1
00:00:00,400 --> 00:00:01,360
8

2
00:00:01,560 --> 00:00:02,180
7

3
00:00:02,460 --> 00:00:03,320
6

4
00:00:03,840 --> 00:00:04,640
5

5
00:00:04,740 --> 00:00:05,500
4

6
00:00:05,720 --> 00:00:06,540
3

7
00:00:06,940 --> 00:00:07,560
2

8
00:00:07,840 --> 00:00:08,460
1

9
00:00:10,020 --> 00:00:13,540
Mike Curie, NASA Launch Commentator: And liftoff
at dawn.

10
00:00:13,680 --> 00:00:19,300
The dawn of Orion and a new era of American
space exploration.

11
00:00:31,600 --> 00:00:34,800
Steve Agid, ULA Launch Commentator: (inaudible)
engine cold on the first stage.

12
00:00:34,800 --> 00:00:40,640
Passing 25 seconds. Velocity 1,341 feet per

second.

13
00:00:40,640 --> 00:00:43,200
Passing 31 seconds.

14
00:00:43,200 --> 00:00:45,280
Still looking good.

15
00:00:46,160 --> 00:00:50,460
Good engine control.

16
00:00:50,480 --> 00:00:57,480
Good chamber pressure in all three boosters
in

17
00:00:57,480 --> 00:01:00,040
the full power mode. 40 seconds in.

18
00:01:00,960 --> 00:01:05,960
Standing by to go to the partial thrust mode
in the core.

19
00:01:17,600 --> 00:01:19,869
And we have partial thrust command in the
core.

20
00:01:22,720 --> 00:01:26,110
Core pressure beginning to drop as expected
as we're coming up on the one minute

21
00:01:26,800 --> 00:01:31,041
mark. Mark, one minute into the flight, still
looking good.

22
00:01:33,360 --> 00:01:36,160
With chamber pressure in the core, the booster
in the partial thrust mode,

23
00:01:38,480 --> 00:01:41,130

with good chamber pressure in the port and
starboard in full power mode.

24
00:01:41,840 --> 00:01:45,790
One minute, 15 seconds into the flight, we
have the hydrazine supply valve open in the

25
00:01:48,640 --> 00:01:52,170
second stage.

26
00:01:52,170 --> 00:01:52,979
One minute, 22 seconds in, MaxQ. Maximum dynamic
pressure on the vehicle.

27
00:01:52,979 --> 00:01:59,979
Passing 1-24, Mach 1. Orion and Delta IV now
transcending the speed of sound.

28
00:02:00,040 --> 00:02:07,040
One minute, 31 seconds in. Good engine control
on the first stage.

29
00:02:07,200 --> 00:02:07,298
Coming up, 1 minute, 40 seconds. Velocity
now 1,341 feet per second.

30
00:02:07,299 --> 00:02:07,349
One minute, 50 seconds in.

31
00:02:07,350 --> 00:02:10,640
Still looking good. Coming up on two minutes.

32
00:02:10,640 --> 00:02:17,520
Two minutes into the flight.

33
00:02:17,520 --> 00:02:22,540
Good engine control on the first stage.

34
00:02:22,540 --> 00:02:27,390

Port and starboard boosters still at good chamber pressures in the full power mode and

35
00:02:27,390 --> 00:02:32,010
a good core chamber pressure in the partial thrust mode.

36
00:02:32,010 --> 00:02:39,010
Two minutes, 22 seconds in.

37
00:02:45,290 --> 00:02:50,900
Two minutes, 35 seconds in, still looking good.

38
00:02:50,900 --> 00:02:52,800
Coming up on the 2 minute, 43 second mark.

39
00:02:52,800 --> 00:02:57,910
Mark, 2 minutes, 43 seconds. Delta IV Heavy rocket now just weights one-half as much

40
00:02:57,910 --> 00:03:04,910
as it did at launch. But in propellant, the rate of 4,744 pounds per second.

41
00:03:08,360 --> 00:03:15,360
Three minutes, one second into the flight, still looking good.

42
00:03:16,040 --> 00:03:19,560
Passing Mach 5.

43
00:03:19,560 --> 00:03:26,560
Three minutes, 16 seconds in. Good engine control.

44
00:03:33,090 --> 00:03:40,090
Less than one-half minute remains on three booster flight.

45
00:03:40,370 --> 00:03:41,470
Three minutes, 30 seconds in.

46
00:03:41,470 --> 00:03:46,090
We're standing by for the command to go to
the partial thrust mode in the port and

47
00:03:46,090 --> 00:03:47,319
starboard booster.

48
00:03:47,319 --> 00:03:54,319
That command should occur about 10 seconds
from now.

49
00:04:00,110 --> 00:04:03,510
And we have partial thrust command port and
starboard to be toggling down to the

50
00:04:03,510 --> 00:04:05,629
partial thrust mode.

51
00:04:05,629 --> 00:04:08,489
Standing by for main engine cutoff.

52
00:04:08,489 --> 00:04:12,750
We have cutoff in the port and starboard and
separation of, good separation of the port

53
00:04:12,750 --> 00:04:18,209
and starboard boosters.