1
00:00:21,160 --> 00:00:02,810
hi I'm Mike Fincke on the sts-134 crew

2
00:00:29,900 --> 00:00:25,220
good morning here's a message from all

3
00:00:39,130 --> 00:00:29,910
the children and the USA thank you for

4
00:01:09,200 --> 00:00:54,250
you

5
00:01:09,210 --> 00:01:19,340
here is my

6
00:01:27,359 --> 00:01:23,399
good morning endeavour good morning and

7
00:01:29,160 --> 00:01:27,369
it's good flight day 16 we're looking

8
00:01:31,530 --> 00:01:29,170
forward to another busy day and

9
00:01:35,550 --> 00:01:31,540
hopefully getting home tomorrow

10
00:01:39,300 --> 00:01:35,560
that song was the second-place winner in

11
00:01:41,670 --> 00:01:39,310
the wakeup music contest by the

12
00:01:45,600 --> 00:01:41,680
Plunkett's called dreams you give and it

13
00:01:49,130 --> 00:01:45,610

received something like over 600,000

14
00:01:56,190 --> 00:01:49,140
votes so congratulations to Brian

15
00:01:57,990 --> 00:01:56,200
Plunkett from halfway Missouri true you

16
00:02:00,090 --> 00:01:58,000
have you certainly walked in space

17
00:02:01,290 --> 00:02:00,100
before would you think about this trip

18
00:02:02,910 --> 00:02:01,300
and what's it going to feel like when

19
00:02:05,790 --> 00:02:02,920
you when you can't fly in these shuttles

20
00:02:08,040 --> 00:02:05,800
again well it's a little bit of a

21
00:02:10,650 --> 00:02:08,050
bittersweet end I was happy to have the

22
00:02:13,110 --> 00:02:10,660
opportunity to do the three the three

23
00:02:15,720 --> 00:02:13,120
spacewalks that I did both with the Greg

24
00:02:17,250 --> 00:02:15,730
Chema top and Mike Fink and happy that

25
00:02:19,319 --> 00:02:17,260
all four of them were very successful

26
00:02:20,580 --> 00:02:19,329
and I can tell you in reference to the

27
00:02:23,490 --> 00:02:20,590
previous question the view from out

28
00:02:25,470 --> 00:02:23,500
there was spectacular when you can see

29
00:02:26,940 --> 00:02:25,480
the earth below and you're holding on to

30
00:02:29,430 --> 00:02:26,950
a piece of the structure up high above

31
00:02:30,870 --> 00:02:29,440
the space station and to see the horizon

32
00:02:33,569 --> 00:02:30,880
out there with all that Hardware beneath

33
00:02:35,280 --> 00:02:33,579
you and understand what we've done as a

34
00:02:36,569 --> 00:02:35,290
nation and as a world to build that

35
00:02:38,400 --> 00:02:36,579
International Space Station it's

36
00:02:40,170 --> 00:02:38,410
spectacular so it's bittersweet to know

37
00:02:42,900 --> 00:02:40,180
that it's sort of coming to an end and

38
00:02:44,400 --> 00:02:42,910

that we all have varying futures ahead

39
00:02:46,259 --> 00:02:44,410
of us but it'll be interesting to see

40
00:02:47,850 --> 00:02:46,269
what what that brings for all of us in

41
00:02:51,360 --> 00:02:47,860
the development of space the space

42
00:02:53,490 --> 00:02:51,370
program mike you set a new record 380

43
00:02:58,800 --> 00:02:53,500
days in space how can anybody possibly

44
00:03:01,650 --> 00:02:58,810
beat you well the Russians have had

45
00:03:04,170 --> 00:03:01,660
people in space for you know update you

46
00:03:06,810 --> 00:03:04,180
know 800 days in their career so I got a

47
00:03:09,030 --> 00:03:06,820
long way to go and but I'm sure there's

48
00:03:11,130 --> 00:03:09,040
other people who are gonna fly in our

49
00:03:13,650 --> 00:03:11,140
office more than one long-duration space

50
00:03:16,080 --> 00:03:13,660
mission and I hope my record is soon

51
00:03:17,940 --> 00:03:16,090
broken and I hope it just becomes a kind

52
00:03:20,640 --> 00:03:17,950
of a ripple in the whole scheme of

53
00:03:22,809 --> 00:03:20,650
history as humans go on Americans go on

54
00:03:24,670 --> 00:03:22,819
to explore the rest of the solar

55
00:03:27,699 --> 00:03:24,680
system but in the meantime I'm glad to

56
00:03:29,979 --> 00:03:27,709
share the moments with these guys all

57
00:03:32,289 --> 00:03:29,989
right you asked or not all right you got

58
00:03:33,699 --> 00:03:32,299
about 10 seconds to explain to me

59
00:03:36,160 --> 00:03:33,709
exactly what the Alpha Magnetic

60
00:03:37,660 --> 00:03:36,170
Spectrometer does for us and trying to

61
00:03:40,990 --> 00:03:37,670
find the origins of the universe

62
00:03:43,330 --> 00:03:41,000
go ahead well it's you know it's there's

63
00:03:44,740 --> 00:03:43,340

some really amazing things that that

64
00:03:46,449 --> 00:03:44,750
it's trying to figure out you know

65
00:03:47,740 --> 00:03:46,459
Hubble Hubble for us one of the

66
00:03:48,819 --> 00:03:47,750
important things Hubble figured out was

67
00:03:51,309 --> 00:03:48,829
that the universe is not only expanding

68
00:03:53,259 --> 00:03:51,319
but it had at an accelerated rate and

69
00:03:56,020 --> 00:03:53,269
our understanding of how that could be

70
00:03:57,780 --> 00:03:56,030
with with mass you know what mass tracks

71
00:04:01,390 --> 00:03:57,790
should be pulling things back together

72
00:04:03,550 --> 00:04:01,400
we clearly don't understand the mass

73
00:04:05,229 --> 00:04:03,560
that's out there and about 4% of the

74
00:04:07,209 --> 00:04:05,239
masses that is the matter that we

75
00:04:08,559 --> 00:04:07,219
understand and then there's other kinds

76
00:04:10,479 --> 00:04:08,569
of matter that we're trying to figure

77
00:04:12,610 --> 00:04:10,489
out and one of those we call dark matter

78
00:04:15,150 --> 00:04:12,620
because physicists don't really

79
00:04:16,990 --> 00:04:15,160
understand what it is and this is a

80
00:04:18,939 --> 00:04:17,000
understanding what the universe is the

81
00:04:21,099 --> 00:04:18,949
universe we live in how it all got here

82
00:04:23,439 --> 00:04:21,109
how it was formed these are fundamental

83
00:04:26,170 --> 00:04:23,449
