



1
00:00:05,680 --> 00:00:14,150
17 seconds

2
00:00:19,269 --> 00:00:15,190
eight

3
00:00:31,509 --> 00:00:19,279
seven six second umbilical backs away

4
00:00:36,630 --> 00:00:33,910
main engine start and liftoff liftoff of

5
00:00:48,069 --> 00:00:36,640
the 47th progress resupply vehicle to

6
00:00:57,110 --> 00:00:49,830
good first stage performance being

7
00:01:03,910 --> 00:00:58,869
all thrusters are reported to be

8
00:01:08,789 --> 00:01:06,550
42 seconds into the flight

9
00:01:10,789 --> 00:01:08,799
the soyuz is delivering 100 tons of

10
00:01:14,149 --> 00:01:10,799
thrust from its four boosters in single

11
00:01:17,030 --> 00:01:15,670
parking uh to the northeast of its

12
00:01:19,670 --> 00:01:17,040
launch pad

13
00:01:22,149 --> 00:01:19,680

toward an orbit inclined 51.6 degrees to

14

00:01:23,749 --> 00:01:22,159

either side of the equator coming up on

15

00:01:27,510 --> 00:01:23,759

the one minute mark into the flight the

16

00:01:29,749 --> 00:01:27,520

velocity already 1100 miles per hour

17

00:01:30,789 --> 00:01:29,759

all systems reported to be functioning

18

00:01:39,350 --> 00:01:30,799

normally

19

00:01:43,190 --> 00:01:41,030

the soyuz booster now going through the

20

00:01:45,670 --> 00:01:43,200

area of maximum dynamic pressure you can

21

00:01:49,109 --> 00:01:45,680

see the contrails the vortices off of

22

00:02:03,670 --> 00:01:50,950

80 seconds into the flight everything is

23

00:02:07,510 --> 00:02:06,069

we're about 30 seconds away from the

24

00:03:00,309 --> 00:02:07,520

shutdown of the first stage and the

25

00:03:04,390 --> 00:03:02,630

everything reported uh nominal from the

26
00:03:06,229 --> 00:03:04,400
block house of the baikonur cosmodrome

27
00:03:07,910 --> 00:03:06,239
in kazakhstan

28
00:03:16,149 --> 00:03:07,920
coming up on the three-minute mark into

29
00:03:20,390 --> 00:03:18,229
this the launch shroud has now been

30
00:03:22,550 --> 00:03:20,400
jettisoned

31
00:03:26,229 --> 00:03:22,560
the uh soyuz booster traveling at a

32
00:03:28,470 --> 00:03:26,239
speed of almost 5 000 miles an hour

33
00:03:31,190 --> 00:03:28,480
we have passed uh the three minute mark

34
00:03:43,990 --> 00:03:31,200
into the flight the second stage or core

35
00:03:48,949 --> 00:03:47,030
three minutes 20 seconds into the flight

36
00:03:50,470 --> 00:03:48,959
everything proceeding uh

37
00:03:53,030 --> 00:03:50,480
in good fashion

38
00:03:56,550 --> 00:03:53,040

as the soyuz booster rocket is

39

00:03:58,710 --> 00:03:56,560

delivering the progress 47 resupply ship

40

00:04:00,390 --> 00:03:58,720

toward its preliminary orbit

41

00:04:02,869 --> 00:04:00,400

and the start of a two-day chase to

42

00:04:04,949 --> 00:04:02,879

reach the international space station at

43

00:04:07,149 --> 00:04:04,959

the time of launch

44

00:04:10,149 --> 00:04:07,159

the station was traveling

45

00:04:16,150 --> 00:04:10,159

245 miles over the atlantic ocean just

46

00:04:20,390 --> 00:04:18,390

a view of the now empty launch pad of

47

00:04:22,310 --> 00:04:20,400

the baikonur cosmodrome

48

00:04:25,110 --> 00:04:22,320

it won't be empty for long however as

49

00:04:27,110 --> 00:04:25,120

another soyuz booster will roll out

50

00:04:29,189 --> 00:04:27,120

in just a few weeks

51

00:04:31,270 --> 00:04:29,199

for the next crew launch to the

52

00:04:33,830 --> 00:04:31,280

international space station

53

00:04:36,390 --> 00:04:33,840

the remainder of the expedition 31 crew

54

00:04:39,430 --> 00:04:36,400

gennady padalka joe acaba sergey revin

55

00:04:43,510 --> 00:04:39,440

on the soyuz tma-04m

56

00:04:46,310 --> 00:04:43,520

four minutes 20 seconds into the flight

57

00:04:47,990 --> 00:04:46,320

