



1  
00:00:22,310 --> 00:00:19,910  
chris ferguson indicating that rex

2  
00:00:24,150 --> 00:00:22,320  
walheim is getting consistent marks

3  
00:00:26,230 --> 00:00:24,160  
through the handheld laser that he's

4  
00:00:28,070 --> 00:00:26,240  
using

5  
00:00:31,189 --> 00:00:28,080  
yeah what we think is going on is you've

6  
00:00:32,790 --> 00:00:31,199  
got good handheld laser of course and uh

7  
00:00:35,590 --> 00:00:32,800  
we do think it's

8  
00:00:37,590 --> 00:00:35,600  
reflector too but the attitude is so out

9  
00:00:39,910 --> 00:00:37,600  
in our pop so that's probably accounting

10  
00:00:42,310 --> 00:00:39,920  
for it once the

11  
00:00:43,590 --> 00:00:42,320  
once the maneuver stops in a few degrees

12  
00:00:53,910 --> 00:00:43,600  
then we'll have a new

13  
00:00:57,430 --> 00:00:56,150

okay we copy steve and uh for our

14

00:01:03,830 --> 00:00:57,440

training we're gonna

15

00:01:03,840 --> 00:01:07,990

roger concur

16

00:01:08,000 --> 00:01:14,950

still 659 with with zero openings

17

00:01:14,960 --> 00:01:27,910

linus

18

00:01:30,950 --> 00:01:29,350

atlantis uh

19

00:01:33,910 --> 00:01:30,960

we think you can put in the new station

20

00:01:36,630 --> 00:01:33,920

attitude now on our pop uh pitch y'all

21

00:01:38,149 --> 00:01:36,640

roll would be 2700

22

00:01:43,990 --> 00:01:38,159

when the maneuver is complete but as you

23

00:01:48,149 --> 00:01:46,230

okay we'll do that

24

00:02:03,109 --> 00:01:48,159

hey we've got an update from rendezvous

25

00:02:07,749 --> 00:02:06,149

atlantis sitting rock steady 659 feet in

26  
00:02:09,350 --> 00:02:07,759  
front of the international space station

27  
00:02:11,430 --> 00:02:09,360  
about two and a half minute minutes to

28  
00:02:13,270 --> 00:02:11,440  
go in the yaw maneuver and the attitude

29  
00:02:15,670 --> 00:02:13,280  
determination and control officer as

30  
00:02:17,990 --> 00:02:15,680  
well as the power systems officer in the

31  
00:02:19,589 --> 00:02:18,000  
station flight control room reporting

32  
00:02:21,589 --> 00:02:19,599  
everything looking good and that

33  
00:02:23,990 --> 00:02:21,599  
temperatures on the struts for the solar

34  
00:02:25,910 --> 00:02:24,000  
arrays have come down a bit so it

35  
00:02:27,589 --> 00:02:25,920  
appears as if we're in good shape

36  
00:02:28,710 --> 00:02:27,599  
this yarn maneuver should be able to be

37  
00:02:31,910 --> 00:02:28,720  
completed

38  
00:02:33,830 --> 00:02:31,920

fully to its full 90 degree yaw and then

39

00:02:35,910 --> 00:02:33,840

the initiation of the half lap fly

40

00:02:43,430 --> 00:02:35,920

around by pilot doug hurley will get

41

00:02:47,830 --> 00:02:45,430

you can see the four vehicles as

42

00:02:50,470 --> 00:02:47,840

appendages from the russian segment of

43

00:02:53,270 --> 00:02:50,480

the international space station two

44

00:02:54,869 --> 00:02:53,280

soyuz vehicles two progress resupply

45

00:02:56,790 --> 00:02:54,879

vehicles

46

00:02:58,390 --> 00:02:56,800

at the international space station for

47

00:03:17,030 --> 00:02:58,400

the six crew members

48

00:03:21,750 --> 00:03:19,990

and to illustrate uh this 90 degree

49

00:03:23,670 --> 00:03:21,760

maneuver on the far right of the

50

00:03:25,750 --> 00:03:23,680

longitudinal axis

51  
00:03:27,990 --> 00:03:25,760  
axis of the space station that is

52  
00:03:30,630 --> 00:03:28,000  
pressurized mating adapter number two

53  
00:04:01,710 --> 00:03:30,640  
from which atlantis undocked 55 minutes

54  
00:04:07,750 --> 00:04:05,030  
671 feet on the hhl houston and it looks

55  
00:04:10,710 --> 00:04:07,760  
like that update of the attitude in uh

56  
00:04:12,070 --> 00:04:10,720  
our pop has put us a little closer 689

57  
00:04:15,910 --> 00:04:12,080  
or so is what we're seeing i assume

