weatherby is here and uh he

995

00:49:01,190 --> 00:48:59,520

impressed me enormously on sts-63

996

00:49:04,069 --> 00:49:01,200

basically managing a complete change in

997

00:49:05,109 --> 00:49:04,079

our flight plan when we added vladimir

998

00:49:06,870 --> 00:49:05,119

ttov

999

00:49:10,150 --> 00:49:06,880

from russia

1000

00:49:12,150 --> 00:49:10,160

and we were redirected to fly up to

1001  
00:49:14,630 --> 00:49:12,160  
the russian mir station

1002  
00:49:17,750 --> 00:49:14,640  
to basically go look at it but not touch

1003  
00:49:19,829 --> 00:49:17,760  
it at least at not that time

1004  
00:49:23,030 --> 00:49:19,839  
and then at that point in my career

1005  
00:49:24,950 --> 00:49:23,040  
everything went russian on me um

1006  
00:49:26,549 --> 00:49:24,960  
not entirely to my liking i have to be

1007  
00:49:28,950 --> 00:49:26,559  
honest

1008  
00:49:30,950 --> 00:49:28,960  
ronda my kids rhonda's in the audience

1009  
00:49:33,190 --> 00:49:30,960  
here you've heard that and janna and ian

1010  
00:49:35,109 --> 00:49:33,200  
who are small then were brilliant taking

1011  
00:49:37,670 --> 00:49:35,119  
on the ordeal of living in

1012  
00:49:39,430 --> 00:49:37,680  
star city for 15 months

1013  
00:49:41,430 --> 00:49:39,440

and i often show a picture of little

1014

00:49:43,430 --> 00:49:41,440

janna in the middle of the kindergarten

1015

00:49:45,030 --> 00:49:43,440

the jetski sud surrounded by all the

1016

00:49:46,710 --> 00:49:45,040

little russian kids they're not all

1017

00:49:48,549 --> 00:49:46,720

being rude but they aren't talking to

1018

00:49:50,390 --> 00:49:48,559

her and it was all because she wasn't

1019

00:49:52,549 --> 00:49:50,400

speaking russian and

1020

00:49:54,630 --> 00:49:52,559

they couldn't speak english but they

1021

00:49:57,430 --> 00:49:54,640

they grew to be friends

1022

00:50:00,069 --> 00:49:57,440

the journey to mir

1023

00:50:01,670 --> 00:50:00,079

on sts-84 that charlie pre-court eileen

1024

00:50:04,630 --> 00:50:01,680

collins were the pilot commander and

1025

00:50:05,510 --> 00:50:04,640

pilot was a great shuttle crew

1026

00:50:11,109 --> 00:50:05,520

but

1027

00:50:14,230 --> 00:50:11,119

who i had not really met until i came to

1028

00:50:16,710 --> 00:50:14,240

the u.s to launch on that atlantis from

1029

00:50:21,510 --> 00:50:19,430

she basically felt the

1030

00:50:23,349 --> 00:50:21,520

the integration need i had to join the

1031

00:50:25,589 --> 00:50:23,359

sts-84 crew because i've been in russia

1032

00:50:27,910 --> 00:50:25,599

for so long and she also understood my

1033

00:50:29,109 --> 00:50:27,920

struggle and my my anxiety about living

1034

00:50:30,870 --> 00:50:29,119

on the mirror

1035

00:50:32,309 --> 00:50:30,880

with two russian guys

1036

00:50:34,470 --> 00:50:32,319

knowing i would have to speak russian to

1037

00:50:35,990 --> 00:50:34,480

really make friends and there are

1038

00:50:37,109 --> 00:50:36,000

astronauts in the audience who know that

1039

00:50:39,030 --> 00:50:37,119

feeling

1040

00:50:40,630 --> 00:50:39,040

and she was struggling with english and

1041

00:50:42,549 --> 00:50:40,640

so which she helped me

1042

00:50:45,109 --> 00:50:42,559

get ready psychologically to be on the

1043

00:50:47,030 --> 00:50:45,119

mirror station for five months

1044

00:50:49,349 --> 00:50:47,040

uh that mission i thought was just going

1045

00:50:51,270 --> 00:50:49,359

to be a kind of a ho-hum for me

1046

00:50:53,109 --> 00:50:51,280

research mission

1047

00:50:56,309 --> 00:50:53,119

but it wasn't and the the progress

1048

00:50:58,150 --> 00:50:56,319

collision the depressurization

1049

00:51:00,069 --> 00:50:58,160

the loss of power

1050

00:51:02,069 --> 00:51:00,079

and attitude control

1051

00:51:04,230 --> 00:51:02,079

i'd describe it as tumbling but frank

1052

00:51:05,750 --> 00:51:04,240

corbison doesn't think it's the same

1053

00:51:09,349 --> 00:51:05,760

um

1054

00:51:10,790 --> 00:51:09,359

