



1
00:00:00,080 --> 00:00:41,590

uh

2
00:00:45,029 --> 00:00:43,430

well it's quite a crowd out here today i

3
00:00:46,869 --> 00:00:45,039

want to thank you for coming out on this

4
00:00:51,830 --> 00:00:46,879

beautiful day

5
00:00:53,110 --> 00:00:51,840

uh every crew return ceremony of course

6
00:00:56,389 --> 00:00:53,120

is special

7
00:00:58,229 --> 00:00:56,399

it's a fun time for all of us

8
00:00:59,670 --> 00:00:58,239

welcoming the crew back from the last

9
00:01:01,349 --> 00:00:59,680

flight of endeavour

10
00:01:03,270 --> 00:01:01,359

is very special

11
00:01:05,189 --> 00:01:03,280

for all of us i would like to start off

12
00:01:07,350 --> 00:01:05,199

by recognizing some of our

13
00:01:09,350 --> 00:01:07,360

guests here today

14

00:01:11,350 --> 00:01:09,360

so please bear with me first of all

15

00:01:15,030 --> 00:01:11,360

jason fuller who's a regional director

16

00:01:17,270 --> 00:01:15,040

for senator kay bailey hutchinson

17

00:01:20,310 --> 00:01:17,280

rob quarles deputy district director for

18

00:01:22,469 --> 00:01:20,320

representative pete olsen

19

00:01:26,469 --> 00:01:22,479

bronson woods district liaison for

20

00:01:30,390 --> 00:01:26,479

representative sheila jackson lee

21

00:01:30,400 --> 00:01:34,630

galveston county judge mark henry

22

00:01:38,630 --> 00:01:37,109

houston city councilman mike sullivan

23

00:01:40,630 --> 00:01:38,640

mike

24

00:01:43,749 --> 00:01:40,640

suzy allen harris county commissioner

25

00:01:48,469 --> 00:01:43,759

from jack moorman's office

26

00:01:48,479 --> 00:01:53,030

dickinson city manager julie johnston

27

00:01:56,630 --> 00:01:54,710

we have a couple groups with us here

28

00:02:06,069 --> 00:01:56,640

today i'd like to recognize

29

00:02:10,790 --> 00:02:08,309

i want to point out that mike fink is

30

00:02:16,309 --> 00:02:10,800

the deputy assistant then leader for cub

31

00:02:21,589 --> 00:02:19,350

that's in his spare time

32

00:02:23,750 --> 00:02:21,599

and we have a special group of students

33

00:02:29,910 --> 00:02:23,760

from the dps international school of new

34

00:02:34,470 --> 00:02:31,990

i'd also like to recognize our new

35

00:02:36,869 --> 00:02:34,480

constable for precinct eight constable

36

00:02:39,990 --> 00:02:36,879

phil sandlin

37

00:02:44,949 --> 00:02:42,390

constable bill bailey retired after many

38

00:02:46,949 --> 00:02:44,959

many years as our local constable here

39

00:02:48,710 --> 00:02:46,959

on the first of june and phil is the new

40

00:02:50,869 --> 00:02:48,720

constable for precinct day we get

41

00:02:54,630 --> 00:02:50,879

fantastic support from the gospel in his

42

00:02:59,990 --> 00:02:57,670

you know i want to start off by thanking

43

00:03:01,430 --> 00:03:00,000

everybody who has supported the shuttle

44

00:03:04,070 --> 00:03:01,440

program

45

00:03:05,750 --> 00:03:04,080

and is supporting these last few flights

46

00:03:08,550 --> 00:03:05,760

so professionally

47

00:03:09,830 --> 00:03:08,560

we have a lot of reasons to be

48

00:03:12,550 --> 00:03:09,840

distracted

49

00:03:14,309 --> 00:03:12,560

with a shuttle program coming to an end

50

00:03:16,790 --> 00:03:14,319

and yet i've never seen such

51

00:03:18,790 --> 00:03:16,800

professionalism and focus

52

00:03:20,869 --> 00:03:18,800

from the whole team as we're seeing

53

00:03:22,630 --> 00:03:20,879

these last few flights and i want to

54

00:03:25,270 --> 00:03:22,640

thank everybody that makes it possible

55

00:03:27,509 --> 00:03:25,280

for these these guys to go up there and

56

00:03:29,509 --> 00:03:27,519

do the fantastic job they do and come

57

00:03:36,949 --> 00:03:29,519

home safely so thank you

58

00:03:39,589 --> 00:03:38,309

so i know you're waiting to hear from

59

00:03:42,949 --> 00:03:39,599

the crew

60

00:03:45,270 --> 00:03:42,959

i would like to point out

61

00:03:46,949 --> 00:03:45,280

they've not only been up there for 16

62

00:03:49,110 --> 00:03:46,959

days

63

00:03:51,509 --> 00:03:49,120

and not only did they land in the middle

64

00:03:53,750 --> 00:03:51,519

of the night

65

00:03:56,390 --> 00:03:53,760

but their sleep shift is exactly out of

66

00:03:58,149 --> 00:03:56,400

sync with all of us they're about 12 000

67

00:03:59,670 --> 00:03:58,159

hours out of sync so i want to thank

68

00:04:02,470 --> 00:03:59,680

them for staying up in the middle of

69

00:04:04,309 --> 00:04:02,480

night to join all these folks up here

70

00:04:07,030 --> 00:04:04,319

and i'd like to congratulate mark kelly

71

00:04:13,670 --> 00:04:07,040

for a very nice night landing after 16

72

00:04:16,629 --> 00:04:15,830

thank you sir

73

00:04:18,949 --> 00:04:16,639

well

74

00:04:21,349 --> 00:04:18,959

it's great to be back here

75

00:04:23,590 --> 00:04:21,359

in houston texas we've been gone for

76
00:04:25,270 --> 00:04:23,600
actually more than 16 days we actually

77
00:04:27,590 --> 00:04:25,280
went into quarantine pretty early and

78
00:04:29,430 --> 00:04:27,600
then had a couple launch slips so

79
00:04:32,870 --> 00:04:29,440
we've been uh locked up since i think

80
00:04:35,270 --> 00:04:32,880
sometime around april 22nd

81
00:04:37,430 --> 00:04:35,280
it's great to be back here in houston it

82
00:04:39,270 --> 00:04:37,440
seems that summer's arrived

83
00:04:40,710 --> 00:04:39,280
and i know it's hot and a little bit

84
00:04:42,950 --> 00:04:40,720
humid so

85
00:04:45,110 --> 00:04:42,960
uh we're our we're gonna keep our

86
00:04:46,310 --> 00:04:45,120
remarks pretty brief

87
00:04:49,670 --> 00:04:46,320
um

88
00:04:52,390 --> 00:04:49,680

it was great for me to be a part of such

89

00:04:53,749 --> 00:04:52,400

a superb mission with a fabulous group

90

00:04:55,510 --> 00:04:53,759

of crew members

91

00:04:56,710 --> 00:04:55,520

these guys pulled this thing off

92

00:04:58,310 --> 00:04:56,720

seamlessly

93

00:04:59,749 --> 00:04:58,320

an endeavor

94

00:05:01,830 --> 00:04:59,759

performed

95

00:05:05,350 --> 00:05:01,840

as if it was brand new

96

00:05:07,590 --> 00:05:05,360

it's spent uh to date about 299 days in

97

00:05:11,189 --> 00:05:07,600

space but it's been just really really

98

00:05:13,510 --> 00:05:11,199

an incredible ship and we're all very

99

00:05:15,430 --> 00:05:13,520

fond of it now i flew endeavor on my

100

00:05:17,110 --> 00:05:15,440

first flight

101
00:05:18,950 --> 00:05:17,120
and i am

102
00:05:20,710 --> 00:05:18,960
was excited that it was going to be on

103
00:05:22,629 --> 00:05:20,720
my last flight as well

104
00:05:25,670 --> 00:05:22,639
and as it worked out

105
00:05:28,390 --> 00:05:25,680
it was the 25th and final flight

106
00:05:29,990 --> 00:05:28,400
of this amazing vehicle called space

107
00:05:32,550 --> 00:05:30,000
shuttle endeavour

108
00:05:35,590 --> 00:05:32,560
but it's not the end of endeavor either

109
00:05:38,469 --> 00:05:35,600
endeavor has a future

110
00:05:41,430 --> 00:05:38,479
and its future is going to be

111
00:05:43,510 --> 00:05:41,440
to continue to inspire young people to

112
00:05:46,870 --> 00:05:43,520
pursue careers

113
00:05:48,870 --> 00:05:46,880

in science and engineering and math and

114

00:05:49,830 --> 00:05:48,880

it's going to do that for a very long

115

00:05:53,029 --> 00:05:49,840

time

116

00:05:55,270 --> 00:05:53,039

it's been a space shuttle for 20 years

117

00:05:57,430 --> 00:05:55,280

and it'll certainly do that for many

118

00:05:58,469 --> 00:05:57,440

many more years

119

00:06:00,390 --> 00:05:58,479

and

120

00:06:04,390 --> 00:06:00,400

we're looking forward to

121

00:06:08,230 --> 00:06:06,629

the space shuttle program

122

00:06:09,590 --> 00:06:08,240

has

123

00:06:11,830 --> 00:06:09,600

been

124

00:06:14,150 --> 00:06:11,840

you know just a hallmark i think of the

125

00:06:15,909 --> 00:06:14,160

u.s space program for the last

126
00:06:18,150 --> 00:06:15,919
30 years

127
00:06:18,830 --> 00:06:18,160
it's about collaboration

128
00:06:25,110 --> 00:06:18,840
and

129
00:06:26,629 --> 00:06:25,120
i think that's what made it such a such

130
00:06:29,110 --> 00:06:26,639
a success

131
00:06:32,870 --> 00:06:29,120
we launched the alpha magnetic

132
00:06:37,189 --> 00:06:35,270
i see we have we must have some ams

133
00:06:40,710 --> 00:06:37,199
people here

134
00:06:43,110 --> 00:06:40,720
dr ting possibly gave them a break

135
00:06:44,550 --> 00:06:43,120
from analyzing

136
00:06:49,749 --> 00:06:44,560
90

137
00:06:54,150 --> 00:06:49,759
50 million particles a day

138
00:06:56,469 --> 00:06:54,160

and we expect that it's gonna

139

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

find some really revolutionary things

140

00:07:00,230 --> 00:06:58,560

about our universe

141

00:07:02,390 --> 00:07:00,240

and we're excited about that but that's

142

00:07:04,390 --> 00:07:02,400

not all we did on this mission we

143

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

installed elc 3

144

00:07:09,830 --> 00:07:06,960

which is a set of spare parts for the

145

00:07:10,870 --> 00:07:09,840

outside of the space station

146

00:07:15,430 --> 00:07:10,880

we

147

00:07:16,870 --> 00:07:15,440

what turns out to be the four last

148

00:07:19,350 --> 00:07:16,880

spacewalks

149

00:07:22,150 --> 00:07:19,360

of the space shuttle program

150

00:07:24,469 --> 00:07:22,160

three of our crew members went outside

151
00:07:26,950 --> 00:07:24,479
and broke

152
00:07:33,990 --> 00:07:26,960
through the barrier of a thousand hours

153
00:07:37,430 --> 00:07:35,670
in the assembly of the space station and

154
00:07:38,790 --> 00:07:37,440
one of those

155
00:07:40,390 --> 00:07:38,800
was over

156
00:07:42,469 --> 00:07:40,400
nearly eight and a half hours or maybe

157
00:07:44,790 --> 00:07:42,479
just over eight and a half hours

158
00:07:46,309 --> 00:07:44,800
which was the sixth longest spacewalk of

159
00:07:47,909 --> 00:07:46,319
all time and these things are really