58  
00:04:15,920 --> 00:04:22,870  
okay copy atlantis yep we are

59  
00:04:27,670 --> 00:04:24,950  
updates from commander chris ferguson

60  
00:04:29,350 --> 00:04:27,680  
who's receiving the

61  
00:04:31,430 --> 00:04:29,360  
rendezvous tool

62  
00:04:35,270 --> 00:04:31,440  
information from rex walheim and sandy

63  
00:04:40,950 --> 00:04:37,310

atlantis uh around

64

00:04:49,590 --> 00:04:40,960

671 feet away panel r1 for some for our

65

00:04:55,110 --> 00:04:52,310

go ahead we're ready on r1

66

00:05:02,150 --> 00:04:55,120

panel r1 o2 tank 3 heaters alpha and

67

00:05:06,950 --> 00:05:05,430

go to tank three heaters a and b both

68

00:05:41,430 --> 00:05:06,960

are in auto

69

00:05:44,710 --> 00:05:43,110

in station atlantis you'll be happy to

70

00:05:52,150 --> 00:05:44,720

know you look just as good from the side

71

00:05:59,749 --> 00:05:53,909

thanks bertie not sure how to answer

72

00:05:59,759 --> 00:06:03,430

hey and that's our good side

73

00:06:03,440 --> 00:06:10,550

what he said

74

00:06:14,749 --> 00:06:12,629

chris ferguson and ron garan admiring

75

00:06:17,029 --> 00:06:14,759

each other at a distance of

76

00:06:18,710 --> 00:06:17,039

675 feet

77

00:06:20,469 --> 00:06:18,720

we are about a minute away from

78

00:06:22,390 --> 00:06:20,479

completing the yaw maneuver at which

79

00:06:25,670 --> 00:06:22,400

point ron garan

80

00:06:28,629 --> 00:06:27,029

have the station in the correct

81

00:06:31,029 --> 00:06:28,639

orientation through the russian

82

00:06:33,110 --> 00:06:31,039

thrusters on the international outpost

83

00:06:41,670 --> 00:06:33,120

and doug hurley aboard atlantis will be

84

00:06:46,150 --> 00:06:43,990

and the space station now in the correct

85

00:07:00,150 --> 00:06:46,160

orientation having completed its 90

86

00:07:04,950 --> 00:07:01,909

atlantis houston

87

00:07:10,070 --> 00:07:04,960

in uh block eight alpha step five you

88

00:07:14,390 --> 00:07:11,670

copy go for the fly around we're in

89

00:07:15,830 --> 00:07:14,400

block nine alpha with you um we've

90

00:07:22,070 --> 00:07:15,840

loaded the maneuver already and if

91

00:07:22,080 --> 00:07:54,070

we're ready for it

92

00:07:58,469 --> 00:07:55,909

the international space station

93

00:08:00,629 --> 00:07:58,479

completed its 90 degree yaw maneuver

94

00:08:02,469 --> 00:08:00,639

almost to the second on the timeline

95

00:08:05,430 --> 00:08:02,479

that was laid out

96

00:08:07,270 --> 00:08:05,440

in the preparation for this activity

97

00:08:10,150 --> 00:08:07,280

beginning

98

00:08:12,629 --> 00:08:10,160

that yaw maneuver at 1 55 a.m central

99

00:08:14,710 --> 00:08:12,639

time completing it at 2 26 am central

100

00:08:16,230 --> 00:08:14,720

time so with the station in the proper

101  
00:08:18,710 --> 00:08:16,240  
orientation

102  
00:08:21,749 --> 00:08:18,720  
pilot doug hurley now initiating his

103  
00:08:24,230 --> 00:08:21,759  
half lap fly around this will put

104  
00:08:27,189 --> 00:08:24,240  
atlantis at a radial distance of about

105  
00:08:30,550 --> 00:08:27,199  
670 feet away from the station

106  
00:08:32,709 --> 00:08:30,560  
he will first fly to a point uh

107  
00:08:35,589 --> 00:08:32,719  
basically in a reverse flip if you will

108  
00:08:36,709 --> 00:08:35,599  
uh to a point about 670 feet directly

109  
00:08:39,350 --> 00:08:36,719  
above

110  
00:08:41,509 --> 00:08:39,360  
the station than behind the station

111  
00:08:43,750 --> 00:08:41,519  
where the first of two

112  
00:08:46,470 --> 00:08:43,760  
firings of reaction control system jets

113  
00:08:47,430 --> 00:08:46,480

will take place the sep 1 burn to take

114

00:08:50,150 --> 00:08:47,440

place

115

00:08:52,070 --> 00:08:50,160

at a point about 670 feet

116

00:08:54,230 --> 00:08:52,080