followed by various attempts of recovery

1055

00:51:11,910 --> 00:51:10,800

turned that mission into the most

1056

00:51:14,230 --> 00:51:11,920

eventful

1057

00:51:15,990 --> 00:51:14,240

and uh i think to some extent

1058

00:51:18,390 --> 00:51:16,000

because of the camaraderie i developed

1059

00:51:21,349 --> 00:51:18,400

with vasilis sublev and alexander

1060

00:51:23,430 --> 00:51:21,359

lazukin sasha it became one of the

1061

00:51:25,510 --> 00:51:23,440

most rewarding experiences in a weird

1062

00:51:30,069 --> 00:51:25,520

and odd way even though

1063

00:51:33,910 --> 00:51:32,150

kurt brown

1064

00:51:36,230 --> 00:51:33,920

is here today and

1065

00:51:39,270 --> 00:51:36,240

he helped make me american again not

1066

00:51:42,950 --> 00:51:39,280

that i could speak it but

1067

00:51:45,270 --> 00:51:42,960

he he led our crew on sts-103

1068

00:51:46,950 --> 00:51:45,280

to basically repair hubble

1069

00:51:48,790 --> 00:51:46,960

put it back to life

1070

00:51:52,710 --> 00:51:48,800

right before that

1071

00:51:55,670 --> 00:51:52,720

that overrated climax called y2k

1072

00:51:57,750 --> 00:51:55,680

uh over christmas of 1999 and we managed

1073

00:51:59,510 --> 00:51:57,760

to complete the repairs and the upgrade

1074

00:52:02,069 --> 00:51:59,520

of the computer

1075

00:52:05,670 --> 00:52:02,079

and then colombia happened so

1076  
00:52:07,910 --> 00:52:05,680  
happiness and sadness in our program

1077  
00:52:09,190 --> 00:52:07,920  
and i was back in russia again and it's

1078  
00:52:10,710 --> 00:52:09,200  
thanks to

1079  
00:52:12,470 --> 00:52:10,720  
rommel where is he yeah somewhere over

1080  
00:52:13,829 --> 00:52:12,480  
there he called me up and said hey mike

1081  
00:52:17,030 --> 00:52:13,839  
guess what

1082  
00:52:18,790 --> 00:52:17,040  
and uh i was launched to the iss

1083  
00:52:22,630 --> 00:52:18,800  
on expedition 8 with

1084  
00:52:24,950 --> 00:52:22,640  
alexander kaleri to stay for six months

1085  
00:52:27,109 --> 00:52:24,960  
and i've got to say thank you to nasa to

1086  
00:52:30,470 --> 00:52:27,119  
mcc houston in particular

1087  
00:52:32,630 --> 00:52:30,480  
who were supportive and superb in

1088  
00:52:35,510 --> 00:52:32,640

kind of making my at least i won't speak

1089

00:52:37,910 --> 00:52:35,520

for sasha lonely situation um much

1090

00:52:39,829 --> 00:52:37,920

better than it it might have been as we

1091

00:52:43,190 --> 00:52:39,839

were just two two crew members uh

1092

00:52:44,470 --> 00:52:43,200

looking after the iss for six months

1093

00:52:46,630 --> 00:52:44,480

so yes

1094

00:52:49,109 --> 00:52:46,640

i think i have been amazingly fortunate

1095

00:52:51,670 --> 00:52:49,119

to have had such a varied career

1096

00:52:53,910 --> 00:52:51,680

and it's due to the help to support

1097

00:52:55,270 --> 00:52:53,920

um the calm leadership

1098

00:52:56,390 --> 00:52:55,280

and followership of my astronaut

1099

00:52:58,870 --> 00:52:56,400

colleagues

1100

00:53:02,150 --> 00:52:58,880

and the nasa team all around us here at

1101  
00:53:04,230 --> 00:53:02,160  
ksc and across the country so thank you

1102  
00:53:20,549 --> 00:53:04,240  
to all of you from the bottom of my

1103  
00:53:20,559 --> 00:53:24,790  
that was most excellent

1104  
00:53:24,800 --> 00:53:29,510  
congratulations dr full

1105  
00:53:34,309 --> 00:53:32,150  
and now it's time to introduce our

1106  
00:53:36,549 --> 00:53:34,319  
second candidate for induction into the

1107  
00:53:40,060 --> 00:53:36,559  
u.s astronaut hall of fame

1108  
00:54:17,670 --> 00:54:06,680  
[Music]

1109  
00:54:21,510 --> 00:54:19,990  
i wanted to try to capture a sunset and

1110  
00:54:31,430 --> 00:54:21,520  
just how quickly it happened in the

1111  
00:54:31,440 --> 00:54:36,150  
[Music]

1112  
00:54:54,270 --> 00:54:38,470  
this discovery

1113  
00:55:50,870 --> 00:55:32,600

[Music]

1114

00:55:54,309 --> 00:55:52,660

main gear touchdown

1115

00:55:57,270 --> 00:55:54,319

[Music]