questions and this is what AMS is going

84
00:04:28,089 --> 00:04:26,180
to be trying to understand for us and

85
00:04:30,129 --> 00:04:28,099
Mark is as the commander you've had a

86
00:04:32,439 --> 00:04:30,139
very emotional trip up there with with

87
00:04:35,770 --> 00:04:32,449
Gabby now on the recovery back here and

88
00:04:37,390 --> 00:04:35,780

on earth how's it been for you well the

89
00:04:39,999 --> 00:04:37,400
missions gone great it's it's nice that

90
00:04:42,580 --> 00:04:40,009
on the space station there's an internet

91
00:04:44,020 --> 00:04:42,590
phone available we actually had pulled

92
00:04:46,510 --> 00:04:44,030
the computer over here and we had a

93
00:04:48,370 --> 00:04:46,520
headset and this mic as a matter of fact

94
00:04:50,649 --> 00:04:48,380
and it was nice to be able to call her

95
00:04:52,810 --> 00:04:50,659
each day after about flight day four of

96
00:04:55,029 --> 00:04:52,820
the flight she had her surgery a couple

97
00:04:57,370 --> 00:04:55,039
days after we launched and that that one

98
00:04:59,469 --> 00:04:57,380
really well so it was nice to be able to

99
00:05:03,670 --> 00:04:59,479
talk to her haven't been able since we

100
00:05:05,980 --> 00:05:03,680
since we undocked but I will you know

101
00:05:07,830 --> 00:05:05,990
shortly after I land so I'm really

102
00:05:10,480 --> 00:05:07,840
really looking forward to seeing her

103
00:05:12,100 --> 00:05:10,490
well you know obviously we share this in

104
00:05:14,560 --> 00:05:12,110
the sense that you got a cranioplasty

105
00:05:16,920 --> 00:05:14,570
put on there's called back on does she

106
00:05:19,749 --> 00:05:16,930
do you see a big change in her less pain

107
00:05:22,480 --> 00:05:19,759
anything else different well there's

108
00:05:26,649 --> 00:05:22,490
always issues with the recovering from

109
00:05:28,540 --> 00:05:26,659
surgery I could tell a difference on on

110
00:05:30,339 --> 00:05:28,550
the phone when speaking to her so that's

111
00:05:33,820 --> 00:05:30,349
that's all positive and a recovery is

112
00:05:35,879 --> 00:05:33,830
going really really well she'll be doing

113
00:05:38,429 --> 00:05:35,889

rehab you know for some

114
00:05:39,869 --> 00:05:38,439
continuing period of time but at some

115
00:05:42,330 --> 00:05:39,879
point pretty soon she'll become an

116
00:05:44,070 --> 00:05:42,340
outpatient so we're we're really looking

117
00:05:46,649 --> 00:05:44,080
forward to that and it's all really

118
00:05:48,839 --> 00:05:46,659
encouraging you made your decision to go

119
00:05:51,570 --> 00:05:48,849
up into space while she's still going

120
00:05:53,540 --> 00:05:51,580
into surgery I can only assume that that

121
00:05:56,010 --> 00:05:53,550
was a very good decision for you to do

122
00:05:58,589 --> 00:05:56,020
yeah I think it was the right decision

123
00:06:00,209 --> 00:05:58,599
it she was ready for the surgery the

124
00:06:03,510 --> 00:06:00,219
timing you know worked out where her

125
00:06:06,839 --> 00:06:03,520
doctor ideally wanted to do it soon

126
00:06:08,700 --> 00:06:06,849
after I launched and yeah I really trust

127
00:06:12,899 --> 00:06:08,710
him and her mom was there and her dad

128
00:06:14,610 --> 00:06:12,909
and you know other family members so was

129
00:06:17,850 --> 00:06:14,620
it was good timing so I didn't want to

130
00:06:20,309 --> 00:06:17,860
hold it up bye-bye this spaceflight so

131
00:06:21,839 --> 00:06:20,319
we decided to go ahead with it and in in

132
00:06:24,659 --> 00:06:21,849
hindsight it was the absolutely the

133
00:06:27,450 --> 00:06:24,669
right decision well this is the last

134
00:06:29,279 --> 00:06:27,460
mission for the endeavor and the second

135
00:06:31,850 --> 00:06:29,289
to the last shuttle mission ever would

136
00:06:35,249 --> 00:06:31,860
dissolve what does all this mean for you

137
00:06:37,050 --> 00:06:35,259
well after endeavour comes to a stop on

138
00:06:38,909 --> 00:06:37,060

the runway tomorrow hopefully in Florida

139
00:06:41,040 --> 00:06:38,919
it'll it'll head off to a museum

140
00:06:43,829 --> 00:06:41,050
certainly bittersweet the Space Shuttle

141
00:06:47,100 --> 00:06:43,839
has been the workhorse of the u.s. space

142
00:06:50,760 --> 00:06:47,110
program for better than 30 years now so

143
00:06:53,700 --> 00:06:50,770
it'll be sad to see see it retired but

144
00:06:56,430 --> 00:06:53,710
you know we are looking forward to new

145
00:06:58,459 --> 00:06:56,440
spacecraft and new destinations and we

146
00:07:01,260 --> 00:06:58,469
were all excited about the future for

147
00:07:03,629 --> 00:07:01,270
the rest of you guys what are you most

148
00:07:05,040 --> 00:07:03,639
looking forward to having being finished

149
00:07:08,459 --> 00:07:05,050
with this mission and what has it been

150
00:07:12,089 --> 00:07:08,469
like to look out at the world those

151
00:07:14,369 --> 00:07:12,099
spacewalks must have been something it

152
00:07:16,290 --> 00:07:14,379
has been my first experience with the

153
00:07:18,749 --> 00:07:16,300
space shuttle I flew before on the

154
00:07:21,240 --> 00:07:18,759
Russian side this has been a very unique

155
00:07:25,079 --> 00:07:21,250
experience to stay and to work with my

156
00:07:27,749 --> 00:07:25,089
crew the mission is coming to an end I'm

157
00:07:29,550 --> 00:07:27,759
very pleased the way I went and I look

158
00:07:30,149 --> 00:07:29,560
forward to see my wife what area in my

159
00:07:33,119 --> 00:07:30,159
three kids

160
00:07:35,610 --> 00:07:33,129
Eduardo Davide Enrico would they will be

161
00:07:37,320 --> 00:07:35,620
waiting for me together with all the

162
00:07:41,459 --> 00:07:37,330
other families at the Kennedy Space

163
00:07:43,469 --> 00:07:41,469