on the velocity vector but directly

117

00:08:55,990 --> 00:08:54,240

behind the complex and then the final

118

00:08:58,230 --> 00:08:56,000

separation burn to depart the

119

00:08:59,110 --> 00:08:58,240

international space station for the last

120

00:09:00,389 --> 00:08:59,120

time

121

00:09:01,990 --> 00:09:00,399

occurring

122

00:09:20,230 --> 00:09:02,000

at a point in which atlantis will be

123

00:09:47,269 --> 00:09:21,990

a very good view of the international

124

00:09:50,949 --> 00:09:48,790

on the far left

125

00:09:53,750 --> 00:09:50,959

docked to the aft end of the zvezda

126

00:09:57,430 --> 00:09:53,760

service module

127

00:09:58,949 --> 00:09:57,440

that is the iss progress 43 resupply

128

00:10:02,870 --> 00:09:58,959

ship that arrived at the international

129

00:10:05,190 --> 00:10:02,880

space station on june 23rd

130

00:10:07,430 --> 00:10:05,200

the two vehicles that are docked at

131

00:10:09,910 --> 00:10:07,440

opposite ports uh vertically to the

132

00:10:12,310 --> 00:10:09,920

longitudinal axis of the station

133

00:10:15,430 --> 00:10:12,320

the space facing side belongs to the

134

00:10:20,069 --> 00:10:17,990

docked to the zenith port of the service

135

00:10:22,790 --> 00:10:20,079

module is the poisk

136

00:10:26,470 --> 00:10:22,800

that is the 26 soyuz vehicle that

137

00:10:28,949 --> 00:10:26,480

arrived on april 6th or the soyuz tma-21

138

00:10:31,829 --> 00:10:28,959

that is the vehicle for andre barasinka

139

00:10:33,269 --> 00:10:31,839

alexander sama kutiayev and ron garan

140

00:10:35,269 --> 00:10:33,279

directly opposite that on the

141

00:10:37,590 --> 00:10:35,279

earth-facing port that is the piers

142

00:10:39,430 --> 00:10:37,600

docking compartment that

143

00:10:42,790 --> 00:10:39,440

is the residence at the moment for the

144

00:10:46,389 --> 00:10:42,800

iss progress 42 resupply ship that

145

00:10:48,470 --> 00:10:46,399

arrived on april 29th

146

00:10:50,470 --> 00:10:48,480

and next to it sort of in the middle of

147

00:10:54,069 --> 00:10:50,480

the longitudinal axis that is the

148

00:10:58,829 --> 00:10:54,079

rossviet module and the home of the 27

149

00:11:01,670 --> 00:10:58,839

soyuz vehicle or the soyuz t uh tma-02m

150

00:11:04,389 --> 00:11:01,680

spacecraft that delivered sergey volkov

151  
00:11:06,150 --> 00:11:04,399  
satoshi furukawa and mike fossum to the

152  
00:12:50,710 --> 00:11:06,160  
international space station in early

153  
00:12:54,629 --> 00:12:52,550  
this view through the center line camera

154  
00:12:57,030 --> 00:12:54,639  
in the orbiter docking system

155  
00:12:58,310 --> 00:12:57,040  
of the international space station as uh

156  
00:12:59,750 --> 00:12:58,320  
the big group we're enjoying the view of

157  
00:13:01,829 --> 00:12:59,760  
the station through the center line

158  
00:13:03,269 --> 00:13:01,839  
camera

159  
00:13:04,550 --> 00:13:03,279  
if there's a time when uh you want to

160  
00:13:11,190 --> 00:13:04,560  
download something other than the center

161  
00:13:11,200 --> 00:13:14,790  
okay standby

162  
00:13:21,110 --> 00:13:16,389  
atlantis and the international space

163  
00:13:24,310 --> 00:13:21,120

station separated by 648 feet flying

164

00:14:32,710 --> 00:13:24,320

over china at the moment

165

00:14:37,509 --> 00:14:35,110

at the flight deck of atlantis

166

00:14:40,069 --> 00:14:37,519

pilot doug hurley is uh at the controls

167

00:14:43,350 --> 00:14:40,079

as he continues uh the fly around that

168

00:14:45,350 --> 00:14:43,360

will take atlantis to a point about 645

169

00:14:47,269 --> 00:14:45,360

or so feet directly above the

170

00:14:48,310 --> 00:14:47,279

international space station a short time

171

00:14:50,949 --> 00:14:48,320

from now

172

00:14:52,870 --> 00:14:50,959