1116

00:55:59,670 --> 00:55:57,280

nosegear touchdown and with orion sls

1117

00:56:01,109 --> 00:55:59,680

rocket and the ground systems those are

1118

00:56:04,230 --> 00:56:01,119

three programs at three different

1119

00:56:22,150 --> 00:56:04,240

centers but todd bob and i all know that

1120

00:56:25,670 --> 00:56:23,910

she was having way too much fun up there

1121

00:56:28,470 --> 00:56:25,680

i tell you that

1122

00:56:31,190 --> 00:56:28,480

dr ellen ochoa currently serves as the

1123

00:56:33,030 --> 00:56:31,200

11th director of nasa's johnson space

1124

00:56:35,270 --> 00:56:33,040

center in houston she has the

1125

00:56:36,950 --> 00:56:35,280

distinction of being the first hispanic

1126

00:56:40,870 --> 00:56:36,960

director of jsc

1127

00:56:43,670 --> 00:56:40,880

and only the second female director

1128

00:56:45,190 --> 00:56:43,680

ellen's nasa journey began in 1990 when

1129

00:56:46,309 --> 00:56:45,200

she was selected as an astronaut

1130

00:56:48,870 --> 00:56:46,319

candidate

1131

00:56:51,390 --> 00:56:48,880

she has flown aboard four space shuttle

1132

00:56:53,910 --> 00:56:51,400

missions and has logged more than

1133

00:56:57,430 --> 00:56:53,920

978 hours in space

1134

00:57:00,630 --> 00:56:57,440

she first flew in 1993 aboard sts 56

1135

00:57:01,750 --> 00:57:00,640

discovery becoming the first hispanic

1136

00:57:09,349 --> 00:57:01,760

woman

1137

00:57:13,270 --> 00:57:11,510

the nine-day atlas ii mission studied

1138

00:57:15,829 --> 00:57:13,280

the effects of solar activity on the

1139

00:57:18,470 --> 00:57:15,839

earth's climate as a mission specialist

1140

00:57:21,190 --> 00:57:18,480

for the flight she used her extensive

1141

00:57:23,990 --> 00:57:21,200

robotics training to operate the remote

1142

00:57:26,069 --> 00:57:24,000

manipulator system or rms

1143

00:57:28,870 --> 00:57:26,079

robotic arm to deploy and capture the

1144

00:57:31,270 --> 00:57:28,880

spartan satellite which was used to

1145

00:57:33,589 --> 00:57:31,280

study the solar corona

1146

00:57:35,109 --> 00:57:33,599

ellen flew again on the atlas 3 mission

1147

00:57:37,270 --> 00:57:35,119

sts-66

1148

00:57:39,589 --> 00:57:37,280

where she served as payload commander

1149

00:57:41,990 --> 00:57:39,599

here she once again was responsible for

1150

00:57:44,069 --> 00:57:42,000

operating the robotic arm to retrieve

1151  
00:57:47,589 --> 00:57:44,079  
the research satellite and provide

1152  
00:57:50,230 --> 00:57:47,599  
valuable data on the energy of the sun

1153  
00:57:52,789 --> 00:57:50,240  
on her third and fourth missions sts 96

1154  
00:57:55,430 --> 00:57:52,799  
and sts-110 she served as mission

1155  
00:57:58,549 --> 00:57:55,440  
specialist and flight engineer

1156  
00:58:01,030 --> 00:57:58,559  
sts 96 marked the first docking of the

1157  
00:58:03,670 --> 00:58:01,040  
international space station where dr

1158  
00:58:06,710 --> 00:58:03,680  
ochoa coordinated the transfer of

1159  
00:58:08,390 --> 00:58:06,720  
supplies in preparation for the arrival

1160  
00:58:10,950 --> 00:58:08,400  
of the first crew

1161  
00:58:12,950 --> 00:58:10,960  
she also operated the rms during the

1162  
00:58:15,750 --> 00:58:12,960  
eight hour spacewalk

1163  
00:58:19,349 --> 00:58:15,760

when she flew again in 2002 aboard

1164

00:58:21,030 --> 00:58:19,359

sts-110 atlantis she and the expedition

1165

00:58:23,190 --> 00:58:21,040

4 crew

1166

00:58:27,030 --> 00:58:23,200

used the station's robotic arm to

1167

00:58:29,589 --> 00:58:27,040

install the s-zero truss and to maneuver

1168

00:58:31,670 --> 00:58:29,599

space walkers around the station

1169

00:58:34,789 --> 00:58:31,680

marking the first time that the arm had

1170

00:58:36,549 --> 00:58:34,799

ever been used to transport astronauts

1171

00:58:39,270 --> 00:58:36,559

on spacewalk

1172

00:58:41,670 --> 00:58:39,280

talk about steady hands

1173

00:58:44,630 --> 00:58:41,680

in addition to her incredible astronaut

1174

00:58:47,190 --> 00:58:44,640

career dr ochoa maintains a strong

1175

00:58:49,829 --> 00:58:47,200

presence in the academic world she is

1176

00:58:52,069 --> 00:58:49,839

the co-inventor of three patents and has

1177

00:58:54,309 --> 00:58:52,079

authored numerous technical papers she

1178

00:58:56,950 --> 00:58:54,319

earned a bachelor of science in physics

1179

00:58:59,270 --> 00:58:56,960

from san diego state university and her

1180

00:59:01,910 --> 00:58:59,280

masters of science and doctorate in

1181

00:59:04,069 --> 00:59:01,920

electrical engineering from stanford

1182

00:59:06,870 --> 00:59:04,079