Center yeah it's really special to be

164
00:07:45,990 --> 00:07:43,479
out there on a spacewalk because there's

165
00:07:47,760 --> 00:07:46,000
just a you know quarter inch of

166
00:07:49,150 --> 00:07:47,770
Plexiglas between you and the rest of

167
00:07:50,620 --> 00:07:49,160
the universe and

168
00:07:53,620 --> 00:07:50,630
and you can look down and see our planet

169
00:07:55,810 --> 00:07:53,630
zoom by at 17,500 miles an hour and you

170
00:07:57,610 --> 00:07:55,820
can see the rest of the cosmos in front

171
00:07:59,860 --> 00:07:57,620
of you but mainly we look at our work

172
00:08:02,500 --> 00:07:59,870
but it's a really breathtaking view and

173
00:08:04,150 --> 00:08:02,510
I was glad to share with both drew

174
00:08:06,400 --> 00:08:04,160
Feustel and Greg Shama Tov

175
00:08:08,280 --> 00:08:06,410
along with the guys inside helping us

176
00:08:11,200 --> 00:08:08,290
out and even taking pictures it was

177
00:08:12,670 --> 00:08:11,210
definitely an enjoyable experience but

178
00:08:14,650 --> 00:08:12,680
one thing I always want to make sure is

179
00:08:16,720 --> 00:08:14,660
everyone knows it is not easy that's

180
00:08:18,670 --> 00:08:16,730
never there's never an easy spacewalk

181
00:08:21,040 --> 00:08:18,680
they're all really difficult I sometimes

182
00:08:22,840 --> 00:08:21,050
like at least in my mind think it's just

183
00:08:27,340 --> 00:08:22,850
as tough to climb Mount Everest as it is

184
00:08:29,530 --> 00:08:27,350
to go on a spacewalk Mike if I got the

185
00:08:32,560 --> 00:08:29,540
steps right here you've had 26 hours on

186
00:08:33,969 --> 00:08:32,570
six spacewalks during your career I'm

187
00:08:35,680 --> 00:08:33,979
just wondering I know it's work out

188
00:08:37,810 --> 00:08:35,690

there and your time is limited and

189
00:08:39,790 --> 00:08:37,820
you've got a lot to get done but knowing

190
00:08:42,190 --> 00:08:39,800
that you won't be flying off the side of

191
00:08:44,980 --> 00:08:42,200
a shuttle again did you take any extra

192
00:08:48,460 --> 00:08:44,990
time on this trip just to reflect just

193
00:08:51,250 --> 00:08:48,470
to have a nostalgic moment yes I

194
00:08:53,560 --> 00:08:51,260
absolutely did each time you get to do a

195
00:08:56,860 --> 00:08:53,570
spacewalk it's uh it's a lot of work but

196
00:08:59,170 --> 00:08:56,870
it's also very much a blessing and since

197
00:09:01,990 --> 00:08:59,180
those six spacewalks on the Russian side

198
00:09:04,480 --> 00:09:02,000
I had three spacewalks out of four here

199
00:09:06,160 --> 00:09:04,490
on our mission so it's a total of nine

200
00:09:09,400 --> 00:09:06,170
now I can't believe it I didn't even

201
00:09:11,350 --> 00:09:09,410
think I'd ever do get to do one but it's

202
00:09:13,000 --> 00:09:11,360
always good especially near the end of

203
00:09:16,000 --> 00:09:13,010
spacewalk when you know you got most of

204
00:09:19,030 --> 00:09:16,010
your tasks and just you'll hold on tight

205
00:09:20,980 --> 00:09:19,040
and look out over the over the edge and

206
00:09:22,540 --> 00:09:20,990
look at the planet Earth go by or look

207
00:09:24,670 --> 00:09:22,550
up and see the moon and the stars and

208
00:09:27,510 --> 00:09:24,680
the planets and look forward to where

209
00:09:30,760 --> 00:09:27,520
we're going to be going next

210
00:09:33,180 --> 00:09:30,770
Greg Johnson's 4,000 hours 40 different

211
00:09:35,590 --> 00:09:33,190
aircraft on your second space flight

212
00:09:36,910 --> 00:09:35,600
we're obviously in a transition a lot of

213
00:09:39,550 --> 00:09:36,920

questions about the future of the

214
00:09:40,840 --> 00:09:39,560
American manned space program what goes

215
00:09:42,490 --> 00:09:40,850
through your mind when you're zipping

216
00:09:44,590 --> 00:09:42,500
around you disconnect from the space

217
00:09:47,740 --> 00:09:44,600
station and now you're preparing to come

218
00:09:51,100 --> 00:09:47,750
home well what occurs to me is how

219
00:09:53,980 --> 00:09:51,110
special it is yesterday we did undock

220
00:09:58,630 --> 00:09:53,990
and fly around and the space station was

221
00:10:01,840 --> 00:09:58,640
absolutely spectacular this mission we

222
00:10:03,060 --> 00:10:01,850
put the final touches as far as the

223
00:10:05,370 --> 00:10:03,070
Assembly of the space

224
00:10:09,090 --> 00:10:05,380
nation so we can declare the space

225
00:10:12,270 --> 00:10:09,100
station complete and in doing so the

226
00:10:14,580 --> 00:10:12,280
space station is so huge that even when

227
00:10:18,150 --> 00:10:14,590
we back off to 600 feet we can barely

228
00:10:21,000 --> 00:10:18,160
catch the entire space station in our

229
00:10:23,220 --> 00:10:21,010
field of view as we traveled all the way

230
00:10:26,580 --> 00:10:23,230
around the space station we were taking

231
00:10:28,530 --> 00:10:26,590
wonderful photographs and and so being a

232
00:10:30,420 --> 00:10:28,540
part of this mission and being a part of

233
00:10:32,220 --> 00:10:30,430
the completion of the space station and

234
00:10:34,230 --> 00:10:32,230
the retirement of the space shuttle I

235
00:10:39,030 --> 00:10:34,240
can't think of a better thing than an

236
00:10:40,730 --> 00:10:39,040
aviator would like to be a part of in

237
00:10:43,230 --> 00:10:40,740
his career

238
00:10:46,260 --> 00:10:43,240

do you have commander Kelly to you at

239
00:10:47,880 --> 00:10:46,270
any any apprehension as we go through

240
00:10:50,340 --> 00:10:47,890
this transition you're the second last

241
00:10:51,870 --> 00:10:50,350
shuttle flight the final mission will

242
00:10:54,450 --> 00:10:51,880
take place just a few weeks down the

243
00:10:56,700 --> 00:10:54,460
road any apprehension that in this

