



1  
00:00:04,710 --> 00:00:03,189  
hi i'm mark kelly commander of space

2  
00:00:06,869 --> 00:00:04,720  
shuttle endeavour

3  
00:00:09,589 --> 00:00:06,879  
my first of four space flights was his

4  
00:00:11,350 --> 00:00:09,599  
endeavors pilot on sts-108 in december

5  
00:00:13,430 --> 00:00:11,360  
2001.

6  
00:00:16,470 --> 00:00:13,440  
this is endeavour's last flight and

7  
00:00:19,189 --> 00:00:16,480  
certainly my last shuttle flight as well

8  
00:00:21,510 --> 00:00:19,199  
we left the station with new spare parts

9  
00:00:23,109 --> 00:00:21,520  
supplies and an advanced scientific

10  
00:00:26,550 --> 00:00:23,119  
instrument called the alpha magnetic

11  
00:00:28,710 --> 00:00:26,560  
spectrometer ams is already at work

12  
00:00:30,870 --> 00:00:28,720  
gathering information that could improve

13  
00:00:32,950 --> 00:00:30,880

our understanding of the universe

14

00:00:35,670 --> 00:00:32,960

the two billion dollar instrument weighs

15

00:00:37,670 --> 00:00:35,680

fifteen thousand pounds and involved a

16

00:00:40,150 --> 00:00:37,680

collaboration with more than six hundred

17

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

scientists and engineers from sixty

18

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

institutions in sixteen countries

19

00:00:47,750 --> 00:00:45,680

this cooperation illustrates a legacy of

20

00:00:50,150 --> 00:00:47,760

endeavor the space shuttle and the space

21

00:00:52,310 --> 00:00:50,160

station the international collaboration

22

00:00:54,310 --> 00:00:52,320

that exploration and utilization of

23

00:00:56,709 --> 00:00:54,320

space has become

24

00:01:00,069 --> 00:00:56,719

endeavor is a proud name born by a

25

00:01:02,549 --> 00:01:00,079

number of ships few were less racy but

26

00:01:05,509 --> 00:01:02,559

more able than explorer james cook's

27

00:01:08,310 --> 00:01:05,519

endeavor the endeavor cooked used on his

28

00:01:11,990 --> 00:01:08,320

first voyage of exploration was built to

29

00:01:14,630 --> 00:01:12,000

haul coal like those on which cook had

30

00:01:17,830 --> 00:01:14,640

served as a merchant marine officer

31

00:01:19,670 --> 00:01:17,840

it was blunt bowed slow yet reliable

32

00:01:22,310 --> 00:01:19,680

strong and able to take a lot of

33

00:01:24,469 --> 00:01:22,320

punishment it would survive grounding on

34

00:01:26,950 --> 00:01:24,479

australia's great barrier reef that

35

00:01:29,190 --> 00:01:26,960

would have sunk most ships of its day in

36

00:01:30,230 --> 00:01:29,200

some ways it reminds us of our own

37

00:01:31,590 --> 00:01:30,240

endeavor

38

00:01:33,190 --> 00:01:31,600

our mission is returning from the

39

00:01:35,350 --> 00:01:33,200

international space station after

40

00:01:36,630 --> 00:01:35,360

endeavour's 12th visit to the orbiting

41

00:01:38,630 --> 00:01:36,640

laboratory

42

00:01:41,670 --> 00:01:38,640

there people from many nations have

43

00:01:44,550 --> 00:01:41,680

served continuously in successive crews

44

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

since november of 2000 teaching and

45

00:01:48,870 --> 00:01:46,560

learning from one another about

46

00:01:51,350 --> 00:01:48,880

interactions and about how best to do

47

00:01:53,190 --> 00:01:51,360

things in this harsh environment

48

00:01:55,830 --> 00:01:53,200

endeavour flew the first space station

49

00:01:57,670 --> 00:01:55,840

assembly mission sts-88

50

00:01:59,670 --> 00:01:57,680

the first japanese component of the

51  
00:02:02,870 --> 00:01:59,680  
space station was taken by endeavor to

52  
00:02:05,910 --> 00:02:02,880  
the station in march 2008

53  
00:02:08,389 --> 00:02:05,920  
it also delivered node three tranquility

54  
00:02:10,949 --> 00:02:08,399  
and the cupola the robotic workstation

55  
00:02:12,630 --> 00:02:10,959  
with six windows to the iss in february

56  
00:02:14,949 --> 00:02:12,640  
of 2010.