university with her doctoral and

1183

00:59:10,470 --> 00:59:06,880

postdoctoral research focusing on

1184

00:59:12,630 --> 00:59:10,480

optical information processing

1185

00:59:15,270 --> 00:59:12,640

dr ochoa is also a member of the

1186

00:59:17,510 --> 00:59:15,280

national science board and chairs the

1187

00:59:20,069 --> 00:59:17,520

nomination evaluation committee for the

1188

00:59:21,349 --> 00:59:20,079

national medal of technology and

1189

00:59:23,430 --> 00:59:21,359

innovation

1190

00:59:25,990 --> 00:59:23,440

she has received numerous awards

1191

00:59:28,390 --> 00:59:26,000

including nasa's highest award the

1192

00:59:30,470 --> 00:59:28,400

distinguished service medal

1193

00:59:33,829 --> 00:59:30,480

perhaps more importantly she has the

1194

00:59:37,589 --> 00:59:33,839

distinction of having six schools named

1195

00:59:39,190 --> 00:59:37,599

after her in texas oklahoma california

1196

00:59:41,990 --> 00:59:39,200

and washington state

1197

00:59:43,510 --> 00:59:42,000

inspiring countless young people all

1198

00:59:45,829 --> 00:59:43,520

over the country

1199

00:59:48,950 --> 00:59:45,839

to reach for the stars

1200

00:59:50,180 --> 00:59:48,960

ladies and gentlemen astronaut ellen

1201

01:00:16,170 --> 00:59:50,190

ochoa

1202

01:00:24,950 --> 01:00:16,180

hall of fame astronaut michael coats

1203

01:00:30,549 --> 01:00:26,549

thank you john

1204

01:00:33,109 --> 01:00:30,559

i'd like to congratulate mike and ellen

1205

01:00:35,589 --> 01:00:33,119

the astronaut hall of fame was created

1206

01:00:37,829 --> 01:00:35,599

to recognize extraordinary individuals

1207

01:00:39,829 --> 01:00:37,839

such as these two

1208

01:00:41,910 --> 01:00:39,839

both of you are wonderful role models

1209

01:00:44,150 --> 01:00:41,920

for our young people and you honor us

1210

01:00:46,549 --> 01:00:44,160

with your presence

1211

01:00:50,150 --> 01:00:46,559

i first met ellen when i was a member of

1212

01:00:53,349 --> 01:00:50,160

the astronaut selection board in 1990

1213

01:00:54,950 --> 01:00:53,359

that chose her class of astronauts

1214

01:00:58,710 --> 01:00:54,960

in all modesty

1215

01:01:05,990 --> 01:01:00,789

her class is arguably the second best

1216

01:01:11,270 --> 01:01:07,349

apparently there's some disagreement

1217

01:01:13,990 --> 01:01:11,280

over which was second best but

1218

01:01:15,829 --> 01:01:14,000

during the selection board discussions

1219

01:01:18,069 --> 01:01:15,839

the director of flight crew operations

1220

01:01:19,990 --> 01:01:18,079

don putty

1221

01:01:22,630 --> 01:01:20,000

asked us to remind him where ellen had

1222

01:01:24,950 --> 01:01:22,640

gone to school

1223

01:01:27,750 --> 01:01:24,960

i said she got her phd in electrical

1224

01:01:30,390 --> 01:01:27,760

engineering from stanford

1225

01:01:33,750 --> 01:01:30,400

with a smile on his face don said isn't

1226

01:01:36,470 --> 01:01:33,760

that where jim plunkett went to school

1227

01:01:39,750 --> 01:01:36,480

and i said yes and he said

1228

01:01:41,190 --> 01:01:39,760

and jim plunkett won the heisman trophy

1229

01:01:43,510 --> 01:01:41,200

and i said yes

1230

01:01:48,069 --> 01:01:43,520

and don said so stanford is a jock

1231

01:01:50,829 --> 01:01:49,589

i said do you have something against

1232

01:01:53,750 --> 01:01:50,839

jock

1233

01:01:58,630 --> 01:01:53,760

schools and don's answer was oh no not

1234

01:02:01,990 --> 01:02:00,549

so just think ellen if you had gone to

1235

01:02:06,630 --> 01:02:02,000

oklahoma maybe you could have made

1236

01:02:10,950 --> 01:02:08,789

now england is obvious obviously one of

1237

01:02:13,109 --> 01:02:10,960

the best and the brightest that this

1238

01:02:15,190 --> 01:02:13,119

nation can produce

1239

01:02:16,950 --> 01:02:15,200

but what really impressed those of us on

1240

01:02:19,270 --> 01:02:16,960

the selection board

1241

01:02:23,029 --> 01:02:19,280

and has impressed me ever since

1242

01:02:24,870 --> 01:02:23,039

is her coolness and poise under pressure

1243

01:02:27,430 --> 01:02:24,880

whether it's the time critical and

1244

01:02:28,870 --> 01:02:27,440

complex operations during her four space

1245

01:02:31,670 --> 01:02:28,880

shuttle missions

1246

01:02:33,829 --> 01:02:31,680

or testifying before congress

1247

01:02:35,510 --> 01:02:33,839

or deliberating over difficult personnel

1248

01:02:37,670 --> 01:02:35,520

decisions

1249

01:02:40,710 --> 01:02:37,680

ellen is always thoughtful

1250

01:02:42,710 --> 01:02:40,720

well informed and decisive

1251

01:02:45,349 --> 01:02:42,720

