1
00:00:35,970 --> 00:00:34,080
from launch complex 39 at the Kennedy

2
00:00:39,090 --> 00:00:35,980
Space Center in Florida this is shuttle

3
00:00:42,470 --> 00:00:39,100
launch control at t-minus 3 hours 39

4
00:00:45,900 --> 00:00:42,480
minutes 49 seconds and counting

5
00:00:47,760 --> 00:00:45,910
we are now in the final six hours of the

6
00:00:52,350 --> 00:00:47,770
countdown for the launch of space

7
00:00:53,759 --> 00:00:52,360
shuttle Columbia on mission STS 83 the

8
00:00:55,560 --> 00:00:53,769
countdown is being controlled from

9
00:00:58,229 --> 00:00:55,570
firing room 1 at the launch control

10
00:01:01,350 --> 00:00:58,239
center and we are on schedule for

11
00:01:05,639 --> 00:01:01,360
liftoff at exactly 2 p.m. Eastern

12
00:01:08,400 --> 00:01:05,649
Daylight Time this afternoon this is the

13
00:01:10,560 --> 00:01:08,410

22nd flight for space shuttle Columbia

14
00:01:13,290 --> 00:01:10,570
and the 83rd mission of the space

15
00:01:17,639 --> 00:01:13,300
shuttle program since launches began in

16
00:01:20,580 --> 00:01:17,649
April 1981 sixteen years ago the primary

17
00:01:23,040 --> 00:01:20,590
objective of the STS 83 mission will be

18
00:01:24,510 --> 00:01:23,050
to conduct over two weeks of experiments

19
00:01:27,749 --> 00:01:24,520
inside the microgravity science

20
00:01:29,730 --> 00:01:27,759
laboratory space lab module which will

21
00:01:32,820 --> 00:01:29,740
include experiments and protein crystal

22
00:01:35,780 --> 00:01:32,830
growth materials processing combustion

23
00:01:39,270 --> 00:01:35,790
experiments and plant growth experiments

24
00:01:43,260 --> 00:01:39,280
the mission duration for sts 83 is

25
00:01:47,010 --> 00:01:43,270
planned as 15 days 16 hours 36 minutes

26
00:01:50,160 --> 00:01:47,020
and Columbia will be in a 184 statute

27
00:01:52,789 --> 00:01:50,170
mile high orbit the landing is planned

28
00:01:57,390 --> 00:01:52,799
to occur at the Kennedy Space Center on

29
00:03:07,970 --> 00:01:57,400
the morning of April 19th at about 7:40

30
00:03:07,980 --> 00:03:13,680
all seven crew members

31
00:03:22,320 --> 00:03:16,800
and the traditional cake with the emblem

32
00:03:24,810 --> 00:03:22,330
for STS 83 and on the far end is payload

33
00:03:27,720 --> 00:03:24,820
specialist Ragland grid Greg Lynn

34
00:03:32,100 --> 00:03:27,730
Terrace and next to him is mission

35
00:03:37,860 --> 00:03:32,110
specialist number 3 Don Thomas our pilot

36
00:03:44,460 --> 00:03:37,870
for STS 83 Susan's still the commander

37
00:03:46,080 --> 00:03:44,470
Jim Hall cell Mike Bernhardt mission

38
00:03:51,060 --> 00:03:46,090

specialist number two and our flight

39
00:03:54,590 --> 00:03:51,070
engineer Janice Voss mission specialist

40
00:03:58,830 --> 00:03:54,600
number one and the payload commander and

41
00:04:29,790 --> 00:03:58,840
next to her is Roger crouch payload

42
00:04:35,100 --> 00:04:32,369
standing by now to receive video from

43
00:04:40,129 --> 00:04:35,110
the astronaut quarters of the STS 83

44
00:04:47,760 --> 00:04:40,139
crew suiting up we are we see our

45
00:04:51,480 --> 00:04:47,770
commander Jim Hall cell there's our

46
00:04:57,279 --> 00:04:54,390
second female pilot to fly the space

47
00:05:06,350 --> 00:05:01,329
Janice Voss our payload commander on

48
00:05:13,499 --> 00:05:10,710
Roger Crouch will be responsible for

49
00:05:23,029 --> 00:05:13,509
much of the science operations on board

50
00:05:25,379 --> 00:05:23,039
the microgravity space lab my gern heart

51
00:05:34,730 --> 00:05:25,389
mission specialist number two and also

52
00:05:34,740 --> 00:05:42,540
and Don Thomas mission specialist

53
00:05:42,550 --> 00:05:54,770
here's Greg Len Terrace

54
00:05:59,429 --> 00:05:58,020
sunlight shining brightly into firing

55
00:06:05,249 --> 00:05:59,439
room one here at the launch control

56
00:06:08,730 --> 00:06:05,259
center at KSC where all the members of

57
00:06:15,839 --> 00:06:08,740
the launch team have been on station

58
00:06:18,959 --> 00:06:15,849
most of them since fueling began at the

59
00:06:21,659 --> 00:06:18,969
left or 6:00 this morning and here we

60
00:07:27,580 --> 00:06:21,669
see pad 39a at the edge of the Atlantic

61
00:07:32,510 --> 00:07:29,840
this is shuttle launch control at

62
00:07:35,420 --> 00:07:32,520
t-minus two hours 37 minutes thirty

63
00:07:38,930 --> 00:07:35,430

seconds in counting the astronauts have

64
00:07:40,340 --> 00:07:38,940
arrived at the 195-foot level of the

65
00:07:48,890 --> 00:07:40,350
fixed service structure where the

66
00:07:50,720 --> 00:07:48,900
orbiter access arm is located this is

67
00:07:53,030 --> 00:07:50,730