then to a point behind the station for

173

00:14:55,350 --> 00:14:52,880

the first of two firings of reaction

174

00:14:57,509 --> 00:14:55,360

control system jets in a two-step

175

00:14:59,350 --> 00:14:57,519

separation maneuver that will enable

176

00:15:02,069 --> 00:14:59,360

atlantis to depart the station for the

177

00:15:04,310 --> 00:15:02,079

final time

178

00:16:40,949 --> 00:15:04,320

the first of these two burns scheduled

179

00:16:46,150 --> 00:16:42,949

in the space station flight control room

180

00:16:48,069 --> 00:16:46,160

the power systems officer has reported

181

00:16:50,710 --> 00:16:48,079

and is keeping

182

00:16:53,110 --> 00:16:50,720

flight director jerry jason updated on

183

00:16:57,110 --> 00:16:53,120

the temperatures on the uh longerons of

184

00:17:02,069 --> 00:16:59,670

the uh temperatures are still holding in

185

00:17:02,790 --> 00:17:02,079

looking uh acceptable

186

00:17:05,350 --> 00:17:02,800

no

187

00:17:10,949 --> 00:17:05,360

issues at the moment

188

00:17:15,429 --> 00:17:13,270

once the separation maneuver is uh

189

00:17:18,230 --> 00:17:15,439

executed by doug hurley

190

00:17:20,150 --> 00:17:18,240

to enable atlantis to depart the station

191

00:17:22,470 --> 00:17:20,160

then the international space station

192

00:17:26,710 --> 00:17:22,480

will be maneuvered back into its normal

193

00:17:31,830 --> 00:17:29,909

sandy magnus and rex walheim are

194

00:17:34,310 --> 00:17:31,840

equipped with a variety of digital

195

00:17:36,310 --> 00:17:34,320

cameras and high-powered lenses

196

00:17:38,870 --> 00:17:36,320

they are documenting

197

00:17:42,710 --> 00:17:40,630

exterior of the international space

198

00:17:44,390 --> 00:17:42,720

station at this unique view

199

00:17:46,470 --> 00:17:44,400

where the longitudinal axis of the

200

00:18:23,750 --> 00:17:46,480

station is being presented to them

201  
00:18:27,750 --> 00:18:25,750  
almost almost directly above the

202  
00:18:30,310 --> 00:18:27,760  
international space station

203  
00:18:34,710 --> 00:18:30,320  
you can see uh the varying views the

204  
00:18:40,150 --> 00:18:37,909  
beta gimbal assemblies to optimize

205  
00:18:43,029 --> 00:18:40,160  
solar array

206  
00:18:47,510 --> 00:18:43,039  
absorption of sunlight to be converted

207  
00:18:54,710 --> 00:18:48,710  
okay

208  
00:18:58,390 --> 00:18:56,870  
on the far right of the axis of the

209  
00:19:02,230 --> 00:18:58,400  
space station

210  
00:19:06,390 --> 00:19:04,710  
in the horizontal position basically as

211  
00:19:08,789 --> 00:19:06,400  
you look at this view that's where

212  
00:19:10,789 --> 00:19:08,799  
atlantis was docked to and on either

213  
00:19:13,110 --> 00:19:10,799

side those two large modules at the

214

00:19:14,950 --> 00:19:13,120

bottom is the european space agency's

215

00:19:16,390 --> 00:19:14,960

columbus laboratory

216

00:19:18,150 --> 00:19:16,400

and uh on

217

00:19:20,230 --> 00:19:18,160

on the top of harmony as you look at

218

00:19:23,190 --> 00:19:20,240

this view from directly above the space

219

00:19:25,909 --> 00:19:23,200

station is the large japanese segment of

220

00:21:23,669 --> 00:19:25,919

the complex the kibo module and its

221

00:21:28,470 --> 00:21:25,669

atlantis now beginning to move to a

222

00:21:30,510 --> 00:21:28,480

position behind the space station

223

00:21:33,590 --> 00:21:30,520

maintaining a radial distance of about

224

00:21:36,070 --> 00:21:33,600

685 feet or so

225

00:21:38,630 --> 00:21:36,080

the fly around going very well

226

00:22:18,390 --> 00:21:38,640

and all of the space station systems

227

00:22:18,400 --> 00:22:25,669

rock 10 elephant work houston

228

00:22:34,789 --> 00:22:27,990

copy 10 alpha we think we're on tcs

229

00:22:37,909 --> 00:22:36,549

