



1  
00:00:08,320 --> 00:00:42,229  
copy mike stand by

2  
00:00:47,830 --> 00:00:44,709  
station houston on one mike um what you

3  
00:00:53,350 --> 00:00:47,840  
had called down is acceptable to us so

4  
00:00:56,790 --> 00:00:55,189  
okay great and i'm taking

5  
00:00:59,029 --> 00:00:56,800  
some photos of all the above so you know

6  
00:01:25,590 --> 00:00:59,039  
what they look like when they're stored

7  
00:01:25,600 --> 00:02:13,670  
and

8  
00:02:13,680 --> 00:04:28,230  
okay

9  
00:04:38,710 --> 00:04:30,310  
atlantis iss this is houston are you

10  
00:04:38,720 --> 00:04:42,550  
yes we're ready for the event

11  
00:04:52,150 --> 00:04:46,070  
wbbm tv this is mission control houston

12  
00:04:52,160 --> 00:04:56,790  
hello check can you hear me

13  
00:05:01,590 --> 00:04:58,070

yes we can hear you loud and clear how

14

00:05:05,350 --> 00:05:03,510

i can hear you perfectly wow that's

15

00:05:07,189 --> 00:05:05,360

amazing it's so good to see all of you i

16

00:05:09,029 --> 00:05:07,199

want to thank you for talking to us and

17

00:05:10,629 --> 00:05:09,039

i want to start by asking questions to

18

00:05:12,550 --> 00:05:10,639

sandra if possible because we know she's

19

00:05:14,710 --> 00:05:12,560

from down state illinois

20

00:05:19,670 --> 00:05:14,720

sandra how meaningful is it for you to

21

00:05:23,749 --> 00:05:21,510

well you know we were so focused on the

22

00:05:25,670 --> 00:05:23,759

launch the training during most of our

23

00:05:27,350 --> 00:05:25,680

preparation time i hadn't really thought

24

00:05:29,270 --> 00:05:27,360

about it but i i will tell you it's an

25

00:05:31,029 --> 00:05:29,280

honor to be a part of any shuttle crew

26

00:05:32,710 --> 00:05:31,039

and this one is is really special

27

00:05:34,790 --> 00:05:32,720

because it is the last one

28

00:05:36,150 --> 00:05:34,800

and we're just very busy up here and i

29

00:05:39,029 --> 00:05:36,160

think it's going to hit us a little bit

30

00:05:40,870 --> 00:05:39,039

harder once we land there at the cape

31

00:05:43,830 --> 00:05:40,880

and have to say goodbye to atlantis for

32

00:05:49,510 --> 00:05:47,350

wow it sure is what's next for the space

33

00:05:51,749 --> 00:05:49,520

program and what is the impact for

34

00:05:56,550 --> 00:05:51,759

future generations without the space

35

00:06:00,629 --> 00:05:58,230

well we're going to find out here next

36

00:06:02,150 --> 00:06:00,639

year i think that there's there's one

37

00:06:03,590 --> 00:06:02,160

big capability we're going to miss up

38

00:06:06,390 --> 00:06:03,600

here on the international space station

39

00:06:07,830 --> 00:06:06,400

and that's being able to return items

40

00:06:10,309 --> 00:06:07,840

like the space shuttle atlantis is

41

00:06:12,070 --> 00:06:10,319

returning when we come back last year

42

00:06:13,189 --> 00:06:12,080

there was a pump a critical pump that

43

00:06:15,670 --> 00:06:13,199

failed and we're going to bring it home

44

00:06:17,110 --> 00:06:15,680

so the engineers can take a look at it

45

00:06:18,550 --> 00:06:17,120

of course when we lose the space shuttle

46

00:06:20,710 --> 00:06:18,560

we're not going to have that capability

47

00:06:22,469 --> 00:06:20,720

anymore but we are building new rockets

48

00:06:24,230 --> 00:06:22,479

uh some of our commercial folks are

49

00:06:25,749 --> 00:06:24,240

putting rockets together for us so we'll

50

00:06:29,270 --> 00:06:25,759

be able to visit the space station again

51  
00:06:34,950 --> 00:06:31,990  
so what happens personally for you and

52  
00:06:37,430 --> 00:06:34,960  
your careers what what is your next um

53  
00:06:42,629 --> 00:06:37,440  
operations involved without being able

54  
00:06:47,110 --> 00:06:45,590  
well that's it's not exactly uh correct

55  
00:06:48,710 --> 00:06:47,120  
i mean we have

56  
00:06:50,790 --> 00:06:48,720  
opportunities following this we're going

57  
00:06:52,629 --> 00:06:50,800  
to continue to crew the international

58  
00:06:54,870 --> 00:06:52,639  
space station for the next decade at

59  
00:06:56,629 --> 00:06:54,880  
least so we've got opportunities there

60  
00:06:58,150 --> 00:06:56,639  
to fly in space and then

61  
00:07:00,790 --> 00:06:58,160  
we've got some great opportunities on

62  
00:07:03,110 --> 00:07:00,800  
the ground as well supporting uh

63  
00:07:04,710 --> 00:07:03,120

development of our next uh vehicle which

64

00:07:07,189 --> 00:07:04,720

is going to go beyond

65

00:07:09,749 --> 00:07:07,199

low earth orbit and then we also have uh

66

00:07:11,830 --> 00:07:09,759

you know a chance to to contribute with

67

00:07:13,670 --> 00:07:11,840

the commercial companies as they come

68

00:07:15,350 --> 00:07:13,680

online to build vehicles that are going

69

00:07:17,189 --> 00:07:15,360

to come to the international space

70

00:07:20,469 --> 00:07:17,199

station so there's there's going to be

71

00:07:23,430 --> 00:07:21,670

you know that's interesting because i

72

00:07:25,670 --> 00:07:23,440

wanted to ask you that there's so much

73

00:07:28,469 --> 00:07:25,680

talk about the commercial programs and

74

00:07:31,510 --> 00:07:28,479

sending citizens private citizens into

75

00:07:34,309 --> 00:07:31,520

space uh what do you feel about that you

76

00:07:36,550 --> 00:07:34,319

guys are moving forward in advancing

77

00:07:41,670 --> 00:07:36,560

science how do you feel about just us

78

00:07:45,189 --> 00:07:43,510

hey i think that's really important the

79

00:07:47,189 --> 00:07:45,199

more people can get in space i think the

80

00:07:48,629 --> 00:07:47,199

