

Ф44 СБЛИЖЕНИЕ
ПРИЧАЛ ПРИЧАЛ

Б1

ДУС12 1

Р 178,1 ССВП ГТ

С1.26601

T=14:38:15

ИСК РСО 1234

рх -0,026%

рy 0,000%

рz 0,061%

КУРС 1

γ 2,98°

ψ -0,70°

θ -0,06°

ψ_n 0,07°

θ_n 0,14°

ρ 0,025

$\dot{\rho}$ -0,12

Φ ρ 0,028кн Ω_y -0,004 0,011

$\dot{\rho}$ -0,12м/с Ω_z -0,065 -0,074

1
00:00:05,269 --> 00:00:03,990
good day from the international space

2
00:00:07,349 --> 00:00:05,279
station flight control room at the

3
00:00:09,270 --> 00:00:07,359
johnson space center in houston where at

4
00:00:11,110 --> 00:00:09,280
this hour the orbit one team of flight

5
00:00:13,190 --> 00:00:11,120
controllers here at the johnson space

6
00:00:15,110 --> 00:00:13,200
center working in concert with their

7
00:00:16,630 --> 00:00:15,120
russian counterparts at the russian

8
00:00:19,349 --> 00:00:16,640
mission control center in the town of

9
00:00:21,429 --> 00:00:19,359
kariyaf outside moscow monitoring the

10
00:00:22,550 --> 00:00:21,439
final minutes of a three-day trek from

11
00:00:25,189 --> 00:00:22,560
the launch pad of the baikonur

12
00:00:27,269 --> 00:00:25,199
cosmodrome in kazakhstan to a docking to

13
00:00:31,189 --> 00:00:27,279

the international space station by the

14

00:00:34,389 --> 00:00:31,199

russian iss progress 45 resupply ship

15

00:00:37,830 --> 00:00:34,399

on sunday at baikonur at 5 11 a.m

16

00:00:40,150 --> 00:00:37,840

central time 4 11 p.m baikonur time

17

00:00:42,229 --> 00:00:40,160

the russian federal space agency bounced

18

00:00:44,950 --> 00:00:42,239

back from an august failure of the third

19

00:00:47,110 --> 00:00:44,960

stage of a soyuz booster rocket that

20

00:00:49,910 --> 00:00:47,120

resulted in the loss of the previous

21

00:00:52,790 --> 00:00:49,920

progress resupply ship the progress 44

22

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

to successfully launch its soyuz booster

23

00:00:56,549 --> 00:00:54,800

less than 10 minutes later the progress

24

00:00:58,630 --> 00:00:56,559

45 had been delivered into its

25

00:01:00,790 --> 00:00:58,640

preliminary orbit for the start of a

26

00:01:03,189 --> 00:01:00,800

three-day trek to link up to the piers

27

00:01:06,469 --> 00:01:03,199

docking compartment of the international

28

00:01:08,469 --> 00:01:06,479

space station progress 45 has been on an

29

00:01:10,789 --> 00:01:08,479

automated approach a computer-guided

30

00:01:13,030 --> 00:01:10,799

approach ever since its orbital

31

00:01:15,510 --> 00:01:13,040

insertion less than 10 minutes after its

32

00:01:17,270 --> 00:01:15,520

launch on sunday and now is approaching

33

00:01:20,390 --> 00:01:17,280

the station not

34

00:01:22,870 --> 00:01:20,400

more than 550 meters away about to begin

35

00:01:24,950 --> 00:01:22,880

a fly around to precisely align its

36

00:01:27,190 --> 00:01:24,960

forward docking probe to the piers

37

00:01:29,190 --> 00:01:27,200

docking compartment for a period of a

38

00:01:31,030 --> 00:01:29,200

few minutes of station keeping before

39

00:01:34,950 --> 00:01:31,040

the commands are issued for the final

40

00:01:36,630 --> 00:01:34,960

approach and a docking two piers

41

00:01:39,030 --> 00:01:36,640

flag is

42

00:01:41,030 --> 00:01:39,040

on the progress and the visiting vehicle

43

00:01:43,429 --> 00:01:41,040

officer here in mission control reports

44

00:01:46,230 --> 00:01:43,439

that the progress is uh computers have

45

00:01:48,630 --> 00:01:46,240

initiated a final approach for docking

46

00:01:51,350 --> 00:01:48,640

on schedule

47

00:01:54,310 --> 00:01:51,360

range rate increasing i visually see a

48