160
00:07:50,390 --> 00:07:47,919
risky so

161
00:07:52,230 --> 00:07:50,400
every time i've sent these guys out i'm

162
00:07:54,550 --> 00:07:52,240
really really nervous and i know you

163
00:07:55,990 --> 00:07:54,560

know mike's been there as well and

164

00:07:58,469 --> 00:07:56,000

thanks to a

165

00:08:00,070 --> 00:07:58,479

very talented team of eva people

166

00:08:01,990 --> 00:08:00,080

on the ground

167

00:08:03,670 --> 00:08:02,000

and a great

168

00:08:05,189 --> 00:08:03,680

eva crew

169

00:08:06,070 --> 00:08:05,199

on this flight were able to pull that

170

00:08:10,830 --> 00:08:06,080

off

171

00:08:17,029 --> 00:08:14,710

um so endeavor has traveled now over 123

172

00:08:18,150 --> 00:08:17,039

million miles 4 000 times around the

173

00:08:21,270 --> 00:08:18,160

planet

174

00:08:24,070 --> 00:08:21,280

and it's now safely back home and there

175

00:08:25,670 --> 00:08:24,080

are a lot of people to thank for that

176

00:08:27,589 --> 00:08:25,680

mike mentioned my landing but that's

177

00:08:29,430 --> 00:08:27,599

that's the easy part

178

00:08:31,189 --> 00:08:29,440

the difficult part

179

00:08:33,589 --> 00:08:31,199

is

180

00:08:35,909 --> 00:08:33,599

uh with folks like john shannon the

181

00:08:38,949 --> 00:08:35,919

space shuttle program manager

182

00:08:42,230 --> 00:08:41,110

that um

183

00:08:47,750 --> 00:08:42,240

these

184

00:08:51,269 --> 00:08:47,760

are just provide superb leadership

185

00:08:52,389 --> 00:08:51,279

for an excellent program that is

186

00:08:54,550 --> 00:08:52,399

big

187

00:08:57,269 --> 00:08:54,560

and difficult to manage

188

00:09:00,630 --> 00:08:57,279

and highly technical and a lot of people

189

00:09:03,509 --> 00:09:00,640

so i really want to thank john and leroy

190

00:09:04,870 --> 00:09:03,519

for their superb leadership over a long

191

00:09:07,350 --> 00:09:04,880

period of time

192

00:09:14,070 --> 00:09:07,360

to safely operate

193

00:09:18,790 --> 00:09:15,910

i'd also like

194

00:09:21,190 --> 00:09:18,800

to thank mike stefferdini who

195

00:09:24,389 --> 00:09:21,200

with his leadership has

196

00:09:26,230 --> 00:09:24,399

assembled a fantastic

197

00:09:28,630 --> 00:09:26,240

orbital laboratory

198

00:09:29,910 --> 00:09:28,640

that is going to provide

199

00:09:32,710 --> 00:09:29,920

a great

200

00:09:35,269 --> 00:09:32,720

uh service to the american people

201
00:09:36,870 --> 00:09:35,279
and great benefits to our economy for

202
00:09:38,710 --> 00:09:36,880
many many years

203
00:09:40,470 --> 00:09:38,720
and we were

204
00:09:42,790 --> 00:09:40,480
you know just a small part of that but

205
00:09:44,310 --> 00:09:42,800
the folks on the ground like mike

206
00:09:45,990 --> 00:09:44,320
and his team

207
00:09:48,230 --> 00:09:46,000
have really

208
00:09:50,310 --> 00:09:48,240
done a great job in

209
00:09:53,110 --> 00:09:50,320
building and operating

210
00:09:55,750 --> 00:09:53,120
in an incredible space station

211
00:09:57,030 --> 00:09:55,760
i also want to thank derek hassman

212
00:09:59,190 --> 00:09:57,040
and

213
00:10:01,269 --> 00:09:59,200

gary orlocker

214

00:10:03,509 --> 00:10:01,279

who are our lead flight directors for

215

00:10:06,069 --> 00:10:03,519

this flight

216

00:10:08,069 --> 00:10:06,079

they've got a tough job as well and one

217

00:10:09,590 --> 00:10:08,079

of the reasons why this

218

00:10:12,949 --> 00:10:09,600

went off without a hitch is because of

219

00:10:17,110 --> 00:10:12,959

the two of them so thanks thanks guys

220

00:10:21,910 --> 00:10:19,350

richard jones

221

00:10:24,790 --> 00:10:21,920

and tony soccer who safely got us into

222

00:10:26,230 --> 00:10:24,800

orbit and back are an instrumental part

223

00:10:27,670 --> 00:10:26,240

of this mission

224

00:10:29,110 --> 00:10:27,680

so i wanted to thank them as well i

225

00:10:35,110 --> 00:10:29,120

don't know if they made it out here

226

00:10:40,069 --> 00:10:37,190

now part of the space shuttle program is

227

00:10:42,150 --> 00:10:40,079

about inspiration inspiring

228

00:10:44,230 --> 00:10:42,160

young minds to

229

00:10:45,509 --> 00:10:44,240

pursue careers in math and science and

230

00:10:48,550 --> 00:10:45,519

we got a chance to do a little bit of

231

00:10:50,630 --> 00:10:48,560

that we talked to a lot of middle school

232

00:10:51,590 --> 00:10:50,640

and elementary school students some from

233

00:10:54,069 --> 00:10:51,600

my

234

00:10:56,710 --> 00:10:54,079

wife's district

235

00:10:58,550 --> 00:10:56,720

gabby's district in tucson arizona and

236

00:10:59,990 --> 00:10:58,560

that was really

237

00:11:02,310 --> 00:11:00,000

say also one of the highlights of the

238

00:11:03,910 --> 00:11:02,320

mission and all of us had an opportunity

239

00:11:06,550 --> 00:11:03,920

to talk to kids

240

00:11:08,230 --> 00:11:06,560

and we always appreciate the chance to

241

00:11:10,069 --> 00:11:08,240

do that

242

00:11:12,389 --> 00:11:10,079

finally i want to thank my incredible

243

00:11:15,509 --> 00:11:12,399

crew

244

00:11:16,710 --> 00:11:15,519

or not finally but who did a fabulous

245

00:11:20,150 --> 00:11:16,720

job

246

00:11:23,910 --> 00:11:20,160

and i could not have personally picked

247

00:11:27,190 --> 00:11:23,920

a finer team to work with on this flight

248

00:11:29,829 --> 00:11:27,200

than these five individuals here

249

00:11:32,150 --> 00:11:29,839

but finally i'd like to thank my family

250

00:11:33,670 --> 00:11:32,160

gabby who's not here today claudia and

251
00:11:34,550 --> 00:11:33,680
claire who are down here in the front

252
00:11:36,069 --> 00:11:34,560
row

253
00:11:41,430 --> 00:11:36,079
i could not do this without their

254
00:11:45,910 --> 00:11:43,269
and i also want to thank the family

255
00:11:46,949 --> 00:11:45,920
members of my crew

256
00:11:49,670 --> 00:11:46,959
who

257
00:11:50,470 --> 00:11:49,680
uh with you know they they make it easy

258
00:11:53,030 --> 00:11:50,480
for

259
00:12:02,550 --> 00:11:53,040
my guys here to do their job so thank so

260
00:12:12,389 --> 00:12:05,110
sitting to my left your right is our

261
00:12:17,829 --> 00:12:15,910
this was his second flight on endeavor

262
00:12:19,190 --> 00:12:17,839
and fortunately it was his second night

263
00:12:20,470 --> 00:12:19,200

landing

264

00:12:21,990 --> 00:12:20,480

and

265

00:12:23,829 --> 00:12:22,000

the other night it was my first time

266

00:12:25,910 --> 00:12:23,839

landing the space shuttle at night but

267

00:12:27,190 --> 00:12:25,920

he'd been there before gave me a little

268

00:12:29,110 --> 00:12:27,200

reassurance

269

00:12:31,590 --> 00:12:29,120

hey it's not much worse than

270

00:12:33,910 --> 00:12:31,600

the daytime so don't worry about it

271

00:12:35,990 --> 00:12:33,920

so it was nice to have him sitting there

272

00:12:38,069 --> 00:12:36,000

and supporting me

273

00:12:40,629 --> 00:12:38,079

well for the entire mission he did a

274

00:12:41,990 --> 00:12:40,639

really really great job

275

00:12:43,910 --> 00:12:42,000

a great

276

00:12:44,949 --> 00:12:43,920

motivator of people

277

00:12:46,389 --> 00:12:44,959

and

278

00:12:47,269 --> 00:12:46,399

i was very happy to have you on this

279

00:12:57,269 --> 00:12:47,279

flight

280

00:13:02,389 --> 00:13:00,230

that's a tough act to follow

281

00:13:06,310 --> 00:13:02,399

but uh

282

00:13:08,629 --> 00:13:06,320

mark asked me to talk about the ascent

283

00:13:10,389 --> 00:13:08,639

but before i do that

284

00:13:12,069 --> 00:13:10,399

it occurred to me yesterday at the press

285

00:13:14,470 --> 00:13:12,079

conference

286

00:13:16,069 --> 00:13:14,480

that there's something i want to mention

287

00:13:18,230 --> 00:13:16,079

and that is

288

00:13:19,910 --> 00:13:18,240

and i'm stealing a little bit or i'm

289

00:13:21,990 --> 00:13:19,920

borrowing a little bit of your thunder

290

00:13:24,870 --> 00:13:22,000

from yesterday

291

00:13:27,670 --> 00:13:24,880

but the most memorable

292

00:13:29,990 --> 00:13:27,680

element of this entire mission was not

293

00:13:33,269 --> 00:13:30,000

the ascent for me

294

00:13:35,110 --> 00:13:33,279

as lovely as endeavor is and magnificent

295

00:13:37,190 --> 00:13:35,120

a vehicle

296

00:13:38,389 --> 00:13:37,200

that's not the most memorable nothing

297

00:13:40,790 --> 00:13:38,399

that happened

298

00:13:42,629 --> 00:13:40,800

specifically on orbit during the launch

299

00:13:45,030 --> 00:13:42,639

during the landing during the training

300

00:13:47,269 --> 00:13:45,040

is the most memorable it's

301
00:13:49,990 --> 00:13:47,279
these guys right here

302
00:13:50,870 --> 00:13:50,000
and working for mark

303
00:13:54,629 --> 00:13:50,880
he's

304
00:13:58,069 --> 00:13:54,639
a very directive very um

305
00:13:59,670 --> 00:13:58,079
strong leader but underneath

306
00:14:01,750 --> 00:13:59,680
that strength

307
00:14:03,670 --> 00:14:01,760
he's

308
00:14:06,069 --> 00:14:03,680
a nice guy and a very caring guy he

309
00:14:07,110 --> 00:14:06,079
cared about each one of us

310
00:14:08,910 --> 00:14:07,120
and

311
00:14:11,110 --> 00:14:08,920
spanky is

312
00:14:13,110 --> 00:14:11,120
multi-talented he's got

313
00:14:16,310 --> 00:14:13,120

all the right stuff

314

00:14:18,550 --> 00:14:16,320

and i loved getting to know roberto uh

315

00:14:19,590 --> 00:14:18,560

this last two years we've become great

316

00:14:22,790 --> 00:14:19,600

friends

317

00:14:24,629 --> 00:14:22,800

he's quiet but when he talks we all

318

00:14:26,389 --> 00:14:24,639

listen

319

00:14:29,350 --> 00:14:26,399

and then we've got the svelte very

320

00:14:30,790 --> 00:14:29,360

talented spacewalk king

321

00:14:32,790 --> 00:14:30,800

drew over here

322

00:14:33,670 --> 00:14:32,800

and uh it was wonderful working with you

323

00:14:35,509 --> 00:14:33,680

drew

324

00:14:38,310 --> 00:14:35,519