shuttle launch control at t-minus 2

68
00:07:58,330 --> 00:07:53,040
hours 34 minutes and Counting

69
00:08:03,380 --> 00:07:58,340
while we see commander Jim Hall cell

70
00:09:00,090 --> 00:08:03,390
being assisted with his equipment for

71
00:09:07,940 --> 00:09:02,520
pilot Susan still now be is being

72
00:09:28,930 --> 00:09:07,950
assisted with her equipment she'll be in

73
00:09:47,530 --> 00:09:31,970
Misha specialist number two Don Thomas

74
00:10:04,810 --> 00:09:54,670
okay tasty DLC you wanted it step 5

75
00:10:07,440 --> 00:10:04,820
my medley be another one yeah LT had to

76
00:10:11,710 --> 00:10:07,450
deal to clear a good morning Susan

77
00:10:18,550 --> 00:10:11,720
mission specialist Janice Voss now being

78
00:10:26,350 --> 00:10:22,600
she's a mess number one and will be the

79
00:10:29,069 --> 00:10:26,360
payload commander on this flight payload

80
00:10:47,890 --> 00:10:29,079
specialist Roger Crouch now preparing to

81
00:10:54,700 --> 00:10:50,170
Misha specialist Mike Bernhardt now

82
00:11:04,570 --> 00:10:54,710
being assisted to prepare for his entry

83
00:11:31,630 --> 00:11:06,820
fs3 this is OTC I have your last

84
00:11:41,889 --> 00:11:35,970
like that

85
00:11:56,370 --> 00:11:41,899
I could add safety values go stop it at

86
00:11:58,900 --> 00:11:56,380
lanes weather copy that copy and

87
00:12:00,370 --> 00:11:58,910
Columbia will be picking up moment

88
00:12:03,090 --> 00:12:00,380

clearly you guys have a great mission

89
00:12:08,650 --> 00:12:03,100
and we'll see you back here in two weeks

90
00:12:10,420 --> 00:12:08,660
NTD you're clear to launch and now we'll

91
00:12:20,400 --> 00:12:10,430
be checking the flight controls on the

92
00:12:29,430 --> 00:12:22,829
vehicle will go back to internal power

93
00:12:32,160 --> 00:12:29,440
at about ten seconds coming up on t

94
00:12:35,579 --> 00:12:32,170
minus three minutes 23 seconds were now

95
00:12:49,679 --> 00:12:35,589
gimbley three main engines checking

96
00:12:51,179 --> 00:12:49,689
their steering capability go to close

97
00:13:10,249 --> 00:12:51,189
and lock your visors and make sure you

98
00:13:19,410 --> 00:13:14,840
ignition sequence start five four three

99
00:13:21,389 --> 00:13:19,420
two one and liftoff of space shuttle

100
00:13:23,970 --> 00:13:21,399
Columbia with the microgravity science

101
00:13:30,520 --> 00:13:23,980
laboratory our research bridge to the

102
00:13:35,690 --> 00:13:34,160
Roger roll Columbia Houston is now

103
00:13:37,970 --> 00:13:35,700
controlling Columbia is rolling on

104
00:13:40,640 --> 00:13:37,980
course for the 160 nautical mile high

105
00:13:42,470 --> 00:13:40,650
orbit inclined plane 1/2 degrees to our

106
00:13:51,940 --> 00:13:42,480
seat better tell me are you traveling

107
00:13:56,720 --> 00:13:54,920
back to 2/3 throttled the spacecraft

108
00:13:57,800 --> 00:13:56,730
capacity area maximum air pressure and

109
00:14:00,350 --> 00:13:57,810
go supersonic

110
00:14:02,000 --> 00:14:00,360
altitude now two and a half miles one

111
00:14:08,410 --> 00:14:02,010
and a half miles east of the launch pad

112
00:14:15,740 --> 00:14:14,330
Columbia go at throttle up Columbia's

113
00:14:17,450 --> 00:14:15,750

three main engines now back at full

114
00:14:18,250 --> 00:14:17,460
throttle all systems on board in good

115
00:14:21,590 --> 00:14:18,260
shape

116
00:14:28,670 --> 00:14:21,600
cumbia speed now 1,500 miles per hour

117
00:14:30,530 --> 00:14:28,680
altitude 12 miles one minute to 55

118
00:14:32,180 --> 00:14:30,540
seconds since liftoff my controller is

119
00:14:34,400 --> 00:14:32,190
standing by in the next a few seconds

120
00:14:41,940 --> 00:14:34,410
for burnout and jettison of the twin

121
00:14:47,639 --> 00:14:44,190
booster officer confirms good separation

122
00:15:58,510 --> 00:14:47,649
of the solid rocket s-- columbia

123
00:16:01,960 --> 00:16:00,040
this is Mission Control Houston this

124
00:16:03,160 --> 00:16:01,970
view shows the inside of the Space Lab

125
00:16:20,280 --> 00:16:03,170
module the microgravity science

126
00:16:32,050 --> 00:16:23,170
and that's affirmative we have a great

127
00:16:58,760 --> 00:16:32,060
view of Space Lab we've got it all set

128
00:17:03,390 --> 00:17:01,560
yes Janice we had one Delta and that

129
00:17:05,280 --> 00:17:03,400
concerned the fact that there's a

130
00:17:12,180 --> 00:17:05,290
circuit breaker that needs to be turned

131
00:17:15,390 --> 00:17:12,190
on on rack for that's our 4w that's epsp

132
00:17:19,560 --> 00:17:15,400
number four and the circuit breaker is

133
00:17:22,530 --> 00:17:19,570
DC one and we need it to be turned on in