244
00:10:58,530 --> 00:10:56,710
period of transition something will be

245
00:11:00,030 --> 00:10:58,540
lost whether it's scientific discovery

246
00:11:03,420 --> 00:11:00,040
or just the great sense of adventure

247
00:11:05,430 --> 00:11:03,430
that is manned spaceflight I don't think

248
00:11:07,980 --> 00:11:05,440
the adventure will be lost I think

249
00:11:11,010 --> 00:11:07,990
what's always at risk is as we

250
00:11:12,540 --> 00:11:11,020
transition to a new new program and a

251
00:11:15,150 --> 00:11:12,550
new vehicle there's going to be a period

252
00:11:17,430 --> 00:11:15,160
of time when Americans aren't flying on

253
00:11:19,740 --> 00:11:17,440
us spacecraft so that's a challenge you

254
00:11:22,050 --> 00:11:19,750
know people leave you know engineers and

255
00:11:23,580 --> 00:11:22,060
operations people will move on and do

256
00:11:25,710 --> 00:11:23,590
other things so it's the it's the

257
00:11:29,700 --> 00:11:25,720
corporate memory that I think I'm most

258
00:11:32,040 --> 00:11:29,710
worried about as people go but you know

259
00:11:34,140 --> 00:11:32,050
over time we'll get the right mix of

260
00:11:34,560 --> 00:11:34,150
people and NASA has an incredible work

261
00:11:38,580 --> 00:11:34,570
force

262
00:11:41,760 --> 00:11:38,590
it's very talented and you know from the

263
00:11:44,730 --> 00:11:41,770

late 1950s to today we take on great

264
00:11:47,760 --> 00:11:44,740
challenges and we've we've we've never

265
00:11:49,650 --> 00:11:47,770
failed so you know I think that the

266
00:11:51,360 --> 00:11:49,660
future is bright there's going to be a

267
00:11:53,940 --> 00:11:51,370
period of time where we're going to

268
00:11:57,990 --> 00:11:53,950
develop our next generation of launch

269
00:12:00,300 --> 00:11:58,000
vehicles and it'll be a you know a

270
00:12:04,080 --> 00:12:00,310
challenging transition but I expect you

271
00:12:07,110 --> 00:12:04,090
know great things some of NASA's legends

272
00:12:08,940 --> 00:12:07,120
some astronauts have written a letter to

273
00:12:11,100 --> 00:12:08,950
NASA the last couple of days and to

274
00:12:13,140 --> 00:12:11,110
President Obama they include Gene Cernan

275
00:12:15,740 --> 00:12:13,150
Neil Armstrong and Jim Lovell who say

276
00:12:18,110 --> 00:12:15,750
that human spaceflight program is in

277
00:12:20,150 --> 00:12:18,120
arrey and if you agree with that given

278
00:12:21,620 --> 00:12:20,160
the the state of where NASA is going now

279
00:12:23,260 --> 00:12:21,630
are you concerned about the future of

280
00:12:25,760 --> 00:12:23,270
human spaceflight

281
00:12:28,550 --> 00:12:25,770
you know I think we're we're always

282
00:12:30,440 --> 00:12:28,560
concerned about about the future I mean

283
00:12:32,510 --> 00:12:30,450
this is our careers it's been our

284
00:12:35,360 --> 00:12:32,520
careers for a long period of time and

285
00:12:37,130 --> 00:12:35,370
it's a difficult transition period we're

286
00:12:38,690 --> 00:12:37,140
going to retire the space shuttle it's

287
00:12:42,080 --> 00:12:38,700
going to take us probably five or six

288
00:12:44,900 --> 00:12:42,090

years to have a new spacecraft ready to

289
00:12:46,670 --> 00:12:44,910
launch u.s. crew members on in that

290
00:12:49,910 --> 00:12:46,680
period of time we'll continue to fly on

291
00:12:51,320 --> 00:12:49,920
the Russian Soyuz we have a very capable

292
00:12:53,960 --> 00:12:51,330
space station that we're going to

293
00:12:56,090 --> 00:12:53,970
continue to operate the u.s. segment of

294
00:12:57,860 --> 00:12:56,100
the space station it's a very capable

295
00:13:01,460 --> 00:12:57,870
laboratory we have a European lab a

296
00:13:03,920 --> 00:13:01,470
Japanese lab on board but you know

297
00:13:06,770 --> 00:13:03,930
transitions are sometimes difficult but

298
00:13:09,740 --> 00:13:06,780
you know we have confidence in in NASA

299
00:13:11,990 --> 00:13:09,750
and NASA management that that you know

300
00:13:14,930 --> 00:13:12,000
we'll steer through this period of time

301
00:13:17,810 --> 00:13:14,940
and come out on the other side with a

302
00:13:19,670 --> 00:13:17,820
really vibrant space program hopefully

303
00:13:21,500 --> 00:13:19,680
we'll get an opportunity to go back to

304
00:13:23,540 --> 00:13:21,510
the moon or go on to Mars

305
00:13:27,920 --> 00:13:23,550
an asteroid I mean we're we're really

306
00:13:30,050 --> 00:13:27,930
excited about the future and Colonel

307
00:13:31,970 --> 00:13:30,060
Johnson if I get one last question in

308
00:13:34,510 --> 00:13:31,980
I'll ask you bittersweet as you watch

309
00:13:38,120 --> 00:13:34,520
the endeavour program come to an end

310
00:13:42,079 --> 00:13:38,130
it's very bittersweet this wonderful

311
00:13:44,420 --> 00:13:42,089
vehicle has gone on 24 previous Shuttle

312
00:13:47,390 --> 00:13:44,430
missions where the 25th it's the newest

313
00:13:49,160 --> 00:13:47,400

of the shuttle fleet and I just love

314
00:13:50,840 --> 00:13:49,170
this vehicle I fell in love with this

315
00:13:54,230 --> 00:13:50,850
vehicle the first time I got to fly

316
00:13:57,350 --> 00:13:54,240
three years ago on sts-123 she's

317
00:13:59,210 --> 00:13:57,360
performed magnificently absolutely no

318
00:14:01,910 --> 00:13:59,220
warnings or cautions on the way up

319
00:14:04,700 --> 00:14:01,920
nothing broke this this vehicle is a

320
00:14:06,440 --> 00:14:04,710
wonderful machine and it's an honor and

321
00:14:09,680 --> 00:14:06,450
a privilege for each one of us to be

322
00:14:11,390 --> 00:14:09,690
part of her final flight captain Kelly

323
00:14:13,130 --> 00:14:11,400
Colonel Johnson you're getting ready to

324
00:14:15,530 --> 00:14:13,140
put endeavour down for her very last

