



РОСКОСМОС



1
00:00:00,080 --> 00:00:14,310
t minus 30 seconds and counting

2
00:00:22,230 --> 00:00:17,269
auto sequence initiated

3
00:00:24,390 --> 00:00:23,590
t-minus 10

4
00:00:25,269 --> 00:00:24,400
9

5
00:00:26,230 --> 00:00:25,279
8

6
00:00:27,189 --> 00:00:26,240
7

7
00:00:28,150 --> 00:00:27,199
6

8
00:00:33,910 --> 00:00:28,160
5

9
00:00:39,590 --> 00:00:35,190
liftoff

10
00:00:42,310 --> 00:00:39,600
carrying sonny williams uriel

11
00:00:43,750 --> 00:00:42,320
malenchenko and aki hoshide on a two-day

12
00:00:47,910 --> 00:00:43,760
journey to the international space

13
00:00:56,630 --> 00:00:50,150

all of their launcher parameters are

14

00:00:56,640 --> 00:00:59,270

20

15

00:01:04,149 --> 00:01:02,790

first stage thrusters are operating

16

00:01:06,149 --> 00:01:04,159

nominally

17

00:01:09,030 --> 00:01:06,159

copy all launch control

18

00:01:11,510 --> 00:01:09,040

and we are fine

19

00:01:13,109 --> 00:01:11,520

30 seconds into the flight

20

00:01:14,630 --> 00:01:13,119

launcher parameters or not the team is

21

00:01:16,870 --> 00:01:14,640

reporting good first stage performance

22

00:01:18,789 --> 00:01:16,880

the soyuz delivering 102 tons of thrust

23

00:01:21,350 --> 00:01:18,799

from its four boosters in single engine

24

00:01:23,830 --> 00:01:21,360

the first stage of the soyuz measures 68

25

00:01:25,429 --> 00:01:23,840

feet in length and 24 feet in diameter

26

00:01:26,870 --> 00:01:25,439

it is currently burning liquid fuel for

27

00:01:28,789 --> 00:01:26,880

the first two minutes and six seconds of

28

00:01:31,910 --> 00:01:28,799

the flight the

29

00:01:33,590 --> 00:01:31,920

engine chamber pressures are nominal one

30

00:01:34,870 --> 00:01:33,600

minute into the flight the teams are

31

00:01:37,510 --> 00:01:34,880

reporting that the chamber pressures

32

00:01:39,270 --> 00:01:37,520

inside the engines are all nominal

33

00:01:41,990 --> 00:01:39,280

you see yuri malenchenko there on the

34

00:01:43,590 --> 00:01:42,000

left sunny williams there on the right

35

00:01:46,230 --> 00:01:43,600

that uh toy that is hanging there was

36

00:01:47,910 --> 00:01:46,240

given to him by his daughter 70 seconds

37

00:01:49,350 --> 00:01:47,920

that serves as the flights talisman that

38

00:01:50,950 --> 00:01:49,360

will be the first sign that the crew has

39

00:01:58,709 --> 00:01:50,960

reached orbit right at the nine minute

40

00:02:05,990 --> 00:02:00,870

one minute 30 seconds into the flights

41

00:02:06,000 --> 00:02:12,150

90 seconds

42

00:02:26,350 --> 00:02:14,150

one and two

43

00:02:29,510 --> 00:02:27,910

110

44

00:02:31,030 --> 00:02:29,520

seconds

45

00:02:42,869 --> 00:02:31,040

roll pitch

46

00:02:46,229 --> 00:02:44,710

booster separation is confirmed they

47

00:02:48,070 --> 00:02:46,239

have completed their job and have now

48

00:02:49,910 --> 00:02:48,080

dropped away at an altitude of 28

49

00:02:51,910 --> 00:02:49,920

statute miles the soyuz is currently

50

00:02:56,630 --> 00:02:51,920

traveling at about three thousand three

51
00:02:59,910 --> 00:02:57,750
the ground team is reporting that the

52
00:03:03,110 --> 00:02:59,920
vehicle has stabilized it is continuing

53
00:03:04,869 --> 00:03:03,120
to perform as expected

54
00:03:06,470 --> 00:03:04,879
everything looking good as this crew