better it's just an amazing place up

81

00:07:50,469 --> 00:07:48,639

here and i'd like everybody to be able

82

00:07:52,070 --> 00:07:50,479

to experience it the problem is right

83

00:07:54,070 --> 00:07:52,080

now it's very expensive to get people to

84

00:07:55,670 --> 00:07:54,080

space and so the reason the way we'll

85

00:07:57,909 --> 00:07:55,680

get more and more people have access to

86

00:07:59,830 --> 00:07:57,919

space is to bring that launch cost down

87

00:08:01,110 --> 00:07:59,840

and so we're gonna we're gonna try to do

88

00:08:03,189 --> 00:08:01,120

that and as we do that it'll make it

89

00:08:05,029 --> 00:08:03,199

cheaper to do important research up here

90

00:08:06,469 --> 00:08:05,039

on the space station but also eventually

91

00:08:08,469 --> 00:08:06,479

someday it'll make it easier to have

92

00:08:12,070 --> 00:08:08,479

access to everyday person to be able to

93

00:08:16,230 --> 00:08:14,309

is your advice for young people who are

94

00:08:18,390 --> 00:08:16,240

interested in moving into your

95

00:08:20,070 --> 00:08:18,400

profession and also just people in

96

00:08:22,150 --> 00:08:20,080

general who are interested in the space

97

00:08:27,189 --> 00:08:22,160

program with all the changes going on

98

00:08:30,629 --> 00:08:29,110

well certainly keep keep tuned in

99

00:08:33,350 --> 00:08:30,639

because a lot of exciting things are

100

00:08:34,870 --> 00:08:33,360

going on and for young people you know

101  
00:08:36,949 --> 00:08:34,880  
when we were all younger we dreamed of

102  
00:08:40,389 --> 00:08:36,959  
being astronauts and it seemed like a

103  
00:08:41,990 --> 00:08:40,399  
very remote chance or a remote idea

104  
00:08:43,269 --> 00:08:42,000  
but if you work really hard you

105  
00:08:45,110 --> 00:08:43,279  
persevere

106  
00:08:47,590 --> 00:08:45,120  
and you follow your dreams anything can

107  
00:08:49,110 --> 00:08:47,600  
happen and here we are testimony to that

108  
00:08:50,470 --> 00:08:49,120  
so i would advise any young person

109  
00:08:52,389 --> 00:08:50,480  
whether you're interested in being an

110  
00:08:54,230 --> 00:08:52,399  
astronaut or or being involved in the

111  
00:08:56,070 --> 00:08:54,240  
space program or whatever your dream is

112  
00:08:59,910 --> 00:08:56,080  
just give it a shot go for it believe in

113  
00:09:03,430 --> 00:09:01,430

and for those of us who are maybe

114

00:09:06,070 --> 00:09:03,440

fantasizing about it now that there is

115

00:09:07,030 --> 00:09:06,080

talk of private people going into space

116

00:09:11,030 --> 00:09:07,040

what is

117

00:09:12,790 --> 00:09:11,040

want to get involved in the program

118

00:09:15,030 --> 00:09:12,800

what's the coolest thing about actually

119

00:09:17,269 --> 00:09:15,040

being up there it's fun to see you guys

120

00:09:24,870 --> 00:09:17,279

having anti-gravity effects what would

121

00:09:28,070 --> 00:09:26,070

of course there's a lot of things to

122

00:09:29,509 --> 00:09:28,080

enjoy up here uh and not the least of

123

00:09:31,590 --> 00:09:29,519

which is being able to float around

124

00:09:33,509 --> 00:09:31,600

that's a sensation that very few people

125

00:09:35,509 --> 00:09:33,519

have experienced and it's a it's really

126

00:09:37,590 --> 00:09:35,519

kind of interesting to translate to to

127

00:09:38,949 --> 00:09:37,600

travel between these modules uh kind of

128

00:09:40,710 --> 00:09:38,959

like superman

129

00:09:42,389 --> 00:09:40,720

your legs your legs don't get a lot of

130

00:09:44,710 --> 00:09:42,399

use and your arms get an awful lot of

131

00:09:46,870 --> 00:09:44,720

use so you know there's a lot of great

132

00:09:48,710 --> 00:09:46,880

things to look forward to and when

133

00:09:50,630 --> 00:09:48,720

folks perhaps who

134

00:09:52,790 --> 00:09:50,640

not just the wealthy few who have been

135

00:09:54,790 --> 00:09:52,800

able to travel to spur space

136

00:09:57,030 --> 00:09:54,800

commercially so far but when the average

137

00:09:58,389 --> 00:09:57,040

person is b is going to be able to do it

138

00:10:00,470 --> 00:09:58,399

it'll be more like

139

00:10:02,790 --> 00:10:00,480

commercial air travel so i would see

140

00:10:05,829 --> 00:10:02,800

maybe 20 or 30 years in the future we'll

141

00:10:07,590 --> 00:10:05,839

have commercial airlines to space just

142

00:10:11,509 --> 00:10:07,600

like we have commercial airlines that go

143

00:10:14,870 --> 00:10:13,430

i know sandra mentioned before that you

144

00:10:16,150 --> 00:10:14,880

guys were very busy and didn't really

145

00:10:17,990 --> 00:10:16,160

have a lot of time to reflect but is

146

00:10:20,550 --> 00:10:18,000

there anybody who's feeling

147

00:10:28,870 --> 00:10:20,560

particularly nostalgic or sentimental

148

00:10:31,269 --> 00:10:30,389

well it's yeah as you know we are very

149

00:10:32,550 --> 00:10:31,279

busy and we're concentrating on a

150

00:10:34,230 --> 00:10:32,560

mission but every once in a while when

151

00:10:35,269 --> 00:10:34,240

it just quiets down for a minute yeah i

152

00:10:36,870 --> 00:10:35,279

remember sitting on the mid deck the

153

00:10:38,310 --> 00:10:36,880

other day and thinking wow this is the

154

00:10:41,030 --> 00:10:38,320

last time this vehicle is going to fly

155

00:10:42,870 --> 00:10:41,040

here we are in space so um just and

156

00:10:44,949 --> 00:10:42,880

fleeting moments between being really

157

00:10:47,350 --> 00:10:44,959

busy you kind of think wow this is this

158

00:10:49,269 --> 00:10:47,360

is really it uh but boy it's gonna hit