we think a lot of like in a lot of

325

00:14:40,629 --> 00:14:38,320

different ways and then taz

326

00:14:41,269 --> 00:14:40,639

you were wonderful to be on orbit with

327

00:14:47,189 --> 00:14:41,279

and

328

00:14:48,870 --> 00:14:47,199

we both have very similar backgrounds in

329

00:14:51,350 --> 00:14:48,880

a lot of different ways and you did a

330

00:14:52,230 --> 00:14:51,360

fabulous job uh on your first spacewalk

331

00:14:54,389 --> 00:14:52,240

and the other

332

00:14:55,829 --> 00:14:54,399

other ones as well but you know these

333

00:14:58,230 --> 00:14:55,839

guys are what i'm going to remember most

334

00:15:00,870 --> 00:14:58,240

about this mission and i i borrowed what

335

00:15:02,790 --> 00:15:00,880

you said but you know that really hit me

336

00:15:03,990 --> 00:15:02,800

right in my heart it's the people on the

337

00:15:05,269 --> 00:15:04,000

on this flight that were the most

338

00:15:06,870 --> 00:15:05,279

important to me

339

00:15:09,430 --> 00:15:06,880

a little about the ascent my first

340

00:15:11,829 --> 00:15:09,440

ascent uh was at night and my first

341

00:15:15,350 --> 00:15:11,839

landing was at night as well and

342

00:15:18,470 --> 00:15:15,360

i previously three years ago

343

00:15:20,710 --> 00:15:18,480

had not been really prepared after eight

344

00:15:23,030 --> 00:15:20,720

years of talking to guys about launches

345

00:15:25,110 --> 00:15:23,040

for what was about to happen

346

00:15:27,590 --> 00:15:25,120

and i described that in detail you know

347

00:15:29,350 --> 00:15:27,600

a wild animal leaping off the ground but

348

00:15:31,509 --> 00:15:29,360

you know

349

00:15:33,829 --> 00:15:31,519

that launch didn't prepare me for this

350

00:15:35,990 --> 00:15:33,839

one because this one was in the day

351
00:15:36,949 --> 00:15:36,000
and we went out during the night which i

352
00:15:39,430 --> 00:15:36,959
remembered

353
00:15:40,710 --> 00:15:39,440
and we looked at the the vehicle on the

354
00:15:43,350 --> 00:15:40,720
launch pad

355
00:15:45,829 --> 00:15:43,360
that is a little like a a live animal

356
00:15:48,150 --> 00:15:45,839
you know it's smoking and creaking and

357
00:15:49,030 --> 00:15:48,160
it's ready to lurch into the air

358
00:15:52,069 --> 00:15:49,040
but

359
00:15:54,389 --> 00:15:52,079
we laid on our backs and as

360
00:15:56,870 --> 00:15:54,399
the sun rose

361
00:15:59,030 --> 00:15:56,880
i saw the placid sea and the ships out

362
00:16:01,430 --> 00:15:59,040
there it was a wonderful vantage point

363
00:16:03,030 --> 00:16:01,440

from my spot in the pi as a pilot

364

00:16:04,790 --> 00:16:03,040

looking to the east

365

00:16:07,509 --> 00:16:04,800

and

366

00:16:08,470 --> 00:16:07,519

the the solitude of those moments prior

367

00:16:11,030 --> 00:16:08,480

to launch

368

00:16:15,030 --> 00:16:11,040

were just in stark contrast with the

369

00:16:17,749 --> 00:16:15,040

explosion and the sensory overload of of

370

00:16:20,389 --> 00:16:17,759

a space shuttle jumping off the launch

371

00:16:23,269 --> 00:16:20,399

pad in the daytime and it was in

372

00:16:25,350 --> 00:16:23,279

addition to the vibration and the sound

373

00:16:27,110 --> 00:16:25,360

and the acceleration it was the visual

374

00:16:29,910 --> 00:16:27,120

of us rolling and

375

00:16:31,430 --> 00:16:29,920

watching the atlantic roar by as we

376
00:16:34,710 --> 00:16:31,440
accelerated out to the heavens i mean it

377
00:16:35,590 --> 00:16:34,720
was just a sight that and a feeling that

378
00:16:36,710 --> 00:16:35,600
i just

379
00:16:41,990 --> 00:16:36,720
can't

380
00:16:43,829 --> 00:16:42,000
one of the most amazing things in in my

381
00:16:46,389 --> 00:16:43,839
lifetime were the launches of the space

382
00:16:48,550 --> 00:16:46,399
shuttle endeavor my first date with

383
00:16:50,470 --> 00:16:48,560
endeavor and my last date as well with

384
00:16:52,230 --> 00:16:50,480
endeavor

385
00:16:53,509 --> 00:16:52,240
so with that i would like to offer some

386
00:16:56,230 --> 00:16:53,519
thanks as well

387
00:16:57,910 --> 00:16:56,240
um i would like to thank our incredible

388
00:16:58,870 --> 00:16:57,920

training team i see many of them back

389

00:17:01,430 --> 00:16:58,880

here

390

00:17:02,829 --> 00:17:01,440

joaquin and all the shuttle guys

391

00:17:04,789 --> 00:17:02,839

and

392

00:17:08,069 --> 00:17:04,799

gals

393

00:17:10,949 --> 00:17:08,079

they trained us on ascent on entry

394

00:17:13,429 --> 00:17:10,959

orbit you name it and then kelly bolt

395

00:17:15,029 --> 00:17:13,439

and the iss training team

396

00:17:18,150 --> 00:17:15,039

kathy bolt sorry

397

00:17:20,870 --> 00:17:18,160

she's also out there with her team i saw

398

00:17:23,590 --> 00:17:20,880

her um a second ago

399

00:17:25,110 --> 00:17:23,600

as well as a host of other instructors

400

00:17:27,110 --> 00:17:25,120

for example and i'm not going to name

401
00:17:28,789 --> 00:17:27,120
them all but like george frank you know

402
00:17:30,789 --> 00:17:28,799
we worked rendezvous

403
00:17:32,789 --> 00:17:30,799
we worked the fly around thank you

404
00:17:34,950 --> 00:17:32,799
george and all the other disciplined

405
00:17:36,390 --> 00:17:34,960
instructors that we had

406
00:17:39,190 --> 00:17:36,400
um

407
00:17:41,350 --> 00:17:39,200
i'd like to thank the robotics uh oh i

408
00:17:43,270 --> 00:17:41,360
don't want to forget steve messersmith

409
00:17:45,270 --> 00:17:43,280
he was with us

410
00:17:46,630 --> 00:17:45,280
there you are for the first half and

411
00:17:48,789 --> 00:17:46,640
then joaquin took over i don't want to

412
00:17:50,870 --> 00:17:48,799
forget you buddy

413
00:17:52,310 --> 00:17:50,880

and then the robotics team all the

414

00:17:53,430 --> 00:17:52,320

trainers you know

415

00:17:56,070 --> 00:17:53,440

megan

416

00:17:58,310 --> 00:17:56,080

zee linda and linda

417

00:17:59,830 --> 00:17:58,320

controllers laura

418

00:18:02,150 --> 00:17:59,840

roberts

419

00:18:04,549 --> 00:18:02,160

don't want to forget tom

420

00:18:06,710 --> 00:18:04,559

who am i forgetting the robot we had a

421

00:18:08,950 --> 00:18:06,720

lot of robotics on this flight we did

422

00:18:10,950 --> 00:18:08,960

three inspections on the shuttle's

423

00:18:13,350 --> 00:18:10,960

thermal protection system as well as a

424

00:18:15,270 --> 00:18:13,360

lot of stuff on the iss side

425

00:18:16,870 --> 00:18:15,280

the schedulers amy and of course

426
00:18:18,710 --> 00:18:16,880
stephanie who left halfway through we

427
00:18:21,510 --> 00:18:18,720
had a long training flow

428
00:18:23,990 --> 00:18:21,520
but most of all i would like to thank

429
00:18:26,549 --> 00:18:24,000
my wonderful family

430
00:18:32,630 --> 00:18:26,559
that i'm so proud of my wife carrie and

431
00:18:37,510 --> 00:18:35,029
matt joe and rachel

432
00:18:39,590 --> 00:18:37,520
they supported me all through

433
00:18:41,350 --> 00:18:39,600
this thing here at nasa it took a long

434
00:18:43,510 --> 00:18:41,360
time for me to get one flight we were

435
00:18:44,950 --> 00:18:43,520
worried that i might not get one and hey

436
00:18:47,430 --> 00:18:44,960
i got two

437
00:18:49,350 --> 00:18:47,440
beautiful experiences in space thank you

438
00:18:51,029 --> 00:18:49,360

so much for the opportunity you know

439

00:18:53,190 --> 00:18:51,039

like i've told people before you know we

440

00:18:54,870 --> 00:18:53,200

have really important missions at nasa

441

00:18:55,830 --> 00:18:54,880

but my most important mission is

442

00:18:56,710 --> 00:18:55,840

training

443

00:18:58,870 --> 00:18:56,720

three

444

00:19:00,310 --> 00:18:58,880

wonderful citizens and they are

445

00:19:04,950 --> 00:19:00,320

everybody will tell you that so thank

446

00:19:08,310 --> 00:19:06,549

okay and i'm a little bit long-winded so

447

00:19:10,789 --> 00:19:08,320

i'm gonna shut up i'd like to introduce

448

00:19:13,110 --> 00:19:10,799

spanky uh he is

449

00:19:15,110 --> 00:19:13,120

mike fink colonel retired u.s air force

450

00:19:17,190 --> 00:19:15,120

we stuck together with against the navy

451
00:19:21,190 --> 00:19:17,200

guys

452
00:19:22,070 --> 00:19:21,200

spanky is the ultimate astronaut machine

453
00:19:25,990 --> 00:19:22,080

he

454
00:19:28,150 --> 00:19:26,000

flight deck for asset

455
00:19:30,470 --> 00:19:28,160

he did robotics

456
00:19:32,549 --> 00:19:30,480

he did spacewalks in addition to his six

457
00:19:35,909 --> 00:19:32,559

previous spacewalks on the on the

458
00:19:39,190 --> 00:19:35,919

russian side he has a total nine now

459
00:19:49,350 --> 00:19:39,200

he also became the new record holder for

460
00:19:49,360 --> 00:19:53,990

so a fine american asset here's spanky

461
00:19:59,029 --> 00:19:56,950

well thanks box and uh those gentlemen

462
00:20:01,590 --> 00:19:59,039

pretty much said it all we

463
00:20:03,909 --> 00:20:01,600

we really had an amazing mission and uh

464

00:20:06,310 --> 00:20:03,919

the most amazing part was was getting a

465

00:20:08,310 --> 00:20:06,320

chance to to work so closely with the

466

00:20:10,549 --> 00:20:08,320

these guys it was uh

467

00:20:11,990 --> 00:20:10,559

is also my my

468

00:20:14,149 --> 00:20:12,000

going to be my best memory when i'm

469

00:20:15,430 --> 00:20:14,159

sitting with grandkids on my knee that's

470

00:20:17,590 --> 00:20:15,440

what i'm going to be telling them about

471

00:20:19,350 --> 00:20:17,600

is the legend of uh box man and ricky

472

00:20:22,070 --> 00:20:19,360

bobby drew with

473

00:20:23,990 --> 00:20:22,080

and uh and taz and of course mark kelly

474

00:20:25,669 --> 00:20:24,000

this is uh this is an amazing story and

475

00:20:27,830 --> 00:20:25,679

you guys were part of it

476
00:20:29,350 --> 00:20:27,840
so uh we last left our story at that

477
00:20:32,390 --> 00:20:29,360
ascent it took us eight and a half

478
00:20:34,789 --> 00:20:32,400
minutes getting into space like box said

