1
00:00:04,630 --> 00:00:02,629
this is mission control in corey off as

2
00:00:06,550 --> 00:00:04,640
you can see uh from views from both the

3
00:00:08,790 --> 00:00:06,560
progress and from international space

4
00:00:11,509 --> 00:00:08,800
station cameras uh the progress uh

5
00:00:14,950 --> 00:00:11,519
continues uh to be manually flown back

6
00:00:17,109 --> 00:00:14,960
in in true form uh for its re-docking

7
00:00:21,109 --> 00:00:17,119
to the piers docking compartment it

8
00:00:22,950 --> 00:00:21,119
departed the piers at 12 36 and 36

9
00:00:24,710 --> 00:00:22,960
seconds a.m

10
00:00:27,189 --> 00:00:24,720
central time

11
00:00:29,109 --> 00:00:27,199
backed away to a distance of almost 600

12
00:00:31,669 --> 00:00:29,119
feet away from the piers

13
00:00:33,510 --> 00:00:31,679

and uh cosmonauts alexei of china and

14
00:00:36,069 --> 00:00:33,520
alex grapochka have now taken over

15
00:00:39,350 --> 00:00:36,079
manual control of the flying of the

16
00:00:41,910 --> 00:00:39,360
progress from the upgraded uh roo

17
00:00:44,389 --> 00:00:41,920
system at a workstation basically

18
00:00:47,190 --> 00:00:44,399
operating a joystick at that workstation

19
00:00:47,990 --> 00:00:47,200
in the zvezda service module

20
00:00:51,510 --> 00:00:48,000
that

21
00:00:53,910 --> 00:00:51,520
manual flying is designed to

22
00:00:55,830 --> 00:00:53,920
test out a new signal conversion unit

23
00:00:57,350 --> 00:00:55,840
that was installed in the workstation

24
00:00:59,189 --> 00:00:57,360
back in april

25
00:01:01,750 --> 00:00:59,199
so far everything is checked out

26
00:01:04,789 --> 00:01:01,760
perfectly the progress is slowly but

27
00:01:06,469 --> 00:01:04,799
surely moving back in for a re-docking

28
00:01:08,469 --> 00:01:06,479
to the piers docking compartment but it

29
00:01:11,030 --> 00:01:08,479
will be a brief stay since it will

30
00:01:13,990 --> 00:01:11,040
undock for the final time late on

31
00:01:16,710 --> 00:01:14,000
saturday july 2nd just before 11 p.m

32
00:01:18,950 --> 00:01:16,720
central time and a few hours later sent

33
00:01:20,710 --> 00:01:18,960
into a de-orbit burn and a destructive

34
00:01:23,670 --> 00:01:20,720
re-entry back into the earth's

35
00:01:28,550 --> 00:01:26,469
progress is now station keeping at about

36
00:01:30,950 --> 00:01:28,560
30 meters away from the piers docking

37
00:01:33,670 --> 00:01:30,960
compartment one final check of its

38
00:01:36,230 --> 00:01:33,680

alignment and uh the systems onboard the

39
00:01:38,550 --> 00:01:36,240
62 progress

40
00:01:41,190 --> 00:01:38,560
so far so good all the reports here in

41
00:01:44,310 --> 00:01:41,200
current alpha indicate a good

42
00:01:46,469 --> 00:01:44,320
system a good toru a manual

43
00:01:49,030 --> 00:01:46,479
rendezvous backup system being operated

44
00:01:50,630 --> 00:01:49,040
by ochinan and scrapoche

45
00:01:52,630 --> 00:01:50,640
this again a brief

46
00:01:54,630 --> 00:01:52,640
moment for station keeping to enable the

47
00:01:58,789 --> 00:01:54,640
flight controllers here to make one

48
00:02:01,190 --> 00:01:58,799
final assessment of the progress systems

49
00:02:05,670 --> 00:02:01,200
and its uh alignment

50
00:02:14,309 --> 00:02:09,510
copy your goal to retract the overclock

51
00:02:19,270 --> 00:02:16,630
command has been sent to retract the

52
00:02:19,280 --> 00:02:34,470
copy alexa

53
00:02:37,830 --> 00:02:36,630
please do not continue in

54
00:02:41,589 --> 00:02:37,840
closer

55
00:02:41,599 --> 00:02:47,190
copy

56
