



1
00:00:33,590 --> 00:00:31,409
this is shuttle launch control at

2
00:00:35,869 --> 00:00:33,600
t-minus three hours and holding

3
00:00:38,729 --> 00:00:35,879
countdown is proceeding without any

4
00:00:42,500 --> 00:00:38,739
technical problems and our activities

5
00:00:44,700 --> 00:00:42,510
are on schedule final inspection team

6
00:00:55,709 --> 00:00:44,710
continuing their activities which have

7
00:01:03,530 --> 00:00:59,069
and here we are in the crew dining room

8
00:01:06,749 --> 00:01:03,540
we see the sts 87 mission emblem cake

9
00:01:11,219 --> 00:01:06,759
mission specialist Winston Scott will be

10
00:01:14,190 --> 00:01:11,229
doing the EBA on this flight mission

11
00:01:17,820 --> 00:01:14,200
specialist 2 cowboy also will be doing

12
00:01:21,950 --> 00:01:17,830
an e ba on this mission our commander

13
00:01:24,990 --> 00:01:21,960

kept and Kregel for the STS 87 flight

14

00:01:28,919 --> 00:01:25,000

our payload specialist layin at Kadena

15

00:01:32,249 --> 00:01:28,929

from the Ukraine mission specialist

16

00:01:34,980 --> 00:01:32,259

Colton a table will be operating the RMS

17

00:01:38,040 --> 00:01:34,990

for the Spartan deployment and finally

18

00:01:39,389 --> 00:01:38,050

our pilot Steve Lindsey will be working

19

00:01:53,969 --> 00:01:39,399

this print camera during the mission

20

00:02:02,170 --> 00:01:58,000

we are in the suit off room with our fts

21

00:02:08,740 --> 00:02:02,180

eighty seven astronauts looking at our

22

00:02:09,690 --> 00:02:08,750

commander kevin Kregel and here is pilot

23

00:02:12,340 --> 00:02:09,700

steve lindsey

24

00:02:17,670 --> 00:02:12,350

you will be operating from the flight

25

00:02:21,870 --> 00:02:17,680

deck this fall basketball sized camera

26
00:02:24,490 --> 00:02:21,880
and this is specialist Kulpa chopper

27
00:02:26,410 --> 00:02:24,500
will operate the remote manipulator

28
00:02:31,720 --> 00:02:26,420
system and deploy and retrieve the

29
00:02:40,660 --> 00:02:37,470
mission specialist 2 cowboy we will be

30
00:02:47,020 --> 00:02:40,670
participating in the EBA on this mission

31
00:02:50,699 --> 00:02:47,030
along with Wednesday Scott and next to

32
00:02:53,140 --> 00:02:50,709
him here is Wednesday Scott who will be

33
00:02:59,770 --> 00:02:53,150
also doing the EBA during the flight

34
00:03:03,190 --> 00:02:59,780
what the cowboy and our payload

35
00:03:07,840 --> 00:03:03,200
specialist lay it at cotton yoke from

36
00:03:18,650 --> 00:03:07,850
the Ukraine we'll be investigating plant

37
00:03:24,840 --> 00:03:20,910
this is shuttle launch control at

38
00:03:28,440 --> 00:03:24,850

t-minus two hours 56 minutes 55 seconds

39

00:03:31,550 --> 00:03:28,450
and counting where we see the STS 87

40

00:03:35,460 --> 00:03:31,560
Astra now are entering the elevator or

41

00:03:37,290 --> 00:03:35,470
ride down two floors from the astronaut

42

00:03:42,020 --> 00:03:37,300
quarters to the astronaut van which will

43

00:03:46,320 --> 00:03:42,030
transport them the approximately 7 mile

44

00:03:48,390 --> 00:03:46,330
distance out to launch pad 39b garage

45

00:03:54,710 --> 00:03:48,400
which will take approximately 20 minutes

46

00:04:25,660 --> 00:03:54,720
or so see some KSC employees behind the

47

00:04:35,330 --> 00:04:29,030
the after then now approaching the pad

48

00:04:37,580 --> 00:04:35,340
perimeter leave the man and what the

49

00:04:40,010 --> 00:04:37,590
elevator to the orbiter access arm and

50

00:04:47,950 --> 00:04:40,020
the closeout crew ready to assist them

51
00:04:53,180 --> 00:04:47,960
in boarding Columbia and here we see our

52
00:04:57,110 --> 00:04:53,190
commander Kevin Kregel preparing to port

53
00:04:59,470 --> 00:04:57,120
Columbia and there to cowboy is the

54
00:05:03,140 --> 00:04:59,480
mission specialist who would be boarding

55
00:05:07,190 --> 00:05:03,150
next here very shortly as soon as Kevin

56
00:05:09,080 --> 00:05:07,200
Kriegel boards the orbiter this is