479
00:20:36,870 --> 00:20:34,799
and then we were weightless and i'd been

480
00:20:39,350 --> 00:20:36,880
in space before we all had

481
00:20:42,630 --> 00:20:39,360
and it was wonderful to be back

482
00:20:44,630 --> 00:20:42,640
we could fly around again like superman

483
00:20:46,870 --> 00:20:44,640
we could float stuff to each other

484
00:20:48,789 --> 00:20:46,880
eating was fun

485
00:20:51,270 --> 00:20:48,799
and it was just great to be back in

486
00:20:53,430 --> 00:20:51,280
orbit and we're traveling 17

487
00:20:55,590 --> 00:20:53,440
500 miles an hour around our beautiful

488
00:20:57,029 --> 00:20:55,600

planet i think each and every one of us

489

00:21:00,149 --> 00:20:57,039

was touched again to look at mother

490

00:21:02,950 --> 00:21:00,159

earth and to see everything go by you

491

00:21:06,390 --> 00:21:02,960

know the whole world in 90 minutes it's

492

00:21:07,190 --> 00:21:06,400

it's amazing 16 sunrises 16 sunsets each

493

00:21:09,029 --> 00:21:07,200

day

494

00:21:10,789 --> 00:21:09,039

but we were busy we were busy getting

495

00:21:12,789 --> 00:21:10,799

ready to uh dock with our beautiful

496

00:21:15,830 --> 00:21:12,799

international space station and as a

497

00:21:18,390 --> 00:21:15,840

former station commander station has a

498

00:21:21,029 --> 00:21:18,400

real special place in my heart and it

499

00:21:23,510 --> 00:21:21,039

got bigger as we rendezvoused and we

500

00:21:25,590 --> 00:21:23,520

opened the hatch and we had a whole

501
00:21:27,430 --> 00:21:25,600
bunch of people on board

502
00:21:29,590 --> 00:21:27,440
and halfway through our mission three of

503
00:21:32,470 --> 00:21:29,600
them left they came back in the soyuz

504
00:21:34,390 --> 00:21:32,480
and we're really glad for uh dimitri and

505
00:21:36,310 --> 00:21:34,400
and paolo and katie for their safe

506
00:21:37,990 --> 00:21:36,320
landing and they were such good hosts to

507
00:21:39,430 --> 00:21:38,000
us we still have you know i like to

508
00:21:42,310 --> 00:21:39,440
remember ron

509
00:21:44,230 --> 00:21:42,320
and andre and alexander who are up there

510
00:21:46,789 --> 00:21:44,240
now getting ready for three more people

511
00:21:48,470 --> 00:21:46,799
to launch soon and from kazakhstan

512
00:21:50,310 --> 00:21:48,480
so that was really great to be back

513
00:21:51,750 --> 00:21:50,320

aboard the space station really great to

514

00:21:53,350 --> 00:21:51,760

fly around

515

00:21:56,070 --> 00:21:53,360

ask these guys sometime about the

516

00:21:57,990 --> 00:21:56,080

patented iron man maneuver it's a

517

00:21:59,270 --> 00:21:58,000

it's uh it was really great to be back

518

00:22:01,350 --> 00:21:59,280

in space

519

00:22:03,110 --> 00:22:01,360

but you know it doesn't take

520

00:22:04,710 --> 00:22:03,120

the laws of physics to make rockets and

521

00:22:06,950 --> 00:22:04,720

space stations fly

522

00:22:08,470 --> 00:22:06,960

and it really doesn't uh it doesn't take

523

00:22:10,390 --> 00:22:08,480

a lot of money although it does that's

524

00:22:12,149 --> 00:22:10,400

not what really makes them fly

525

00:22:14,230 --> 00:22:12,159

and some people think it's paperwork

526

00:22:16,470 --> 00:22:14,240

that makes it uh space stations and

527

00:22:19,110 --> 00:22:16,480

rockets fly but it's really the support

528

00:22:21,110 --> 00:22:19,120

of our our our friends and our family

529

00:22:22,390 --> 00:22:21,120

and i'd like to thank our crew secretary

530

00:22:24,230 --> 00:22:22,400

brooke keithman

531

00:22:26,470 --> 00:22:24,240

and the folks that took care of our our

532

00:22:30,870 --> 00:22:26,480

families family support with beth turner

533

00:22:34,070 --> 00:22:31,990

uh you

534

00:22:37,110 --> 00:22:34,080

you heard mr coats and mark talk a

535

00:22:38,870 --> 00:22:37,120

little bit about our sleep shifting and

536

00:22:41,270 --> 00:22:38,880

getting into the groove getting our game

537

00:22:44,230 --> 00:22:41,280

faces on before the the big game

538

00:22:45,669 --> 00:22:44,240

and we did that uh in crew quarters both

539

00:22:48,310 --> 00:22:45,679

crew quarters here

540

00:22:50,710 --> 00:22:48,320

in uh houston and and in uh

541

00:22:52,390 --> 00:22:50,720

at the cape and the teams there really

542

00:22:54,390 --> 00:22:52,400

took good care of us they fed us they

543

00:22:56,470 --> 00:22:54,400

made sure we had the right kinds of

544

00:22:58,549 --> 00:22:56,480

coffee and we were really ready and

545

00:23:00,149 --> 00:22:58,559

rested for our mission so i'd like to

546

00:23:01,830 --> 00:23:00,159

thank them and also the vehicle

547

00:23:04,149 --> 00:23:01,840

integration

548

00:23:06,710 --> 00:23:04,159

support office the vit bid office jerry

549

00:23:09,029 --> 00:23:06,720

ross and his team really took great care

550

00:23:12,149 --> 00:23:09,039

of us and they made sure that we were

551

00:23:13,909 --> 00:23:12,159

ready to go and the vehicle was ready

552

00:23:16,230 --> 00:23:13,919

everything all the way to the last piece

553

00:23:18,070 --> 00:23:16,240

of gray tape was where exactly we needed

554

00:23:20,230 --> 00:23:18,080

it so we could get our incredible

555

00:23:21,350 --> 00:23:20,240

mission it was really busy get the

556

00:23:23,110 --> 00:23:21,360

things done

557

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

so i'd like to thank all of those people

558

00:23:28,470 --> 00:23:25,360

and i'd also like to say thanks to to my

559

00:23:33,029 --> 00:23:28,480

family my my beautiful wife ranita

560

00:23:38,789 --> 00:23:35,669

our three children chandra tara and

561

00:23:41,190 --> 00:23:38,799

surya ranita's parents who are here and

562

00:23:43,350 --> 00:23:41,200

her brother and also my parents from

563

00:23:45,190 --> 00:23:43,360

pittsburgh pennsylvania and my my ex

564

00:23:46,470 --> 00:23:45,200

vast extended family i'm the oldest of

565

00:23:49,350 --> 00:23:46,480

nine kids so

566

00:23:52,470 --> 00:23:49,360

we're uh i i didn't get here by myself

567

00:23:54,070 --> 00:23:52,480

so that's uh i'd like to send our thanks

568

00:23:55,510 --> 00:23:54,080

to to them

569

00:23:57,110 --> 00:23:55,520

but now the guy you really wanted to

570

00:23:59,830 --> 00:23:57,120

hear talk because we don't hear him talk

571

00:24:02,390 --> 00:23:59,840

too much like box said and when uh

572

00:24:04,630 --> 00:24:02,400

roberto we call him ricky bobby

573

00:24:07,990 --> 00:24:04,640

when ricky bobby talks we listen

574

00:24:10,230 --> 00:24:08,000

uh roberto was a top grad at the naval

575

00:24:11,669 --> 00:24:10,240

test pilot school uh he really knows how

576

00:24:14,630 --> 00:24:11,679

to fly airplanes all the way from the

577

00:24:17,350 --> 00:24:14,640

center cuatro the 104 to you name it he

578

00:24:19,350 --> 00:24:17,360

can fly it he sat as our our

579

00:24:22,070 --> 00:24:19,360

as our flight engineer he had the best

580

00:24:23,669 --> 00:24:22,080

seat he could see outside the

581

00:24:25,269 --> 00:24:23,679

the commander's window he could see

582

00:24:26,870 --> 00:24:25,279

everything in front of us and he could

583

00:24:29,029 --> 00:24:26,880

look out the pilot's window and he kept

584

00:24:30,870 --> 00:24:29,039

us on the flight deck right in control

585

00:24:33,269 --> 00:24:30,880

where we needed to be because this is a

586

00:24:35,269 --> 00:24:33,279

very complex aerospace vehicle and the

587

00:24:37,029 --> 00:24:35,279

secret of it all is is that ricky bobby

588

00:24:39,029 --> 00:24:37,039

had never been on a shuttle before he's

589

00:24:41,269 --> 00:24:39,039

an experienced italian you know

590

00:24:42,710 --> 00:24:41,279

astronaut and he flew twice on the soyuz

591

00:24:44,630 --> 00:24:42,720

as flight engineer and he took some of

592

00:24:47,350 --> 00:24:44,640

those skills that he learned in russia

593

00:24:50,470 --> 00:24:47,360

and his natural abilities and guided us

594

00:24:52,470 --> 00:24:50,480

up and and down for uh ascent and entry

595

00:24:55,669 --> 00:24:52,480

and it was a real pleasure to fly with

596

00:24:58,070 --> 00:24:55,679

my uh my space brother roberto vittori

597

00:25:00,390 --> 00:24:58,080

colonel in the italian air force uh

598

00:25:01,909 --> 00:25:00,400

italian astronaut with the

599

00:25:05,110 --> 00:25:01,919

agents what do you call the italian

600

00:25:06,950 --> 00:25:05,120

space agency and uh esa astronaut and a

601
00:25:14,549 --> 00:25:06,960
really good friend of mine here's ricky

602
00:25:21,909 --> 00:25:17,269
thank you for the presentation and uh

603
00:25:23,110 --> 00:25:21,919
thank you for the nickname ricky bobby

604
00:25:26,470 --> 00:25:23,120
we watched

605
00:25:32,789 --> 00:25:28,549
and at the end of the movie i said what

606
00:25:38,789 --> 00:25:35,669
but i like i like the nickname and i

607
00:25:47,909 --> 00:25:39,590
i

608
00:25:49,430 --> 00:25:47,919
get me ready management for

609
00:25:52,070 --> 00:25:49,440
trusting me in this

610
00:25:54,230 --> 00:25:52,080
important role ms2

611
00:25:56,630 --> 00:25:54,240
i would like to thank you the european

612
00:25:59,269 --> 00:25:56,640
space agency italian space agency and

613
00:26:01,190 --> 00:25:59,279

the ams team ciao roberto

614

00:26:03,110 --> 00:26:01,200

we have people today that came from

615

00:26:06,390 --> 00:26:03,120

italy for the

616

00:26:10,310 --> 00:26:07,669

it took us

617

00:26:11,909 --> 00:26:10,320

it took me some time to get on board of

618

00:26:15,350 --> 00:26:11,919

the shadow

619

00:26:16,149 --> 00:26:15,360

enriquez here on the second row is five

620

00:26:19,350 --> 00:26:16,159

and

621

00:26:21,510 --> 00:26:19,360

when we came here the first time eduardo

622

00:26:24,870 --> 00:26:21,520

at the same age as enrico

623

00:26:27,110 --> 00:26:24,880

eduardo is now almost 18 and is about to

624

00:26:30,070 --> 00:26:27,120