00:01:56,069 --> 00:01:54,320

bridge occurring

49

00:01:58,550 --> 00:01:56,079

visually i

50

00:02:00,789 --> 00:01:58,560

assess everything is nominal the balcony

51
00:02:02,950 --> 00:02:00,799
target is

52
00:02:05,350 --> 00:02:02,960
um out

53
00:02:08,869 --> 00:02:05,360
and to the left

54
00:02:10,949 --> 00:02:08,879
i have a

55
00:02:16,630 --> 00:02:10,959
uh square to the left

56
00:02:18,790 --> 00:02:16,640
of range right 0.5 meters per second

57
00:02:24,309 --> 00:02:18,800
progress now inside 100 meters to

58
00:02:28,790 --> 00:02:26,949
i clearly see the docking

59
00:02:31,830 --> 00:02:28,800
mission

60
00:02:33,350 --> 00:02:31,840
i the appears docking compartment

61
00:02:35,430 --> 00:02:33,360
became available

62
00:02:37,350 --> 00:02:35,440
with the undocking of the

63
00:02:39,430 --> 00:02:37,360

previous progress craft at the station

64

00:02:42,229 --> 00:02:39,440

the progress 42

65

00:02:45,030 --> 00:02:42,239

that uh undocked back on saturday and

66

00:02:48,710 --> 00:02:45,040

was deorbited to a destructive re-entry

67

00:02:53,589 --> 00:02:50,470

the piers docking compartment is the

68

00:02:55,430 --> 00:02:53,599

module delivered in september 2001

69

00:02:57,110 --> 00:02:55,440

that linked up automatically to the

70

00:02:59,350 --> 00:02:57,120

russian segment of the international

71

00:03:01,750 --> 00:02:59,360

space station

72

00:03:04,309 --> 00:03:01,760

and which for the past decade has served

73

00:03:07,030 --> 00:03:04,319

two purposes both as a docking port for

74

00:03:09,270 --> 00:03:07,040

arriving russian vehicles and as an

75

00:03:10,949 --> 00:03:09,280

airlock from which russian spacewalks

76

00:03:15,030 --> 00:03:10,959

have been staged

77

00:03:16,630 --> 00:03:15,040

i can see across hairs crosshairs

78

00:03:21,110 --> 00:03:16,640

match

79

00:03:23,910 --> 00:03:21,120

the and char it is uh to the left by one

80

00:03:26,390 --> 00:03:23,920

uh square of the vacau center and it's

81

00:03:27,990 --> 00:03:26,400

up above the iwakawa center

82

00:03:30,149 --> 00:03:28,000

copy

83

00:03:33,430 --> 00:03:30,159

uh sergey what do you think about the

84

00:03:35,910 --> 00:03:33,440

quality of the video 40 meters away from

85

00:03:38,149 --> 00:03:35,920

docking the progress is core's automated

86

00:03:39,110 --> 00:03:38,159

rendezvous antenna has been retracted as

87

00:03:40,710 --> 00:03:39,120

planned

88

00:03:42,789 --> 00:03:40,720

everything continuing to go very

89

00:03:44,830 --> 00:03:42,799

smoothly docking less than five minutes

90

00:03:47,030 --> 00:03:44,840

away range 36

91

00:03:49,270 --> 00:03:47,040

meters okay

92

00:03:53,190 --> 00:03:49,280

go ahead and execute

93

00:03:56,949 --> 00:03:53,200

we have all three all four leds on

94

00:03:58,789 --> 00:03:56,959

okay then operation and then hdc mode on

95

00:04:01,190 --> 00:03:58,799

copy

96

00:04:03,589 --> 00:04:01,200

i can see the target clearly

97

00:04:07,509 --> 00:04:03,599

um the crosshairs are aligned

98

00:04:10,869 --> 00:04:07,519

i turn off uh operation command we see

99

00:04:18,069 --> 00:04:10,879

oh for reality is no longer eliminated

100

00:04:22,230 --> 00:04:20,069

range radius

101
00:04:23,550 --> 00:04:22,240
range is 30 meters

102
00:04:31,749 --> 00:04:23,560
range rate is

103
00:04:36,390 --> 00:04:33,830
the progress's docking mechanism has

104
00:04:48,950 --> 00:04:36,400
been powered up as planned range now

105
00:04:48,960 --> 00:05:09,430
target is in the center of a cow

106
00:05:09,440 --> 00:05:28,070
range is about 30 30 meters poppy