her outstanding leadership skills have

1252

01:02:47,829 --> 01:02:45,359

benefited our space program during some

1253

01:02:51,670 --> 01:02:47,839

very turbulent times and hopefully we'll

1254

01:02:53,670 --> 01:02:51,680

continue to do so for many years to come

1255

01:02:55,349 --> 01:02:53,680

a few years ago

1256

01:02:59,349 --> 01:02:55,359

when the deputy director of the johnson

1257

01:03:02,789 --> 01:02:59,359

space center some guy named bob cabana

1258

01:03:05,750 --> 01:03:02,799

deserted me

1259

01:03:08,870 --> 01:03:05,760

to go back east somewhere

1260

01:03:11,029 --> 01:03:08,880

i had to pick a new deputy director

1261

01:03:12,710 --> 01:03:11,039

replacing bob wasn't easy he had big

1262

01:03:15,430 --> 01:03:12,720

shoes to fill

1263

01:03:17,829 --> 01:03:15,440

but fortunately jsc had a host of well

1264

01:03:19,910 --> 01:03:17,839

qualified candidates

1265

01:03:23,589 --> 01:03:19,920

at the top of my list was our director

1266

01:03:25,910 --> 01:03:23,599

of flight crew operations ellen ochoa

1267

01:03:28,470 --> 01:03:25,920

when i asked her if she'd like to become

1268

01:03:33,109 --> 01:03:28,480

the jsc deputy director

1269

01:03:36,549 --> 01:03:35,029

now i don't know if co

1270

01:03:38,710 --> 01:03:36,559

and jordan or wilson know what i'm

1271

01:03:41,589 --> 01:03:38,720

talking about

1272

01:03:43,589 --> 01:03:41,599

apparently they do

1273

01:03:45,430 --> 01:03:43,599

but she didn't say a word

1274

01:03:47,190 --> 01:03:45,440

she just stared at me

1275

01:03:50,470 --> 01:03:47,200

with a look that could have stopped

1276

01:03:52,789 --> 01:03:50,480

global warming and its tracks

1277

01:03:56,309 --> 01:03:52,799

she was obviously thinking very hard

1278

01:04:00,150 --> 01:03:56,319

about how to decline my offer tactfully

1279

01:04:04,789 --> 01:04:01,990

it immediately dawned on me that i had

1280

01:04:07,190 --> 01:04:04,799

miscalculated and i quickly said

1281

01:04:09,430 --> 01:04:07,200

let me rephrase that question

1282

01:04:16,710 --> 01:04:09,440

congratulations you are now the new jsc

1283

01:04:20,069 --> 01:04:18,390

she had been quite happy as a director

1284

01:04:21,430 --> 01:04:20,079

of flight cooperation

1285

01:04:23,190 --> 01:04:21,440

but sometimes you have to make

1286

01:04:25,190 --> 01:04:23,200

sacrifices for the good of the space

1287

01:04:27,990 --> 01:04:25,200

program

1288

01:04:29,510 --> 01:04:28,000

as the jsc deputy director just as bob

1289

01:04:31,750 --> 01:04:29,520

cabana had done

1290

01:04:32,789 --> 01:04:31,760

she made my job as director so much

1291

01:04:34,309 --> 01:04:32,799

easier

1292

01:04:37,589 --> 01:04:34,319

for which i was

1293

01:04:40,150 --> 01:04:37,599

and will always be eternally grateful

1294

01:04:41,670 --> 01:04:40,160

when it came time for me to retire nasa

1295

01:04:43,510 --> 01:04:41,680

administrator charlie bolden was

1296

01:04:46,870 --> 01:04:43,520

gracious enough to ask me for a

1297

01:04:48,549 --> 01:04:46,880

recommendation from my successor

1298

01:04:50,549 --> 01:04:48,559

i didn't hesitate to tell him ellen

1299

01:04:52,630 --> 01:04:50,559

would be a terrific choice

1300

01:04:55,109 --> 01:04:52,640

and he said yeah i kind of thought you'd

1301

01:04:57,270 --> 01:04:55,119

say that and i agree completely

1302

01:05:01,029 --> 01:04:57,280

he then gave me the very great honor of

1303

01:05:02,630 --> 01:05:01,039

announcing ellen as my successor

1304

01:05:04,710 --> 01:05:02,640

as a veteran of four space shuttle

1305

01:05:07,430 --> 01:05:04,720

missions and of course as the 11th

1306

01:05:09,589 --> 01:05:07,440

director of the johnson space center

1307

01:05:11,910 --> 01:05:09,599

ellen's accomplishments are many

1308

01:05:13,349 --> 01:05:11,920

including having six schools named after

1309

01:05:16,789 --> 01:05:13,359

her

1310

01:05:18,870 --> 01:05:16,799

accomplishments

1311

01:05:22,950 --> 01:05:18,880

is that she married a man who likes to

1312

01:05:28,390 --> 01:05:25,510

ko is a successful lawyer but he's also

1313

01:05:36,870 --> 01:05:30,230

perhaps we should create a hall of fame

1314

01:05:42,789 --> 01:05:40,069

i think i got a second on that

1315

01:05:45,670 --> 01:05:42,799

it now gives me a great deal of pleasure

1316

01:05:48,870 --> 01:05:45,680

to induct one of our nation's finest dr

1317

01:05:50,390 --> 01:05:48,880

ellen ochoa into the astronaut hall of

1318

01:06:11,920 --> 01:05:50,400

fame

1319

01:06:21,680 --> 01:06:11,930

[Applause]

1320

01:06:35,430 --> 01:06:21,690

[Music]