uh you got clipped off there see which

230

00:22:54,070 --> 00:22:37,919

reflector do you think

231

00:22:58,390 --> 00:22:56,070

okay uh reflect your three steve and

232

00:23:09,830 --> 00:22:58,400

we're seeing about the 685 on the range

233

00:23:14,310 --> 00:23:11,830

you can see the jets firing on atlantis

234

00:23:15,350 --> 00:23:14,320

doug hurley in control of the aft flight

235

00:23:16,950 --> 00:23:15,360

deck

236

00:23:20,549 --> 00:23:16,960

atlantis and the international space

237

00:23:46,710 --> 00:23:20,559

station separated by 685 feet flying

238

00:23:51,590 --> 00:23:48,470

atlanta station on the big loop we see

239

00:23:55,430 --> 00:23:51,600

you from sergey's bedroom window

240

00:23:55,440 --> 00:24:06,549

you guys look good from here

241

00:24:10,310 --> 00:24:08,710

flight engineer ron garan admiring the

242

00:24:12,950 --> 00:24:10,320

view of atlantis

243

00:24:15,669 --> 00:24:12,960

chris ferguson responding

244

00:24:17,990 --> 00:24:15,679

doug hurley uh busy flying atlantis at

245

00:24:19,990 --> 00:24:18,000

the moment

246

00:24:21,909 --> 00:24:20,000

the orbiter is uh behind the

247

00:24:23,669 --> 00:24:21,919

international space station we're about

248

00:24:27,430 --> 00:24:23,679

six minutes away from the first of two

249

00:24:34,310 --> 00:24:30,950

the first uh burn a sep one burn is 1.5

250

00:24:37,269 --> 00:24:34,320

foot per second radial downward burn

251  
00:24:39,669 --> 00:24:37,279  
that will enable atlantis to move to a

252  
00:24:42,230 --> 00:24:39,679  
position directly below the station for

253  
00:24:44,310 --> 00:24:42,240  
the final separation burn a sep 2 burn

254  
00:24:46,310 --> 00:24:44,320  
which is a larger component 10 feet per

255  
00:24:47,990 --> 00:24:46,320  
second a retrograde burn that will

256  
00:25:32,789 --> 00:24:48,000  
enable atlantis to depart the station

257  
00:25:40,310 --> 00:25:34,789  
houston we're going to auto the data on

258  
00:25:40,320 --> 00:27:46,230  
and we'll go for that fergie

259  
00:27:49,110 --> 00:27:47,350  
it has been

260  
00:27:51,029 --> 00:27:49,120  
almost an hour and 20 minutes since

261  
00:27:55,269 --> 00:27:51,039  
atlantis undocked from the international

262  
00:27:59,269 --> 00:27:57,110  
the orbiter under the control of pilot

263  
00:28:02,149 --> 00:27:59,279

doug hurley moved to a point directly in

264

00:28:03,590 --> 00:28:02,159

front of the station of about 600

265

00:28:06,710 --> 00:28:03,600

plus feet

266

00:28:08,310 --> 00:28:06,720

and held in a station keeping position

267

00:28:10,630 --> 00:28:08,320

for about

268

00:28:13,590 --> 00:28:10,640

31 minutes to enable the station to

269

00:28:14,870 --> 00:28:13,600

maneuver and yaw 90 degrees

270

00:28:16,630 --> 00:28:14,880

presenting

271

00:28:19,110 --> 00:28:16,640

the length of the axis of the station

272

00:28:21,510 --> 00:28:19,120

the longitudinal axis of the station to

273

00:28:23,669 --> 00:28:21,520

atlantis for the beginning of the fly

274

00:28:25,750 --> 00:28:23,679

around that got underway about 22

275

00:28:28,950 --> 00:28:25,760

minutes or so ago

276

00:28:31,110 --> 00:28:28,960

hurley is now at a position

277

00:28:34,549 --> 00:28:31,120

almost directly behind the station at a

278

00:28:37,190 --> 00:28:34,559

distance of 671 feet maintaining

279

00:28:38,870 --> 00:28:37,200

a distance

280

00:28:40,630 --> 00:28:38,880

everything looking very good

281

00:28:42,070 --> 00:28:40,640

documentation of the station is

282

00:28:44,630 --> 00:28:42,080

continuing by

283

00:28:47,269 --> 00:28:44,640

sandy magnus and rex walheim who are

284

00:28:49,190 --> 00:28:47,279

also joining chris ferguson

285

00:28:51,669 --> 00:28:49,200

up on the flight deck of atlantis to

286

00:28:54,630 --> 00:28:51,679