159

00:10:50,630 --> 00:10:49,279

when we uh when we land and we'll stop

160

00:10:52,150 --> 00:10:50,640

and when all the pressure's off of the

161

00:10:54,790 --> 00:10:52,160

mission and all the busyness is done

162

00:10:56,389 --> 00:10:54,800

we'll reflect back and uh and we'll

163

00:10:58,150 --> 00:10:56,399

realize that the the space shuttle has

164

00:10:59,590 --> 00:10:58,160

completed it's completed its mission and

165

00:11:01,590 --> 00:10:59,600

it's it's not a time for sets it's a

166

00:11:03,670 --> 00:11:01,600

time for celebration it's had a storied

167

00:11:06,310 --> 00:11:03,680

30-year career and we're very very proud

168

00:11:07,670 --> 00:11:06,320

of it and so i i plan on uh when we get

169

00:11:08,949 --> 00:11:07,680

back to the ground celebrating with

170

00:11:11,030 --> 00:11:08,959

everybody who's worked so hard on this

171

00:11:14,310 --> 00:11:11,040

program to uh to celebrate the great

172

00:11:15,990 --> 00:11:14,320

achievements over the last 30 years

173

00:11:17,590 --> 00:11:16,000

well thank you all so much for talking

174

00:11:19,350 --> 00:11:17,600

to us and thank you for the wonderful

175

00:11:23,750 --> 00:11:19,360

work that you've been doing for us on

176

00:11:29,269 --> 00:11:26,389

thank you very much we'll see you

177

00:11:31,829 --> 00:11:29,279

atlantis iss this is houston acr that

178

00:11:33,870 --> 00:11:31,839

concludes the wbbm portion of the event

179

00:11:35,990 --> 00:11:33,880

please stand by for a voice check from

180

00:11:38,550 --> 00:11:36,000

ktvu tv

181

00:11:40,949 --> 00:11:38,560

here on ktvu morning news it is thursday

182

00:11:42,630 --> 00:11:40,959

it's july 14th sounds good stand by

183

00:11:44,630 --> 00:11:42,640

morning cam cook thank you for joining

184

00:11:46,230 --> 00:11:44,640

us it's 6 26 right now this is an

185

00:11:48,069 --> 00:11:46,240

incredible morning yes it is because for

186

00:11:50,150 --> 00:11:48,079

almost a week we've been showing you the

187

00:11:51,910 --> 00:11:50,160

incredible pictures of the crew members

188

00:11:54,470 --> 00:11:51,920

of the space shuttle atlantis well this

189

00:11:56,470 --> 00:11:54,480

morning pam and i have the privilege of

190

00:11:59,430 --> 00:11:56,480

talking to the shuttle crew live about

191

00:12:04,470 --> 00:11:59,440

their historic mission atlantis iss this

192

00:12:10,230 --> 00:12:05,910

yes space station read you loud and

193

00:12:13,590 --> 00:12:11,590

that

194

00:12:16,550 --> 00:12:13,600

we hear you good morning gentlemen thank

195

00:12:18,629 --> 00:12:16,560

you uh and and uh ma'am for joining us

196

00:12:20,310 --> 00:12:18,639

this morning um tell us okay we've been

197

00:12:23,030 --> 00:12:20,320

talking about the barbecued chicken and

198

00:12:25,110 --> 00:12:23,040

the beans what what is uh

199

00:12:26,790 --> 00:12:25,120

it's called thermostabilized tell us

200

00:12:29,990 --> 00:12:26,800

about the food how does it look how's it

201  
00:12:34,069 --> 00:12:32,230  
actually the food's pretty good um some

202  
00:12:35,670 --> 00:12:34,079  
of it is sort of in the form of meals

203  
00:12:37,750 --> 00:12:35,680  
ready to eat that the military has where

204  
00:12:40,550 --> 00:12:37,760  
it's a pouch you just heat it up and and

205  
00:12:43,350 --> 00:12:40,560  
you eat it the thermal stabilized is in

206  
00:12:45,430 --> 00:12:43,360  
a dehydrated sort of form

207  
00:12:47,910 --> 00:12:45,440  
as well it comes in that form you just

208  
00:12:50,310 --> 00:12:47,920  
add water put it in the oven and heat it

209  
00:12:52,150 --> 00:12:50,320  
up and that's good to go as well and of

210  
00:12:53,269 --> 00:12:52,160  
course we have you know our special meal

211  
00:12:55,670 --> 00:12:53,279  
we're going to be sharing with the space

212  
00:12:57,509 --> 00:12:55,680  
station crew and and we'll be having a

213  
00:12:59,829 --> 00:12:57,519

very nice time and reflecting you know

214

00:13:04,550 --> 00:12:59,839

we originally wanted it on july 4th but

215

00:13:09,110 --> 00:13:07,030

well just an observation the four of you

216

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

looked terrific up there in space we're

217

00:13:13,829 --> 00:13:11,200

so happy to be able to talk to you but

218

00:13:15,269 --> 00:13:13,839

this is also the end of the shuttle

219

00:13:17,190 --> 00:13:15,279

mission what are your thoughts now the

220

00:13:19,350 --> 00:13:17,200

average person doesn't get a chance to

221

00:13:20,790 --> 00:13:19,360

talk to the space shuttle crew you're

222

00:13:29,269 --> 00:13:20,800

winding down this is the end of the

223

00:13:33,430 --> 00:13:31,509

well you know it's uh it's like any uh

224

00:13:35,030 --> 00:13:33,440

well your first car for example you know

225

00:13:36,949 --> 00:13:35,040

you love it you hate to see it go but

226

00:13:39,269 --> 00:13:36,959

you realize that every vehicle has its

227

00:13:40,629 --> 00:13:39,279

time and while you know i personally

228

00:13:42,310 --> 00:13:40,639

believe there's a little bit of lifetime

229

00:13:43,910 --> 00:13:42,320

left in the space shuttle

230

00:13:46,790 --> 00:13:43,920

we do have to realize that if we want to

231

00:13:48,470 --> 00:13:46,800

go beyond and get another rocket or

232

00:13:50,389 --> 00:13:48,480

craft that will go outside of low earth

233

00:13:52,150 --> 00:13:50,399

orbit the space shuttle is not the one

234

00:13:54,710 --> 00:13:52,160

and eventually we do want to go to back

235

00:13:55,990 --> 00:13:54,720

