



1
00:00:06,070 --> 00:00:04,870
less than one kilometer away from

2
00:00:08,150 --> 00:00:06,080
docking

3
00:00:09,669 --> 00:00:08,160
the soyuz spacecraft

4
00:00:11,990 --> 00:00:09,679
closing at a rate of

5
00:00:14,390 --> 00:00:12,000
three and a half meters per second at

6
00:00:16,870 --> 00:00:14,400
the correct speed once uh

7
00:00:19,189 --> 00:00:16,880
the soyuz docks or comes into contact

8
00:00:20,870 --> 00:00:19,199
and capture with the raspbian module on

9
00:00:22,230 --> 00:00:20,880
the earth-facing side of the russian

10
00:00:24,390 --> 00:00:22,240
segment of the international space

11
00:00:25,589 --> 00:00:24,400
station's zarya module

12
00:00:27,830 --> 00:00:25,599
there will be a

13
00:00:29,589 --> 00:00:27,840

few seconds worth of

14

00:00:31,429 --> 00:00:29,599

opportunity for the two spacecraft's

15

00:00:32,630 --> 00:00:31,439

relative motion to dampen out against

16

00:00:35,430 --> 00:00:32,640

one another

17

00:00:38,069 --> 00:00:35,440

they will come to a stable

18

00:00:40,630 --> 00:00:38,079

position of the two docking interfaces

19

00:00:42,470 --> 00:00:40,640

will stop the relative motion and that

20

00:00:43,910 --> 00:00:42,480

will enable the docking probe to be

21

00:00:46,310 --> 00:00:43,920

retracted

22

00:00:48,549 --> 00:00:46,320

basically drawing in the rassvet module

23

00:00:50,790 --> 00:00:48,559

for a hard mate enabling hooks and

24

00:00:52,790 --> 00:00:50,800

latches to close at the docking

25

00:00:55,110 --> 00:00:52,800

interface and set the stage for the

26

00:01:05,429 --> 00:00:55,120

initiation of three hours worth of leak

27

00:01:05,439 --> 00:01:15,830

station

28

00:01:15,840 --> 00:01:21,429

fly around in progress

29

00:01:27,910 --> 00:01:25,670

balance with the range 250 from course

30

00:01:28,789 --> 00:01:27,920

you can see against the cloudy backdrop

31

00:01:31,030 --> 00:01:28,799

of

32

00:01:33,830 --> 00:01:31,040

the southern pacific ocean

33

00:01:35,510 --> 00:01:33,840

you can see that flashing uh

34

00:01:38,310 --> 00:01:35,520

light that's not actually a light that

35

00:01:39,590 --> 00:01:38,320

is the radio beacon that is the core's

36

00:01:42,550 --> 00:01:39,600

antenna

37

00:01:44,950 --> 00:01:42,560

that sends out a radio beacon signal to

38

00:01:47,429 --> 00:01:44,960

a comparable system on the station

39

00:01:49,910 --> 00:01:47,439

itself

40

00:01:52,870 --> 00:01:49,920

that provides updates to the soyuz

41

00:01:55,830 --> 00:01:52,880

computers on the range of the spacecraft

42

00:01:59,030 --> 00:01:55,840

to its target and the rate of closure

43

00:02:01,670 --> 00:01:59,040

again you're looking uh

44

00:02:03,590 --> 00:02:01,680

at an outstanding view of a

45

00:02:07,109 --> 00:02:03,600

swirling cloud pattern that is not a

46

00:02:09,109 --> 00:02:07,119

hurricane we are flying 200

47

00:02:09,990 --> 00:02:09,119

18 statute miles

48

00:02:12,470 --> 00:02:10,000

just

49

00:02:14,229 --> 00:02:12,480

off of the coast of chile about to begin

50

00:02:15,750 --> 00:02:14,239

a southwest and northeasterly approach

51
00:02:18,470 --> 00:02:15,760
that will carry the international space

52
00:02:26,150 --> 00:02:18,480
station across argentina and back over

53
00:02:49,430 --> 00:02:28,470
i do not have a visual of the target yet

54
00:02:53,430 --> 00:02:51,910
okay videos are going to the final

55
00:02:55,830 --> 00:02:53,440
approach

56
00:02:58,550 --> 00:02:55,840
as the soyuz station keeps at a distance

57
00:03:01,270 --> 00:02:58,560
of about 200 meters away

58
00:03:04,550 --> 00:03:01,280
you can see uh periodic thruster firings

59
00:03:06,229 --> 00:03:04,560
to maintain a stable uh distance

60
00:03:09,350 --> 00:03:06,239
while the russian flight control team

61
00:03:11,030 --> 00:03:09,360
makes its final analysis uh before uh

62
00:03:12,790 --> 00:03:11,040
giving approval for the core's automated

63
00:03:17,270 --> 00:03:12,800

rendezvous system to re-initiate the

