



1
00:00:04,390 --> 00:00:02,470
depart you'll know it's 15 seconds away

2
00:00:05,990 --> 00:00:04,400
from the lift off

3
00:00:07,510 --> 00:00:06,000
again not tracking any issues with the

4
00:00:09,669 --> 00:00:07,520
vehicle everything pointing to go where

5
00:00:12,789 --> 00:00:09,679
it should be about 20 minutes 20 seconds

6
00:00:17,750 --> 00:00:15,030
vehicle to internal power auto sequence

7
00:00:19,349 --> 00:00:17,760
initiated vehicle now on internal power

8
00:00:23,349 --> 00:00:19,359
the launch command has been issued you

9
00:00:25,910 --> 00:00:23,359
can see the rocket engines firing

10
00:00:28,550 --> 00:00:25,920
power is going to start ramping up

11
00:00:30,470 --> 00:00:28,560
engine turbo pumps at flight speed

12
00:00:32,470 --> 00:00:30,480
engines at maximum turbo pumps at flight

13
00:00:34,790 --> 00:00:32,480

speed and lifts off

14

00:00:37,350 --> 00:00:34,800

sergey ryazanskiy randy bresnik and

15

00:00:39,030 --> 00:00:37,360

paulo nespoli rocking away from baikonur

16

00:00:39,950 --> 00:00:39,040

and on their way to the international

17

00:00:45,670 --> 00:00:39,960

space

18

00:00:50,549 --> 00:00:48,790

see the very bright first stage engines

19

00:00:53,270 --> 00:00:50,559

cutting across the night sky there on

20

00:00:53,280 --> 00:00:56,470

25

21

00:01:01,670 --> 00:00:59,830

20 seconds into flights all systems

22

00:01:03,670 --> 00:01:01,680

getting reports everything running

23

00:01:05,189 --> 00:01:03,680

nominally or normally for the first

24

00:01:07,910 --> 00:01:05,199

stage so getting good first stage

25

00:01:10,950 --> 00:01:07,920

performance so far

26
00:01:12,710 --> 00:01:10,960
so used delivering about 930 000 pounds

27
00:01:16,789 --> 00:01:12,720
of thrust with those four boosters in

28
00:01:20,230 --> 00:01:18,310
they're gonna be burning liquid fuel for

29
00:01:30,310 --> 00:01:20,240
the first two minutes and six seconds of

30
00:01:35,749 --> 00:01:33,109
already passed one minute since liftoff

31
00:01:38,550 --> 00:01:35,759
velocity already approaching 1100 miles

32
00:01:41,190 --> 00:01:38,560
per hour for the soyuz spacecraft your

33
00:01:44,230 --> 00:01:41,200
pitch uh nominal copy

34
00:01:46,069 --> 00:01:44,240
70 seconds in the long in the flight

35
00:01:49,109 --> 00:01:46,079
everything is nominal on board and

36
00:01:50,710 --> 00:01:49,119
continuing to get good reports from the

37
00:01:52,389 --> 00:01:50,720
controllers in baikonur everything

38
00:01:55,030 --> 00:01:52,399

looking good with the rocket so far as

39

00:02:04,230 --> 00:01:55,040

the first stage continues onwards in the

40

00:02:07,109 --> 00:02:05,670

90 seconds

41

00:02:09,190 --> 00:02:07,119

into flight

42

00:02:23,340 --> 00:02:09,200

stage one and two thrusters are working

43

00:02:23,350 --> 00:02:26,710

[Music]