107
00:05:32,390 --> 00:05:29,909
at the top of your screen is the piers

108
00:05:35,350 --> 00:05:32,400
docking compartment itself just below it

109
00:05:37,670 --> 00:05:35,360
the diamond shaped docking target

110
00:05:40,390 --> 00:05:37,680
the progress is aligning its forward

111
00:05:49,749 --> 00:05:40,400
docking probe with that docking target

112
00:05:52,950 --> 00:05:51,749
we're continuing to monitor automatic

113
00:05:55,990 --> 00:05:52,960

approach

114

00:05:58,150 --> 00:05:56,000

we see the target crosshairs are aligned

115

00:05:59,510 --> 00:05:58,160

happy

116

00:06:02,629 --> 00:05:59,520

it is

117

00:06:10,950 --> 00:06:02,639

one square off to the center in relation

118

00:06:14,390 --> 00:06:12,550

progress in the international space

119

00:06:25,990 --> 00:06:14,400

station currently flying almost directly

120

00:06:34,230 --> 00:06:30,430

range is about 20 meters range rate is

121

00:06:38,870 --> 00:06:34,240

0.12 we see the target

122

00:06:38,880 --> 00:06:42,070

the target

123

00:07:14,950 --> 00:06:45,189

is um half a square to the left and half

124

00:07:17,909 --> 00:07:16,390

again

125

00:07:19,990 --> 00:07:17,919

okay then bring up

126
00:07:24,150 --> 00:07:20,000
agency i'm activating the player center

127
00:07:24,160 --> 00:07:27,830
activity operation

128
00:07:35,029 --> 00:07:30,870
i see four leds activating agency modes

129
00:07:39,990 --> 00:07:38,710
we're continuing the approach monitoring

130
00:07:42,309 --> 00:07:40,000
turn off

131
00:07:50,629 --> 00:07:44,309
operation command okay let me compute

132
00:07:54,710 --> 00:07:53,510
okay i confirm

133
00:08:11,110 --> 00:07:54,720
i'm

134
00:08:15,909 --> 00:08:12,070
center

135
00:08:15,919 --> 00:08:19,270
okay

136
00:08:24,869 --> 00:08:22,469
um rain will continue approach uh

137
00:08:33,509 --> 00:08:24,879
range rate is nominal

138
00:08:33,519 --> 00:08:37,350

we're continuing to monitor

139

00:08:41,670 --> 00:08:39,909

target is in the center of the cow cross

140

00:08:44,389 --> 00:08:41,680

hairs are aligned

141

00:08:46,470 --> 00:08:44,399

we're still seeing slight roll

142

00:08:49,509 --> 00:08:46,480

within about half a degree

143

00:08:53,910 --> 00:08:52,470

range approaching the five meter mark

144

00:08:55,990 --> 00:08:53,920

closing at a rate of one-tenth of a

145

00:08:58,630 --> 00:08:56,000

meter per second

146

00:09:00,949 --> 00:08:58,640

flight controllers on both sides of the

147

00:09:02,470 --> 00:09:00,959

atlantic ocean standing by for contact

148

00:09:06,230 --> 00:09:02,480

and capture

149

00:09:11,430 --> 00:09:08,230

target is basically in the center of

150

00:09:11,440 --> 00:09:15,350

range rate is nominal copy

151
00:09:20,829 --> 00:09:17,670
there is slight role

152
00:09:26,389 --> 00:09:24,389
is perfect in the center we're expecting

153
00:09:28,790 --> 00:09:26,399
um capture

154
00:09:30,949 --> 00:09:28,800
uh range rate is nominal

155
00:09:32,949 --> 00:09:30,959
crosshair is our alliance capture we

156
00:09:34,550 --> 00:09:32,959
have indicator mode

157
00:09:38,070 --> 00:09:34,560
we have uh

158
00:09:39,670 --> 00:09:38,080
mechanical docking confirmed at 6 41 a.m

159
00:09:42,949 --> 00:09:39,680
central time

160
00:09:46,949 --> 00:09:42,959
over northern china just to the east of

161
00:09:50,310 --> 00:09:48,949
on the 11th anniversary of the arrival

162
00:09:52,230 --> 00:09:50,320
of the first residents of the

163
00:09:54,710 --> 00:09:52,240

international space station

164

00:09:57,910 --> 00:09:54,720

supplies have arrived to fortify the