325
00:14:17,060 --> 00:14:15,540
time what's going through your heads how

326
00:14:19,040 --> 00:14:17,070
big of a moment is this for you guys

327
00:14:20,840 --> 00:14:19,050
both as astronauts and pilots and and

328
00:14:22,400 --> 00:14:20,850
who gets to have their hand on the stick

329
00:14:24,560 --> 00:14:22,410
for this and and and what our folks do

330
00:14:26,930 --> 00:14:24,570
you folks like you guys do next without

331
00:14:28,490 --> 00:14:26,940
a space shuttle to fly yes it's always a

332
00:14:29,449 --> 00:14:28,500
big moment in the mission the Space

333
00:14:31,850 --> 00:14:29,459
Shuttle is a big

334
00:14:33,650 --> 00:14:31,860
Lichter there's no engines for landing I

335
00:14:36,769 --> 00:14:33,660
mean we have this incredible amount of

336
00:14:39,769 --> 00:14:36,779
thrust and power for liftoff and then we

337
00:14:41,059 --> 00:14:39,779
glide home very steep glide slope Space

338
00:14:44,179 --> 00:14:41,069

Shuttle has really short and stubby

339
00:14:46,249 --> 00:14:44,189
wings so we practice the landing a lot

340
00:14:48,829 --> 00:14:46,259
and I'll do the landing tomorrow it'll

341
00:14:51,650 --> 00:14:48,839
be about two in the morning we're hoping

342
00:14:53,210 --> 00:14:51,660
for good weather but it's it's it's a

343
00:14:55,100 --> 00:14:53,220
big moment in the mission to get safely

344
00:14:56,749 --> 00:14:55,110
back to earth I think everybody I think

345
00:14:58,329 --> 00:14:56,759
these guys are looking forward to a soft

346
00:15:01,489 --> 00:14:58,339
landing I'm gonna try to give them one

347
00:15:04,759 --> 00:15:01,499
we are we're going to have a night

348
00:15:06,439 --> 00:15:04,769
landing tomorrow morning or super late

349
00:15:09,139 --> 00:15:06,449
at night depending on how you look at it

350
00:15:10,609 --> 00:15:09,149
and my previous flight we had a night

351
00:15:13,669 --> 00:15:10,619
landing as well this will be Marc's

352
00:15:17,030 --> 00:15:13,679
first night landing so as his pilot my

353
00:15:19,939 --> 00:15:17,040
job is to contribute in any way that I

354
00:15:23,150 --> 00:15:19,949
can to back him up and support the

355
00:15:24,919 --> 00:15:23,160
landing we're both trained almost one

356
00:15:27,069 --> 00:15:24,929
might say over train because we've been

357
00:15:30,169 --> 00:15:27,079
training for many many years to land of

358
00:15:32,540 --> 00:15:30,179
shuttles and I'm looking forward to this

359
00:15:38,660 --> 00:15:32,550
landing at Kennedy Space Center early

360
00:15:44,480 --> 00:15:38,670
Wednesday morning didn't we already free

361
00:15:54,460 --> 00:15:44,490
can you start alright endeavour yeah we

362
00:15:58,450 --> 00:15:56,530
this is Mission Control Houston we can

363
00:15:59,980 --> 00:15:58,460

see that exert power you know one is up

364
00:16:01,390 --> 00:15:59,990
and running because there's hydraulic

365
00:16:04,120 --> 00:16:01,400
pressure flowing through the lines that

366
00:16:05,830 --> 00:16:04,130
are controlling the Elavon so we're

367
00:16:07,180 --> 00:16:05,840
watching that live picture from the

368
00:16:08,860 --> 00:16:07,190
payload bay cameras of the space shuttle

369
00:16:14,380 --> 00:16:08,870
Endeavour as the flight control surfaces

370
00:16:16,540 --> 00:16:14,390
are checked out once the space shuttle

371
00:16:20,230 --> 00:16:16,550
reaches what's known as entry interface

372
00:16:22,390 --> 00:16:20,240
about five minutes before landing they

373
00:16:24,130 --> 00:16:22,400
will be significant error dynamic

374
00:16:26,470 --> 00:16:24,140
pressure on the control surfaces that

375
00:16:28,420 --> 00:16:26,480
they'll be able to control endeavours

376
00:16:29,950 --> 00:16:28,430
descent through the atmosphere toward

377
00:16:34,540 --> 00:16:29,960
the runway at Kennedy Space Center in

378
00:16:35,980 --> 00:16:34,550
Florida this is part of the standard

379
00:16:38,470 --> 00:16:35,990
check out of all of the flight control

380
00:16:41,110 --> 00:16:38,480
systems aboard the space shuttle prior

381
00:16:44,970 --> 00:16:41,120
to every landing the point at which the

382
00:16:47,980 --> 00:16:44,980
shuttle reaches that entry interface or

383
00:16:50,080 --> 00:16:47,990
enough aerodynamic pressure to use these

384
00:16:53,230 --> 00:16:50,090
control surfaces is about four hundred

385
00:16:55,120 --> 00:16:53,240
thousand feet up and about five thousand

386
00:16:56,800 --> 00:16:55,130
miles from the landing site at that

387
00:16:58,090 --> 00:16:56,810
point the spaceship will be traveling

388
00:17:01,930 --> 00:16:58,100

about twenty five thousand feet per

389
00:17:04,080 --> 00:17:01,940
second which is about 1,700 miles an

390
00:17:09,760 --> 00:17:06,940
hi I'm Mark Kelly commander of space

391
00:17:12,130 --> 00:17:09,770
shuttle Endeavour my first of four space

392
00:17:14,400 --> 00:17:12,140
flights was as endeavours pilot an STS

393
00:17:16,930 --> 00:17:14,410
108 in December 2001

394
00:17:19,480 --> 00:17:16,940
this is endeavours last flight and

395
00:17:22,540 --> 00:17:19,490
certainly my last shuttle flight as well

396
00:17:24,970 --> 00:17:22,550
we left the station with new spare parts

397
00:17:26,740 --> 00:17:24,980
supplies and an advanced scientific

398
00:17:29,850 --> 00:17:26,750
instrument called the Alpha Magnetic

399
00:17:32,380 --> 00:17:29,860
Spectrometer AMS is already at work

400
00:17:34,900 --> 00:17:32,390
gathering information that could improve

401
00:17:37,240 --> 00:17:34,910
our understanding of the universe the

402
00:17:39,490 --> 00:17:37,250
two billion dollar instrument weighs 15

403
00:17:41,470 --> 00:17:39,500
thousand pounds and involved a

404
00:17:43,930 --> 00:17:41,480
collaboration with more than 600