measure with handheld lasers and other

287

00:28:56,470 --> 00:28:54,640

rendezvous tools of the distance and the

288

00:29:48,070 --> 00:28:56,480

maintenance of the distance

289

00:29:51,750 --> 00:29:49,669

and through the

290

00:29:54,310 --> 00:29:51,760

shuttle's

291

00:29:56,549 --> 00:29:54,320

s-band communication system the

292

00:29:58,870 --> 00:29:56,559

sequential still video view this is a

293

00:30:00,950 --> 00:29:58,880

frame refreshed view in the absence of a

294

00:30:02,310 --> 00:30:00,960

downlink ku band capability at the

295

00:30:06,070 --> 00:30:02,320

moment from

296

00:30:07,990 --> 00:30:06,080

atlantis looking back at the station

297

00:30:10,310 --> 00:30:08,000

which will maneuver back into its normal

298

00:30:12,470 --> 00:30:10,320

orientation following a final separation

299

00:30:15,269 --> 00:30:12,480

maneuver we're about 24 seconds away

300

00:30:17,750 --> 00:30:15,279

from the first separation burn uh by a

301  
00:30:23,909 --> 00:30:17,760  
pilot doug hurley this will be a 1.5

302  
00:30:29,430 --> 00:30:27,669  
gappy we're with with you in eight bravo

303  
00:30:47,430 --> 00:30:29,440  
this will be about a four second burst

304  
00:31:07,509 --> 00:30:50,789  
and you saw the jets firing

305  
00:31:24,149 --> 00:31:11,350  
16 21 40 for the burn houston

306  
00:31:29,750 --> 00:31:27,669  
that initial separation maneuver fired

307  
00:31:32,870 --> 00:31:29,760  
by doug hurley this pulse of the

308  
00:31:34,630 --> 00:31:32,880  
reaction control system jets basically

309  
00:31:36,870 --> 00:31:34,640  
hastens

310  
00:31:40,149 --> 00:31:36,880  
atlantis's

311  
00:31:41,750 --> 00:31:40,159  
traverse down to a position about 671

312  
00:31:44,789 --> 00:31:41,760  
feet directly below the international

313  
00:31:47,350 --> 00:31:44,799

space station at which point the second

314

00:31:49,029 --> 00:31:47,360

separation burn will take place this is

315

00:31:50,710 --> 00:31:49,039

essentially the final burn in the

316

00:32:15,110 --> 00:31:50,720

vicinity of the international space

317

00:32:21,509 --> 00:32:16,630

atlantis houston on the big loop with

318

00:32:21,519 --> 00:32:24,789

i know what you're going to tell me

319

00:32:24,799 --> 00:32:46,310

roger

320

00:32:51,590 --> 00:32:47,750

here on the sm antenna page here comes

321

00:32:51,600 --> 00:32:58,630

thank you fergie

322

00:32:58,640 --> 00:33:05,190

thanks a lot

323

00:33:09,990 --> 00:33:07,110

in the space station flight control room

324

00:33:13,029 --> 00:33:10,000

jerry jason the station flight director

325

00:33:14,630 --> 00:33:13,039

has indicated that the maneuvering of

326

00:33:16,789 --> 00:33:14,640

the international space station by

327

00:33:19,190 --> 00:33:16,799

russian thrusters back to the normal

328

00:33:20,710 --> 00:33:19,200

orientation should begin about five

329

00:33:22,710 --> 00:33:20,720

minutes from now

330

00:33:24,310 --> 00:33:22,720

that will enable

331

00:33:26,310 --> 00:33:24,320

atlantis to be in a position almost

332

00:33:27,830 --> 00:33:26,320

directly below the international space

333

00:33:29,909 --> 00:33:27,840

station

334

00:33:31,269 --> 00:33:29,919

uh we'll be uh coming out underneath you

335

00:33:32,950 --> 00:33:31,279

and i should have a good view from the

336

00:33:34,710 --> 00:33:32,960

cupola i'm not sure when we're gonna

337

00:33:36,149 --> 00:33:34,720

break down the big loop but uh if it's

338

00:33:39,029 --> 00:33:36,159

anytime soon we just wanted to give you

339

00:33:40,630 --> 00:33:39,039

a final uh goodbye hey thanks fergie

340

00:33:42,389 --> 00:33:40,640

we'll be watching you from the uh sm

341

00:33:44,870 --> 00:33:42,399

windows and you guys look really good on

342

00:33:46,389 --> 00:33:44,880

the firearm from what we can see and