00:02:51,750 --> 00:02:48,150
current

57
00:02:57,270 --> 00:02:51,760
range is 25 meters moscow

58
00:03:01,750 --> 00:02:58,790
russian flight controllers uh

59
00:03:04,309 --> 00:03:01,760
instructing alexa ochinen to take it

60
00:03:06,869 --> 00:03:04,319
slowly and surely in an incremental

61
00:03:09,430 --> 00:03:06,879
fashion as he manually flies the

62
00:03:11,190 --> 00:03:09,440
progress back in 25 meters distance now

63
00:03:13,430 --> 00:03:11,200

between the progress

64
00:03:14,710 --> 00:03:13,440
and a re-docking to the piers docking

65
00:03:16,710 --> 00:03:14,720
compartment

66
00:03:18,309 --> 00:03:16,720
on the earth-facing port of the russian

67
00:03:19,350 --> 00:03:18,319
segment of the international space

68
00:03:21,750 --> 00:03:19,360
station

69
00:03:24,949 --> 00:03:21,760
appears having first launched to the

70
00:03:27,990 --> 00:03:24,959
station in september of 2001 serving a

71
00:03:30,470 --> 00:03:28,000
dual purpose as both a docking port and

72
00:04:08,550 --> 00:03:30,480
the airlock for russian-based spacewalks

73
00:04:13,750 --> 00:04:11,270
we're maintaining 25 meter range

74
00:04:15,670 --> 00:04:13,760
the crosshairs are aligned and we are

75
00:04:18,710 --> 00:04:15,680
straight across from the

76
00:04:24,390 --> 00:04:19,909
copy all

77
00:04:30,390 --> 00:04:24,400
alexei please continue station keeping

78
00:04:34,629 --> 00:04:32,070
russian flight controller is happy with

79
00:04:36,870 --> 00:04:34,639
the alignment of the uh progress 62

80
00:04:38,950 --> 00:04:36,880
cargo craft as you heard

81
00:04:41,990 --> 00:04:38,960
alexi ochinan with a steady hand at the

82
00:04:44,070 --> 00:04:42,000
workstation in the zvezda service module

83
00:04:47,110 --> 00:04:44,080
manually flying the progress back in

84
00:04:49,830 --> 00:04:47,120
this engineering test of the upgraded

85
00:04:50,790 --> 00:04:49,840
tele-robotically operated unit or toru

86
00:04:52,950 --> 00:04:50,800
system

87
00:04:56,310 --> 00:04:52,960
which again serves as a backup to the

88
00:04:59,110 --> 00:04:56,320

core's automated rendezvous system that

89
00:05:01,590 --> 00:04:59,120
is used in the unlikely event during the

90
00:05:03,430 --> 00:05:01,600
final approach of a progress in its

91
00:05:05,189 --> 00:05:03,440
rendezvous for a docking to the

92
00:05:07,510 --> 00:05:05,199
international space station the core is

93
00:05:09,270 --> 00:05:07,520
of course the automated system that is

94
00:05:11,350 --> 00:05:09,280
tried and true but in the event of a

95
00:05:12,950 --> 00:05:11,360
problem the crew on board the station

96
00:05:15,430 --> 00:05:12,960
would take over manual control of the

97
00:05:17,510 --> 00:05:15,440
flying of an approaching progress just

98
00:05:21,270 --> 00:05:17,520
as they are doing in this test this

99
00:05:27,110 --> 00:05:23,029
continuous station keeping and

100
00:05:32,150 --> 00:05:29,749
and make sure that you stay at the right

101
00:05:32,160 --> 00:05:38,469
copy and work

102
00:05:44,469 --> 00:05:42,150
and we're getting video of the station

103
00:05:48,550 --> 00:05:44,479
station keeping uh continuing all the

104
00:05:50,150 --> 00:05:48,560
progress 62 cargo craft as it flies 254

105
00:05:51,749 --> 00:05:50,160
statute miles

106
00:05:53,909 --> 00:05:51,759
over the western pacific to the

107
00:05:55,270 --> 00:05:53,919
northeast of new guinea for our

108
00:05:57,990 --> 00:05:55,280
assessment

109
00:06:16,950 --> 00:05:58,000
no issues at all

110
00:06:16,960 --> 00:06:45,270
world

111