405
00:17:47,380 --> 00:17:43,940
scientists and engineers from 60

406
00:17:49,420 --> 00:17:47,390
institutions in 16 countries this

407
00:17:51,310 --> 00:17:49,430
cooperation illustrates a legacy of

408
00:17:53,290 --> 00:17:51,320
endeavour the space shuttle and the

409
00:17:55,240 --> 00:17:53,300
space station the international

410
00:17:57,570 --> 00:17:55,250
collaboration that exploration and

411
00:18:00,460 --> 00:17:57,580
utilization of space has become

412
00:18:03,640 --> 00:18:00,470
endeavour is a proud name born by a

413
00:18:06,220 --> 00:18:03,650

number of ships few were less racy but

414
00:18:08,380 --> 00:18:06,230
more able than Explorer James Cook's

415
00:18:10,650 --> 00:18:08,390
endeavour the endeavour cooked

416
00:18:14,320 --> 00:18:10,660
used on his first voyage of exploration

417
00:18:16,870 --> 00:18:14,330
was built to haul coal like those on

418
00:18:17,830 --> 00:18:16,880
which Cook had served as a Merchant

419
00:18:21,060 --> 00:18:17,840
Marine officer

420
00:18:23,410 --> 00:18:21,070
it was Blount bowed slow yet reliable

421
00:18:26,140 --> 00:18:23,420
strong and able to take a lot of

422
00:18:28,360 --> 00:18:26,150
punishment it would survive grounding on

423
00:18:30,520 --> 00:18:28,370
Australia's Great Barrier Reef that

424
00:18:32,860 --> 00:18:30,530
would have sunk most ships of its day in

425
00:18:35,350 --> 00:18:32,870
some ways it reminds us of our own

426
00:18:37,030 --> 00:18:35,360
endeavor our mission is returning from

427
00:18:39,190 --> 00:18:37,040
the International Space Station after

428
00:18:41,710 --> 00:18:39,200
endeavours 12th visit to the orbiting

429
00:18:44,110 --> 00:18:41,720
laboratory there people from many

430
00:18:47,260 --> 00:18:44,120
nations have served continuously in

431
00:18:49,260 --> 00:18:47,270
successive crews since November of 2000

432
00:18:52,420 --> 00:18:49,270
teaching and learning from one another

433
00:18:54,570 --> 00:18:52,430
about interactions and about how best to

434
00:18:56,650 --> 00:18:54,580
do things in this harsh environment

435
00:19:00,070 --> 00:18:56,660
endeavour flew the first space station

436
00:19:02,260 --> 00:19:00,080
assembly mission STS 88 the first

437
00:19:04,270 --> 00:19:02,270
Japanese component of the space station

438
00:19:08,430 --> 00:19:04,280

was taken by endeavour to the station in

439
00:19:11,590 --> 00:19:08,440
March 2008 it also delivered node 3

440
00:19:14,050 --> 00:19:11,600
tranquility and the cupola the robotic

441
00:19:17,860 --> 00:19:14,060
work station with six windows to the ISS

442
00:19:20,230 --> 00:19:17,870
in February of 2010 a spacecraft that

443
00:19:23,170 --> 00:19:20,240
was partly a collection of spare parts

444
00:19:25,930 --> 00:19:23,180
endeavour also features advanced new

445
00:19:28,060 --> 00:19:25,940
hardware that helped improve safety and

446
00:19:30,060 --> 00:19:28,070
performance of other orbiters when it

447
00:19:33,460 --> 00:19:30,070
was later incorporated into them

448
00:19:36,160 --> 00:19:33,470
endeavour ovie 105 authorized by

449
00:19:38,470 --> 00:19:36,170
congress in august 1987 as a replacement

450
00:19:40,570 --> 00:19:38,480
for challenger was named through a

451
00:19:43,420 --> 00:19:40,580
national competition of elementary and

452
00:19:45,280 --> 00:19:43,430
secondary school students endeavour was

453
00:19:49,240 --> 00:19:45,290
delivered to the Kennedy Space Center on

454
00:19:55,030 --> 00:19:49,250
May 7 1991 and launched first into space

455
00:19:59,350 --> 00:19:55,040
on May 7 1992 endeavours sts-118 launch

456
00:20:01,780 --> 00:19:59,360
on August 8 2007 was its first in four

457
00:20:03,520 --> 00:20:01,790
years after a lengthy modernization

458
00:20:06,400 --> 00:20:03,530
following the loss of space shuttle

459
00:20:09,100 --> 00:20:06,410
Columbia this flight was commanded by my

460
00:20:12,100 --> 00:20:09,110
brother Scott Kelly when we launched on

461
00:20:14,680 --> 00:20:12,110
STS 134 endeavour already had traveled

462
00:20:17,560 --> 00:20:14,690
almost a hundred and sixteen point four

463
00:20:21,580 --> 00:20:17,570

million miles in space on 24 of previous

464
00:20:24,279 --> 00:20:21,590
flights it had spent 283 days in space

465
00:20:27,039 --> 00:20:24,289
in orbit of the earth four thousand four

466
00:20:29,680 --> 00:20:27,049
hundred and twenty three times we are

467
00:20:32,560 --> 00:20:29,690
adding significantly to that total it

468
00:20:35,399 --> 00:20:32,570
has taken 133 individuals into space

469
00:20:37,930 --> 00:20:35,409
some of them more than once

470
00:20:41,470 --> 00:20:37,940
astronauts are just the tip of a very

471
00:20:44,080 --> 00:20:41,480
large iceberg behind us are thousands of

472
00:20:47,169 --> 00:20:44,090
people civil servants contractors

473
00:20:49,779 --> 00:20:47,179
suppliers their dedicated hard-working

474
00:20:52,210 --> 00:20:49,789
folks who believe deeply in what we do

475
00:20:54,760 --> 00:20:52,220
they train us to do our jobs

476
00:20:56,980 --> 00:20:54,770
they build repair and maintain our

477
00:20:59,470 --> 00:20:56,990
spacecraft and their equipment they

478
00:21:01,990 --> 00:20:59,480
manage our missions launch us and

479
00:21:05,049 --> 00:21:02,000
control our flights they support us in

480
00:21:07,740 --> 00:21:05,059
many many ways we believe deeply in them

481
00:21:10,330 --> 00:21:07,750
enough to trust them with our lives

482
00:21:12,970 --> 00:21:10,340
we've talked a lot about endeavour the

483
00:21:15,279 --> 00:21:12,980
Space Shuttle in the past now that we've

484
00:21:17,769 --> 00:21:15,289
looked back let's take a moment to look

485
00:21:19,659 --> 00:21:17,779
ahead the retirement of Endeavour and