to the moon perhaps mars or an asteroid

236

00:13:58,949 --> 00:13:56,000

and we're going to need to stand down a

237

00:14:00,949 --> 00:13:58,959

little bit and and take time and take

238

00:14:03,269 --> 00:14:00,959

perhaps the money that was used to

239

00:14:04,629 --> 00:14:03,279

operate the space shuttle and instead

240

00:14:08,069 --> 00:14:04,639

build a new vehicle with it which is

241

00:14:10,949 --> 00:14:09,670

that's certainly exciting to hear that

242

00:14:13,430 --> 00:14:10,959

you know we intend to go back to the

243

00:14:15,990 --> 00:14:13,440

moon and mars what would you say is the

244

00:14:21,509 --> 00:14:16,000

most significant contribution that the

245

00:14:24,949 --> 00:14:23,269

well i can definitely offer you one i

246

00:14:26,949 --> 00:14:24,959

think there were a number of great

247

00:14:28,790 --> 00:14:26,959

contributions to shuttle made but uh

248

00:14:30,629 --> 00:14:28,800

we're here talking to you from one of

249

00:14:32,069 --> 00:14:30,639

the one of the

250

00:14:33,030 --> 00:14:32,079

crowning achievements of the space

251

00:14:34,870 --> 00:14:33,040

shuttle program and that's the

252

00:14:37,030 --> 00:14:34,880

international space station you know the

253

00:14:39,269 --> 00:14:37,040

shuttle was integral in constructing

254

00:14:41,910 --> 00:14:39,279

building and putting all this together

255

00:14:44,550 --> 00:14:41,920

uh 210 miles above the surface of the

256

00:14:46,790 --> 00:14:44,560

earth so you know we we get to see this

257

00:14:49,430 --> 00:14:46,800

uh you know this work of art every day

258

00:14:51,990 --> 00:14:49,440

for the next uh several days and uh and

259

00:14:53,590 --> 00:14:52,000

it'll be here for years to come so

260

00:14:54,870 --> 00:14:53,600

definitely the space station is probably

261

00:14:56,829 --> 00:14:54,880

one of the greatest achievements of the

262

00:14:59,110 --> 00:14:56,839

space

263

00:15:01,110 --> 00:14:59,120

shuttle we love you we're pleased to

264

00:15:03,670 --> 00:15:01,120

talk to you one final question have you

265

00:15:06,069 --> 00:15:03,680

thought of a neil armstrong type

266

00:15:13,430 --> 00:15:06,079

statement to make about this as it winds

267

00:15:16,949 --> 00:15:14,470

well you know it's funny you should

268

00:15:18,949 --> 00:15:16,959

mention that because uh if we launched

269

00:15:20,790 --> 00:15:18,959

on time on july 8th our original landing

270

00:15:22,790 --> 00:15:20,800

was supposed to be july 20th which of

271

00:15:25,910 --> 00:15:22,800

course is the anniversary of neil

272

00:15:27,590 --> 00:15:25,920

armstrong's landing on the moon um as it

273

00:15:30,150 --> 00:15:27,600

as it was we've extended one day we'll

274

00:15:32,230 --> 00:15:30,160

be landing on july 21st a significant

275

00:15:33,749 --> 00:15:32,240

day nonetheless and uh i put some

276

00:15:36,470 --> 00:15:33,759

thought into uh how we're going to

277

00:15:38,069 --> 00:15:36,480

reflect on the moment uh and uh perhaps

278

00:15:42,790 --> 00:15:38,079

we'll just save that so that we'll stop

279

00:15:47,829 --> 00:15:45,670

all right fantastic thank you very much

280

00:15:50,470 --> 00:15:47,839

thank you so much we are talking live to

281

00:15:52,550 --> 00:15:50,480

the astronauts there uh notice the cal

282

00:15:54,949 --> 00:15:52,560

cow fan in the back we appreciate that

283

00:15:56,470 --> 00:15:54,959

here in the bay area thank you very much

284

00:16:00,870 --> 00:15:56,480

for joining us today and have a safe

285

00:16:00,880 --> 00:16:04,710

thank you so very much have a great day

286

00:16:10,389 --> 00:16:07,509

atlantis iss this is houston acr that

287

00:16:12,550 --> 00:16:10,399

concludes the ktvu tv portion of the

288

00:16:21,990 --> 00:16:12,560

event please stand by for a voice check

289

00:16:24,470 --> 00:16:23,269

let's go to space what do you say let's

290

00:16:26,550 --> 00:16:24,480

do it all right here we go the

291

00:16:27,829 --> 00:16:26,560

astronauts of the shuttle atlantis are

292

00:16:29,350 --> 00:16:27,839

making history right now on the

293

00:16:32,150 --> 00:16:29,360

shuttle's last mission in space you know

294

00:16:33,590 --> 00:16:32,160

that and they are about to join us live

295

00:16:35,350 --> 00:16:33,600

in fact i think we have them at the

296

00:16:37,430 --> 00:16:35,360

international space station

297

00:16:39,509 --> 00:16:37,440

and there they are

298

00:16:43,590 --> 00:16:39,519

just floating there hi welcome to

299

00:16:49,110 --> 00:16:45,590

hey it's it's great to be here my

300

00:16:50,870 --> 00:16:49,120

hometown of philly how you doing

301  
00:16:53,509 --> 00:16:50,880  
good that's great commander we're so

302  
00:16:55,269 --> 00:16:53,519  
happy and proud of you now we may talk

303  
00:16:56,870 --> 00:16:55,279  
to the rest of the crew too but we're

304  
00:16:58,949 --> 00:16:56,880  
going to concentrate on

305  
00:17:00,710 --> 00:16:58,959  
commander ferguson here we'll get to

306  
00:17:02,629 --> 00:17:00,720  
everybody eventually i'm trying to look

307  
00:17:07,350 --> 00:17:02,639  
at you and look at

308  
00:17:11,429 --> 00:17:08,230  
so

309  
00:17:15,029 --> 00:17:11,439  
when did you first

310  
00:17:16,309 --> 00:17:15,039  
get involved in space

311  
00:17:18,549 --> 00:17:16,319  
that's awesome

312  
00:17:19,990 --> 00:17:18,559  
you know philly's own willow or will

313  
00:17:21,510 --> 00:17:20,000

smith's kid

314

00:17:22,789 --> 00:17:21,520

what's the thing with her song

315

00:17:23,990 --> 00:17:22,799