1321

01:06:42,069 --> 01:06:37,349

well thank you very much dan and of

1322

01:06:44,230 --> 01:06:42,079

course to you mike and in my defense

1323

01:06:45,910 --> 01:06:44,240

i had been director of flight crew ops

1324

01:06:47,750 --> 01:06:45,920

less than a year and i just felt i had

1325

01:06:49,510 --> 01:06:47,760

so much more to learn and grow into that

1326

01:06:51,829 --> 01:06:49,520

job before stepping up into the big

1327

01:06:55,750 --> 01:06:51,839

shoes that bob had just left that was

1328

01:06:57,510 --> 01:06:55,760

the only reason for that hesitation

1329

01:06:58,789 --> 01:06:57,520

among the many things i'm grateful for

1330

01:07:00,549 --> 01:06:58,799

is the opportunity to have worked

1331

01:07:02,549 --> 01:07:00,559

closely with you

1332

01:07:04,710 --> 01:07:02,559

when i was your deputy for several years

1333

01:07:06,870 --> 01:07:04,720

and and not only did i learn a lot about

1334

01:07:08,390 --> 01:07:06,880

leadership from you but i just really

1335

01:07:10,549 --> 01:07:08,400

really enjoyed getting to know you and

1336

01:07:12,710 --> 01:07:10,559

your wonderful family mike

1337

01:07:14,390 --> 01:07:12,720

i want to congratulate mike foale

1338

01:07:16,549 --> 01:07:14,400

i was so happy to hear he and i would be

1339

01:07:18,950 --> 01:07:16,559

inducted together when he and i flew

1340

01:07:20,710 --> 01:07:18,960

together on sts-56

1341

01:07:22,870 --> 01:07:20,720

he of course had already had one mission

1342

01:07:24,950 --> 01:07:22,880

he passed on all kinds of helpful

1343

01:07:27,029 --> 01:07:24,960

information that helped a rookie like me

1344

01:07:28,789 --> 01:07:27,039

really know where to focus and hopefully

1345

01:07:31,109 --> 01:07:28,799

not be too surprised when the actual

1346

01:07:33,589 --> 01:07:31,119

flight happened because being surprised

1347

01:07:35,029 --> 01:07:33,599

in space is rarely a good thing as as

1348

01:07:37,349 --> 01:07:35,039

you found out

1349

01:07:39,029 --> 01:07:37,359

and uh and i appreciate you took that

1350

01:07:40,549 --> 01:07:39,039

picture of me playing my flute in space

1351

01:07:42,150 --> 01:07:40,559

that was the only mission i i got to

1352

01:07:44,390 --> 01:07:42,160

take my flute up on it was part of an

1353

01:07:46,390 --> 01:07:44,400

educational video and the

1354

01:07:49,990 --> 01:07:46,400

picture you shot is one i have used many

1355

01:07:51,589 --> 01:07:50,000

times for people interested in music

1356

01:07:53,349 --> 01:07:51,599

i don't have the luxury of thanking

1357

01:07:55,670 --> 01:07:53,359

everyone who has been important to me on

1358

01:07:58,069 --> 01:07:55,680

my own journey it's a very long list so

1359

01:08:00,069 --> 01:07:58,079

i'll mention just a few today

1360

01:08:02,950 --> 01:08:00,079

people who know me know how important my

1361

01:08:05,029 --> 01:08:02,960

mom roseanne ochoa was to me

1362

01:08:07,029 --> 01:08:05,039

while she's no longer with us she was

1363

01:08:09,750 --> 01:08:07,039

able to see all of my launches and

1364

01:08:11,670 --> 01:08:09,760

followed my missions minute by minute

1365

01:08:13,349 --> 01:08:11,680

she loved everything about it

1366

01:08:15,589 --> 01:08:13,359

i'm so glad to have my three brothers

1367

01:08:17,669 --> 01:08:15,599

here monty thai and wilson

1368

01:08:19,590 --> 01:08:17,679

along with my sister beth who died a few

1369

01:08:22,229 --> 01:08:19,600

years ago they've always been there to

1370

01:08:23,910 --> 01:08:22,239

share in my life and support me

1371

01:08:25,669 --> 01:08:23,920

and i would like to thank all of my

1372

01:08:29,349 --> 01:08:25,679

other family members and the many

1373

01:08:30,950 --> 01:08:29,359

friends who traveled to support me today

1374

01:08:33,669 --> 01:08:30,960

graduate school at stanford is what

1375

01:08:35,590 --> 01:08:33,679

really set me on the path to nasa the

1376

01:08:36,950 --> 01:08:35,600

space shuttle flew for the first time

1377

01:08:38,390 --> 01:08:36,960

near the end of my first year at

1378

01:08:40,229 --> 01:08:38,400

stanford

1379

01:08:41,990 --> 01:08:40,239

my close friends and me and dave were

1380

01:08:43,349 --> 01:08:42,000

some of the only people i told about my

1381

01:08:46,550 --> 01:08:43,359

new ambition

1382

01:08:49,189 --> 01:08:46,560

and i appreciate that they didn't laugh

1383

01:08:51,030 --> 01:08:49,199

my thesis advisors joe goodman and bert

1384

01:08:53,189 --> 01:08:51,040

hesselink were not only my research

1385

01:08:55,669 --> 01:08:53,199

mentors there but encouraging in many

1386

01:08:58,550 --> 01:08:55,679

ways early in my career

1387

01:09:00,789 --> 01:08:58,560

my first nasa job was at ames research

1388

01:09:02,470 --> 01:09:00,799

center and it certainly helped me in a

1389

01:09:03,590 --> 01:09:02,480

number of ways toward astronaut

1390

01:09:05,910 --> 01:09:03,600

selection

1391

01:09:08,709 --> 01:09:05,920

but it was really most notable for being

1392

01:09:11,269 --> 01:09:08,719

where i met my husband coe miles

1393

01:09:12,789 --> 01:09:11,279

he's been by my side ever since and his

1394

01:09:13,990 --> 01:09:12,799

love and support have meant everything

1395