55
00:03:08,390 --> 00:03:06,480
heads toward a date with the

56
00:03:11,670 --> 00:03:08,400
international space station

57
00:03:20,470 --> 00:03:13,910
second stage engines are operating

58
00:03:23,509 --> 00:03:21,910
two minutes and 50 seconds into the

59
00:03:26,149 --> 00:03:23,519
flight the launch shroud and escape

60
00:03:28,309 --> 00:03:26,159
tower have been jettisoned it's complete

61
00:03:29,670 --> 00:03:28,319
we copy and we saw it

62
00:03:31,430 --> 00:03:29,680
as you can see a bit of sunlight coming

63
00:03:37,990 --> 00:03:31,440

into the soyuz there the crew getting a

64

00:03:41,910 --> 00:03:39,990

80 seconds into the flight

65

00:03:43,830 --> 00:03:41,920

the vehicle is stable

66

00:03:45,670 --> 00:03:43,840

three minutes 12 seconds into the flight

67

00:03:47,509 --> 00:03:45,680

the soyuz is now traveling at a speed of

68

00:03:58,309 --> 00:03:47,519

about four thousand seven hundred miles

69

00:04:03,110 --> 00:03:59,830

stage two

70

00:04:05,110 --> 00:04:03,120

engines are operating nominally

71

00:04:07,910 --> 00:04:05,120

aki hoshide there giving the thumbs up

72

00:04:09,830 --> 00:04:07,920

everything going well flight uh

73

00:04:11,509 --> 00:04:09,840

fairly smooth so far we're watching i

74

00:04:27,629 --> 00:04:11,519

got three

75

00:04:34,950 --> 00:04:30,790

230 seconds into the flight the vehicle

76

00:04:34,960 --> 00:04:45,870

everything's nominal on board

77

00:04:49,909 --> 00:04:47,430

250

78

00:04:52,390 --> 00:04:49,919

seconds into the flight

79

00:04:56,070 --> 00:04:52,400

roll pitch you're nominal

80

00:05:01,350 --> 00:04:57,909

the soyuz core stage is performing as

81

00:05:03,430 --> 00:05:01,360

expected everything is looking green

82

00:05:05,749 --> 00:05:03,440

the core stage of the soyuz is 56 feet

83

00:05:07,510 --> 00:05:05,759

in length 13 and a half feet in diameter

84

00:05:31,990 --> 00:05:07,520

with a single engine with four fuel

85

00:05:35,749 --> 00:05:33,270

is on

86

00:05:36,710 --> 00:05:35,759

and we confirm separation of second

87

00:05:38,310 --> 00:05:36,720

stage

88

00:05:39,830 --> 00:05:38,320

five minutes and seven seconds into the

89

00:05:41,749 --> 00:05:39,840

flight the second stage has separated

90

00:05:43,270 --> 00:05:41,759

the third stage has ignited everything's

91

00:05:44,790 --> 00:05:43,280

fine

92

00:05:47,590 --> 00:05:44,800

and core stage is dropping away at an

93

00:05:50,870 --> 00:05:47,600

altitude of about 105 miles

94

00:05:52,550 --> 00:05:50,880

and we're looking at the picture now

95

00:05:54,710 --> 00:05:52,560

the soyuz is now being propelled by the

96

00:05:56,469 --> 00:05:54,720

single engine of the soyuz's third stage

97

00:05:57,510 --> 00:05:56,479

this engine is providing 30 tons of

98

00:05:58,950 --> 00:05:57,520

thrust

99

00:06:00,950 --> 00:05:58,960

and will burn for a little more than

100

00:06:02,469 --> 00:06:00,960

four minutes launcher parameters are

101
00:06:14,950 --> 00:06:02,479
nominal

102
00:06:19,189 --> 00:06:17,510
340 seconds

103
00:06:29,189 --> 00:06:19,199
motion control system parameters are

104
00:06:32,870 --> 00:06:31,189
at the six minute mark the flight is

105
00:06:34,230 --> 00:06:32,880
still nominal

106
00:06:35,830 --> 00:06:34,240
the ground controllers are steadily