486
00:21:23,200 --> 00:21:19,669
the shuttle fleet will not end the human

487
00:21:26,169 --> 00:21:23,210
need to explore it is and always will be

488
00:21:28,810 --> 00:21:26,179

part of who we are the United States

489
00:21:31,480 --> 00:21:28,820
will build other spaceships better than

490
00:21:33,299 --> 00:21:31,490
those of today even if they are years in

491
00:21:35,909 --> 00:21:33,309
the future they will nevertheless

492
00:21:38,409 --> 00:21:35,919
increase our knowledge of the world

493
00:21:42,010 --> 00:21:38,419
generate an enormous benefit to our

494
00:21:44,409 --> 00:21:42,020
economy and inspire our children we

495
00:21:46,690 --> 00:21:44,419
can't know when they will come about or

496
00:21:49,269 --> 00:21:46,700
what they will be but perhaps one of

497
00:21:51,820 --> 00:21:49,279
those new vehicles of exploration will

498
00:21:54,279 --> 00:21:51,830
be named endeavour and maybe it will

499
00:21:57,250 --> 00:21:54,289
take humans to other planets or even

500
00:22:00,490 --> 00:21:57,260
more distant world circling other stars

501
00:22:03,850 --> 00:22:00,500
it could bear a no prouder or more

502
00:22:05,190 --> 00:22:03,860
fitting name I hear we had just departed

503
00:22:07,720 --> 00:22:05,200
from the International Space Station

504
00:22:10,450 --> 00:22:07,730
we're sitting here in endeavours airlock

505
00:22:12,940 --> 00:22:10,460
and we've got two of our spacesuits here

506
00:22:15,620 --> 00:22:12,950
that we used for the work that we did

507
00:22:17,960 --> 00:22:15,630
16-day mission and we're happy to be

508
00:22:20,960 --> 00:22:17,970
part of endeavours legacy and round out

509
00:22:23,900 --> 00:22:20,970
the final spacewalks on the space

510
00:22:25,610 --> 00:22:23,910
shuttle era endeavour started off with

511
00:22:28,190 --> 00:22:25,620
some spectacular spacewalks on its

512
00:22:30,380 --> 00:22:28,200
maiden voyage and it ended with our four

513
00:22:33,049 --> 00:22:30,390

spacewalks and we hope that the tools

514
00:22:35,120 --> 00:22:33,059
the techniques that we've learned over

515
00:22:39,230 --> 00:22:35,130
the years especially here with endeavour

516
00:22:40,549 --> 00:22:39,240
is will be applicable for all the

517
00:22:44,540 --> 00:22:40,559
spacewalks that we're going to be doing

518
00:22:48,020 --> 00:22:44,550
on asteroids Moon and Mars it has been

519
00:22:51,320 --> 00:22:48,030
an honor for me to the amount of sts-134

520
00:22:57,590 --> 00:22:55,940
on the last shuttle flight of the of

521
00:23:00,640 --> 00:22:57,600
endeavour

522
00:23:03,570 --> 00:23:00,650
it's also the end

523
00:23:06,359 --> 00:23:03,580
the Assembly of international space day

524
00:23:08,969 --> 00:23:06,369
that's been a

525
00:23:12,410 --> 00:23:08,979
they're working for me to see that our

526
00:23:18,980 --> 00:23:12,420
presence as European Space Agency

527
00:23:22,790 --> 00:23:18,990
strong Columbus VMM no.3 cupola and many

528
00:23:26,150 --> 00:23:22,800
other components are coming from

529
00:23:28,220 --> 00:23:26,160
and from Europe we are coming back from

530
00:23:31,520 --> 00:23:28,230
both of endeavor to make final landing

531
00:23:34,259 --> 00:23:31,530
and there will be the last landing of

532
00:23:36,850 --> 00:23:34,269
this incredible machine

533
00:23:41,500 --> 00:23:36,860
I do not believe

534
00:23:47,320 --> 00:23:44,020
flights similar to the one that I

535
00:23:50,460 --> 00:23:47,330
experienced I truly believe that the

536
00:23:52,770 --> 00:23:50,470
legacy with legacy will continue

537
00:23:55,380 --> 00:23:52,780
and everything that we have learned from

538
00:23:58,200 --> 00:23:55,390

all the shuttles including and better

539
00:24:01,260 --> 00:23:58,210
would be the base of the transportation

540
00:24:03,060 --> 00:24:01,270
of future generation what does endeavor

541
00:24:05,850 --> 00:24:03,070
mean to me what am I thinking about

542
00:24:08,909 --> 00:24:05,860
endeavour on the night here before

543
00:24:11,430 --> 00:24:08,919
landing endeavours very special shift to

544
00:24:14,520 --> 00:24:11,440
me a couple years ago I was on the

545
00:24:17,640 --> 00:24:14,530
station for six months and was dropped

546
00:24:20,039 --> 00:24:17,650
off by discovery and never saw another

547
00:24:21,930 --> 00:24:20,049
vehicle of this size I saw a lot of

548
00:24:26,909 --> 00:24:21,940
traffic up there with progress and and

549
00:24:29,340 --> 00:24:26,919
Soyuz and an ATV come and go but after

550
00:24:32,230 --> 00:24:29,350
six months on the space station I was

551
00:24:34,360 --> 00:24:32,240
had a wonderful time and

552
00:24:36,520 --> 00:24:34,370
the mission went really well and if his

553
00:24:39,400 --> 00:24:36,530
company was time to come home and my

554
00:24:41,470 --> 00:24:39,410
ride home was gonna be endeavor and I'll

555
00:24:43,330 --> 00:24:41,480
never forget the moment that never

556
00:24:45,010 --> 00:24:43,340
pulled into formation right below the

557
00:24:46,600 --> 00:24:45,020
space station we were over in the

558
00:24:47,050 --> 00:24:46,610
service module taking pictures of

559
00:24:49,660 --> 00:24:47,060
Endeavour

560
00:24:50,890 --> 00:24:49,670
and this massive spaceship came up you

561
00:24:53,680 --> 00:24:50,900
know after six months I've seen nothing

562
00:24:54,970 --> 00:24:53,690
like that and flew into formation with

563
00:24:57,070 --> 00:24:54,980

the space station it was just a

564
00:24:58,630 --> 00:24:57,080
beautiful beautiful unbelievable sight

565
00:25:00,550 --> 00:24:58,640
you know the other night I was looking

566
00:25:02,830 --> 00:25:00,560
at the whole space station from the

567
00:25:06,640 --> 00:25:02,840
cupola late at night and I saw Endeavour

568