44

00:02:30,390 --> 00:02:28,710

and we have confirmation that the escape

45

00:02:32,869 --> 00:02:30,400

tower has been jettisoned and there you

46

00:02:35,110 --> 00:02:32,879

can see the four strap-on boosters

47

00:02:37,270 --> 00:02:35,120

flying away making something known as

48

00:02:39,670 --> 00:02:37,280

the coryof cross the four

49

00:02:42,309 --> 00:02:39,680

strap-on boosters now detached the first

50

00:02:43,670 --> 00:02:42,319

stage has done its job and then the core

51

00:02:46,390 --> 00:02:43,680

stage of the

52

00:02:48,630 --> 00:02:46,400

second stage continuing to burn now

53

00:02:51,830 --> 00:02:48,640

at this point the rocket already 48

54

00:02:54,630 --> 00:02:51,840

miles in altitude traveling

55

00:02:59,030 --> 00:02:54,640

or rather 28 miles in altitude the soyuz

56

00:03:04,070 --> 00:02:59,040

traveling at over 3 300 miles per hour

57

00:03:08,309 --> 00:03:04,080

150 minutes in seconds and into flight

58

00:03:11,509 --> 00:03:10,470

everything continuing to look good

59

00:03:13,589 --> 00:03:11,519

with the

60

00:03:15,750 --> 00:03:13,599

second stage getting confirmation from

61

00:03:17,589 --> 00:03:15,760

the visiting vehicle officer that the

62

00:03:19,589 --> 00:03:17,599

launch shroud so that protective shroud

63

00:03:23,270 --> 00:03:19,599

around the soyuz spacecraft has been

64

00:03:26,470 --> 00:03:23,280

jettisoned so soyuz now exposed during

65

00:03:28,949 --> 00:03:26,480

the additional climb to orbit

66

00:03:30,390 --> 00:03:28,959

all parameters are nominal

67

00:03:32,550 --> 00:03:30,400

at this point a little over three

68

00:03:35,509 --> 00:03:32,560

minutes since launched the soyuz rocket

69

00:03:40,309 --> 00:03:35,519

traveling at a speed of over 70 4700

70

00:03:44,550 --> 00:03:42,710

orbit

71

00:03:46,949 --> 00:03:44,560

getting away from paolo nespoli he's in

72

00:03:48,550 --> 00:03:46,959

the right seat and then randy bresen

73

00:03:51,030 --> 00:03:48,560

there at the top of your screen sergey

74

00:03:52,710 --> 00:03:51,040

ryazanskiy in the middle

75

00:03:54,550 --> 00:03:52,720

10 seconds

76

00:03:57,030 --> 00:03:54,560

into flight stability everything

77

00:03:58,070 --> 00:03:57,040

continuing to look good with the soyuz

78

00:03:59,670 --> 00:03:58,080

rocket

79

00:04:02,309 --> 00:03:59,680

being propelled by that single engine of

80

00:04:04,070 --> 00:04:02,319

the third stage provides about 67 000

81

00:04:07,750 --> 00:04:04,080

pounds of thrust and is going to burn

82

00:04:09,110 --> 00:04:07,760

for four minutes and two seconds

83

00:04:10,949 --> 00:04:09,120

guys

84

00:04:12,550 --> 00:04:10,959

third stage performance performs an

85

00:04:18,069 --> 00:04:12,560

avoidance maneuver

86

00:04:23,749 --> 00:04:22,230

all right work for page 35

87

00:04:25,590 --> 00:04:23,759

and getting confirmation from the

88

00:04:27,749 --> 00:04:25,600

visiting vehicle officer all of the

89

00:04:30,790 --> 00:04:27,759

antennas and the solar arrays have been

90

00:04:33,110 --> 00:04:30,800

deployed so that always a good sign the

91

00:04:35,590 --> 00:04:33,120

soyuz now going to orbit at this

92

00:04:37,909 --> 00:04:35,600

altitude that's going to be raised over

93

00:04:39,830 --> 00:04:37,919

the next six hours

94

00:04:41,670 --> 00:04:39,840

by a series of different burns to place

95

00:04:43,749 --> 00:04:41,680

it in close proximity to the

96

00:04:46,870 --> 00:04:43,759

international space station but

97

00:04:49,430 --> 00:04:46,880

a flawless launch a flawless opening of

98

00:04:51,430 --> 00:04:49,440

all of those antennas and arrays the

99

00:04:53,110 --> 00:04:51,440

crew now in orbit control of the

100

00:04:55,030 --> 00:04:53,120

spacecraft from here on out will be

101

00:04:57,430 --> 00:04:55,040

overseen from the russian mission

102

00:04:59,990 --> 00:04:57,440

control center just outside of moscow

103

00:05:02,469 --> 00:05:00,000

but a very happy rozanski bresnik and

104

00:05:03,990 --> 00:05:02,479

nepoli obviously in space and on their

105

00:05:06,550 --> 00:05:04,000

way towards the international space

106

00:05:10,950 --> 00:05:06,560

station and you will be sending the rdr

107

00:05:12,070 --> 00:05:10,960

command via cara el command command data