00:06:45,280 --> 00:06:51,430
to operate the docking mechanism hi copy

112
00:06:55,110 --> 00:06:53,189
the russian segment of the international

113
00:06:57,110 --> 00:06:55,120

space station is reported by flight

114
00:06:59,830 --> 00:06:57,120
controllers here at coral elf to be

115
00:07:01,189 --> 00:06:59,840
ready for re-docking

116
00:07:03,909 --> 00:07:01,199
that should

117
00:07:05,749 --> 00:07:03,919
commence uh with the final approach for

118
00:07:07,830 --> 00:07:05,759
uh the re-docking of the progress to the

119
00:07:14,309 --> 00:07:07,840
piers docking compartment just a few

120
00:07:19,029 --> 00:07:17,670
we're maintaining 25 meter range

121
00:07:22,309 --> 00:07:19,039
and i am

122
00:07:25,189 --> 00:07:22,319
aligned with the required

123
00:07:52,150 --> 00:07:25,199
docking interface

124
00:08:10,629 --> 00:07:53,510
control panel

125
00:08:10,639 --> 00:08:18,390
to power

126
00:08:24,309 --> 00:08:22,150
control panel send command

127
00:08:28,790 --> 00:08:24,319
which is called activation

128
00:08:36,070 --> 00:08:32,469
and i can report that um the central

129
00:08:48,710 --> 00:08:36,080
or middle leds are on

130
00:08:54,949 --> 00:08:51,110
the side leds

131
00:08:56,070 --> 00:08:54,959
came on and off and the middle

132
00:08:58,310 --> 00:08:56,080
leds

133
00:09:06,630 --> 00:08:58,320
are off

134
00:09:12,470 --> 00:09:09,509
we are finished with transitioning

135
00:09:15,030 --> 00:09:12,480
iss to snap and hold

136
00:09:17,509 --> 00:09:15,040
and your go to initiate final approach

137
00:09:18,230 --> 00:09:17,519
please maintain a range rate of no more

138
00:09:19,829 --> 00:09:18,240

than

139
00:09:21,269 --> 00:09:19,839
zero decimal

140
00:09:23,670 --> 00:09:21,279
one five

141
00:09:27,030 --> 00:09:23,680
meters per second and we recommend that

142
00:09:29,110 --> 00:09:27,040
you use pulse mode

143
00:09:31,190 --> 00:09:29,120
on the translation hand controller

144
00:09:33,670 --> 00:09:31,200
and perform

145
00:09:36,470 --> 00:09:33,680
uh one last station keeping at a range

146
00:09:37,750 --> 00:09:36,480
of three meters i copy

147
00:09:39,750 --> 00:09:37,760
at a range of

148
00:09:42,230 --> 00:09:39,760
two to three meters i will

149
00:09:48,710 --> 00:09:42,240
initiate station keeping and i am

150
00:09:48,720 --> 00:09:58,150
initiate

151
00:10:03,670 --> 00:10:00,790
the final approach of the progress 62

152
00:10:05,430 --> 00:10:03,680
for its redocking has been initiated

153
00:10:07,670 --> 00:10:05,440
under the manual control of alexey

154
00:10:10,949 --> 00:10:07,680
o'channing and backed up by alex for

155
00:10:12,870 --> 00:10:10,959
pochka inside the zvezda service module

156
00:10:14,710 --> 00:10:12,880
you heard that series of instructions

157
00:10:16,949 --> 00:10:14,720
from the flight control team here in

158
00:10:18,710 --> 00:10:16,959
korea to obtain

159
00:10:20,630 --> 00:10:18,720
as he uh slowly

160
00:10:22,310 --> 00:10:20,640
flies the progress in for it's

161
00:10:23,590 --> 00:10:22,320
re-docking

162
00:10:26,470 --> 00:10:23,600
they'll be watching as will the

163
00:10:28,150 --> 00:10:26,480

cosmonauts on a tv monitor the same view

164
00:10:31,590 --> 00:10:28,160
that you're seeing they're seeing on

165
00:10:33,350 --> 00:10:31,600
board as they will approach at a glacial

166
00:10:35,829 --> 00:10:33,360
rate of about one tenth of a meter per

167
00:10:38,310 --> 00:10:35,839
second station keep about two to three

168
00:10:41,350 --> 00:10:38,320
meters away from the docking port itself