01:09:16,229 --> 01:09:14,000

to me

1396

01:09:19,030 --> 01:09:16,239

i love that he's an engineer

1397

01:09:21,030 --> 01:09:19,040

among other things as you heard

1398

01:09:22,870 --> 01:09:21,040

a lawyer and a chef

1399

01:09:24,470 --> 01:09:22,880

and can understand what i'm doing and

1400

01:09:26,390 --> 01:09:24,480

why i'm doing it

1401

01:09:27,590 --> 01:09:26,400

our family escort on my first flight

1402

01:09:29,510 --> 01:09:27,600

told me

1403

01:09:31,510 --> 01:09:29,520

co was the only spouse he'd ever seen

1404

01:09:33,189 --> 01:09:31,520

who had a stopwatch during the launch

1405

01:09:35,030 --> 01:09:33,199

along with all the times that the abort

1406

01:09:37,590 --> 01:09:35,040

calls are supposed to be made

1407

01:09:39,349 --> 01:09:37,600

and he was verifying call by call what

1408

01:09:40,950 --> 01:09:39,359

mission control was doing

1409

01:09:43,269 --> 01:09:40,960

and making sure they were all coming out

1410

01:09:45,030 --> 01:09:43,279

at the right time

1411

01:09:46,950 --> 01:09:45,040

after we had kids he had the difficult

1412

01:09:49,110 --> 01:09:46,960

job of being the only parent when i was

1413

01:09:51,510 --> 01:09:49,120

off training or in flight we were

1414

01:09:53,590 --> 01:09:51,520

blessed with a wonderful nanny and brown

1415

01:09:55,350 --> 01:09:53,600

but there's no question that co's job

1416

01:09:57,350 --> 01:09:55,360

was a lot harder than mine during those

1417

01:09:58,950 --> 01:09:57,360

times

1418

01:10:00,870 --> 01:09:58,960

i'd like to thank our wonderful kids

1419

01:10:03,110 --> 01:10:00,880

wilson and jordan

1420

01:10:05,590 --> 01:10:03,120

they were too young really to enjoy my

1421

01:10:07,750 --> 01:10:05,600

missions or not not even born yet for uh

1422

01:10:09,669 --> 01:10:07,760

most of them but i have tried to share

1423

01:10:11,590 --> 01:10:09,679

my space adventures with them and

1424

01:10:13,110 --> 01:10:11,600

encourage them to explore their own

1425

01:10:14,550 --> 01:10:13,120

interests

1426

01:10:16,310 --> 01:10:14,560

parenthood while being much more

1427

01:10:18,950 --> 01:10:16,320

personal is clearly an even bigger

1428

01:10:21,590 --> 01:10:18,960

invention a bigger adventure than space

1429

01:10:23,110 --> 01:10:21,600

exploration

1430

01:10:24,950 --> 01:10:23,120

there's no way to adequately thank

1431

01:10:27,910 --> 01:10:24,960

everyone in the astronaut corps

1432

01:10:30,709 --> 01:10:27,920

colleagues friends crewmates including

1433

01:10:32,390 --> 01:10:30,719

those still in flight ops who came today

1434

01:10:34,709 --> 01:10:32,400

to share in this moment thank you for

1435

01:10:37,750 --> 01:10:34,719

coming and three of my commanders also

1436

01:10:39,510 --> 01:10:37,760

came today i really appreciate that

1437

01:10:41,590 --> 01:10:39,520

i remember that one of the first pieces

1438

01:10:43,590 --> 01:10:41,600

of advice i got when i joined the

1439

01:10:45,590 --> 01:10:43,600

astronaut office was said

1440

01:10:47,990 --> 01:10:45,600

okay don't worry there's really only two

1441

01:10:49,990 --> 01:10:48,000

ways to mess up as an astronaut

1442

01:10:52,310 --> 01:10:50,000

number one failing to follow the

1443

01:10:53,189 --> 01:10:52,320

procedures exactly as written and number

1444

01:10:55,110 --> 01:10:53,199

two

1445

01:10:57,510 --> 01:10:55,120

following the procedures exactly as

1446

01:11:01,270 --> 01:10:59,430

so you know it took me a little while to

1447

01:11:04,070 --> 01:11:01,280

figure out what i should do with that

1448

01:11:06,470 --> 01:11:04,080

advice but in time and following the

1449

01:11:08,790 --> 01:11:06,480

example of all my colleagues i i believe

1450

01:11:11,110 --> 01:11:08,800

i was able to develop the the in-depth

1451

01:11:12,630 --> 01:11:11,120

knowledge and judgment that it was

1452

01:11:14,790 --> 01:11:12,640

referring to

1453

01:11:17,430 --> 01:11:14,800

and of course their camaraderie has made

1454

01:11:19,990 --> 01:11:17,440

the journey so memorable and fun

1455

01:11:21,910 --> 01:11:20,000

you can hear a lot about what mike and i

1456

01:11:23,590 --> 01:11:21,920

accomplished on our missions and what

1457

01:11:25,350 --> 01:11:23,600

those missions were about but i can

1458

01:11:25,990 --> 01:11:25,360

guarantee you that when we think about

1459

01:11:29,510 --> 01:11:26,000

them

1460

01:11:31,430 --> 01:11:29,520

what we're thinking about is the people

1461

01:11:33,590 --> 01:11:31,440

just as i'd hoped when i first started

1462

01:11:35,590 --> 01:11:33,600

thinking about the astronaut corps i got

1463

01:11:37,430 --> 01:11:35,600

to participate in conducting science

1464

01:11:38,630 --> 01:11:37,440

research in space on my first two

1465

01:11:40,550 --> 01:11:38,640

missions

1466

01:11:43,510 --> 01:11:40,560

i remember talking to one ecstatic

1467

01:11:45,430 --> 01:11:43,520

scientist after we landed and asked him

1468

01:11:48,709 --> 01:11:45,440

what could we do to help his research

1469

01:11:50,630 --> 01:11:48,719

and he said stay in orbit longer

1470

01:11:52,630 --> 01:11:50,640

so then i had the good fortune of being

1471

01:11:54,470 --> 01:11:52,640