57  
00:02:17,910 --> 00:02:14,959  
a spacecraft that was partly a

58  
00:02:20,470 --> 00:02:17,920  
collection of spare parts endeavour also

59  
00:02:22,869 --> 00:02:20,480  
features advanced new hardware that

60  
00:02:24,790 --> 00:02:22,879  
helped improve safety and performance of

61  
00:02:26,869 --> 00:02:24,800  
other orbiters when it was later

62  
00:02:30,150 --> 00:02:26,879  
incorporated into them

63  
00:02:32,710 --> 00:02:30,160

endeavor ov-105 authorized by congress

64

00:02:35,270 --> 00:02:32,720

in august 1987 as a replacement for

65

00:02:37,350 --> 00:02:35,280

challenger was named through a national

66

00:02:38,949 --> 00:02:37,360

competition of elementary and secondary

67

00:02:40,790 --> 00:02:38,959

school students

68

00:02:44,470 --> 00:02:40,800

endeavour was delivered to the kennedy

69

00:02:48,869 --> 00:02:44,480

space center on may 7 1991 and launched

70

00:02:52,830 --> 00:02:48,879

first into space on may 7 1992.

71

00:02:56,470 --> 00:02:52,840

endeavors sts-118 launch on august 8

72

00:02:58,949 --> 00:02:56,480

2007 was its first in four years after a

73

00:03:01,270 --> 00:02:58,959

lengthy modernization following the loss

74

00:03:04,390 --> 00:03:01,280

of space shuttle columbia this flight

75

00:03:07,270 --> 00:03:04,400

was commanded by my brother scott kelly

76  
00:03:09,869 --> 00:03:07,280  
when we launched on sts-134 endeavour

77  
00:03:13,270 --> 00:03:09,879  
already had traveled almost

78  
00:03:16,630 --> 00:03:13,280  
116.4 million miles in space on 24

79  
00:03:19,350 --> 00:03:16,640  
previous flights it had spent 283 days

80  
00:03:20,509 --> 00:03:19,360  
in space and orbited the earth

81  
00:03:24,949 --> 00:03:20,519  
4

82  
00:03:28,470 --> 00:03:24,959  
we are adding significantly to that

83  
00:03:31,910 --> 00:03:28,480  
total it has taken 133 individuals into

84  
00:03:34,550 --> 00:03:31,920  
space some of them more than once

85  
00:03:37,670 --> 00:03:34,560  
astronauts are just the tip of a very

86  
00:03:38,550 --> 00:03:37,680  
large iceberg behind us are thousands of

87  
00:03:41,430 --> 00:03:38,560  
people

88  
00:03:44,309 --> 00:03:41,440

civil servants contractors suppliers

89

00:03:46,550 --> 00:03:44,319

they're dedicated hard-working folks who

90

00:03:49,190 --> 00:03:46,560

believe deeply in what we do

91

00:03:51,830 --> 00:03:49,200

they train us to do our jobs they build

92

00:03:54,789 --> 00:03:51,840

repair and maintain our spacecraft and

93

00:03:57,270 --> 00:03:54,799

their equipment they manage our missions

94

00:03:59,670 --> 00:03:57,280

launch us and control our flights they

95

00:04:02,390 --> 00:03:59,680

support us in many many ways

96

00:04:04,710 --> 00:04:02,400

we believe deeply in them enough to

97

00:04:06,550 --> 00:04:04,720

trust them with our lives

98

00:04:08,390 --> 00:04:06,560

we've talked a lot about endeavor the

99

00:04:10,630 --> 00:04:08,400

space shuttle in the past

100

00:04:12,390 --> 00:04:10,640

now that we've looked back let's take a

101  
00:04:14,070 --> 00:04:12,400  
moment to look ahead

102  
00:04:15,990 --> 00:04:14,080  
the retirement of endeavor and the

103  
00:04:17,509 --> 00:04:16,000  
shuttle fleet will not end the human

104  