get his diploma from high school

625

00:26:32,310 --> 00:26:30,080

good job eduardo

626
00:26:37,350 --> 00:26:32,320
david

627
00:26:39,110 --> 00:26:37,360
me a little better because he came here

628
00:26:41,430 --> 00:26:39,120
that was only two

629
00:26:43,830 --> 00:26:41,440
and uh for the entire first year he did

630
00:26:45,350 --> 00:26:43,840
not want to talk

631
00:26:46,070 --> 00:26:45,360
so one day

632
00:26:49,990 --> 00:26:46,080
i

633
00:26:53,190 --> 00:26:50,000
don't talk to

634
00:26:57,990 --> 00:26:53,200
to your friends and they said well

635
00:27:00,070 --> 00:26:58,870
well

636
00:27:01,909 --> 00:27:00,080
thank you for

637
00:27:05,590 --> 00:27:01,919
supporting to stay here thank you

638
00:27:07,990 --> 00:27:05,600

valeria for the 13 years that took us to

639

00:27:09,750 --> 00:27:08,000

from the start of the training back in

640

00:27:12,470 --> 00:27:09,760

98 with

641

00:27:14,789 --> 00:27:12,480

the penguins class 17

642

00:27:17,590 --> 00:27:14,799

until today when i finally get the

643

00:27:20,149 --> 00:27:17,600

opportunity to to fly in space

644

00:27:22,310 --> 00:27:20,159

i was really looking forward to trying

645

00:27:24,549 --> 00:27:22,320

to experience the shuttle

646

00:27:27,510 --> 00:27:24,559

i have flown many aircraft

647

00:27:29,909 --> 00:27:27,520

i have flown the soyuz two times and as

648

00:27:30,549 --> 00:27:29,919

a test pilot i was extremely interested

649

00:27:36,070 --> 00:27:30,559

in

650

00:27:37,029 --> 00:27:36,080

uh we are about to retire the shuttle

651
00:27:39,430 --> 00:27:37,039
but

652
00:27:42,149 --> 00:27:39,440
the heritage of the shuttle will remain

653
00:27:45,269 --> 00:27:42,159
forever and the transportation of future

654
00:27:46,230 --> 00:27:45,279
generation relies on the lesson learned

655
00:27:50,630 --> 00:27:46,240
of

656
00:27:52,549 --> 00:27:50,640
and this is particularly true for the

657
00:27:53,669 --> 00:27:52,559
re-entry

658
00:27:56,070 --> 00:27:53,679
um

659
00:28:00,149 --> 00:27:56,080
box spoke about the launch

660
00:28:02,789 --> 00:28:00,159
uh spanky about orbit but after this

661
00:28:04,950 --> 00:28:02,799
unbelievable mission about 16 days time

662
00:28:06,389 --> 00:28:04,960
arrived for us to park and come back

663
00:28:08,389 --> 00:28:06,399

home

664

00:28:11,269 --> 00:28:08,399

re-entry is a

665

00:28:14,470 --> 00:28:11,279

very very special part of the flight

666

00:28:19,110 --> 00:28:14,480

the re-entry you start from some 5000

667

00:28:20,789 --> 00:28:19,120

miles away from your landing runway and

668

00:28:22,230 --> 00:28:20,799

the plan is to

669

00:28:25,269 --> 00:28:22,240

to to

670

00:28:27,190 --> 00:28:25,279

put your tires exactly on the runway

671

00:28:29,909 --> 00:28:27,200

it's almost unbelievable the shuttling

672

00:28:32,789 --> 00:28:29,919

coming back has no engine so you have

673

00:28:34,149 --> 00:28:32,799

only one chance and you shall not get

674

00:28:36,870 --> 00:28:34,159

that wrong

675

00:28:40,470 --> 00:28:36,880

it's a if you if you if you think about

676

00:28:44,389 --> 00:28:40,480

uh the way the shuttle does is almost

677

00:28:46,149 --> 00:28:44,399

unbelievable so i had a very

678

00:28:48,630 --> 00:28:46,159

strong interest in

679

00:28:52,950 --> 00:28:48,640

in seeing the re-entry and the

680

00:28:55,990 --> 00:28:52,960

endeavor perform uh beautifully

681

00:28:58,310 --> 00:28:56,000

everything went so smoothly that if i

682

00:29:00,630 --> 00:28:58,320

would not have known all the theory that

683

00:29:01,669 --> 00:29:00,640

is behind the re-entry of the shuttle i

684

00:29:04,630 --> 00:29:01,679

would

685

00:29:07,029 --> 00:29:04,640

leave this experience saying that cc is

686

00:29:11,830 --> 00:29:07,039

all but easy

687

00:29:15,430 --> 00:29:11,840

slowing down from mach 25 25 000 mile 25

688

00:29:18,710 --> 00:29:15,440

000 kilometers per hour down to an exact

689

00:29:22,470 --> 00:29:18,720

landing on a runway is all but easy and

690

00:29:25,190 --> 00:29:22,480

the shuttle is doing this perfectly

691

00:29:28,149 --> 00:29:25,200

this is due to the professionalism of

692

00:29:31,590 --> 00:29:28,159

all the engineers all people that made

693

00:29:34,149 --> 00:29:31,600

this unbelievable vehicle and that even

694

00:29:37,029 --> 00:29:34,159

if the shuttle will retire the heritage

695

00:29:40,549 --> 00:29:37,039

will be the basis for the transportation

696

00:29:42,070 --> 00:29:40,559

of future generation

697

00:29:45,510 --> 00:29:42,080

i can only

698

00:29:46,630 --> 00:29:45,520

i ask your imagination to

699

00:29:50,950 --> 00:29:46,640

follow me

700

00:29:52,149 --> 00:29:50,960

in the in the in the in leaving space

701
00:29:55,029 --> 00:29:52,159

flying at

702
00:29:58,389 --> 00:29:55,039

those eight kilometers per second

703
00:29:59,990 --> 00:29:58,399

going through this very intense breaking

704
00:30:02,710 --> 00:30:00,000

through the atmosphere

705
00:30:05,750 --> 00:30:02,720

during which outside the temperature

706
00:30:08,870 --> 00:30:05,760

gets so hot that uh you start seeing the

707
00:30:10,870 --> 00:30:08,880

sky from blue becoming red pink at the

708
00:30:12,549 --> 00:30:10,880

beginning and then red and then you

709
00:30:14,870 --> 00:30:12,559

start feeling the pressure that is

710
00:30:17,510 --> 00:30:14,880

building on you you are not used anymore

711
00:30:21,430 --> 00:30:17,520

to the gravity and this

712
00:30:23,590 --> 00:30:21,440

buildup of g-force on your body

713
00:30:27,029 --> 00:30:23,600

get the chance to confuse you

714

00:30:29,350 --> 00:30:27,039

that's why it is extremely important

715

00:30:31,350 --> 00:30:29,360

that the commander and the pilot

716

00:30:33,430 --> 00:30:31,360

regardless and despite this very

717

00:30:36,149 --> 00:30:33,440

difficult and heavy situation on the on

718

00:30:37,669 --> 00:30:36,159

the body maintain control of the

719

00:30:39,909 --> 00:30:37,679

situation

720

00:30:42,230 --> 00:30:39,919

and in our case was a night landing that

721

00:30:43,430 --> 00:30:42,240

are the difficulty to difficulty

722

00:30:48,389 --> 00:30:43,440

i was

723

00:30:51,269 --> 00:30:48,399

the lights of florida

724

00:30:53,110 --> 00:30:51,279

that was just beautiful and i know that

725

00:30:56,310 --> 00:30:53,120

mark and box were

726

00:30:58,310 --> 00:30:56,320

probably not so much uh enjoying that

727

00:31:01,509 --> 00:30:58,320

view because they were concentrating on

728

00:31:04,549 --> 00:31:01,519

each and all of those parameters

729

00:31:06,310 --> 00:31:04,559

a perfect trajectory down to

730

00:31:09,350 --> 00:31:06,320

a perfect landing

731

00:31:11,190 --> 00:31:09,360

and thank you very much mark for that

732

00:31:18,230 --> 00:31:11,200

beautiful and

733

00:31:20,470 --> 00:31:19,750

i i

734

00:31:23,909 --> 00:31:20,480

now

735

00:31:25,029 --> 00:31:23,919

want to introduce drew

736

00:31:27,110 --> 00:31:25,039

drew did

737

00:31:29,830 --> 00:31:27,120

did all that i

738

00:31:31,830 --> 00:31:29,840

most likely will never be able to do

739

00:31:52,870 --> 00:31:31,840

i

740

00:31:58,070 --> 00:31:52,880

but

741

00:32:01,269 --> 00:31:58,080

i was inside and i was

742

00:32:03,669 --> 00:32:01,279

just following them along uh life on the

743

00:32:06,789 --> 00:32:03,679

station is uh it's a it is kind of

744

00:32:10,789 --> 00:32:06,799

difficult and sometimes uh especially

745

00:32:11,830 --> 00:32:10,799

for the small things uh quite the uh

746

00:32:14,789 --> 00:32:11,840

uh

747

00:32:16,710 --> 00:32:14,799

it is difficult life when they started

748

00:32:19,590 --> 00:32:16,720

to deviate the preparation the

749

00:32:24,230 --> 00:32:19,600

difficulties increased exponentially

750

00:32:25,350 --> 00:32:24,240

and drew as a lead in the ava group was

751
00:32:26,710 --> 00:32:25,360
guiding

752
00:32:29,190 --> 00:32:26,720
every

753
00:32:31,509 --> 00:32:29,200
all of us through that effort

754
00:32:34,070 --> 00:32:31,519
and it was making that easy but was all

755
00:32:38,470 --> 00:32:34,080
but easy

756
00:32:39,909 --> 00:32:38,480
well i believe that i can only say drew

757
00:32:41,750 --> 00:32:39,919
thank you and

758
00:32:43,269 --> 00:32:41,760
i will leave you to describe

759
00:32:50,549 --> 00:32:43,279
the aba

760
00:32:54,950 --> 00:32:52,389
well one of the distinctions i had for

761
00:32:56,310 --> 00:32:54,960
the flight was being the only person

762
00:32:57,990 --> 00:32:56,320
on the shuttle to have never seen the

763
00:32:59,269 --> 00:32:58,000

space station before

764

00:33:01,990 --> 00:32:59,279

and uh

765

00:33:03,509 --> 00:33:02,000

that was amazing for me i i as we

766

00:33:05,029 --> 00:33:03,519

approached the space station i thought

767

00:33:05,830 --> 00:33:05,039

wow that's pretty big

768

00:33:07,750 --> 00:33:05,840

and

769

00:33:09,269 --> 00:33:07,760

i had done three space walks before on

770

00:33:11,269 --> 00:33:09,279

hubble but it turns out hubble's a lot

771

00:33:12,950 --> 00:33:11,279

smaller than the space station i didn't

772

00:33:13,830 --> 00:33:12,960

realize how much until we got really

773

00:33:15,269 --> 00:33:13,840

close

774

00:33:16,789 --> 00:33:15,279

and then it occurred to me that i was

775

00:33:18,549 --> 00:33:16,799

expected to actually climb out on the

776

00:33:20,549 --> 00:33:18,559

ends of the space station and that was

777

00:33:22,870 --> 00:33:20,559

going to be our task over the next

778

00:33:24,389 --> 00:33:22,880

few days to carry out those evas so it

779

00:33:26,470 --> 00:33:24,399

was a little bit of a surprise for me

780

00:33:27,830 --> 00:33:26,480

but also an interesting challenge and

781

00:33:29,990 --> 00:33:27,840

and i feel lucky to have had that

782

00:33:31,669 --> 00:33:30,000

opportunity to uh to experience the

783