64

00:03:22,149 --> 00:03:19,750

and with everything uh in great shape uh

65

00:03:25,670 --> 00:03:22,159

the soyuz has now initiated its final

66

00:03:30,470 --> 00:03:28,229

in 15 seconds will cancel the route and

67

00:03:44,949 --> 00:03:30,480

send v8 one two

68

00:03:53,429 --> 00:03:49,949

range from course 75 meters radial on

69

00:04:23,510 --> 00:03:53,439

30.38 and closing copy

70

00:04:27,110 --> 00:04:25,830

an outstanding view of the

71

00:04:29,110 --> 00:04:27,120

soyuz

72

00:04:30,870 --> 00:04:29,120

with the limit of the earth in the

73

00:04:33,270 --> 00:04:30,880

background

74

00:04:35,189 --> 00:04:33,280

just 33 meters separating the soyuz from

75

00:04:37,830 --> 00:04:35,199

the rossviet module on the far left of

76
00:04:40,790 --> 00:04:37,840
your screen the 42 progress cargo craft

77
00:04:42,550 --> 00:04:40,800
docked to the piers docking compartment

78
00:04:43,909 --> 00:04:42,560
the glittering solar rays of the us

79
00:04:46,150 --> 00:04:43,919
segment of the international space

80
00:04:48,150 --> 00:04:46,160
station on the right side of your screen

81
00:04:49,830 --> 00:04:48,160
the docking mechanism on the soyuz has

82
00:04:52,469 --> 00:04:49,840
been powered up and the core's automated

83
00:04:54,310 --> 00:04:52,479
rendezvous antenna has been retracted as

84
00:04:59,909 --> 00:04:54,320
planned um

85
00:05:03,029 --> 00:05:00,870
no more

86
00:05:07,909 --> 00:05:03,039
rotation

87
00:05:15,189 --> 00:05:11,189
final approach rate nominal

88
00:05:19,590 --> 00:05:17,830

small movement of the target relative to

89

00:05:21,350 --> 00:05:19,600

the center of vesica

90

00:05:31,670 --> 00:05:21,360

for example that's what the nominal

91

00:05:36,870 --> 00:05:34,790

okay go ahead and again bring the image

92

00:05:50,150 --> 00:05:36,880

to the full screen

93

00:05:55,029 --> 00:05:52,390

target is one cell to the right from the

94

00:05:58,950 --> 00:05:55,039

center of vascular everything is normal

95

00:05:58,960 --> 00:06:02,550

standing by for contact

96

00:06:02,560 --> 00:06:10,070

target is in the center

97

00:06:10,080 --> 00:06:47,029

foreign

98

00:06:54,790 --> 00:06:49,110

confirmed

99

00:07:04,550 --> 00:06:56,390

the international space station in free

100

00:07:08,629 --> 00:07:06,469

the hearty laugh of mike fossum

101
00:07:10,150 --> 00:07:08,639
signaling the arrival of three new

102
00:07:12,950 --> 00:07:10,160
residents of the international space

103
00:07:14,230 --> 00:07:12,960
station docking confirmed at 4 18 p.m

104
00:07:16,230 --> 00:07:14,240
central time

105
00:07:19,029 --> 00:07:16,240
as the soyuz tma-02m and the

106
00:07:21,029 --> 00:07:19,039
international space station flew 218

107
00:07:34,790 --> 00:07:21,039
statute miles to the northeast of rio de

108
00:07:38,870 --> 00:07:36,870
hatches are open

109
00:07:42,070 --> 00:07:38,880
at uh

110
00:07:44,230 --> 00:07:42,080
7 34 pm central time

111
00:07:46,710 --> 00:07:44,240
mike fossum floating in right behind

112
00:07:49,110 --> 00:07:46,720
sergey volkov

113
00:08:36,070 --> 00:07:49,120

and satoshi furukawa from the japan

114

00:08:41,750 --> 00:08:38,949

and congratulations on the successful

115

00:08:44,310 --> 00:08:41,760

completion of these

116

00:08:45,670 --> 00:08:44,320

important stage docking of the immense

117

00:08:47,509 --> 00:08:45,680

vehicle to the international space

118

00:08:54,310 --> 00:08:47,519

station we're very glad to see you all

119

00:08:59,590 --> 00:08:57,829

assures us that the program that we plan

120

00:09:01,190 --> 00:08:59,600

for your mission is going to be

121

00:09:02,630 --> 00:09:01,200

completed

122

00:09:05,110 --> 00:09:02,640

and that we're

123

00:09:12,150 --> 00:09:05,120

going to be looking forward to meeting

124

00:09:16,070 --> 00:09:13,990

i understand you're very excited right

125

00:09:17,590 --> 00:09:16,080

now i would like to make sure you can

126

00:09:20,470 --> 00:09:17,600