00:04:18,469 --> 00:04:17,519  
need to explore

105  
00:04:21,430 --> 00:04:18,479  
it is

106  
00:04:23,270 --> 00:04:21,440  
and always will be part of who we are

107  
00:04:26,469 --> 00:04:23,280  
the united states will build other

108  
00:04:28,550 --> 00:04:26,479  
spaceships better than those of today

109  
00:04:30,790 --> 00:04:28,560  
even if they are years in the future

110  
00:04:32,629 --> 00:04:30,800  
they will nevertheless increase our

111  
00:04:34,550 --> 00:04:32,639  
knowledge of the world

112  
00:04:37,990 --> 00:04:34,560  
generate an enormous benefit to our

113  
00:04:40,390 --> 00:04:38,000

economy and inspire our children

114

00:04:42,950 --> 00:04:40,400

we can't know when they will come about

115

00:04:45,430 --> 00:04:42,960

or what they will be but perhaps one of

116

00:04:48,310 --> 00:04:45,440

those new vehicles of exploration will

117

00:04:51,110 --> 00:04:48,320

be named endeavor and maybe it will take

118

00:04:54,150 --> 00:04:51,120

humans to other planets or even more

119

00:04:56,790 --> 00:04:54,160

distant worlds circling other stars

120

00:04:58,710 --> 00:04:56,800

it could bear a no prouder or more

121

00:05:00,310 --> 00:04:58,720

fitting name

122

00:05:02,310 --> 00:05:00,320

here we had just departed from the

123

00:05:04,950 --> 00:05:02,320

international space station now we're

124

00:05:06,550 --> 00:05:04,960

sitting here in endeavour's airlock and

125

00:05:08,629 --> 00:05:06,560

we've got two of our spacesuits here

126

00:05:11,270 --> 00:05:08,639

that we used for the work that we did

127

00:05:13,270 --> 00:05:11,280

during our 16-day mission and we're

128

00:05:16,230 --> 00:05:13,280

happy to be part of endeavour's legacy

129

00:05:18,790 --> 00:05:16,240

and round out the final spacewalks of

130

00:05:20,150 --> 00:05:18,800

the space shuttle era

131

00:05:22,070 --> 00:05:20,160

endeavour started off with some

132

00:05:24,710 --> 00:05:22,080

spectacular spacewalks on its maiden

133

00:05:26,790 --> 00:05:24,720

voyage and it ended with our four space

134

00:05:29,510 --> 00:05:26,800

walks and we hope that the tools and

135

00:05:32,150 --> 00:05:29,520

techniques that we've learned over the

136

00:05:33,029 --> 00:05:32,160

years especially here with endeavor is

137

00:05:35,110 --> 00:05:33,039

uh

138

00:05:36,390 --> 00:05:35,120

will be applicable for

139

00:05:40,150 --> 00:05:36,400

all the space walks that we're going to

140

00:05:42,310 --> 00:05:40,160

be doing on asteroids moon and mars

141

00:05:44,469 --> 00:05:42,320

it has been an honor for me to be a part

142

00:05:46,629 --> 00:05:44,479

of the sts-134

143

00:05:47,830 --> 00:05:46,639

space flight with my

144

00:05:49,590 --> 00:05:47,840

crew

145

00:05:51,110 --> 00:05:49,600

on the last

146

00:05:54,070 --> 00:05:51,120

shuttle flight

147

00:05:55,590 --> 00:05:54,080

of the of endeavor

148

00:05:57,990 --> 00:05:55,600

it's also

149

00:06:00,390 --> 00:05:58,000

the end of the assembly of the

150

00:06:02,629 --> 00:06:00,400

international space station and it has

151

00:06:05,430 --> 00:06:02,639

been extremely

152

00:06:08,230 --> 00:06:05,440

rewarding for me to see that our

153

00:06:10,070 --> 00:06:08,240