00:33:33,430 --> 00:33:31,679

space station and especially share that

784

00:33:35,669 --> 00:33:33,440

experience with mike fink and greg

785

00:33:37,430 --> 00:33:35,679

shamatoff the two other space walkers

786

00:33:39,269 --> 00:33:37,440

for the mission so

787

00:33:41,350 --> 00:33:39,279

i'm really here just to thank the folks

788

00:33:43,909 --> 00:33:41,360

that supported us allison bollinger

789

00:33:45,509 --> 00:33:43,919

vicki otto and sandy fletcher and along

790

00:33:48,310 --> 00:33:45,519

with farooq sabor who i don't see here

791

00:33:50,549 --> 00:33:48,320

today but he was there all along as well

792

00:33:52,310 --> 00:33:50,559

they did an excellent job and i think

793

00:33:55,430 --> 00:33:52,320

you should all be proud of the way you

794

00:33:57,269 --> 00:33:55,440

prepared us uh our successes were really

795

00:33:58,870 --> 00:33:57,279

uh just a reflection of the work that

796

00:34:00,950 --> 00:33:58,880

you all did in preparing us over the

797

00:34:04,310 --> 00:34:00,960

last year and a half uh to send us out

798

00:34:06,230 --> 00:34:04,320

the door and uh i i think it had a lot

799

00:34:07,990 --> 00:34:06,240

less to do with us than it did to do

800

00:34:09,430 --> 00:34:08,000

with you guys and and the details the

801
00:34:11,349 --> 00:34:09,440
attention that you paid to detail and

802
00:34:13,909 --> 00:34:11,359
preparing us to go outside so thank you

803
00:34:15,909 --> 00:34:13,919
so much for that effort uh we'd also had

804
00:34:17,750 --> 00:34:15,919
the opportunity to do something called

805
00:34:20,069 --> 00:34:17,760
the aisle the in-suit light exercise

806
00:34:22,550 --> 00:34:20,079
pre-breeze protocol on one of our evas

807
00:34:25,669 --> 00:34:22,560
and for that we'd like to thank

808
00:34:29,750 --> 00:34:25,679
mike gernhardt and our doc dr joe durvey

809
00:34:33,990 --> 00:34:32,069
yeah megan murphy thanks sorry megan i i

810
00:34:36,069 --> 00:34:34,000
thought about that earlier but

811
00:34:37,829 --> 00:34:36,079
slipped my mind for a minute but you all

812
00:34:39,270 --> 00:34:37,839
did a wonderful job and also the rest of

813
00:34:41,430 --> 00:34:39,280

the folks that were on the isle team and

814

00:34:44,790 --> 00:34:41,440

getting us ready to actually try that

815

00:34:46,869 --> 00:34:44,800

protocol uh it worked out fabulously and

816

00:34:48,790 --> 00:34:46,879

we're very supportive of it and i think

817

00:34:51,190 --> 00:34:48,800

it made our eva 3 a success and it

818

00:34:52,950 --> 00:34:51,200

proved that we can try new protocols on

819

00:34:55,109 --> 00:34:52,960

the space station and come up with a

820

00:34:57,910 --> 00:34:55,119

solution now that looks to be optimized

821

00:34:59,430 --> 00:34:57,920

for future events uh future evas on the

822

00:35:01,510 --> 00:34:59,440

space station so

823

00:35:03,829 --> 00:35:01,520

uh again we want to express our thanks

824

00:35:06,390 --> 00:35:03,839

to all of the eva teams uh all the folks

825

00:35:07,670 --> 00:35:06,400

at jsc that you know reviewed us

826

00:35:09,109 --> 00:35:07,680

the people that came out and made sure

827

00:35:10,790 --> 00:35:09,119

that we were you know covering all of

828

00:35:12,710 --> 00:35:10,800

our bases and all the others that were

829

00:35:14,710 --> 00:35:12,720

behind the scenes that i didn't mention

830

00:35:17,349 --> 00:35:14,720

uh for allowing us to do this work and

831

00:35:19,190 --> 00:35:17,359

uh and helping support us and again

832

00:35:22,710 --> 00:35:19,200

thanks to mike and greg for

833

00:35:24,630 --> 00:35:22,720

supporting me all along as ev1

834

00:35:27,670 --> 00:35:24,640

i like to think of me as ev1 but these

835

00:35:29,190 --> 00:35:27,680

guys are my ev1-1 and ev1-2 i couldn't

836

00:35:30,630 --> 00:35:29,200

have done it without them and of course

837

00:35:33,190 --> 00:35:30,640

having never been to the space station

838

00:35:35,349 --> 00:35:33,200

before i had no idea about the iss

839

00:35:36,950 --> 00:35:35,359

airlock and how all the systems worked

840

00:35:39,430 --> 00:35:36,960

and how we were supposed to carry out

841

00:35:41,270 --> 00:35:39,440

the these activities but mike and greg

842

00:35:42,950 --> 00:35:41,280

had had those experiences and were great

843

00:35:44,790 --> 00:35:42,960

support for me so thanks you guys for

844

00:35:46,310 --> 00:35:44,800

for being there and and supporting me

845

00:35:47,829 --> 00:35:46,320

along the way and and making it all

846

00:35:49,670 --> 00:35:47,839

happen with the work that everybody did

847

00:35:51,430 --> 00:35:49,680

on the ground so

848

00:35:54,069 --> 00:35:51,440

lastly i would also like to thank my

849

00:35:55,430 --> 00:35:54,079

family my lovely wife indra uh for all

850

00:35:57,030 --> 00:35:55,440

that you did for the mission and for

851
00:35:59,030 --> 00:35:57,040
keeping all of our friends and family up

852
00:36:00,870 --> 00:35:59,040
to date during the mission you were a

853
00:36:03,109 --> 00:36:00,880
great pr machine and i know those people

854
00:36:04,790 --> 00:36:03,119
appreciated it and ari and aiden for

855
00:36:06,310 --> 00:36:04,800
being there as well and supporting your

856
00:36:08,470 --> 00:36:06,320
mother through the flight i'm proud of

857
00:36:19,030 --> 00:36:08,480
you both and good job in school and

858
00:36:22,470 --> 00:36:20,470
thanks everybody it's my pleasure to

859
00:36:24,069 --> 00:36:22,480
introduce greg shamatoff

860
00:36:25,589 --> 00:36:24,079
i've said this before about him he's a

861
00:36:27,510 --> 00:36:25,599
great scientist i think of him as a

862
00:36:29,510 --> 00:36:27,520
scientist first and foremost and and and

863
00:36:31,190 --> 00:36:29,520

i think greg and i we can we can

864

00:36:32,870 --> 00:36:31,200

probably claim to be the two scientists

865

00:36:34,950 --> 00:36:32,880

on the flight and the two civilians as

866

00:36:38,069 --> 00:36:34,960

well and so we're sort of our own team

867

00:36:39,510 --> 00:36:38,079

in and of ourselves but uh yeah and

868

00:36:41,270 --> 00:36:39,520

canadian as well with some canadian

869

00:36:43,910 --> 00:36:41,280

heritage so we we've got our own little

870

00:36:46,470 --> 00:36:43,920

group down here uh sorry about that guys

871

00:36:48,069 --> 00:36:46,480

but um

872

00:36:49,589 --> 00:36:48,079

we had a little border crossing from the

873

00:36:53,270 --> 00:36:49,599

flight deck to the mid deck for a little

874

00:36:57,030 --> 00:36:55,270

greg was great uh he did his first space

875

00:36:58,790 --> 00:36:57,040

walks on this mission and uh

876
00:37:00,710 --> 00:36:58,800
congratulations greg you did a wonderful

877
00:37:02,870 --> 00:37:00,720
job out there uh it was it was an honor

878
00:37:04,470 --> 00:37:02,880
to be out there on on day one with you

879
00:37:06,230 --> 00:37:04,480
and uh proud of the work that you did

880
00:37:08,150 --> 00:37:06,240
and it was tough getting greg back off

881
00:37:10,069 --> 00:37:08,160
the space station is he spent six months

882
00:37:11,349 --> 00:37:10,079
there prior we we had to literally drag

883
00:37:13,990 --> 00:37:11,359
him off i don't know if those of you who

884
00:37:15,349 --> 00:37:14,000
saw the uh the departure ceremony greg

885
00:37:16,950 --> 00:37:15,359
and mike were

886
00:37:18,790 --> 00:37:16,960
trying to stow away but we managed to

887
00:37:20,950 --> 00:37:18,800
get them back and they were even both

888
00:37:22,790 --> 00:37:20,960

able to do some space station work some

889

00:37:24,790 --> 00:37:22,800

nominal space station tasks i don't know

890

00:37:26,950 --> 00:37:24,800

if you call it nominal but repairing the

891

00:37:29,430 --> 00:37:26,960

oxygen generating system and the carbon

892

00:37:31,190 --> 00:37:29,440

dioxide removal assembly

893

00:37:33,589 --> 00:37:31,200

so they had some fun up there and greg

894

00:37:35,670 --> 00:37:33,599

did a great job and was a an excellent

895

00:37:37,430 --> 00:37:35,680

member of our crew and our eva team so

896

00:37:41,910 --> 00:37:37,440

hats off to you greg and here you go all

897

00:37:46,790 --> 00:37:44,390

thank you thank you drew

898

00:37:48,710 --> 00:37:46,800

what an adventure this was and

899

00:37:50,630 --> 00:37:48,720

this is last but last but not least and

900

00:37:52,710 --> 00:37:50,640

won't keep you too long here but

901
00:37:54,069 --> 00:37:52,720
we had an adventure together um that

902
00:37:56,230 --> 00:37:54,079
i'll never forget

903
00:37:58,230 --> 00:37:56,240
and uh i just want to say i i am so

904
00:38:00,150 --> 00:37:58,240
honored to be part of this crew um you

905
00:38:01,670 --> 00:38:00,160
know as you can probably tell we've kind

906
00:38:03,349 --> 00:38:01,680
of become like brothers you know during

907
00:38:05,910 --> 00:38:03,359
the course of the training and

908
00:38:08,150 --> 00:38:05,920
preparation during the flight and we had

909
00:38:09,829 --> 00:38:08,160
a lot of fun up there

910
00:38:11,910 --> 00:38:09,839
you know my first flight i flew with

911
00:38:14,710 --> 00:38:11,920
mark and he dropped me off there for

912
00:38:16,870 --> 00:38:14,720
this six month stage you mentioned and

913
00:38:18,310 --> 00:38:16,880

he keeps mentioning that you know as he

914

00:38:20,150 --> 00:38:18,320

closed the hatch he saw this kind of

915

00:38:22,470 --> 00:38:20,160

white look on my face knowing that i was

916

00:38:24,630 --> 00:38:22,480

going to be there for six months

917

00:38:26,470 --> 00:38:24,640

with two russians for most of the time

918

00:38:28,390 --> 00:38:26,480

and uh wondering when the next ride was

919

00:38:30,069 --> 00:38:28,400

going to come to bring me back

920

00:38:31,349 --> 00:38:30,079

but then four and a half months later

921

00:38:33,750 --> 00:38:31,359

mike came up

922

00:38:35,430 --> 00:38:33,760

and we had all of a sudden i had someone

923

00:38:36,950 --> 00:38:35,440