343

00:33:47,350 --> 00:33:46,399

again thank you so much for all that you

344

00:33:48,950 --> 00:33:47,360

guys

345

00:34:07,669 --> 00:33:48,960

have done for us up here we really

346

00:34:12,069 --> 00:34:09,750

you couldn't script it any better but as

347

00:34:14,869 --> 00:34:12,079

atlantis flies into an orbital sunset

348

00:34:18,629 --> 00:34:14,879

about to execute its second separation

349

00:34:23,109 --> 00:34:20,869

ron garan communicating with chris

350

00:34:24,950 --> 00:34:23,119

ferguson as atlantis approaches a point

351

00:34:27,270 --> 00:34:24,960

uh directly below the international

352

00:34:30,710 --> 00:34:27,280

space station that second separation

353

00:34:32,869 --> 00:34:30,720

burn will be noted as uh both ferguson

354

00:34:34,550 --> 00:34:32,879

and garin who heads up u.s orbital

355

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

segment operations

356

00:34:38,310 --> 00:34:36,560

as one of the two nasa flight engineers

357

00:34:41,589 --> 00:34:38,320

on board the international space station

358

00:34:45,990 --> 00:34:43,750

the station crew is watching this

359

00:34:48,069 --> 00:34:46,000

activity now out of the zvezda service

360

00:34:49,909 --> 00:34:48,079

module windows their best vantage point

361

00:36:43,270 --> 00:34:49,919

for this particular orientation of the

362

00:36:47,109 --> 00:36:45,030

atlantis and the international space

363

00:36:50,069 --> 00:36:47,119

station flying just uh to the southeast

364

00:36:52,950 --> 00:36:50,079

of the continent of australia

365

00:36:54,630 --> 00:36:52,960

atlantis uh moments away from departing

366

00:36:56,790 --> 00:36:54,640

from the international space station for

367

00:36:59,510 --> 00:36:56,800

the final time having undocked almost an

368

00:37:01,589 --> 00:36:59,520

hour and a half ago

369

00:37:03,349 --> 00:37:01,599

the fly around is essentially complete

370

00:37:06,870 --> 00:37:03,359

there'll be one more burst of the

371

00:37:08,390 --> 00:37:06,880

reaction control system jets

372

00:37:09,750 --> 00:37:08,400

that coming in

373

00:37:12,950 --> 00:37:09,760

21 minutes

374

00:37:49,109 --> 00:37:12,960

to complete atlantis 12th and final

375

00:37:54,069 --> 00:37:51,990

the last view of atlantis

376  
00:39:15,829 --> 00:37:54,079  
as both craft have

377  
00:39:19,510 --> 00:39:17,510  
in the space station flight control room

378  
00:39:20,630 --> 00:39:19,520  
the attitude determination and control

379  
00:39:22,550 --> 00:39:20,640  
officer

380  
00:39:24,470 --> 00:39:22,560  
basically the station equivalent of the

381  
00:39:27,270 --> 00:39:24,480  
guidance navigation and control officer

382  
00:39:29,589 --> 00:39:27,280  
here in the shuttle room reporting that

383  
00:39:31,510 --> 00:39:29,599  
the international space station has

384  
00:39:32,870 --> 00:39:31,520  
begun its maneuver back into the normal

385  
00:39:35,589 --> 00:39:32,880  
orientation

386  
00:39:37,430 --> 00:39:35,599  
the fly around now complete standing by

387  
00:39:39,349 --> 00:39:37,440  
in just a few minutes for the final

388  
00:39:41,349 --> 00:39:39,359

separation burn that will take atlantis

389

00:40:47,829 --> 00:39:41,359

away from the space station for the last

390

00:40:55,829 --> 00:40:50,630

houston for the uh this next step burn

391

00:42:23,270 --> 00:40:57,990

hey thanks for checking and we agree

392

00:42:23,280 --> 00:42:28,829

atlantis houston on the big

393

00:42:34,790 --> 00:42:31,510

loop go ahead dan

394

00:42:36,710 --> 00:42:34,800

hey fergie from the ulf 7 orbit 1 team

395

00:42:38,150 --> 00:42:36,720

in the iss mission control room here in

396

00:42:40,069 --> 00:42:38,160

houston we just want to let you know

397

00:42:41,510 --> 00:42:40,079