presence as european space agency and as

154

00:06:12,390 --> 00:06:10,080

europe is strong

155

00:06:14,230 --> 00:06:12,400

columbus emm

156

00:06:14,950 --> 00:06:14,240

note 3 cupola

157

00:06:17,990 --> 00:06:14,960

and

158

00:06:21,270 --> 00:06:18,000

many other components are coming from

159

00:06:23,270 --> 00:06:21,280

isa and from europe

160

00:06:25,909 --> 00:06:23,280

we are coming back on board of endeavor

161

00:06:29,110 --> 00:06:25,919

to make final landing and that will be

162

00:06:30,790 --> 00:06:29,120

the last landing of this incredible

163

00:06:34,390 --> 00:06:30,800

machine

164

00:06:37,990 --> 00:06:34,400

i do not believe this is the end

165

00:06:43,270 --> 00:06:40,309

flights similar to the one that i have

166

00:06:46,710 --> 00:06:43,280

experienced i truly believe that

167

00:06:47,430 --> 00:06:46,720

the legacy with legacy will continue

168

00:06:49,589 --> 00:06:47,440

and

169

00:06:52,390 --> 00:06:49,599

everything that we have learned from all

170

00:06:54,790 --> 00:06:52,400

the shuttles including endeavor would be

171

00:06:56,469 --> 00:06:54,800

the base of the transportation of future

172

00:06:58,550 --> 00:06:56,479

generation

173

00:07:00,150 --> 00:06:58,560

but what does endeavor mean to me what

174

00:07:01,270 --> 00:07:00,160

am i thinking about endeavor on the on

175

00:07:03,189 --> 00:07:01,280

the

176

00:07:06,070 --> 00:07:03,199

night here before landing

177

00:07:07,990 --> 00:07:06,080

um endeavor is very special ship to me

178

00:07:09,350 --> 00:07:08,000

a couple years ago i was on the station

179

00:07:12,390 --> 00:07:09,360

for six months

180

00:07:14,870 --> 00:07:12,400

and uh was dropped off by discovery

181

00:07:16,710 --> 00:07:14,880

and i never saw another vehicle uh of

182

00:07:19,189 --> 00:07:16,720

this size i saw a lot of traffic up

183

00:07:21,189 --> 00:07:19,199

there with progress and and soyuz and an

184

00:07:22,950 --> 00:07:21,199

atv uh come and go

185

00:07:25,110 --> 00:07:22,960

but um

186

00:07:28,469 --> 00:07:25,120

after six months on the space station

187

00:07:30,870 --> 00:07:28,479

i was i had a wonderful time and uh

188

00:07:32,230 --> 00:07:30,880

the mission went really well and it was

189

00:07:33,909 --> 00:07:32,240

time to come home

190

00:07:35,029 --> 00:07:33,919

and my ride home was going to be

191

00:07:37,110 --> 00:07:35,039

endeavor

192

00:07:38,950 --> 00:07:37,120

and i'll never forget the moment that

193

00:07:40,790 --> 00:07:38,960

that endeavor pulled into formation

194

00:07:42,150 --> 00:07:40,800

right below the space station we were

195

00:07:44,550 --> 00:07:42,160

over in the service module taking

196

00:07:46,309 --> 00:07:44,560

pictures of endeavor and this massive

197

00:07:48,390 --> 00:07:46,319

spaceship came up you know after six

198

00:07:50,230 --> 00:07:48,400

months i've seen nothing like that and

199

00:07:51,670 --> 00:07:50,240

flew into formation with the space

200

00:07:53,830 --> 00:07:51,680

station it was just a beautiful

201  
00:07:55,350 --> 00:07:53,840  
beautiful unbelievable sight you know

202  
00:07:57,350 --> 00:07:55,360  
the other night i was looking at the

203  
00:07:59,670 --> 00:07:57,360  