to talk to in english

924

00:38:38,550 --> 00:38:36,960

my joke with him is i fold him around

925

00:38:39,589 --> 00:38:38,560

like a puppy dog just to talk to him in

926

00:38:40,550 --> 00:38:39,599

english

927

00:38:42,150 --> 00:38:40,560

but

928

00:38:43,750 --> 00:38:42,160

we had this routine every morning he

929

00:38:48,310 --> 00:38:43,760

would come by my sleep station and he

930

00:38:50,069 --> 00:38:48,320

would say greg guess what we're in space

931

00:38:51,750 --> 00:38:50,079

and i was really looking forward to that

932

00:38:53,829 --> 00:38:51,760

uh that happening again on this mission

933

00:38:55,990 --> 00:38:53,839

and so we had 16 more days of this

934

00:38:57,510 --> 00:38:56,000

ritual in the morning which was which

935

00:38:58,390 --> 00:38:57,520

was really great

936

00:39:01,829 --> 00:38:58,400

and

937

00:39:03,510 --> 00:39:01,839

together we played chess against the

938

00:39:05,510 --> 00:39:03,520

world and we had a lot of fun with that

939

00:39:07,910 --> 00:39:05,520

and we actually did pretty well

940

00:39:09,990 --> 00:39:07,920

and we had a great time doing a lot of

941

00:39:10,950 --> 00:39:10,000

other uh a lot of other things robotics

942

00:39:12,630 --> 00:39:10,960

together

943

00:39:16,230 --> 00:39:12,640

uh we were the guys who did the station

944

00:39:19,510 --> 00:39:16,240

arm robotics for installing elc and ams

945

00:39:21,829 --> 00:39:19,520

and uh roberto and i ended up having the

946

00:39:23,750 --> 00:39:21,839

late night late night photography crew

947

00:39:25,510 --> 00:39:23,760

and we spent a lot of

948

00:39:27,270 --> 00:39:25,520

whatever free time we had late at night

949

00:39:29,670 --> 00:39:27,280

we spent by the window with the cameras

950

00:39:31,270 --> 00:39:29,680

trying to capture amazing pictures of

951
00:39:32,150 --> 00:39:31,280
assembly complete

952
00:39:34,950 --> 00:39:32,160
and then

953
00:39:37,750 --> 00:39:34,960
the three of us mike and and drew and i

954
00:39:40,069 --> 00:39:37,760
um you know it it's a really really neat

955
00:39:41,910 --> 00:39:40,079
tight-knit group uh training for eva

956
00:39:43,430 --> 00:39:41,920
because the three of us you know when

957
00:39:46,069 --> 00:39:43,440
when two guys are out the other one is

958
00:39:47,910 --> 00:39:46,079
choreographing inside and so the three

959
00:39:50,390 --> 00:39:47,920
of us kind of know every move everyone's

960
00:39:53,270 --> 00:39:50,400
gonna make and and um and you know that

961
00:39:54,950 --> 00:39:53,280
training was uh was so thorough um you

962
00:39:56,550 --> 00:39:54,960
know it's just been a great little

963
00:39:58,550 --> 00:39:56,560

brotherhood between the three of us that

964

00:40:00,950 --> 00:39:58,560

we've really enjoyed and what a great

965

00:40:02,950 --> 00:40:00,960

feeling of uh success and joy when we

966

00:40:05,910 --> 00:40:02,960

all when we completed all the all the

967

00:40:07,589 --> 00:40:05,920

spacewalks successfully so um and then

968

00:40:10,150 --> 00:40:07,599

mark has been at the center of all these

969

00:40:11,589 --> 00:40:10,160

interactions guiding us all and and

970

00:40:13,750 --> 00:40:11,599

keeping us on our toes and making sure

971

00:40:15,510 --> 00:40:13,760

we do everything right so it's been a

972

00:40:17,349 --> 00:40:15,520

really enjoyable uh thing being a part

973

00:40:19,670 --> 00:40:17,359

of this crew

974

00:40:21,589 --> 00:40:19,680

but before i say anything else i want to

975

00:40:23,589 --> 00:40:21,599

recognize my family

976
00:40:24,870 --> 00:40:23,599
my wife chantal right here in the in the

977
00:40:27,190 --> 00:40:24,880
front

978
00:40:29,670 --> 00:40:27,200
and my kids natasha and dimitri right

979
00:40:33,030 --> 00:40:30,870
and my mom

980
00:40:34,390 --> 00:40:33,040
sherry and then chantelle's parents

981
00:40:36,470 --> 00:40:34,400
madeline and vern

982
00:40:39,349 --> 00:40:36,480
the support from my family

983
00:40:41,030 --> 00:40:39,359
really was what was necessary for me to

984
00:40:44,390 --> 00:40:41,040
be able to do this this mission and the

985
00:40:46,390 --> 00:40:44,400
last and i i appreciate uh endlessly

986
00:40:48,390 --> 00:40:46,400
what you know the support and the the

987
00:40:50,470 --> 00:40:48,400
love and and the encouragement that i've

988
00:40:52,069 --> 00:40:50,480

had from them so and there's a lot of

989

00:40:54,150 --> 00:40:52,079

other people that you know we need to

990

00:40:55,750 --> 00:40:54,160

thank i can't thank uh can't mention all

991

00:40:58,390 --> 00:40:55,760

the names but i want to mention our

992

00:40:59,990 --> 00:40:58,400

flight docs um joe durbay and rick

993

00:41:02,150 --> 00:41:00,000

center have taken amazing care of us

994

00:41:06,069 --> 00:41:02,160

through all of the training

995

00:41:07,510 --> 00:41:06,079

the mission and now post flight as well

996

00:41:08,710 --> 00:41:07,520

and you know one of the most important

997

00:41:10,870 --> 00:41:08,720

things about the mission has been able

998

00:41:13,510 --> 00:41:10,880

to share the experience with everybody

999

00:41:15,589 --> 00:41:13,520

and i see uh one of our way in the back

1000

00:41:18,630 --> 00:41:15,599

there one of our photo tv guys dave

1001
00:41:20,870 --> 00:41:18,640
williams our lead for he's been the one

1002
00:41:22,630 --> 00:41:20,880
who's been who prepared us and has been

1003
00:41:24,630 --> 00:41:22,640
enabling us to share all the photos and

1004
00:41:27,750 --> 00:41:24,640
video with everybody i also want to

1005
00:41:28,790 --> 00:41:27,760
thank the the pao folks rob navies

1006
00:41:31,190 --> 00:41:28,800
nicole

1007
00:41:33,829 --> 00:41:31,200
clutch lemasters

1008
00:41:35,750 --> 00:41:33,839
and also a personal thanks to kelly

1009
00:41:37,750 --> 00:41:35,760
humphries who helped sponsor the chess

1010
00:41:40,069 --> 00:41:37,760
match that that we had that hopefully

1011
00:41:42,309 --> 00:41:40,079
inspired some kids uh around the world

1012
00:41:44,470 --> 00:41:42,319
uh during during the mission

1013
00:41:45,829 --> 00:41:44,480

um you know it's this was such a complex

1014

00:41:48,550 --> 00:41:45,839

mission we're all kind of i think you

1015

00:41:50,150 --> 00:41:48,560

know in awe that it actually went

1016

00:41:51,109 --> 00:41:50,160

through successfully we got everything

1017

00:41:52,710 --> 00:41:51,119

done

1018

00:41:56,230 --> 00:41:52,720

and you know almost seems like a long

1019

00:41:57,910 --> 00:41:56,240

time ago that we that we installed ams

1020

00:41:59,670 --> 00:41:57,920

that was our primary objective that was

1021

00:42:00,470 --> 00:41:59,680

on day four that was already a long time

1022

00:42:02,390 --> 00:42:00,480

ago

1023

00:42:05,030 --> 00:42:02,400

but um you know there was a team of

1024

00:42:07,109 --> 00:42:05,040

people that that made that possible uh

1025

00:42:09,510 --> 00:42:07,119

box already mentioned the robotics teams

1026

00:42:11,910 --> 00:42:09,520

there's also a struck and mech group

1027

00:42:14,309 --> 00:42:11,920

that made it possible um adam and

1028

00:42:16,950 --> 00:42:14,319

michael uh uh key guys who made sure

1029

00:42:19,030 --> 00:42:16,960

that when we attached ams to the station

1030

00:42:20,790 --> 00:42:19,040

that the mechanism worked properly that

1031

00:42:22,150 --> 00:42:20,800

was one of my biggest fears that we

1032

00:42:24,390 --> 00:42:22,160

would get up there and not be able to

1033

00:42:26,470 --> 00:42:24,400

install it and that went really smoothly

1034

00:42:28,230 --> 00:42:26,480

thanks thanks to the team

1035

00:42:31,030 --> 00:42:28,240

so uh

1036

00:42:33,510 --> 00:42:31,040

an ams you know this is really an

1037

00:42:36,150 --> 00:42:33,520

amazing amazing uh

1038

00:42:37,589 --> 00:42:36,160

uh apparatus uh scientific observatory

1039

00:42:38,630 --> 00:42:37,599

that we've installed it's really unlike

1040

00:42:41,109 --> 00:42:38,640

anything

1041

00:42:44,069 --> 00:42:41,119

um any of the other great observatories

1042

00:42:45,510 --> 00:42:44,079

a huge congratulations to professor ting

1043

00:42:47,589 --> 00:42:45,520

i don't know if he's here today but i

1044

00:42:53,670 --> 00:42:47,599

know some of the ams folks are here use

1045

00:42:57,430 --> 00:42:54,870

the ams

1046

00:42:58,790 --> 00:42:57,440

alpha magnetic spectrometer

1047

00:43:00,309 --> 00:42:58,800

this instrument will be up there you

1048

00:43:01,670 --> 00:43:00,319

know for the life of the station now

1049

00:43:03,589 --> 00:43:01,680

it's already as you heard already

1050

00:43:05,510 --> 00:43:03,599

collected uh and analyzed millions and

1051
00:43:06,550 --> 00:43:05,520
millions of particles and what makes it

1052
00:43:07,829 --> 00:43:06,560
unique from all other great

1053
00:43:09,829 --> 00:43:07,839
observatories is that it's looking at

1054
00:43:11,510 --> 00:43:09,839
particles not at light

1055
00:43:12,870 --> 00:43:11,520
and we don't have that understanding and

1056
00:43:15,030 --> 00:43:12,880
characterization of what the what

1057
00:43:17,270 --> 00:43:15,040
particles are are flying around out in

1058
00:43:19,910 --> 00:43:17,280
the solar system and and the universe

1059
00:43:21,990 --> 00:43:19,920
but those particles help define and and

1060
00:43:24,390 --> 00:43:22,000
help us understand what how the universe

1061
00:43:25,910 --> 00:43:24,400
formed and and what it's made out of

1062
00:43:27,190 --> 00:43:25,920
uh there's a couple of big questions

1063
00:43:29,430 --> 00:43:27,200

that are that are still unknown in

1064

00:43:30,870 --> 00:43:29,440

physics you know why is there more

1065

00:43:33,270 --> 00:43:30,880

matter or is there more matter than

1066

00:43:34,950 --> 00:43:33,280

anti-matter um if if there is more

1067

00:43:37,349 --> 00:43:34,960

matter that anti-matter left over from

1068

00:43:39,670 --> 00:43:37,359