i whip my hair back and forth where's my

316

00:17:24,870 --> 00:17:24,000

hair back and forth that's the first

317

00:17:26,390 --> 00:17:24,880

time you've seen somebody with their

318

00:17:28,630 --> 00:17:26,400

hair back and forth from space anyway

319

00:17:30,710 --> 00:17:28,640

commander ferguson when did you first

320

00:17:32,549 --> 00:17:30,720

have the dream of going to space from

321

00:17:36,870 --> 00:17:32,559

living in philadelphia

322

00:17:39,029 --> 00:17:36,880

grew up in the northeast there i went to

323

00:17:40,390 --> 00:17:39,039

saint martha's grade school archbishop

324

00:17:41,669 --> 00:17:40,400

bryant high school and i think it was

325

00:17:43,590 --> 00:17:41,679

somewhere in there i had some real

326

00:17:46,070 --> 00:17:43,600

motivational teachers who got me

327

00:17:47,990 --> 00:17:46,080

interested in science and taught me a

328

00:17:49,590 --> 00:17:48,000

little bit about aviation i thought well

329

00:17:51,669 --> 00:17:49,600

you know maybe i'd like to fly airplanes

330

00:17:53,510 --> 00:17:51,679

someday one thing led to another i

331

00:17:54,950 --> 00:17:53,520

always had a fascination with the with

332

00:17:57,430 --> 00:17:54,960

the early astronauts and the apollo

333

00:17:59,750 --> 00:17:57,440

program and you know lo and behold you

334

00:18:01,029 --> 00:17:59,760

just you put your nose to the grindstone

335

00:18:04,070 --> 00:18:01,039

and you keep your dreams alive and you

336

00:18:06,310 --> 00:18:04,080

end up in interesting places someday

337

00:18:08,150 --> 00:18:06,320

you're here i'm telling you i've done a

338

00:18:10,630 --> 00:18:08,160

lot of these interviews as well a few of

339

00:18:13,270 --> 00:18:10,640

them from space the technology now is

340

00:18:15,190 --> 00:18:13,280

amazing the picture guys

341

00:18:17,590 --> 00:18:15,200

you look like you're in a studio maybe

342

00:18:19,669 --> 00:18:17,600

in omaha nebraska or something the shot

343

00:18:21,909 --> 00:18:19,679

is so clear is this a hoax are you

344

00:18:25,430 --> 00:18:21,919

really in space still

345

00:18:26,470 --> 00:18:25,440

hair

346

00:18:32,870 --> 00:18:26,480

i don't know we're gonna have to do

347

00:18:32,880 --> 00:18:36,950

oh yeah i can do that watch this

348

00:18:40,310 --> 00:18:38,630

can everybody float around for it that

349

00:18:44,789 --> 00:18:40,320

was really cool chris

350

00:18:49,590 --> 00:18:46,870

i think i think sandy's hair is pretty

351

00:18:51,510 --> 00:18:49,600

much a dead giveaway

352

00:18:53,669 --> 00:18:51,520

it is oh there you go there's a pose for

353

00:18:56,870 --> 00:18:53,679

you right there

354

00:18:59,029 --> 00:18:56,880

that is so cool well which way is the is

355

00:19:03,669 --> 00:18:59,039

the space station are you standing are

356

00:19:07,430 --> 00:19:05,510

actually uh we're in we're in the

357

00:19:09,430 --> 00:19:07,440

japanese module right now this is one of

358

00:19:11,669 --> 00:19:09,440

several modules the space station is

359

00:19:13,430 --> 00:19:11,679

really it's an incredibly large vehicle

360

00:19:16,070 --> 00:19:13,440

it's uh weighs over a million pounds

361

00:19:17,669 --> 00:19:16,080

right now and uh you know if you have

362

00:19:19,909 --> 00:19:17,679

one of the unique opportunities like we

363

00:19:21,909 --> 00:19:19,919

have to you know

364

00:19:24,070 --> 00:19:21,919

be a thousand feet below and look up at

365

00:19:25,510 --> 00:19:24,080

this tremendous vehicle it's just all

366

00:19:27,270 --> 00:19:25,520

inspiring it's hard to believe that

367

00:19:30,310 --> 00:19:27,280

mankind has built this and we get to

368

00:19:31,510 --> 00:19:30,320

live in it for a couple weeks it's great

369

00:19:33,510 --> 00:19:31,520

you know every now and then you can see

370

00:19:35,029 --> 00:19:33,520

the space shuttle go over philadelphia

371

00:19:36,310 --> 00:19:35,039

what are you looking at right now like

372

00:19:40,150 --> 00:19:36,320

for instance right now where are you

373

00:19:43,190 --> 00:19:41,750

uh we're actually

374

00:19:44,950 --> 00:19:43,200

uh we're like i said we're floating in

375

00:19:46,390 --> 00:19:44,960

the japanese module which is one of the

376

00:19:48,070 --> 00:19:46,400

wings that sits off the side of the

377

00:19:49,909 --> 00:19:48,080

space station of course it's a series of

378

00:19:51,510 --> 00:19:49,919

tubes that stick together but when you

379

00:19:52,950 --> 00:19:51,520

see the space station fly over it's a

380

00:19:54,710 --> 00:19:52,960

very bright light what you're usually

381

00:19:56,630 --> 00:19:54,720

seeing is the reflection off the large

382

00:20:00,870 --> 00:19:56,640

solar arrays that are about 300 feet

383

00:20:09,190 --> 00:20:03,990

yeah so where is the space station right

384

00:20:13,909 --> 00:20:11,990

wow that's a real good question we

385

00:20:15,909 --> 00:20:13,919

we actually have this uh real neat

386

00:20:17,590 --> 00:20:15,919

computer application that tells us where

387

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

we are in the world because sometimes

388

00:20:20,549 --> 00:20:19,360

just by looking out the window you can't

389

00:20:22,549 --> 00:20:20,559

tell

390

00:20:24,149 --> 00:20:22,559

but right now we don't have it up so

391

00:20:25,669 --> 00:20:24,159

honest to goodness we can't tell you

392

00:20:27,350 --> 00:20:25,679

where we are over the earth but if we

393

00:20:29,110 --> 00:20:27,360

went to a window we could find out well

394

00:20:30,630 --> 00:20:29,120

listen to this

395