57
00:05:11,660 --> 00:05:09,090
actually a view from the flight deck and

58
00:05:15,380 --> 00:05:11,670
now he's climbing up into the commander

59
00:05:17,000 --> 00:05:15,390
seat keep in mind that everything is in

60
00:05:20,000 --> 00:05:17,010
the vertical here he's getting

61
00:05:25,129 --> 00:05:20,010
assistance from another astronaut

62
00:05:28,429 --> 00:05:26,960
right now he's just positioning himself

63
00:05:30,230 --> 00:05:28,439

in the seat it's very important that

64

00:05:32,029 --> 00:05:30,240

they get in the seat straight they've

65

00:05:33,890 --> 00:05:32,039

got some emergency oxygen bottles

66

00:05:35,600 --> 00:05:33,900

strapped to their back on the harness

67

00:05:37,719 --> 00:05:35,610

and then they'll be laying on top of the

68

00:05:40,969 --> 00:05:37,729

parachute and they could be in there for

69

00:05:43,339 --> 00:05:40,979

upwards of three plus hours today and

70

00:05:46,219 --> 00:05:43,349

it's very important that he's in a

71

00:05:47,959 --> 00:05:46,229

position where nothing is in his back

72

00:05:48,230 --> 00:05:47,969

and there'll be two people working on

73

00:05:50,809 --> 00:05:48,240

them

74

00:05:53,689 --> 00:05:50,819

there's several connections here you see

75

00:05:55,879 --> 00:05:53,699

two cowboy getting in into the mid-deck

76

00:05:58,309 --> 00:05:55,889

and what we try and do here is strap one

77

00:06:03,020 --> 00:05:58,319

person at a time in both the flight deck

78

00:06:06,230 --> 00:06:03,030

and midday so this cow is ms3 and he'll

79

00:06:09,830 --> 00:06:06,240

be assisted by another strap in

80

00:06:11,749 --> 00:06:09,840

personnel on the mid-deck now once Kevin

81

00:06:14,119 --> 00:06:11,759

is strapped in and has his cooling and

82

00:06:18,800 --> 00:06:14,129

the oxygen hooked up they'll begin to

83

00:06:21,279 --> 00:06:18,810

put on his helmet and that core there

84

00:06:23,439 --> 00:06:21,289

will be hooked up for his communications

85

00:06:26,209 --> 00:06:23,449

following his strapped in they'll do

86

00:06:27,920 --> 00:06:26,219

some communications checks just to make

87

00:06:32,570 --> 00:06:27,930

sure that everything is in line before

88

00:06:36,150 --> 00:06:32,580

they move on to the next there's a shot

89

00:06:40,080 --> 00:06:38,160

looks like he's got his harness on and

90

00:06:44,910 --> 00:06:40,090

he'll be waiting to be the second person

91

00:06:46,860 --> 00:06:44,920

on the mid-deck there's the the pilot

92

00:06:52,310 --> 00:06:46,870

steve lindsey climbing into the flight

93

00:06:57,470 --> 00:06:54,410

go ask Steve to reach up and grab two

94

00:06:58,940 --> 00:06:57,480

hand holds and this particular maneuver

95

00:07:00,950 --> 00:06:58,950

here is very similar to just doing a

96

00:07:02,650 --> 00:07:00,960

pull-up he's pull self up into the seat

97

00:07:04,880 --> 00:07:02,660

getting his feet in position

98

00:07:07,220 --> 00:07:04,890

do you see is holding on to his

99

00:07:08,690 --> 00:07:07,230

emergency oxygen bottles to keep them on

100

00:07:10,160 --> 00:07:08,700

each side of the parachute and then

101
00:07:12,680 --> 00:07:10,170
they'll begin the process all over again

102
00:07:16,130 --> 00:07:12,690
if getting Steve positioned correctly on

103
00:07:18,800 --> 00:07:16,140
a parachute for comfort here's a great

104
00:07:20,120 --> 00:07:18,810
shot I landed he's in the seat now the

105
00:07:21,770 --> 00:07:20,130
second crewmember on the mid-deck

106
00:07:26,080 --> 00:07:21,780
they'll be hooking up his cooling at

107
00:07:36,280 --> 00:07:30,250
this is our first flight of Ukrainian on

108
00:07:40,300 --> 00:07:36,290
the shuttle yeah let's go

109
00:07:43,360 --> 00:07:40,310
yeah 5:30 a couple o'clock a COS copy

110
00:08:15,690 --> 00:07:43,370
the we need us to MCC on channel 1 16

111
00:08:20,020 --> 00:08:17,980
Second patient this is the entity for

112
00:08:21,910 --> 00:08:20,030