00:25:08,680 --> 00:25:06,650
in a lit-up but over the earth you know

569
00:25:10,570 --> 00:25:08,690
at night and I took some some some

570
00:25:13,180 --> 00:25:10,580
pictures with us with a star background

571
00:25:15,280 --> 00:25:13,190
it's just a beautiful spaceship and it

572
00:25:17,200 --> 00:25:15,290
really belongs here it's just you see it

573
00:25:19,300 --> 00:25:17,210
attached to the space station it just

574
00:25:24,670 --> 00:25:19,310
really looks like it belongs here

575
00:25:27,580 --> 00:25:24,680
belongs in space and so it's it is a

576
00:25:29,680 --> 00:25:27,590
little bit hard to see in a spaceship

577
00:25:31,150 --> 00:25:29,690
like this being retired and we know that

578
00:25:32,890 --> 00:25:31,160
you know more is going to come in the

579
00:25:34,900 --> 00:25:32,900
future and the end features can be very

580
00:25:36,940 --> 00:25:34,910
exciting but I think the legacy for

581
00:25:40,060 --> 00:25:36,950
endeavour is exactly what it was doing

582
00:25:43,600 --> 00:25:40,070
here on the space station endeavours my

583
00:25:45,460 --> 00:25:43,610
bookends the space station assembly you

584
00:25:46,810 --> 00:25:45,470
know the first flight that was here to

585
00:25:48,400 --> 00:25:46,820
assemble part of the space station was

586
00:25:50,320 --> 00:25:48,410
endeavour and now here on the last

587
00:25:52,300 --> 00:25:50,330
flight she was here for the final

588
00:25:54,220 --> 00:25:52,310

assembly and the space station is

589
00:25:56,140 --> 00:25:54,230
complete and although endeavour is

590
00:25:58,150 --> 00:25:56,150
retiring it's a new beginning and the

591
00:26:00,310 --> 00:25:58,160
space station now is a place where we're

592
00:26:02,110 --> 00:26:00,320
going to do the research and and

593
00:26:03,230 --> 00:26:02,120
practice with the new systems of life

594
00:26:05,720 --> 00:26:03,240
support and

595
00:26:07,940 --> 00:26:05,730
and everything we need to do to be able

596
00:26:09,140 --> 00:26:07,950
to explore further and it can tough

597
00:26:11,750 --> 00:26:09,150
science up here that will take us

598
00:26:14,299 --> 00:26:11,760
further so the space station is our new

599
00:26:16,820 --> 00:26:14,309
foothold on the future and that's a big

600
00:26:19,430 --> 00:26:16,830
legacy that endeavour has and as well as

601
00:26:22,880 --> 00:26:19,440
the whole space shuttle program and so

602
00:26:24,700 --> 00:26:22,890
this is what I think about as we come to

603
00:26:28,700 --> 00:26:24,710
land endeavour

604
00:26:32,000 --> 00:26:28,710
when I first became an astronaut over a

605
00:26:36,590 --> 00:26:32,010
decade ago one of my very first Jobs was

606
00:26:39,410 --> 00:26:36,600
to go to the Cape and prepare the space

607
00:26:41,120 --> 00:26:39,420
shuttles for launch and landing and so

608
00:26:42,530 --> 00:26:41,130
we spent a lot of time in all the

609
00:26:47,270 --> 00:26:42,540
different orbiters and discovery

610
00:26:48,890 --> 00:26:47,280
Atlantis and Columbia but endeavour was

611
00:26:50,690 --> 00:26:48,900
always my favorite and I think endeavour

612
00:26:53,210 --> 00:26:50,700
was my favorite because it was the

613
00:26:55,220 --> 00:26:53,220

newest of the orbiters smelled a lot

614
00:26:57,710 --> 00:26:55,230
more like a new car than some of the

615
00:27:00,200 --> 00:26:57,720
other more seasoned orbiters getting

616
00:27:04,460 --> 00:27:00,210
this second fight in endeavour and being

617
00:27:07,430 --> 00:27:04,470
on her final flight is amazing to me

618
00:27:10,640 --> 00:27:07,440
this 25th flight of Endeavour one of the

619
00:27:12,549 --> 00:27:10,650
more significant missions I would claim

620
00:27:15,380 --> 00:27:12,559
in the Assembly of the space station

621
00:27:17,900 --> 00:27:15,390
partly because we brought up the AMS the

622
00:27:21,169 --> 00:27:17,910
Alpha Magnetic Spectrometer which is an

623
00:27:22,820 --> 00:27:21,179
amazing scientific experiment that will

624
00:27:27,740 --> 00:27:22,830
help scientists better understand our

625
00:27:29,180 --> 00:27:27,750
universe but also it was the 25th flight

626
00:27:29,600 --> 00:27:29,190
of Endeavour and the final flight of

627
00:27:32,299 --> 00:27:29,610
Endeavour

628
00:27:35,930 --> 00:27:32,309
and so being on this mission was a great

629
00:27:38,750 --> 00:27:35,940
honor and privilege to me if you asked

630
00:27:41,330 --> 00:27:38,760
me what I think endeavours legacy would

631
00:27:44,990 --> 00:27:41,340
be I'd have to say well first being a

632
00:27:47,780 --> 00:27:45,000
part of the mainstay the workhorse of

633
00:27:50,120 --> 00:27:47,790
the space program the space shuttle for

634
00:27:52,910 --> 00:27:50,130
the last 30 years endeavour was a big

635
00:27:55,010 --> 00:27:52,920
part of that but also endeavour had the

636
00:27:57,110 --> 00:27:55,020
unique distinction of bringing up the

637
00:28:00,669 --> 00:27:57,120
very first piece of the International

638
00:28:05,030 --> 00:28:00,679

Space Station and then by installing the

639
00:28:07,460 --> 00:28:05,040
orbiter boom system on top for use

640
00:28:10,310 --> 00:28:07,470
through the station's arm to extend its

641
00:28:12,980 --> 00:28:10,320
robotic arm the Endeavour brought up the

642
00:28:14,990 --> 00:28:12,990
last piece of the space station as well

643
00:28:17,960 --> 00:28:15,000
so I think endeavour

644
00:28:20,360 --> 00:28:17,970
this legacy would be that she was a very

645
00:28:23,740 --> 00:28:20,370
important part of the Assembly of the

646
00:28:27,140 --> 00:28:23,750
space station from beginning to end and

647
00:28:29,570 --> 00:28:27,150
also to me personally because I had my

648
00:28:32,430 --> 00:28:29,580
first date on endeavour and I'm having