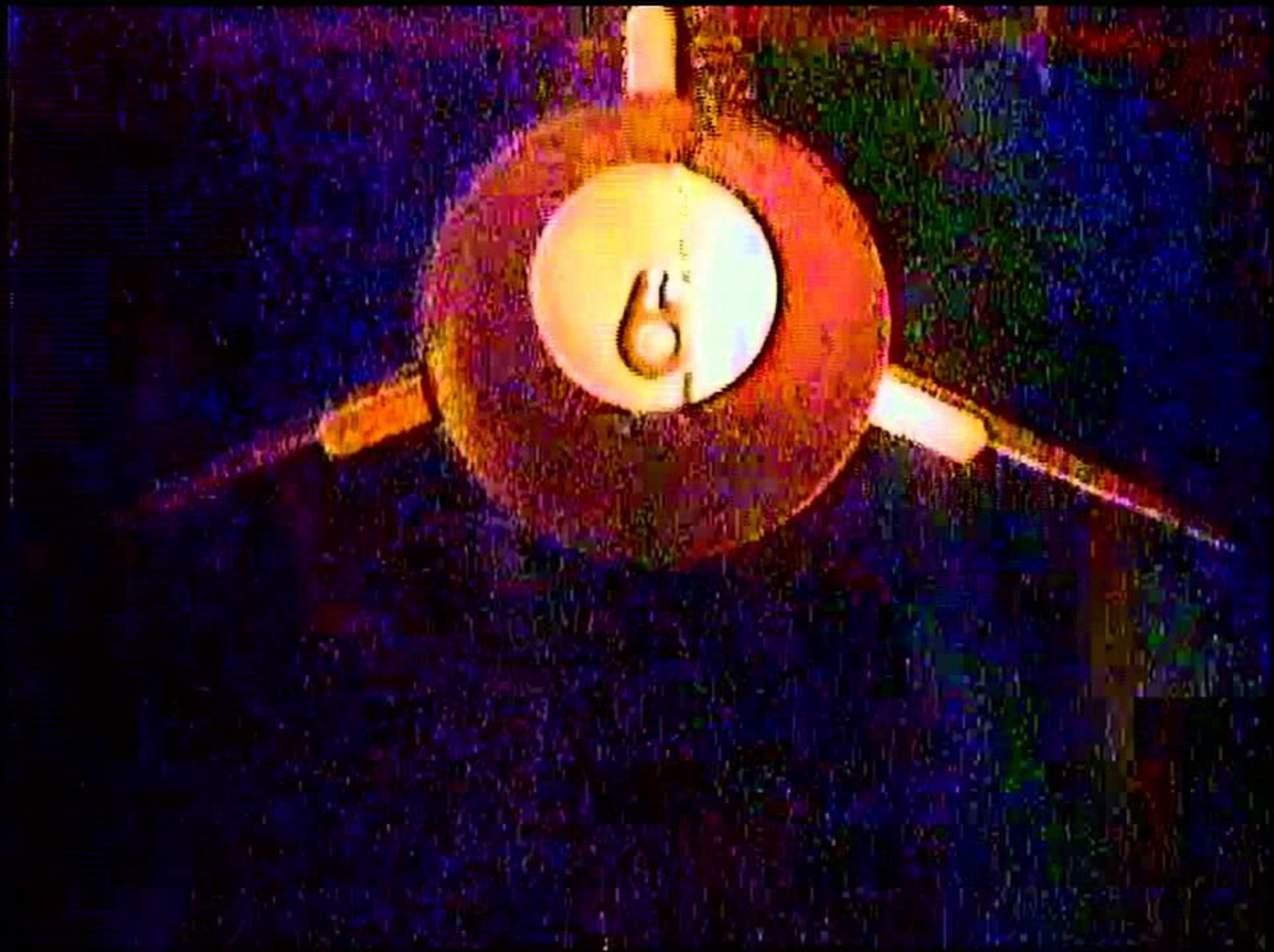

1
00:00:00,410 --> 00:00:03,770
George Diller, NASA Launch Commentator: This is Pegasus launch control

2
00:00:03,770 --> 00:00:05,660
at T-2 hours and counting.

3
00:00:05,660 --> 00:00:11,360
Preparations are under way for the launch of the Orbital Sciences Pegasus XL rocket

4
00:00:11,360 --> 00:00:12,160
carrying NASA's NuSTAR spacecraft.

5
00:00:12,160 --> 00:00:17,990
The call to stations for the launch team was at 7 a.m. this morning

6
00:00:17,990 --> 00:00:24,990
and the launch countdown began at 7:30 a.m. eastern time at T-4 hours.

7
00:00:25,429 --> 00:00:31,420
The time from the L-1011's departure until the drop of the Pegasus rocket is 60 minutes

8
00:00:31,420 --> 00:00:37,379
and the launch window available to us today is four hours in duration.

9
00:00:37,379 --> 00:00:40,960
Weather wise, we have no significant clouds or weather.

10
00:00:40,960 --> 00:00:46,770
The forecast today calls for only a one percent chance or even less,

11
00:00:46,770 --> 00:00:53,170
almost no chance of having a launch weather issue during our countdown today in the drop

12
00:00:53,170 --> 00:00:54,850
box location.

13
00:00:54,850 --> 00:00:59,399

So at this time, from a weather standpoint, we are completely green.

14
00:00:59,399 --> 00:01:05,330
The University of California at Berkeley is responsible for the operation of the spacecraft

15
00:01:05,330 --> 00:01:10,430
and the California Institute of Technology, or CalTech, is responsible

16
00:01:10,430 --> 00:01:11,710
for the mission science.

17
00:01:11,710 --> 00:01:17,270
Both the Pegasus XL rocket and the NuSTAR spacecraft were built by

18
00:01:17,270 --> 00:01:18,880
Orbital Sciences Corporation.