pointer lock status cut so if I ready to

113
00:08:24,750 --> 00:08:21,920

resume count and opal on they don't know

114

00:08:31,510 --> 00:08:24,760

go I'll go

115

00:08:49,090 --> 00:08:31,520

go help you go you look like Justin

116

00:08:50,740 --> 00:08:49,100

flights go and I thought they all watch

117

00:08:51,430 --> 00:08:50,750

quicker than to eat watch them is ready

118

00:08:58,770 --> 00:08:51,440

to proceed

119

00:09:05,260 --> 00:09:01,480

safety and they say safety and mission

120

00:09:12,640 --> 00:09:05,270

assurance is go right weather no context

121

00:09:14,710 --> 00:09:12,650

for that MMP is go for lunch after that

122

00:09:18,940 --> 00:09:14,720

and qawalli looks like we're there you

123

00:09:42,769 --> 00:09:18,950

go so was all NPD you're quite a large

124

00:09:47,850 --> 00:09:45,269

come on developing close and lock your

125

00:09:51,139 --> 00:09:47,860

visors this dude okay slow down ethical

126
00:09:58,280 --> 00:09:51,149
Thanksgiving I'm gonna roll go your way

127
00:10:05,560 --> 00:09:58,290
thank you very much 20

128
00:10:05,570 --> 00:10:13,450
t-minus ten nine eight seven six five

129
00:10:20,450 --> 00:10:18,380
three two one and liftoff of space

130
00:10:22,490 --> 00:10:20,460
shuttle Columbia on a mission combining

131
00:10:36,740 --> 00:10:22,500
science and the practical aspects of

132
00:10:38,840 --> 00:10:36,750
space control it's down wings level

133
00:10:41,000 --> 00:10:38,850
position headed to a 150 nautical mile

134
00:10:50,620 --> 00:10:41,010
orbit incline 20 and 1/2 degrees to

135
00:10:54,700 --> 00:10:52,300
three inches on board Columbia now

136
00:10:56,080 --> 00:10:54,710
traveling back to 67% of rated thrust as

137
00:10:58,300 --> 00:10:56,090
the orbiter passes through the area of

138
00:11:18,340 --> 00:10:58,310

maximum aerodynamic pressure in the

139

00:11:25,630 --> 00:11:21,110

three inches now ramping back up to 104

140

00:11:32,480 --> 00:11:30,190

Columbia go at throttle up Columbia

141

00:11:34,580 --> 00:11:32,490

Columbia Street liquid-fuel engines are

142

00:11:36,800 --> 00:11:34,590

now back at four throttle 104 percent of

143

00:11:45,700 --> 00:11:36,810

rated thrust altitude now eleven miles

144

00:11:49,060 --> 00:11:48,010

one minute 30 seconds into flight with

145

00:11:50,560 --> 00:11:49,070

more than two and a quarter million

146

00:11:52,780 --> 00:11:50,570

pounds of propellant having already been

147

00:11:55,420 --> 00:11:52,790

consumed Colombia now weighs half of

148

00:11:57,130 --> 00:11:55,430

what it did at liftoff stand by for the

149

00:11:58,660 --> 00:11:57,140

next major ban which will be the burnout

150

00:12:00,670 --> 00:11:58,670

and separation of the twin solid rocket

151
00:12:02,100 --> 00:12:00,680
boosters that coming up in a little more

152
00:12:04,750 --> 00:12:02,110
than two minutes into the flight

153
00:12:28,160 --> 00:12:04,760
altitude now 20 miles downrange distance

154
00:12:37,600 --> 00:12:29,900
booster officer confirms good separation

155
00:12:37,610 --> 00:12:46,269
Columbia performance is nominal

156
00:12:52,790 --> 00:12:49,009
commander Kevin creel now rolling a

157
00:12:55,009 --> 00:12:52,800
videotape shot from a camera mounted on

158
00:12:58,310 --> 00:12:55,019
the forward flight deck of Columbia

159
00:13:00,860 --> 00:12:58,320
looking back aft on the right side is

160
00:13:01,759 --> 00:13:00,870
commander Kregel left side Steve Lindsey

161
00:13:04,100 --> 00:13:01,769
in the foreground

162
00:13:05,810 --> 00:13:04,110
flight engineer Winston Scott directly

163
00:13:07,550 --> 00:13:05,820

in the middle behind them and to his

164

00:13:10,550 --> 00:13:07,560

right mission specialist Colton the

165

00:14:40,939 --> 00:13:10,560

travel up this video of the launch

166

00:14:48,439 --> 00:14:43,039

and I could probably tell my lights that

167

00:14:50,150 --> 00:14:48,449

was the role the heads-up thanks Kevin