hear the voices

127

00:09:23,350 --> 00:09:20,480

not just of the russian mission control

128

00:09:26,630 --> 00:09:24,710

uh that are

129

00:09:28,389 --> 00:09:26,640

here and some surprises as well i'd like

130

00:09:31,190 --> 00:09:28,399

to

131

00:09:33,509 --> 00:09:31,200

let william kirsten meyer greet the

132

00:09:35,829 --> 00:09:33,519

international space station crew

133

00:09:37,910 --> 00:09:35,839

hello it's uh this is cursed it's great

134

00:09:39,910 --> 00:09:37,920

to see all you guys on orbit

135

00:09:42,150 --> 00:09:39,920

it's especially nice to see all six of

136

00:09:44,550 --> 00:09:42,160

you i think the space station needs all

137

00:09:46,710 --> 00:09:44,560

six of you to stay busy and have fun and

138

00:09:49,190 --> 00:09:46,720

you all look great and the smiles are

139

00:09:51,110 --> 00:09:49,200

just amazing so have a great expedition

140

00:09:52,870 --> 00:09:51,120

and take good care of the space station

141

00:09:54,310 --> 00:09:52,880

now i'll turn it over to mr soraki for

142

00:09:57,350 --> 00:09:54,320

some words and then we'll let you get to

143

00:10:04,230 --> 00:10:01,670

congratulations for expedition 28 crew

144

00:10:24,790 --> 00:10:04,240

i congratulate you are safer libra of

145

00:10:24,800 --> 00:10:46,150

foreign

146

00:10:52,949 --> 00:10:49,750

somebody hi mike this is mel

147

00:10:54,550 --> 00:10:52,959

i think congratulations from your

148

00:10:58,710 --> 00:10:54,560

hi

149

00:11:02,069 --> 00:10:58,720

your brother

150

00:11:03,350 --> 00:11:02,079

uh here in mission control moscow from

151
00:11:06,710 --> 00:11:03,360
your

152
00:11:07,910 --> 00:11:06,720
daughter from kerry jonathan emily and

153
00:11:10,550 --> 00:11:07,920
rebecca

154
00:11:12,550 --> 00:11:10,560
in mission control houston

155
00:11:16,710 --> 00:11:12,560
we're very proud of you for what you've

156
00:11:19,190 --> 00:11:16,720
accomplished in uh your training for uh

157
00:11:21,990 --> 00:11:19,200
getting to where you are right now

158
00:11:24,230 --> 00:11:22,000
we're very uh excited about what you

159
00:11:25,670 --> 00:11:24,240
will accomplish with your crew

160
00:11:28,790 --> 00:11:25,680
we're very

161
00:11:31,030 --> 00:11:28,800
eager to have you back with uh

162
00:11:32,389 --> 00:11:31,040
just to share in which in all that

163
00:11:34,470 --> 00:11:32,399

you've been through

164

00:11:37,350 --> 00:11:34,480

in this great mission

165

00:11:42,790 --> 00:11:37,360

uh go with our blessing and god's

166

00:11:46,949 --> 00:11:45,110

love you hun you guys have the hard job

167

00:11:49,269 --> 00:11:46,959

standing down the sidelines and watching

168

00:11:52,230 --> 00:11:49,279

us uh take off and do this so uh thank

169

00:11:58,710 --> 00:11:52,240

you very much god bless

170

00:12:16,389 --> 00:12:12,230

um

171

00:12:18,470 --> 00:12:16,399

i'm just i'm really happy to see you

172

00:12:20,389 --> 00:12:18,480

guys all there safe and all smiles it's

173

00:12:21,590 --> 00:12:20,399

really cool to see your face

174

00:12:23,030 --> 00:12:21,600

and um

175

00:12:25,030 --> 00:12:23,040

if i ever decide to go back to the

176

00:12:26,389 --> 00:12:25,040

states after this i'll be seeing you

177

00:12:30,230 --> 00:12:26,399

there so

178

00:12:36,790 --> 00:12:31,990

john you have a good time in moscow but

179

00:12:36,800 --> 00:12:52,230

okay

180

00:12:52,240 --> 00:13:09,910

foreign

181

00:13:13,829 --> 00:13:12,150

hey dad it's uh mitch

182

00:13:15,910 --> 00:13:13,839

you guys had a fantastic launch the

183

00:13:18,069 --> 00:13:15,920

other day and i'm sure you had a great

184

00:13:19,910 --> 00:13:18,079

last couple days i was pretty bright

185

00:13:22,389 --> 00:13:19,920

against the dark knight sky i think i

186

00:13:23,990 --> 00:13:22,399

might still have my pq but that that

187

00:13:26,310 --> 00:13:24,000

brightness is still burned into my

188

00:13:28,069 --> 00:13:26,320