the the big bang that doesn't

1069

00:43:40,950 --> 00:43:39,680

jive with the theory of of the big bang

1070

00:43:42,870 --> 00:43:40,960

and try to understand that that's one of

1071

00:43:43,670 --> 00:43:42,880

the fundamental questions that we still

1072

00:43:45,430 --> 00:43:43,680

have

1073

00:43:47,430 --> 00:43:45,440

and then as physicists see galaxies

1074

00:43:49,349 --> 00:43:47,440

rotating the mass that we see doesn't

1075

00:43:51,109 --> 00:43:49,359

explain the rotation that we see

1076
00:43:53,030 --> 00:43:51,119
and so looking for the missing mass or

1077
00:43:54,710 --> 00:43:53,040
the dark matter that that may explain

1078
00:43:56,309 --> 00:43:54,720
that these are some fundamental

1079
00:43:58,790 --> 00:43:56,319
questions about the universe that ams

1080
00:44:00,790 --> 00:43:58,800
will hopefully uncover in the next uh in

1081
00:44:03,109 --> 00:44:00,800
the next decade so we really look

1082
00:44:05,990 --> 00:44:03,119
forward to seeing the results from ams

1083
00:44:07,589 --> 00:44:06,000
and uh and and you know seeing the

1084
00:44:09,349 --> 00:44:07,599
fundamental

1085
00:44:10,470 --> 00:44:09,359
principles that it may uncover in the

1086
00:44:12,390 --> 00:44:10,480
years ahead

1087
00:44:14,230 --> 00:44:12,400
i want to end with

1088
00:44:16,470 --> 00:44:14,240

a little uh

1089

00:44:18,950 --> 00:44:16,480

share an experience that i had and mike

1090

00:44:22,150 --> 00:44:18,960

and drew also had this experience um we

1091

00:44:23,670 --> 00:44:22,160

all happened to we installed elc3

1092

00:44:24,630 --> 00:44:23,680

out on the port side of the station up

1093

00:44:26,390 --> 00:44:24,640

on top

1094

00:44:28,630 --> 00:44:26,400

and there's no higher place on the space

1095

00:44:30,550 --> 00:44:28,640

station than the top of this platform

1096

00:44:31,829 --> 00:44:30,560

where we have external spare equipment

1097

00:44:33,910 --> 00:44:31,839

that we installed

1098

00:44:35,430 --> 00:44:33,920

and all of us had a view from up there a

1099

00:44:36,710 --> 00:44:35,440

breathhtaking view

1100

00:44:38,790 --> 00:44:36,720

and uh

1101
00:44:40,309 --> 00:44:38,800
i got to share that with uh with the

1102
00:44:42,309 --> 00:44:40,319
flight control team because i had a

1103
00:44:44,309 --> 00:44:42,319
helmet camera on while i was up there in

1104
00:44:46,230 --> 00:44:44,319
in the in the daylight and just kind of

1105
00:44:48,309 --> 00:44:46,240
panned around and saw the whole station

1106
00:44:50,230 --> 00:44:48,319
and assembly complete with endeavour

1107
00:44:51,109 --> 00:44:50,240
attached and it was just an unbelievable

1108
00:44:55,349 --> 00:44:51,119
view

1109
00:44:57,510 --> 00:44:55,359
of this of the space shuttle of this

1110
00:44:59,030 --> 00:44:57,520
assembly this this technological

1111
00:45:00,630 --> 00:44:59,040
achievement perhaps the greatest

1112
00:45:02,630 --> 00:45:00,640
achievement of our time to build this

1113
00:45:04,470 --> 00:45:02,640

international space station

1114

00:45:06,950 --> 00:45:04,480

and then this amazing view the most

1115

00:45:08,790 --> 00:45:06,960

incredible view of of all of nature both

1116

00:45:10,230 --> 00:45:08,800

right below it and looking down up from

1117

00:45:12,309 --> 00:45:10,240

on on high

1118

00:45:14,069 --> 00:45:12,319

and i've always loved this contrast of

1119

00:45:16,309 --> 00:45:14,079

technology and nature

1120

00:45:18,790 --> 00:45:16,319

and that's what struck me in that moment

1121

00:45:21,670 --> 00:45:18,800

that there wasn't the clash it was like

1122

00:45:23,750 --> 00:45:21,680

a perfect blend of technology and nature

1123

00:45:25,510 --> 00:45:23,760

it's almost as if the space station you

1124

00:45:27,430 --> 00:45:25,520

know was an extension of the earth you

1125

00:45:30,550 --> 00:45:27,440

know rather than technology in contrast

1126

00:45:32,790 --> 00:45:30,560

to the nature of the earth and um

1127

00:45:35,190 --> 00:45:32,800

by extension of that you know it seemed

1128

00:45:37,109 --> 00:45:35,200

to belong there and and then we seemed

1129

00:45:38,470 --> 00:45:37,119

to belong there as well

1130

00:45:40,309 --> 00:45:38,480

and um

1131

00:45:42,230 --> 00:45:40,319

so it was a really amazing feeling to to

1132

00:45:44,309 --> 00:45:42,240

see that and to feel like you know yeah

1133

00:45:46,230 --> 00:45:44,319

we belong there and this is our future

1134

00:45:47,829 --> 00:45:46,240

and a huge congratulations to the whole

1135

00:45:48,710 --> 00:45:47,839

space shuttle team and space station

1136

00:45:49,910 --> 00:45:48,720

team

1137

00:45:58,390 --> 00:45:49,920

for assembly complete of the

1138

00:46:02,470 --> 00:45:59,829

so i'm going to hand this back over to

1139

00:46:04,390 --> 00:46:02,480

mark but before i do i'd you know i'd

1140

00:46:06,150 --> 00:46:04,400

like just to say that uh

1141

00:46:09,270 --> 00:46:06,160

you know mark's a veteran of four space

1142

00:46:11,270 --> 00:46:09,280

flights uh commander of the last two

1143

00:46:13,109 --> 00:46:11,280

i got to fly with him on the last one so

1144

00:46:13,990 --> 00:46:13,119

i kind of knew what to expect

1145

00:46:15,589 --> 00:46:14,000

and

1146

00:46:17,670 --> 00:46:15,599

you know if there was any reason why

1147

00:46:19,270 --> 00:46:17,680

this flight was so successful and so

1148

00:46:21,910 --> 00:46:19,280

unbelievably flawless from our

1149

00:46:24,390 --> 00:46:21,920

perspective it was mark mark's

1150

00:46:26,150 --> 00:46:24,400

unbelievable attention to detail

1151

00:46:28,470 --> 00:46:26,160

in the planning and in the execution of

1152

00:46:30,150 --> 00:46:28,480

everything that we did and also in being

1153

00:46:31,750 --> 00:46:30,160

able to sort of keep us in line and make

1154

00:46:33,349 --> 00:46:31,760

sure everything we were doing and you

1155

00:46:35,430 --> 00:46:33,359

know was was done right and we and that

1156

00:46:37,910 --> 00:46:35,440

we knew what we were doing um he's been

1157

00:46:39,910 --> 00:46:37,920

an unbelievable commander and all of us

1158

00:46:41,349 --> 00:46:39,920

here are just absolutely thrilled that

1159

00:46:47,349 --> 00:46:41,359

we were able to fly on this mission have

1160

00:46:51,910 --> 00:46:48,870

thank you greg

1161

00:46:53,829 --> 00:46:51,920

and thanks to all of you folks for

1162

00:46:55,670 --> 00:46:53,839

coming out today you know it's a little

1163

00:46:58,390 --> 00:46:55,680

humid i'm going to turn it over

1164

00:47:01,910 --> 00:46:58,400
to the jsc center director

1165

00:47:03,589 --> 00:47:01,920
mike coats for some final comments

1166

00:47:06,470 --> 00:47:03,599
thanks mark

1167

00:47:08,710 --> 00:47:06,480
i want to say thank you to a few

1168

00:47:11,349 --> 00:47:08,720
groups of folks one is the families as

1169

00:47:13,829 --> 00:47:11,359
mark said they couldn't fly without the

1170

00:47:16,230 --> 00:47:13,839
support of the families

1171

00:47:17,750 --> 00:47:16,240
and i've known that now for 33 years and

1172

00:47:19,750 --> 00:47:17,760
it's certainly true

1173

00:47:21,829 --> 00:47:19,760
you make it possible

1174

00:47:23,109 --> 00:47:21,839
for these guys to do what they do out

1175

00:47:24,549 --> 00:47:23,119
there and you'll have to bear with them

1176

00:47:25,829 --> 00:47:24,559

as they're waking up in the middle of

1177

00:47:28,630 --> 00:47:25,839

night and trying to go to sleep in the

1178

00:47:30,950 --> 00:47:28,640

middle afternoon for a while while they

1179

00:47:32,069 --> 00:47:30,960

shift their circadian rhythms back

1180

00:47:34,790 --> 00:47:32,079

again

1181

00:47:37,190 --> 00:47:34,800

i'd also like to thank

1182

00:47:40,150 --> 00:47:37,200

personally the senior nasa leadership i

1183

00:47:42,309 --> 00:47:40,160

i have been very sensitive

1184

00:47:44,790 --> 00:47:42,319

to any pressure to

1185

00:47:46,790 --> 00:47:44,800

to go launch

1186

00:47:48,710 --> 00:47:46,800

and i have not seen any of that from

1187

00:47:51,030 --> 00:47:48,720

charlie bolden the nasa administrator

1188

00:47:53,510 --> 00:47:51,040

bill gerstenmaier the space operations

1189

00:47:55,670 --> 00:47:53,520

mission director john shannon the

1190

00:47:58,390 --> 00:47:55,680

shuttle program manager

1191

00:48:00,950 --> 00:47:58,400

all of them have emphasized consistently

1192

00:48:03,190 --> 00:48:00,960

and repeatedly we will not fly before

1193

00:48:05,510 --> 00:48:03,200

we're ready to fly

1194

00:48:08,069 --> 00:48:05,520

and that's exactly the the

1195

00:48:11,109 --> 00:48:08,079

type of space professionals this country

1196

00:48:13,589 --> 00:48:11,119

deserves i'm really proud of them

1197

00:48:15,670 --> 00:48:13,599

lastly i'd like to congratulate and

1198

00:48:17,270 --> 00:48:15,680

thank mark

1199

00:48:19,270 --> 00:48:17,280

mark kelly

1200

00:48:22,390 --> 00:48:19,280

we select our astronauts for their

1201
00:48:23,910 --> 00:48:22,400
ability to compartmentalize and focus

1202
00:48:26,470 --> 00:48:23,920
he's probably had a bigger challenge

1203
00:48:32,829 --> 00:48:26,480
than most and he did a terrific job

1204
00:48:38,069 --> 00:48:36,470
mark now much and much to my surprise

1205
00:48:40,549 --> 00:48:38,079
and despite being up in the middle of

1206
00:48:42,150 --> 00:48:40,559
the night and floating around for 16

1207
00:48:44,549 --> 00:48:42,160
days the crew has agreed to sign

1208
00:48:46,549 --> 00:48:44,559
autographs and come out there

1209
00:48:47,990 --> 00:48:46,559
so take as much time as you want keep

1210
00:48:50,630 --> 00:48:48,000
them awake they need to shift their

1211
00:48:52,870 --> 00:48:50,640
sleep cycles anyway

1212
00:48:55,190 --> 00:48:52,880
i want to thank everybody for coming out

1213
00:48:57,829 --> 00:48:55,200

here today and don't forget we have one

1214

00:49:20,630 --> 00:48:57,839

more shuttle mission let's not overlook