107
00:06:37,430 --> 00:06:35,840
monitoring the progress of the soyuz

108
00:06:39,909 --> 00:06:37,440
vehicle with sunny williams yuri

109
00:06:41,590 --> 00:06:39,919
malenchenko and aki hoshide inside

110
00:06:44,629 --> 00:06:41,600
everything is flying true and flying

111
00:07:10,150 --> 00:06:47,830
official launch time tonight was 9 40

112
00:07:10,160 --> 00:07:26,710
all of the parameters are nominal

113
00:07:30,870 --> 00:07:29,430

130 seconds into the flight everything's

114

00:07:55,110 --> 00:07:30,880

nominal

115

00:08:00,150 --> 00:07:57,270

all of the structural parameters of the

116

00:08:01,510 --> 00:08:00,160

vehicle are nominal

117

00:08:03,189 --> 00:08:01,520

i got the copy

118

00:08:04,790 --> 00:08:03,199

at the seven and a half minute mark the

119

00:08:06,790 --> 00:08:04,800

team reporting that the vehicle is still

120

00:08:08,550 --> 00:08:06,800

flying as expected

121

00:08:10,309 --> 00:08:08,560

into the flight everything so you still

122

00:08:13,189 --> 00:08:10,319

being propelled by the single engine of

123

00:08:30,230 --> 00:08:13,199

its third stage we copy and everything

124

00:08:34,469 --> 00:08:32,149

we're now at eight minutes after launch

125

00:08:35,909 --> 00:08:34,479

70. the velocity of the soyuz now

126
00:08:38,230 --> 00:08:35,919
approaching more than fourteen thousand

127
00:08:40,949 --> 00:08:38,240
miles an hour the parameters raw pitch

128
00:08:43,750 --> 00:08:40,959
and yaw are all nominal happy heading on

129
00:08:50,389 --> 00:08:43,760
up to 17 500 miles an hour that is the

130
00:09:08,910 --> 00:08:53,110
490 seconds into the flight everything's

131
00:09:13,990 --> 00:09:12,070
510 seconds into the flight royal pitch

132
00:09:16,310 --> 00:09:14,000
and you are all nominal

133
00:09:18,150 --> 00:09:16,320
copy

134
00:09:20,070 --> 00:09:18,160
once the third stage delivers the soyuz

135
00:09:21,990 --> 00:09:20,080
to orbit and the module is separated a

136
00:09:23,670 --> 00:09:22,000
series of pre-programmed commands will

137
00:09:25,990 --> 00:09:23,680
be executed to prepare the soyuz for

138
00:09:27,910 --> 00:09:26,000

orbital operations

139

00:09:29,670 --> 00:09:27,920

these stored commands called time tagged

140

00:09:31,590 --> 00:09:29,680

commands allow many of the soyuz's

141

00:09:34,150 --> 00:09:31,600

systems to be automatically activated by

142

00:09:36,310 --> 00:09:34,160

onboard computers at precise times

143

00:09:40,949 --> 00:09:36,320

stored within those computers received

144

00:09:45,509 --> 00:09:43,269

the first stage

145

00:09:47,829 --> 00:09:45,519

we copy and uh

146

00:09:49,750 --> 00:09:47,839

mr popovkin congratulations on your

147

00:09:52,389 --> 00:09:49,760

orbital insertion everything was

148

00:09:54,630 --> 00:09:52,399

successful i hope everything goes

149

00:09:56,150 --> 00:09:54,640

just as well from here on

150

00:10:00,470 --> 00:09:56,160

thank you so much

151

00:10:03,750 --> 00:10:01,990

9 minutes 30 seconds into the flight

152

00:10:05,190 --> 00:10:03,760

sunday williamson giving a big thumbs up

153

00:10:07,350 --> 00:10:05,200

for the ground teams confirmed that the

154

00:10:09,110 --> 00:10:07,360

third stage did separate

155

00:10:10,949 --> 00:10:09,120

the soyuz itself along with the crew of