



1
00:00:09,270 --> 00:00:04,150
atlas tank stable at step three

2
00:00:11,910 --> 00:00:10,629
25

3
00:00:15,669 --> 00:00:11,920
status check

4
00:00:19,670 --> 00:00:15,679
go atlas go centaur go oa4

5
00:00:19,680 --> 00:00:24,470
t-minus 15 seconds

6
00:00:27,189 --> 00:00:26,150
t-minus 10

7
00:00:28,070 --> 00:00:27,199
9

8
00:00:29,029 --> 00:00:28,080
8

9
00:00:29,990 --> 00:00:29,039
7

10
00:00:31,029 --> 00:00:30,000
six

11
00:00:32,150 --> 00:00:31,039
five

12
00:00:33,350 --> 00:00:32,160
four

13
00:00:34,389 --> 00:00:33,360

three

14

00:00:38,229 --> 00:00:34,399

two

15

00:00:43,350 --> 00:00:40,069

liftoff

16

00:00:47,029 --> 00:00:43,360

on the shoulders of atlas the ss deke

17

00:00:48,950 --> 00:00:47,039

slayton ii orbital atk cygnus spacecraft

18

00:00:53,029 --> 00:00:48,960

soars toward the international space

19

00:00:53,039 --> 00:00:56,630

patrol

20

00:00:56,640 --> 00:01:06,230

roll from

21

00:01:06,240 --> 00:01:17,990

continue looking

22

00:01:22,950 --> 00:01:21,429

42 seconds into flight

23

00:01:24,550 --> 00:01:22,960

here it's climbing somewhere it's

24

00:01:35,910 --> 00:01:24,560

controlling well

25

00:01:39,830 --> 00:01:37,910

zero angle attack phase of flight

26
00:01:40,870 --> 00:01:39,840
get your roll progress now complete body

27
00:01:43,670 --> 00:01:40,880
rate is controlling right down the

28
00:01:43,680 --> 00:01:54,630
currently according to 1.6 gs

29
00:01:54,640 --> 00:01:59,350
standing by to pass through mach 1

30
00:01:59,360 --> 00:02:02,149
mach 1

31
00:02:11,670 --> 00:02:03,990
and approaching maximum dynamics

32
00:02:11,680 --> 00:02:17,990
maximum dynamic pressure

33
00:02:22,550 --> 00:02:19,750
booster has now throttled back right on

34
00:02:24,790 --> 00:02:22,560
schedule engine response looks good

35
00:02:26,949 --> 00:02:24,800
current altitude is 10 and a half miles

36
00:02:30,150 --> 00:02:26,959
downrange distance 5.2 miles current

37
00:02:32,150 --> 00:02:30,160
velocity 1876 miles per hour

38
00:02:33,430 --> 00:02:32,160

range track shows the vehicle making

39

00:02:39,270 --> 00:02:33,440

good progress right down the middle of

40

00:02:43,750 --> 00:02:41,110

pump speeds injector pressures look good

41

00:02:46,869 --> 00:02:43,760

for the set throttle setting

42

00:02:49,030 --> 00:02:46,879

body rates continue to look good

43

00:02:51,589 --> 00:02:49,040

two minutes ten seconds into flight

44

00:02:53,190 --> 00:02:51,599

marty malinowski giving us updates as

45

00:02:54,790 --> 00:02:53,200

the atlas flies uphill toward the

46

00:02:55,910 --> 00:02:54,800

international space station has been

47

00:03:00,149 --> 00:02:55,920

enabled

48

00:03:04,550 --> 00:03:02,550

ql for limited steering has begun the

49

00:03:13,350 --> 00:03:04,560

vehicle is now less than one half its

50

00:03:17,030 --> 00:03:14,070

the

51
00:03:18,710 --> 00:03:17,040
rcs pyro valve has been fired

52
00:03:19,830 --> 00:03:18,720
that system is now pressurizing the

53
00:03:21,910 --> 00:03:19,840
flight levels

54
00:03:24,309 --> 00:03:21,920
signatures look good

55
00:03:27,070 --> 00:03:24,319
current altitude is 28 miles downrange

56
00:03:30,830 --> 00:03:27,080
distance 38 miles current velocity

57
00:03:36,309 --> 00:03:33,670
hour coming up on our three and a half g

58
00:03:44,710 --> 00:03:36,319
throttle segment

59
00:03:51,830 --> 00:03:46,390
and the booster has begun to throttle

60
00:03:51,840 --> 00:04:03,350
qlf limited steering is complete

61
00:04:10,309 --> 00:04:05,910
about 45 seconds away from booster

62
00:04:24,550 --> 00:04:12,229
followed about six seconds later by the

63
00:04:37,749 --> 00:04:28,629

and boost phase cooldown has begun

64

00:04:51,990 --> 00:04:39,510

still throttling to maintain three and a

65

00:04:58,070 --> 00:04:55,030

and we have engine shutdown

66

00:05:01,590 --> 00:04:58,080

engine shutdown as planned

67

00:05:03,590 --> 00:05:01,600

we have retros and stage separation

68

00:05:09,189 --> 00:05:03,600

we have locks and fuel pre-start the gn2

69

00:05:13,029 --> 00:05:11,430

and we have ignition and full thrust in

70

00:05:15,830 --> 00:05:13,039

the arrowtown

71

00:05:17,670 --> 00:05:15,840

the centaur single rl10c engine has

72

00:05:20,230 --> 00:05:17,680

ignited to begin about a 13 and a half

73

00:05:22,870 --> 00:05:20,240

minute burn that will take cygnus into

74

00:05:24,710 --> 00:05:22,880

low earth orbit

75

00:05:33,029 --> 00:05:24,720

generating twenty two thousand nine

76

00:05:37,189 --> 00:05:34,870

center thermal conditioning firings of

77

00:05:41,990 --> 00:05:37,199

the rcs are underway

78

00:05:49,390 --> 00:05:45,270

current altitude is 124 miles downrange