00:20:32,789 --> 00:20:30,640

i've been told you're over the northeast

396

00:20:39,590 --> 00:20:32,799

atlantic

397

00:20:43,830 --> 00:20:41,830

you know rex here is just an expert in

398

00:20:46,230 --> 00:20:43,840

geography and all he has to go down to

399

00:20:48,149 --> 00:20:46,240

uh the cupola which is a kind of like a

400

00:20:49,510 --> 00:20:48,159

fishbowl if you will to allow us to look

401  
00:20:51,190 --> 00:20:49,520  
out the bottom of the space station and

402  
00:20:53,750 --> 00:20:51,200  
rex can usually pick out exactly where

403  
00:20:55,510 --> 00:20:53,760  
we are at any given moment

404  
00:20:58,149 --> 00:20:55,520  
that's kind of cool i'll say did you

405  
00:21:00,830 --> 00:20:58,159  
take any tasty cakes uh tasty cakes up

406  
00:21:03,110 --> 00:21:00,840  
there and if you did which one do you

407  
00:21:04,549 --> 00:21:03,120  
like one do you like you know first

408  
00:21:06,070 --> 00:21:04,559  
thing we're gonna do is maybe get sandy

409  
00:21:07,270 --> 00:21:06,080  
go back and open one of these windows

410  
00:21:09,430 --> 00:21:07,280  
behind us we'll let you look out the

411  
00:21:11,830 --> 00:21:09,440  
window a little bit did i take any tasty

412  
00:21:17,029 --> 00:21:11,840  
cakes unfortunately no but believe me i

413  
00:21:21,110 --> 00:21:19,270

okay now we have some video of you of uh

414

00:21:23,110 --> 00:21:21,120

you folks eating breakfast what did you

415

00:21:26,549 --> 00:21:23,120

have for breakfast

416

00:21:27,669 --> 00:21:26,559

uh

417

00:21:29,270 --> 00:21:27,679

i'll tell you what let me pass the

418

00:21:31,029 --> 00:21:29,280

microphone around a little bit yeah this

419

00:21:34,070 --> 00:21:31,039

is doug hurley the pilot let's talk to

420

00:21:38,470 --> 00:21:36,870

uh let's see would i i had uh oatmeal

421

00:21:40,070 --> 00:21:38,480

with brown sugar this morning and i

422

00:21:41,909 --> 00:21:40,080

think uh

423

00:21:43,909 --> 00:21:41,919

somebody else had eggs and i don't

424

00:21:45,990 --> 00:21:43,919

remember what rex had a sausage patty

425

00:21:46,950 --> 00:21:46,000

and a sausage patty so you know pretty

426  
00:21:51,909 --> 00:21:46,960  
good

427  
00:21:56,789 --> 00:21:54,230  
now we don't we a lot of our meals are

428  
00:21:58,549 --> 00:21:56,799  
kind of you know similar to military

429  
00:22:00,149 --> 00:21:58,559  
meals ready to eat so they're in pouches

430  
00:22:02,710 --> 00:22:00,159  
or bags and some of them you have to add

431  
00:22:05,430 --> 00:22:02,720  
water to and we have a a small oven in

432  
00:22:06,630 --> 00:22:05,440  
the shuttle where we can heat things up

433  
00:22:08,630 --> 00:22:06,640  
both

434  
00:22:10,950 --> 00:22:08,640  
you know food and we can get hot or cold

435  
00:22:13,190 --> 00:22:10,960  
water out of the dispenser right above

436  
00:22:17,190 --> 00:22:13,200  
it so uh it's a pretty nice setup and

437  
00:22:19,190 --> 00:22:17,200  
the food is uh is really really good

438  
00:22:20,310 --> 00:22:19,200

sandy your face is turning red is is

439

00:22:21,669 --> 00:22:20,320

that the blood runner for rushing to

440

00:22:26,230 --> 00:22:21,679

your head and what are you looking at

441

00:22:29,909 --> 00:22:28,149

a lot of water most of the time when you

442

00:22:32,149 --> 00:22:29,919

look out the window up here there's just

443

00:22:34,230 --> 00:22:32,159

a lot of water and occasionally you'll

444

00:22:35,990 --> 00:22:34,240

go over a continent uh you know only

445

00:22:37,590 --> 00:22:36,000

takes us 90 minutes to go around the

446

00:22:39,990 --> 00:22:37,600

world and so we get a sunset in the

447

00:22:41,990 --> 00:22:40,000

sunrise about every 45 minutes when

448

00:22:43,590 --> 00:22:42,000

you're over the sahara it's very very

449

00:22:45,750 --> 00:22:43,600

dramatic there's a lot of browns and

450

00:22:47,190 --> 00:22:45,760

oranges and tans and beiges it's really

451  
00:22:49,029 --> 00:22:47,200  
beautiful the caribbean is really

452  
00:22:51,430 --> 00:22:49,039  
beautiful but right now we just see a

453  
00:22:52,310 --> 00:22:51,440  
lot of water out the window

454  
00:22:55,510 --> 00:22:52,320  
yeah

455  
00:22:58,149 --> 00:22:55,520  
you know as bette miller once said

456  
00:22:59,909 --> 00:22:58,159  
from a distance

457  
00:23:01,590 --> 00:22:59,919  
no i won't sing so

458  
00:23:03,510 --> 00:23:01,600  
so i always wonder what you wear but

459  
00:23:04,789 --> 00:23:03,520  
we've had some people tweet us this

460  
00:23:07,190 --> 00:23:04,799  
morning want to know by the way

461  
00:23:09,590 --> 00:23:07,200  
congratulations they say to commander

462  
00:23:11,669 --> 00:23:09,600  
ferguson we're all proud of you uh

463  
00:23:12,710 --> 00:23:11,679

everybody whoever went to archbishop

464

00:23:15,110 --> 00:23:12,720

ryan

465

00:23:16,149 --> 00:23:15,120

uh high school so that's one thing uh

466

00:23:17,190 --> 00:23:16,159

i'm not gonna ask this but they always

467

00:23:18,870 --> 00:23:17,200

ask you how do you go to the bathroom

468

00:23:21,590 --> 00:23:18,880

stuff like that you want a notion my

469

00:23:23,669 --> 00:23:21,600

co-anchor chanel marie jones

470

00:23:25,350 --> 00:23:23,679

wants to know

471

00:23:29,110 --> 00:23:25,360

how do you go to the bathroom you go in

472

00:23:33,350 --> 00:23:31,190

let's just say it involves airflow

473

00:23:43,510 --> 00:23:33,360

rather than gravity i will just leave it

474

00:23:46,710 --> 00:23:44,789

thank you all very much well we didn't

475

00:23:48,549 --> 00:23:46,720