19
00:01:18,880 --> 00:01:23,900
This will be the 41st launch of a Pegasus rocket,

20
00:01:23,900 --> 00:01:26,920
13th for NASA and this is the thirdlaunch

21
00:01:26,920 --> 00:01:32,970
from Kwajalein Atoll in the Marshall Islands for NASA's Launch Services Program.

22
00:01:32,970 --> 00:01:38,490
Launch Conductor: And launch team, this is LC on countdown net.

23
00:01:38,490 --> 00:01:39,780
L-1011 is rolling for taxi,

24
00:01:39,780 --> 00:01:46,780
this completes the engine start and pre-taxi checklist.

25
00:02:22,480 --> 00:02:27,240
And we've got wheels up, launch team. We'll go ahead and check step 116 complete.

26
00:02:27,240 --> 00:02:30,860
That completes the pre-takeoff checklist, currently in the climb-cruise checklist.

27
00:02:33,160 --> 00:02:34,560
Launch Controller: And batteries on my mark,

28
00:02:34,560 --> 00:02:35,160
Three

29
00:02:35,160 --> 00:02:35,700
Two

30
00:02:35,700 --> 00:02:36,170
One

31
00:02:36,170 --> 00:02:37,020
Mark

32
00:02:40,020 --> 00:02:41,530
Starboard now.

33
00:02:42,030 --> 00:02:43,130
Port now.

34
00:02:43,530 --> 00:02:46,190
RCRSO, rudder now.

35
00:02:48,090 --> 00:02:50,060
Fin sweep now.

36
00:02:55,060 --> 00:02:58,660
Launch Conductor: LC is go for launch, PLT confirms.

37
00:02:58,940 --> 00:03:00,510
George Diller/Launch Commentator: T minus 15 seconds.

38
00:03:00,510 --> 00:03:02,520

Pilot is "go" for launch.

39
00:03:02,520 --> 00:03:03,890
T minus 10

40
00:03:03,890 --> 00:03:04,750
Nine

41
00:03:04,750 --> 00:03:05,380
Eight

42
00:03:05,380 --> 00:03:06,240
Seven

43
00:03:06,240 --> 00:03:07,140
Six

44
00:03:07,140 --> 00:03:08,080
Five

45
00:03:08,080 --> 00:03:08,880
Four

46
00:03:08,880 --> 00:03:09,630
Three

47
00:03:09,630 --> 00:03:10,220
Two

48
00:03:10,220 --> 00:03:11,260
One

49
00:03:11,260 --> 00:03:14,230
Drop

50
00:03:14,230 --> 00:03:17,790
And Pegasus is away, standing by for ignition.

51
00:03:17,790 --> 00:03:19,730
Launch Controller: Stage 1 ignition.

52
00:03:19,730 --> 00:03:24,960
George Diller/Launch Commentator: And we have Stage 1 ignition.

53
00:03:24,960 --> 00:03:29,580
Ignition of the Pegasus rocket with NuSTAR for an understanding of the ultimate destinies

54
00:03:29,580 --> 00:03:31,459
of our stars and galaxies.

55
00:03:31,459 --> 00:03:34,840
Ascent Commentator: Fin actuator system operating nominally.

56
00:03:34,840 --> 00:03:39,990
Fins following commands and controlling the flight of the vehicle.

57
00:03:39,990 --> 00:03:44,650
Power bus is strong, PDUs enabled. Vehicle flight path is nominal, flying the normal

58
00:03:44,650 --> 00:03:46,500
trajectory.

59
00:03:46,500 --> 00:03:47,480
Launch Controller: We have Stage 1 sep.

60
00:03:47,480 --> 00:03:48,900
Stage 2 ignition confirmed.

61
00:03:48,900 --> 00:03:51,480
Launch Controller: Stage 2 ignition.

62
00:03:51,480 --> 00:03:54,709
Launch Controller: Stage 2 separation.

63
00:03:54,709 --> 00:03:57,420

Eleven seconds to stage three ignition.

64
00:03:57,420 --> 00:04:02,720
Attitude remains nominal. Stage 3 status good.

65
00:04:02,720 --> 00:04:09,220
Stage 3 ignition. Attitude nominal.

66
00:04:09,220 --> 00:04:13,069
Stage 3 TVC performing nominally, controlling the flight of the vehicle during the

67
00:04:13,069 --> 00:04:14,130
Stage 3 burn.

68
00:04:14,130 --> 00:04:21,130
Launch Controller: Payload separation, NuSTAR separation from Pegasus.

69
00:04:22,139 --> 00:04:25,510
NuSTAR reports that the spacecraft has been acquired via TDRS.

70
00:04:25,510 --> 00:04:29,230
George Diller/Launch Commentator: And we have confirmation of solar array deployment has

71
00:04:29,230 --> 00:04:30,320
been started.

72
00:04:30,320 --> 00:04:34,970
Launch Controller: Standby, the generation of the state vector message is in work and

73
00:04:34,970 --> 00:04:35,840
will be transmitted

74
00:04:35,840 --> 00:04:38,010
as soon as it's verified.

75
00:04:38,010 --> 00:04:42,020
George Diller/Launch Commentator: And we've gotten confirmation through the

76
00:04:42,020 --> 00:04:42,880
spacecraft team,

77
00:04:43,080 --> 00:04:51,980
they've got a good lock with the TDRS spacecraft and the spacecraft is still reorienting,

78
00:04:51,990 --> 00:04:57,750
getting ready to point fully into the sun point attitude. But at this point we seem

79
00:04:57,750 --> 00:05:02,530
to have a successful launch,

80
00:05:02,530 --> 00:05:09,530
so this will conclude our launch coverage for today. At 26 minutes,