whole space station from the cupola late

204  
00:08:02,550 --> 00:07:59,680  
at night and i saw endeavour

205  
00:08:04,629 --> 00:08:02,560  
you know lit up um but over the earth

206  
00:08:06,230 --> 00:08:04,639  
you know at night and i took some some

207  
00:08:08,550 --> 00:08:06,240  
some pictures with us with a star

208  
00:08:10,309 --> 00:08:08,560  
background it's just a beautiful

209  
00:08:11,830 --> 00:08:10,319  
spaceship and it really belongs here

210  
00:08:13,990 --> 00:08:11,840  
it's just when you see it attached to

211  
00:08:14,790 --> 00:08:14,000  
the space station it just really looks

212  
00:08:17,189 --> 00:08:14,800  
like

213  
00:08:18,309 --> 00:08:17,199

it belongs here belongs in space

214

00:08:19,830 --> 00:08:18,319

and

215

00:08:22,150 --> 00:08:19,840

so

216

00:08:24,070 --> 00:08:22,160

you know it's it is a little bit uh hard

217

00:08:26,629 --> 00:08:24,080

to see you know a spaceship like this

218

00:08:28,070 --> 00:08:26,639

being retired we know that you know more

219

00:08:29,110 --> 00:08:28,080

is going to come in the future and the

220

00:08:31,029 --> 00:08:29,120

and the future is going to be very

221

00:08:33,190 --> 00:08:31,039

exciting but i think the legacy for

222

00:08:36,070 --> 00:08:33,200

endeavor is exactly what it was doing

223

00:08:39,589 --> 00:08:36,080

here on the space station it endeavors

224

00:08:41,430 --> 00:08:39,599

life bookends the space station assembly

225

00:08:42,790 --> 00:08:41,440

you know the first flight that was here

226

00:08:44,710 --> 00:08:42,800

to assemble part of the space station

227

00:08:46,470 --> 00:08:44,720

was endeavour and now here on the last

228

00:08:48,470 --> 00:08:46,480

flight she was here for the final

229

00:08:50,389 --> 00:08:48,480

assembly and the space station is

230

00:08:52,230 --> 00:08:50,399

complete and although endeavour is

231

00:08:54,310 --> 00:08:52,240

retiring it's a new beginning and the

232

00:08:56,550 --> 00:08:54,320

space station now is a place where we're

233

00:08:58,310 --> 00:08:56,560

going to do the research and and

234

00:08:59,990 --> 00:08:58,320

practice with the new systems and life

235

00:09:01,990 --> 00:09:00,000

support and and

236

00:09:04,470 --> 00:09:02,000

everything we need to do to be able to

237

00:09:06,949 --> 00:09:04,480

explore further and to conduct science

238

00:09:08,550 --> 00:09:06,959

up here that will take us further so the

239

00:09:11,110 --> 00:09:08,560

space station is our new foothold in the

240

00:09:13,190 --> 00:09:11,120

future and that's a big legacy that

241

00:09:15,829 --> 00:09:13,200

endeavor has as as well as the whole

242

00:09:18,630 --> 00:09:15,839

space shuttle program and so this is

243

00:09:21,590 --> 00:09:18,640

what i think about as we

244

00:09:24,790 --> 00:09:21,600

come to land endeavor tomorrow

245

00:09:26,310 --> 00:09:24,800

when i first became an astronaut uh over

246

00:09:28,630 --> 00:09:26,320

a decade ago

247

00:09:30,470 --> 00:09:28,640

one of my very first jobs

248

00:09:32,790 --> 00:09:30,480

was to

249

00:09:35,190 --> 00:09:32,800

go to the cape and prepare the space

250

00:09:37,190 --> 00:09:35,200

shuttles for launch and landing