talk to rex uh all right thank you all

476

00:23:49,909 --> 00:23:48,559

very much and con congratulations

477

00:23:54,310 --> 00:23:49,919

especially to our commander chris

478

00:23:57,430 --> 00:23:55,830

hello to my family and friends in

479

00:24:01,750 --> 00:23:57,440

philadelphia drexel university

480

00:24:03,750 --> 00:24:01,760

archbishop ryan go philly that's right

481

00:24:05,430 --> 00:24:03,760

can i tell you i'm not even kidding this

482

00:24:10,870 --> 00:24:05,440

makes me want to go back to school and

483

00:24:16,390 --> 00:24:12,950

atlantis iss this is houston thanks so

484

00:24:16,400 --> 00:24:20,710

thank you that concludes the event

485

00:24:29,430 --> 00:24:27,350

thank you wbbm tv ktvu tv and wtxftv

486

00:25:40,950 --> 00:24:29,440

atlantis iss we are now resuming

487

00:25:40,960 --> 00:26:31,909

good

488

00:26:31,919 --> 00:27:08,390

hey

489

00:30:59,110 --> 00:27:24,870

okay

490

00:31:03,509 --> 00:31:01,029

this is mission control houston five

491

00:31:05,269 --> 00:31:03,519

days 22 hours 17 minutes into the flight

492

00:31:06,549 --> 00:31:05,279

of atlantis to the international space

493

00:31:08,710 --> 00:31:06,559

station

494

00:31:11,430 --> 00:31:08,720

with the completion of our second set of

495

00:31:12,870 --> 00:31:11,440

interviews with atlantis astronauts now

496

00:31:14,470 --> 00:31:12,880

complete

497

00:31:16,310 --> 00:31:14,480

we will

498

00:31:20,549 --> 00:31:16,320

look forward in about

499

00:31:22,070 --> 00:31:20,559

14 minutes to the first airing of

500

00:31:24,149 --> 00:31:22,080

the video

501  
00:31:26,470 --> 00:31:24,159  
that was acquired through cameras on the

502  
00:31:28,789 --> 00:31:26,480  
solid rocket boosters the solid rocket

503  
00:31:30,950 --> 00:31:28,799  
booster video that was acquired for

504  
00:31:33,029 --> 00:31:30,960  
atlantis final launch on the last launch

505  
00:31:36,070 --> 00:31:33,039  
in shuttle program history

506  
00:31:38,549 --> 00:31:36,080  
last friday at 10 29 a.m central time

507  
00:31:40,190 --> 00:31:38,559  
from the kennedy space center

508  
00:31:43,430 --> 00:31:40,200  
again the

509  
00:31:45,669 --> 00:31:43,440  
sts-135 solid rocket booster video

510  
00:31:48,230 --> 00:31:45,679  
from last friday's launch of atlantis to

511  
00:31:50,870 --> 00:31:48,240  
be played for the first time at 9

512  
00:31:52,230 --> 00:31:50,880  
central time there are replays of this

513  
00:32:04,230 --> 00:31:52,240

scheduled throughout the course of the

514

00:32:08,230 --> 00:32:05,990

here in the shuttle flight control room

515

00:32:10,470 --> 00:32:08,240

a shift handover has just begun as the

516

00:32:12,549 --> 00:32:10,480

orbit 2 team led by flight director rick

517

00:32:14,789 --> 00:32:12,559

lebrode working bankers hours during

518

00:32:17,029 --> 00:32:14,799

this mission

519

00:32:19,190 --> 00:32:17,039

about to take over from the lead shuttle

520

00:32:21,269 --> 00:32:19,200

flight control team the orbit one team

521

00:32:45,669 --> 00:32:21,279

that has been on console since 12 30

522

00:32:49,509 --> 00:32:47,750

as the crew members press into the

523

00:32:51,990 --> 00:32:49,519

second half of their day this will be

524

00:32:58,470 --> 00:32:52,000

off-duty time for the 10 crew members on

525

00:33:02,630 --> 00:33:00,549

this is uh the first opportunity since

526

00:33:05,509 --> 00:33:02,640

atlantis docked to the station sunday

527

00:33:07,190 --> 00:33:05,519

morning for the crew members to catch up

528

00:33:10,230 --> 00:33:07,200

on some work

529

00:33:12,549 --> 00:33:10,240

to essentially relax and take a breather

530

00:33:15,830 --> 00:33:12,559

and enjoy the view of earth from orbit

531

00:33:17,190 --> 00:33:15,840

with their station counterparts

532

00:33:18,789 --> 00:33:17,200

commander chris ferguson in the

533

00:33:20,230 --> 00:33:18,799

foreground pilot doug hurley in the

534

00:33:22,710 --> 00:33:20,240

background down in the mid deck of

535

00:33:24,549 --> 00:33:22,720

atlantis where they have been working

536

00:33:28,950 --> 00:33:24,559

with some of the stowage activities for

537

00:33:34,310 --> 00:33:31,549

the shuttle station complex is orbiting

538

00:33:36,950 --> 00:33:34,320

246 miles above the earth crossing over

539

00:33:38,950 --> 00:33:36,960

the sahara desert

540

00:33:42,470 --> 00:33:38,960

moving from northwest to southeast

541

00:33:44,950 --> 00:33:42,480

across the eastern portion of africa

542

00:33:46,870 --> 00:33:44,960

soon to cross over into the

543

00:34:10,149 --> 00:33:46,880

indian ocean

544

00:34:14,710 --> 00:34:12,149

once again the crew members have been

545

00:34:17,430 --> 00:34:14,720

working uh over the past several hours

546

00:34:19,510 --> 00:34:17,440

on continuing the cargo transfer of

547

00:34:23,510 --> 00:34:19,520

items from the rafaello multipurpose

548

00:34:25,510 --> 00:34:23,520

logistics module that is mated

549

00:34:27,270 --> 00:34:25,520

to the earth-facing side of the harmony

550

00:34:29,750 --> 00:34:27,280

module of the international space

551  
00:34:33,270 --> 00:34:29,760  
station all of that cargo transfer

552  
00:34:35,909 --> 00:34:33,280  
moving from the cargo module itself onto

553  
00:34:37,510 --> 00:34:35,919  
the station that will provide a year's

554  
00:34:40,389 --> 00:34:37,520  
worth of uh

555  
00:34:41,750 --> 00:34:40,399  
stockpiling for the station crews uh

556  
00:34:44,389 --> 00:34:41,760  
including the current crew the

557  
00:34:46,950 --> 00:34:44,399  
expedition 28 crew the commander of the

558  