we're coming up shortly on second stage

58

00:05:15,270 --> 00:04:48,000

shutdown in jettison everything

59

00:05:19,749 --> 00:05:17,670

all flight parameters continue to come

60

00:05:23,110 --> 00:05:19,759

in in nominal fashion according to the

61

00:05:25,189 --> 00:05:23,120

reports from the block house

62

00:05:30,150 --> 00:05:25,199

we have now had second stage shutdown

63

00:05:49,029 --> 00:05:32,629

the next four minutes of flight will be

64

00:05:55,189 --> 00:05:51,749

once again the launch of the uh

65

00:05:56,390 --> 00:05:55,199

iss progress 47 cargo craft occurred on

66

00:06:03,110 --> 00:05:56,400

time

67

00:06:06,469 --> 00:06:04,629

into

68

00:06:16,309 --> 00:06:06,479

virtually cloudless skies at the

69

00:06:19,749 --> 00:06:17,990

you're watching a replay now of the

70

00:06:22,150 --> 00:06:19,759

final seconds before main engine

71

00:06:29,510 --> 00:06:22,160

ignition and liftoff this video courtesy

72

00:06:33,909 --> 00:06:31,749

we've just passed the six minute mark

73

00:06:47,749 --> 00:06:33,919

into the flight about three minutes of

74

00:06:52,230 --> 00:06:49,990

and there just moments ago

75

00:06:54,469 --> 00:06:52,240

this replay showing the main engine

76

00:06:56,070 --> 00:06:54,479

ignition and liftoff

77

00:06:58,870 --> 00:06:56,080

of the

78

00:07:04,390 --> 00:06:58,880

soyuz booster and the progress 47 cargo

79

00:07:10,629 --> 00:07:06,950

six uh and a half minutes into the

80

00:07:12,790 --> 00:07:10,639

flight everything reported normally

81

00:07:16,629 --> 00:07:12,800

good engine performance

82

00:07:19,749 --> 00:07:16,639

good orientation by the third stage

83

00:07:21,110 --> 00:07:19,759

as it continues its flight uphill to

84

00:07:36,469 --> 00:07:21,120

deliver the progress into its

85

00:07:41,189 --> 00:07:39,110

very few perturbations reported to the

86

00:07:44,790 --> 00:07:41,199

third stage of the soyuz booster good

87

00:07:46,629 --> 00:07:44,800

roll good pitch good yaw reported in

88

00:07:49,670 --> 00:07:46,639

telemetry being received at the baikonur

89

00:07:50,550 --> 00:07:49,680
cosmodrome in kazakhstan you're looking

90

00:07:52,150 --> 00:07:50,560
at the

91

00:07:54,150 --> 00:07:52,160
international space station flight

92

00:07:57,270 --> 00:07:54,160
control room at the russian mission

93

00:07:59,670 --> 00:07:57,280
control center in korayov outside moscow

94

00:08:00,790 --> 00:07:59,680
which will take over control of the

95

00:08:02,629 --> 00:08:00,800
progress

96

00:08:13,670 --> 00:08:02,639
and its trek to the international space

97

00:08:19,510 --> 00:08:16,710
the progress and its soyuz booster third

98

00:08:20,790 --> 00:08:19,520
stage now traveling almost 14 000 miles

99

00:08:52,150 --> 00:08:20,800
an hour

100

00:09:02,070 --> 00:08:53,509
coming up on the eight and a half minute

101
00:09:04,949 --> 00:09:03,509
we're all pitching y'all of the third

102
00:09:08,790 --> 00:09:04,959
stage still

103
00:09:10,949 --> 00:09:08,800
normal everything is on track the

104
00:09:13,350 --> 00:09:10,959
soyuz booster traveling right down the

105
00:09:23,990 --> 00:09:13,360
marks toward its preliminary orbit to

106
00:09:24,000 --> 00:09:35,350
and we've had third stage shutdown

107
00:09:35,360 --> 00:09:53,910
spacecraft separation confirmed

108
00:09:57,430 --> 00:09:55,670
and we've had confirmation of the

109
00:10:00,070 --> 00:09:57,440
deployment of the solar rays and the

110
00:10:03,269 --> 00:10:00,080
navigational antennas on the iss

111
00:10:04,870 --> 00:10:03,279
progress 47 vehicle a flawless launch

112
00:10:06,550 --> 00:10:04,880
from the baikonur cosmodrome in

113
00:10:08,870 --> 00:10:06,560

kazakhstan the progress now in its