251  
00:09:39,990 --> 00:09:37,200  
and so we spent a lot of time in all the

252  
00:09:41,670 --> 00:09:40,000  
different orbiters in discovery atlantis

253  
00:09:44,470 --> 00:09:41,680  
and columbia

254  
00:09:46,389 --> 00:09:44,480  
but endeavor was always my favorite and

255  
00:09:48,389 --> 00:09:46,399  
i think it never was my favorite because

256  
00:09:50,949 --> 00:09:48,399  
it was the newest of the orbiters

257  
00:09:53,509 --> 00:09:50,959  
smelled a lot more like a new car than

258  
00:09:55,829 --> 00:09:53,519  
some of the other more seasoned orbiters

259  
00:09:58,630 --> 00:09:55,839  
getting this second flight in endeavor

260  
00:10:00,389 --> 00:09:58,640  
and being on her final flight

261  
00:10:03,190 --> 00:10:00,399  
is amazing to me

262  
00:10:06,230 --> 00:10:03,200  
um this 25th flight of endeavor

263  
00:10:08,069 --> 00:10:06,240

one of the more significant missions i

264

00:10:09,269 --> 00:10:08,079

would claim in the assembly of the space

265

00:10:11,509 --> 00:10:09,279

station

266

00:10:14,069 --> 00:10:11,519

partly because we brought up the ams the

267

00:10:15,430 --> 00:10:14,079

alpha magnetic spectrometer which is an

268

00:10:17,509 --> 00:10:15,440

amazing

269

00:10:19,030 --> 00:10:17,519

scientific experiment that will help

270

00:10:20,069 --> 00:10:19,040

scientists better understand our

271

00:10:21,190 --> 00:10:20,079

universe

272

00:10:22,630 --> 00:10:21,200

but also

273

00:10:24,710 --> 00:10:22,640

it was uh

274

00:10:26,949 --> 00:10:24,720

the 25th flight of endeavor and the

275

00:10:29,430 --> 00:10:26,959

final flight of endeavor and so being on

276

00:10:31,509 --> 00:10:29,440

this mission was a great honor and

277

00:10:32,870 --> 00:10:31,519

privilege to me

278

00:10:35,590 --> 00:10:32,880

if you ask me

279

00:10:38,150 --> 00:10:35,600

what i think endeavour's legacy would be

280

00:10:40,069 --> 00:10:38,160

i'd have to say well first being a part

281

00:10:43,030 --> 00:10:40,079

of the mainstay

282

00:10:45,350 --> 00:10:43,040

the workhorse of the space program uh

283

00:10:47,509 --> 00:10:45,360

the space shuttle for the last 30 years

284

00:10:50,470 --> 00:10:47,519

endeavour was a big part of that but

285

00:10:52,630 --> 00:10:50,480

also endeavor had the unique distinction

286

00:10:55,350 --> 00:10:52,640

of bringing up the very first piece of

287

00:10:57,350 --> 00:10:55,360

the international space station and then

288

00:10:59,190 --> 00:10:57,360

by installing the

289

00:11:02,630 --> 00:10:59,200

orbiter boom

290

00:11:04,870 --> 00:11:02,640

system on top for use for the station's

291

00:11:07,670 --> 00:11:04,880

arm to extend its robotic arm

292

00:11:10,310 --> 00:11:07,680

the endeavor brought up the last piece

293

00:11:12,949 --> 00:11:10,320

of the space station as well so

294

00:11:15,269 --> 00:11:12,959

i think endeavour his legacy would be

295

00:11:17,670 --> 00:11:15,279

that she was a very important part of

296

00:11:19,990 --> 00:11:17,680

the assembly of the space station from

297

00:11:21,509 --> 00:11:20,000

beginning to end

298

00:11:23,590 --> 00:11:21,519

and also

299

00:11:26,150 --> 00:11:23,600

to me personally because i had my first