169
00:10:43,590 --> 00:10:41,360
for a final uh review of alignment and

170
00:10:46,150 --> 00:10:43,600
the progress systems before they bring

171
00:10:47,910 --> 00:10:46,160
the progress in for contact and capture

172
00:10:51,190 --> 00:10:47,920
and the initiation of the retraction of

173
00:10:53,829 --> 00:10:51,200
the docking probe that will uh enable

174
00:10:55,509 --> 00:10:53,839
the hooks to close once again for a

175
00:10:57,910 --> 00:10:55,519
24-hour period

176
00:11:00,550 --> 00:10:57,920
before the progress is undocked on the

177
00:11:25,670 --> 00:11:00,560
night of saturday july 2nd for the final

178
00:11:32,870 --> 00:11:30,470
range is six meters six meters

179
00:11:34,550 --> 00:11:32,880
just six meters away from re-docking you

180
00:11:36,310 --> 00:11:34,560
can see that alignment coming into

181
00:11:39,990 --> 00:11:36,320
perfect uh symmetry

182
00:11:42,790 --> 00:11:40,000
uh as uh alexia ochenin applies uh kid

183
00:11:45,829 --> 00:11:42,800
gloves on the workstation of the toru

184
00:11:47,829 --> 00:11:45,839
system inside the zvezda service module

185
00:11:49,829 --> 00:11:47,839
we'll be standing by for another brief

186
00:12:01,910 --> 00:11:49,839
period of station keeping before final

187
00:12:05,190 --> 00:12:03,829
please report when you are station

188
00:12:11,269 --> 00:12:05,200

keeping

189
00:12:39,670 --> 00:12:31,110
so

190
00:12:46,230 --> 00:12:42,870
an excellent view of the uh progress 62

191
00:12:48,230 --> 00:12:46,240
as it has reinitiated station keeping

192
00:12:50,069 --> 00:12:48,240
just about three meters away from the

193
00:12:54,230 --> 00:12:50,079
piers docking compartment that you see

194
00:12:58,150 --> 00:12:56,069
once again uh

195
00:12:59,990 --> 00:12:58,160
we'll defend commands through the

196
00:13:02,550 --> 00:13:00,000
tele-robotically operated rendezvous

197
00:13:05,829 --> 00:13:03,990
to

198
00:13:08,470 --> 00:13:05,839
re-initiate the final approach for

199
00:13:10,790 --> 00:13:08,480
contact and capture we'll be standing by

200
00:13:13,110 --> 00:13:10,800
uh for a final go from the russian

201
00:13:16,230 --> 00:13:13,120
mission control team here in corey law

202
00:13:18,150 --> 00:13:16,240
to uh complete uh this uh toru test the

203
00:13:28,790 --> 00:13:18,160
undocking and re-docking of the progress

204
00:13:32,790 --> 00:13:30,470
three meters

205
00:13:35,910 --> 00:13:32,800
the crosshairs are aligned and i'm ready

206
00:13:37,190 --> 00:13:35,920
to send the pulse to closing

207
00:13:38,710 --> 00:13:37,200
copy

208
00:13:41,670 --> 00:13:38,720
go ahead and send the

209
00:13:41,680 --> 00:14:07,430
i copy

210
00:14:10,710 --> 00:14:09,509
and final approach to close the final

211
00:14:12,389 --> 00:14:10,720
three meters

212
00:14:14,829 --> 00:14:12,399
to contact and capture has been

213
00:14:17,189 --> 00:14:14,839

initiated everything going very

214
00:14:18,949 --> 00:14:17,199
smoothly we'll monitor the

215
00:14:21,269 --> 00:14:18,959
communications from the flight control

216
00:14:23,350 --> 00:14:21,279
team here in curry off and

217
00:14:25,189 --> 00:14:23,360
these outstanding television views that

218
00:14:27,990 --> 00:14:25,199
you're receiving from both international

219
00:14:33,910 --> 00:14:28,000
space station cameras and the progress

220
00:14:40,710 --> 00:14:37,509
contact confirm docking confirm

221
00:14:41,910 --> 00:14:40,720
copy docking confirmed at 105

222
00:14:43,590 --> 00:14:41,920
am

223
00:14:49,829 --> 00:14:43,600
central time