



1  
00:00:00,909 --> 00:00:02,810  
MIKE CURIE/NASA LAUNCH COMMENTATOR: T-minus  
10,

2  
00:00:02,810 --> 00:00:03,630  
9,

3  
00:00:03,630 --> 00:00:04,650  
8,

4  
00:00:04,650 --> 00:00:05,610  
7,

5  
00:00:05,610 --> 00:00:06,310  
6,

6  
00:00:06,310 --> 00:00:07,070  
5,

7  
00:00:07,070 --> 00:00:08,580  
4,

8  
00:00:08,580 --> 00:00:09,540  
3,

9  
00:00:09,540 --> 00:00:10,540  
2,

10  
00:00:10,540 --> 00:00:11,500  
1.

11  
00:00:14,660 --> 00:00:16,640  
Liftoff!

12  
00:00:16,640 --> 00:00:18,390  
On the shoulders of Atlas,

13

00:00:18,390 --> 00:00:20,740

the S.S. Deke Slayton II,

14

00:00:20,740 --> 00:00:23,420

Orbital ATK's Cygnus spacecraft,

15

00:00:23,420 --> 00:00:26,080

soars toward the International Space Station.

16

00:00:28,300 --> 00:00:30,160

MARTY MALINOWSKI/ASCENT COMMENTATOR: Close-loop control.

17

00:00:32,740 --> 00:00:33,700

Pitch, yaw, roll.

18

00:00:33,700 --> 00:00:34,520

Roger, rates look good.

19

00:00:34,530 --> 00:00:37,890

CURIE: Listening to Marty Malinowski.

20

00:00:38,000 --> 00:00:44,260

MALINOWSKI: [Inaudible] Rates continue to look nominal.

21

00:00:54,400 --> 00:00:57,740

CURIE: Forty-two seconds into flight.

22

00:00:57,740 --> 00:01:03,180

MALINOWSKI: Rates climbing somewhat. Controlling well.

23

00:01:03,180 --> 00:01:06,920

RD-180 pump speeds and chamber pressures all look good.

24

00:01:12,050 --> 00:01:14,240

Flying the zero-attack angle phase of flight.

25

00:01:14,240 --> 00:01:16,490

itch yaw roll program's now complete.

26

00:01:16,490 --> 00:01:19,300

Rates controlling right down the middle.

27

00:01:19,300 --> 00:01:22,740

Currently one-point-six G's.

28

00:01:31,180 --> 00:01:33,400

CURIE: Standing by to pass through Mach 1.

29

00:01:35,520 --> 00:01:36,640

MALINOWSKI: Mach 1.

30

00:01:38,680 --> 00:01:40,240

CURIE: And approaching maximum dynamic pressure.

31

00:01:40,250 --> 00:01:42,030

MALINOWSKI: Rates continue to look good.

32

00:01:48,320 --> 00:01:49,660

Maximum dynamic pressure.

33

00:01:54,420 --> 00:01:57,420

Booster has now throttled back, right on schedule.

34

00:01:57,430 --> 00:01:59,240

Engine response looks good.

35

00:01:59,240 --> 00:02:01,410

Current altitude is 10-and-a-half miles.

36

00:02:01,410 --> 00:02:03,190

Downrange distance 5.2 miles.

37

00:02:03,190 --> 00:02:06,610

Current velocity 1876 miles per hour.

38

00:02:06,610 --> 00:02:09,220

Range track shows the vehicle making good progress,

39

00:02:09,220 --> 00:02:11,220

right down the middle of the range.

40

00:02:15,900 --> 00:02:20,580

Pump speeds, injector pressures look good for the throttle setting.

41

00:02:20,590 --> 00:02:21,720

Rates continue to look good.

42

00:02:21,720 --> 00:02:25,730

CURIE: Two minutes, 10 seconds into flight.

43

00:02:25,730 --> 00:02:30,110

Marty Malinowski giving us updates as the Atlas flies uphill toward the International

44

00:02:30,110 --> 00:02:30,760

Space Station.

45

00:02:30,760 --> 00:02:32,720

MALINOWSKI: Closed-loop turn has been enabled.

46

00:02:32,720 --> 00:02:36,180

Rates continue to look very good.