on two missions that helped assemble the

1472

01:11:57,110 --> 01:11:54,480

international space station

1473

01:11:59,430 --> 01:11:57,120

which today is an absolutely incredible

1474

01:12:02,310 --> 01:11:59,440

laboratory in space that's been

1475

01:12:04,229 --> 01:12:02,320

continuously inhabited for 16 and a half

1476

01:12:05,830 --> 01:12:04,239

years

1477

01:12:08,390 --> 01:12:05,840

it's a thrill to be welcomed into the

1478

01:12:10,870 --> 01:12:08,400

hall of fame today along with mike i'm

1479

01:12:12,870 --> 01:12:10,880

very grateful to the ksc visitor center

1480

01:12:15,030 --> 01:12:12,880

the astronaut scholarship foundation and

1481

01:12:16,950 --> 01:12:15,040

to all who support it

1482

01:12:19,590 --> 01:12:16,960

while the spotlight today

1483

01:12:21,270 --> 01:12:19,600

is on astronauts we know we're simply

1484

01:12:23,270 --> 01:12:21,280

the ones who represent everyone in the

1485

01:12:25,430 --> 01:12:23,280

nasa community who have made nasa's

1486

01:12:27,430 --> 01:12:25,440

accomplishments possible

1487

01:12:29,430 --> 01:12:27,440

and that the biggest role we play

1488

01:12:31,189 --> 01:12:29,440

throughout our careers and actually

1489

01:12:33,669 --> 01:12:31,199

throughout our lives

1490

01:12:35,910 --> 01:12:33,679

is in inspiring the next generation

1491

01:12:37,669 --> 01:12:35,920

including astronaut scholars who will go

1492

01:12:38,870 --> 01:12:37,679

on to accomplish more than we can

1493

01:12:40,790 --> 01:12:38,880

imagine

1494

01:12:43,270 --> 01:12:40,800

i'm so thankful to have spent the last

1495

01:12:44,149 --> 01:12:43,280

almost 30 years being a part of the nasa

1496

01:12:45,500 --> 01:12:44,159

crew

1497

01:12:51,390 --> 01:12:45,510

thank you

1498

01:13:00,870 --> 01:12:57,710

[Applause]

1499

01:13:02,550 --> 01:13:00,880

you know your kids are a little older

1500

01:13:04,630 --> 01:13:02,560

now you you know share that maybe you

1501  
01:13:06,470 --> 01:13:04,640  
want to fly again so they can share the

1502  
01:13:07,590 --> 01:13:06,480  
experience a little

1503  
01:13:09,860 --> 01:13:07,600  
bit

1504  
01:13:11,350 --> 01:13:09,870  
she's all for it

1505  
01:13:13,110 --> 01:13:11,360  
[Music]

1506  
01:13:15,270 --> 01:13:13,120  
ladies and gentlemen may i present to

1507  
01:13:16,870 --> 01:13:15,280  
you once again the 16th class of

1508  
01:13:19,110 --> 01:13:16,880  
astronauts to be inducted into the

1509  
01:13:37,350 --> 01:13:19,120  
united states astronaut hall of fame

1510  
01:13:41,590 --> 01:13:39,750  
now we're going to do a uh

1511  
01:13:42,630 --> 01:13:41,600  
now we're going to do a little countdown

1512  
01:13:45,270 --> 01:13:42,640  
here

1513  
01:13:47,750 --> 01:13:45,280

to an unveiling

1514

01:13:50,070 --> 01:13:47,760

of our new inductees displays that will

1515

01:13:52,630 --> 01:13:50,080

soon be housed in the new attraction

1516

01:13:54,310 --> 01:13:52,640

heroes and legends featuring the us

1517

01:13:55,669 --> 01:13:54,320

astronaut hall of fame presented by

1518

01:13:57,590 --> 01:13:55,679

boeing michael and ellen please take

1519

01:13:58,550 --> 01:13:57,600

your places i assume you know where they

1520

01:14:00,630 --> 01:13:58,560

are because i don't know where your

1521

01:14:02,790 --> 01:14:00,640

place is okay

1522

01:14:04,310 --> 01:14:02,800

you ready as soon as you guys are ready

1523

01:14:06,310 --> 01:14:04,320

move the chairs we're gonna do this

1524

01:14:07,270 --> 01:14:06,320

unveiling we'll do a five five count

1525

01:14:08,630 --> 01:14:07,280

ready

1526

01:14:09,830 --> 01:14:08,640

five

1527

01:14:11,030 --> 01:14:09,840

four

1528

01:14:11,910 --> 01:14:11,040

three

1529

01:14:12,870 --> 01:14:11,920

two

1530

01:14:29,510 --> 01:14:12,880

one

1531

01:14:34,709 --> 01:14:31,430

once again i present to you michael

1532

01:14:42,709 --> 01:14:34,719

foale and ellen ochoa the newest hall of

1533

01:14:46,550 --> 01:14:44,470

would all the members of the united

1534

01:14:51,750 --> 01:14:46,560

states astronaut hall of fame please

1535

01:14:51,760 --> 01:14:59,030

you guys can move

1536

01:15:02,950 --> 01:15:00,790

and guess if you'd please remain seated

1537

01:15:05,030 --> 01:15:02,960

during the official photos we will have

1538

01:15:07,110 --> 01:15:05,040

our astronauts stay in place after we're

1539

01:15:09,270 --> 01:15:07,120

finished so that you may also take

1540

01:15:10,470 --> 01:15:09,280

photos of this incredible group of

1541

01:15:24,430 --> 01:15:10,480

astronauts

1542

01:16:23,910 --> 01:15:32,450

[Music]

1543

01:16:29,030 --> 01:16:26,149

folks if you'd like to take pictures

1544

01:16:47,430 --> 01:16:29,040

go ahead now's your chance before they

1545

01:16:51,430 --> 01:16:49,030

it has been my pleasure to be with you

1546

01:16:53,510 --> 01:16:51,440

today on behalf of kennedy space center

1547

01:16:58,550 --> 01:16:53,520

visitor complex and the astronaut

1548

01:17:03,750 --> 01:17:00,390

thank you for joining us for this

1549

01:17:06,070 --> 01:17:03,760

historic ceremony please remain standing

1550

01:17:13,500 --> 01:17:06,080

as the hall of fame astronauts make

1551

01:17:13,510 --> 01:17:22,630

[Applause]