that it's been our pleasure and honor to

398

00:42:43,510 --> 00:42:41,520

support this the

399

00:42:44,710 --> 00:42:43,520

37th mission of the space shuttle to the

400

00:42:46,630 --> 00:42:44,720

iss

401  
00:42:48,470 --> 00:42:46,640  
and we're proud to be the last in a

402  
00:42:50,470 --> 00:42:48,480  
countless line of mission control teams

403  
00:42:53,589 --> 00:42:50,480  
that have had the honor to watch over

404  
00:42:55,510 --> 00:42:53,599  
the iss while discovery and endeavor and

405  
00:42:56,790 --> 00:42:55,520  
atlantis have visited over the last 13

406  
00:42:58,870 --> 00:42:56,800  
years

407  
00:43:00,630 --> 00:42:58,880  
from this room we've watched the watched

408  
00:43:02,230 --> 00:43:00,640  
and supported as the shuttle has enabled

409  
00:43:04,309 --> 00:43:02,240  
the station to grow from

410  
00:43:06,710 --> 00:43:04,319  
a humble single module that was grappled

411  
00:43:08,710 --> 00:43:06,720  
by the stations on the shuttle's arm to

412  
00:43:10,630 --> 00:43:08,720  
a stunning facility that is so large

413  
00:43:12,710 --> 00:43:10,640

that some astronauts have even

414

00:43:15,510 --> 00:43:12,720

momentarily gotten lost in it

415

00:43:17,829 --> 00:43:15,520

you can you can take it from me

416

00:43:19,829 --> 00:43:17,839

so of course the iss wouldn't be here

417

00:43:21,589 --> 00:43:19,839

without the space shuttle so while we

418

00:43:24,069 --> 00:43:21,599

have the communication link up for the

419

00:43:26,470 --> 00:43:24,079

last time we wanted to say thank you and

420

00:43:28,870 --> 00:43:26,480

farewell to the magnificent machines

421

00:43:31,670 --> 00:43:28,880

that delivered assembled and staffed our

422

00:43:34,309 --> 00:43:31,680

world-class laboratory in space

423

00:43:36,550 --> 00:43:34,319

so fergie chunky sandy and rex get her

424

00:43:42,550 --> 00:43:36,560

home safely and enjoy the last couple

425

00:43:48,470 --> 00:43:45,349

hey uh dan and uh to the whole uh figure

426

00:43:50,630 --> 00:43:48,480

one team and the orbit one team uh jerry

427

00:43:52,550 --> 00:43:50,640

from jury on down uh we do appreciate

428

00:43:55,349 --> 00:43:52,560

those great words you know it's been

429

00:43:58,630 --> 00:43:55,359

it's been an incredible ride and uh

430

00:44:01,430 --> 00:43:58,640

i think on on behalf of the four of us

431

00:44:03,190 --> 00:44:01,440

uh we uh we're really appreciative that

432

00:44:05,190 --> 00:44:03,200

we had the opportunity to work with you

433

00:44:06,550 --> 00:44:05,200

and extremely fortunate to have taken

434

00:44:09,109 --> 00:44:06,560

part in this uh

435

00:44:10,630 --> 00:44:09,119

this pivotal mission um

436

00:44:13,349 --> 00:44:10,640

we're looking forward to in a couple

437

00:44:15,270 --> 00:44:13,359

days to meeting up with most of you and

438

00:44:16,630 --> 00:44:15,280

pat you on the back and sharing some of

439

00:44:18,230 --> 00:44:16,640

the stories some of the behind the

440

00:44:20,150 --> 00:44:18,240

scenes stuff that we hope we

441

00:44:22,150 --> 00:44:20,160

successfully hid from you

442

00:44:24,069 --> 00:44:22,160

but believe me there was a little bit of

443

00:44:26,630 --> 00:44:24,079

pandemonium between what appeared to be

444

00:44:28,390 --> 00:44:26,640

all the calm um and we're uh we're glad

445

00:44:31,589 --> 00:44:28,400

to be headed home and we're happy to

446

00:44:32,790 --> 00:44:31,599

serve with you we'll see you then

447

00:44:49,349 --> 00:44:32,800

fergie thanks a million we'll see you

448

00:44:53,510 --> 00:44:51,349

veteran astronaut and former expedition

449

00:44:55,990 --> 00:44:53,520

crew member dan tawney in the space

450

00:44:58,790 --> 00:44:56,000

station flight control room

451

00:45:00,790 --> 00:44:58,800

with an opportunity to say farewell to