00:34:49,349 --> 00:34:46,960  
station andre barasenska along with his

559  
00:34:51,030 --> 00:34:49,359  
russian crewmates alexander samokutyayev

560  
00:34:52,950 --> 00:34:51,040  
and sergey volkov

561  
00:34:56,310 --> 00:34:52,960  
japanese flight engineer satoshi

562  
00:35:14,069 --> 00:34:56,320  
furukawa and nasa flight engineers ron

563  
00:35:18,230 --> 00:35:16,630

on the big loop um i was looking at the

564

00:35:20,069 --> 00:35:18,240

procedure and all it really says is

565

00:35:22,630 --> 00:35:20,079

apply the clear pen

566

00:35:24,230 --> 00:35:22,640

to the sensor uh so i guess i wanted to

567

00:35:25,349 --> 00:35:24,240

make sure

568

00:35:26,710 --> 00:35:25,359

i guess i wanted to figure out what

569

00:35:33,829 --> 00:35:26,720

exactly that means i'm looking at the

570

00:35:36,790 --> 00:35:35,109

i'm not really sure what i'm looking at

571

00:35:38,790 --> 00:35:36,800

actually so it looks it's black and it's

572

00:35:40,150 --> 00:35:38,800

kind of a cloth like surface and i'm i'm

573

00:35:42,630 --> 00:35:40,160

not really sure

574

00:35:45,829 --> 00:35:42,640

uh how that has got like attached to it

575

00:35:49,990 --> 00:35:45,839

it picks up dust off of the sensor or

576

00:35:50,000 --> 00:38:50,150

checking

577

00:38:56,310 --> 00:38:53,710

this is mission control houston sailing

578

00:38:58,470 --> 00:38:56,320

245 miles above the earth at a speed of

579

00:39:01,190 --> 00:38:58,480

5 miles a second the shuttle station

580

00:39:03,190 --> 00:39:01,200

complex has passed just south of the

581

00:39:04,390 --> 00:39:03,200

saudi peninsula skirting the east coast

582

00:39:06,470 --> 00:39:04,400

of africa

583

00:39:09,109 --> 00:39:06,480

moving from northwest to southeast in an

584

00:39:12,230 --> 00:39:09,119

orbit inclined 51.6 degrees to either

585

00:39:17,030 --> 00:39:14,470

everything going extremely well on board

586

00:39:18,950 --> 00:39:17,040

the two spacecraft this has been a day

587

00:39:23,109 --> 00:39:18,960

so far devoted to some in-flight

588

00:39:28,390 --> 00:39:25,589

the continuation of the transfer of

589

00:39:29,990 --> 00:39:28,400

cargo from the rafael

590

00:39:31,829 --> 00:39:30,000

logistics module over to the

591

00:39:32,630 --> 00:39:31,839

international space station and now the

592

00:39:35,589 --> 00:39:32,640

crew

593

00:39:37,910 --> 00:39:35,599

plans to enjoy some off-duty time

594

00:39:40,870 --> 00:39:37,920

cleaning that that you're working on is

595

00:39:43,829 --> 00:39:40,880

the in step

596

00:39:46,150 --> 00:39:43,839

three you're going to

597

00:39:48,150 --> 00:39:46,160

put the sensor clear loop

598

00:39:49,829 --> 00:39:48,160

over where the lens

599

00:39:52,470 --> 00:39:49,839

mounted

600

00:39:54,710 --> 00:39:52,480

and then the sensor clear pin

601  
00:39:57,030 --> 00:39:54,720  
would be put in the window of the loop

602  
00:40:03,510 --> 00:39:57,040  
and then you gently dab

603  
00:40:07,510 --> 00:40:05,349  
that all sounds great except you set me

604  
00:40:09,349 --> 00:40:07,520  
up in the message that the loop uh

605  
00:40:12,069 --> 00:40:09,359  
battery was not working and i should use

606  
00:40:14,309 --> 00:40:12,079  
a headlamp for the illumination but it

607  
00:40:16,790 --> 00:40:14,319  
sounds like big picture of the dad the

608  
00:40:18,390 --> 00:40:16,800  
end of this pen gets flat very gently

609  
00:40:19,829 --> 00:40:18,400  
dabbed on the sensor and that will pick

610  
00:40:28,230 --> 00:40:19,839  
up whatever debris is on there is that

611  
00:40:32,630 --> 00:40:30,150  
this conversation uh taking place

612  
00:40:35,670 --> 00:40:32,640  
between sandy magnus and the station

613  
00:40:38,630 --> 00:40:35,680

capcom rob hayhurst involves

614

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

a slightly uh leaking

615

00:40:43,030 --> 00:40:40,640

one of the water bags that the crew is

616

00:40:45,589 --> 00:40:43,040

filling up for transfer over to the

617

00:40:47,829 --> 00:40:45,599

international space station a slight

618

00:40:50,710 --> 00:40:47,839

leak at the point at which the bag is

619

00:40:55,190 --> 00:40:54,230

magnus plans to use some towels to dab

620

00:40:58,150 --> 00:40:55,200

off

621

00:41:00,790 --> 00:40:58,160

the leaky portion and to seal that up so

622

00:41:02,470 --> 00:41:00,800

that the bag can be usable over on the

623

00:41:04,870 --> 00:41:02,480

station's side one of

624

00:41:06,870 --> 00:41:04,880

a multiple number of bags that are being

625

00:41:10,550 --> 00:41:06,880

filled up with water and brought over to

626

00:41:15,349 --> 00:41:12,550

one reminder programming note coming up

627

00:41:17,270 --> 00:41:15,359

in four minutes uh we will air the solid

628

00:41:19,109 --> 00:41:17,280

rocket booster video from the boosters

629

00:41:20,790 --> 00:41:19,119

that helped propel atlantis to orbit

630

00:41:21,829 --> 00:41:20,800

last friday from the kennedy space

631

00:41:23,750 --> 00:41:21,839

center

632

00:41:26,390 --> 00:41:23,760

the solid rocket booster video with

633

00:41:29,990 --> 00:41:26,400

multiple views uh spectacular views of

634

00:41:32,950 --> 00:41:30,000

uh the launch of atlantis and the uh srb

635

00:41:35,190 --> 00:41:32,960

separation and uh very good

636

00:41:38,150 --> 00:41:35,200

the eventual splashdown of

637

00:41:39,910 --> 00:41:38,160

those boosters in the atlantic is 32

638

00:41:42,630 --> 00:41:39,920

minutes in length coming up at the top

639

00:41:44,950 --> 00:41:42,640

of the hour at 9 central time 10 eastern