cornea but i hope you enjoy your stay

189

00:13:29,269 --> 00:13:28,079

along the space station it's good to see

190

00:13:32,230 --> 00:13:29,279

that you and ron had a good little

191

00:13:37,750 --> 00:13:32,240

homecoming there and a reunion uh 220

192

00:13:43,189 --> 00:13:39,590

thanks mitch this is a one heck of a

193

00:13:46,790 --> 00:13:45,590

hey dad it's kenny that's a fantastic

194

00:13:49,670 --> 00:13:46,800

launch

195

00:13:52,150 --> 00:13:49,680

and the six months up there will pass in

196

00:13:54,790 --> 00:13:52,160

no time and

197

00:13:58,870 --> 00:13:54,800

i hope you have fun

198

00:14:03,509 --> 00:14:00,710

hey thanks kenny great talking to the

199

00:14:07,189 --> 00:14:03,519

sun and it will go by fast and look

200

00:14:10,230 --> 00:14:09,189

hey brother it's uh it's your brother

201
00:14:11,509 --> 00:14:10,240
terry

202
00:14:12,470 --> 00:14:11,519
just want to let you know we're proud of

203
00:14:16,550 --> 00:14:12,480
you

204
00:14:19,030 --> 00:14:16,560
background from around the world know

205
00:14:23,269 --> 00:14:19,040
that they can accomplish uncommon dreams

206
00:15:06,949 --> 00:14:25,590
love you bro glad you come along on the

207
00:15:06,959 --> 00:15:11,030
well i've got the phone again

208
00:15:15,110 --> 00:15:12,710
um

209
00:15:17,670 --> 00:15:15,120
i hope that it's a great i hope that

210
00:15:20,389 --> 00:15:17,680
it's a great reunion with uh your

211
00:15:23,670 --> 00:15:20,399
friends that were already up there

212
00:15:27,509 --> 00:15:26,310
and just know that that our prayers and

213
00:15:29,990 --> 00:15:27,519

our uh

214

00:15:32,389 --> 00:15:30,000

our good wishes are with you from

215

00:15:37,990 --> 00:15:32,399

here until you come back safely in

216

00:15:42,710 --> 00:15:39,990

thanks son yeah it's great seeing these

217

00:16:06,069 --> 00:15:42,720

guys up here ronnie and the boys like we

218

00:16:06,079 --> 00:16:15,749

your son

219

00:16:19,670 --> 00:16:18,550

too early or too late at night here in

220

00:16:21,110 --> 00:16:19,680

moscow

221

00:16:24,069 --> 00:16:21,120

they were worrying

222

00:16:27,110 --> 00:16:24,079

for you that we're all so glad

223

00:16:29,189 --> 00:16:27,120

that your docking went successfully they

224

00:16:31,590 --> 00:16:29,199

remember you

225

00:16:33,189 --> 00:16:31,600

didn't know you're on board but i'm sure

226

00:16:34,470 --> 00:16:33,199

you're going to talk to them assembly

227

00:16:38,069 --> 00:16:34,480

conferences

228

00:16:42,389 --> 00:16:39,590

i should remember that the mission

229

00:16:43,990 --> 00:16:42,399

control center is always

230

00:16:46,389 --> 00:16:44,000

thinking of you we will never leave you

231

00:16:48,470 --> 00:16:46,399

without support and looking at your

232

00:16:50,230 --> 00:16:48,480

smiling faces we can

233

00:16:51,990 --> 00:16:50,240

tell that you're in good mood and we're

234

00:16:53,910 --> 00:16:52,000

hoping that you're going to be in good

235

00:16:55,110 --> 00:16:53,920

mood until the very completion of your

236

00:16:57,670 --> 00:16:55,120

flight

237

00:16:59,829 --> 00:16:57,680

we're hoping everything goes well and

238

00:17:01,110 --> 00:16:59,839

you can always rely on people on the

239

00:17:03,110 --> 00:17:01,120

ground looking forward to seeing you

240

00:17:05,429 --> 00:17:03,120

again and

241

00:17:08,789 --> 00:17:05,439

we're going to have a lot of work ahead

242

00:17:10,470 --> 00:17:08,799

of us and a lot of uh

243

00:17:13,110 --> 00:17:10,480

meetings back on the ground when you

244

00:17:30,950 --> 00:17:13,120

come back oh the very best again

245

00:17:35,669 --> 00:17:33,350

um all the

246

00:17:38,070 --> 00:17:35,679

family and friends conferences are

247

00:17:39,830 --> 00:17:38,080

completed you can disassemble the um the

248

00:17:41,750 --> 00:17:39,840

proposal

249

00:17:43,350 --> 00:17:41,760

and welcome and board

250

00:17:45,830 --> 00:17:43,360

okay

