George Diller/ NASA Commentator: T-minus 15 seconds. T-minus 10, 9, 8, 7, 6, 5, 4, 3, 2, 1. Main engine start.

Zero and liftoff of the Atlas V with Curiosity, seeking clues to the planetary puzzle about life on Mars.

Rob Gagnon/Flight Commentator: Roll program is in right on time.

RD-180 operating at 100 percent thrust, as expected

Throttling down to 76 percent. Program is now complete. MSL is now breaking the sound barrier.

SRB chamber pressures following the nominal curve. Everything looking good.

And we pass through MaxQ.

Close loop on Atlas B/U. Signatures as expected.

SRB profile continues to look nominal.

Throttling back up to 100 percent thrust on the RD-180, engine parameters looking good.

Flight control disturbances look as expected.

SRB pressures running right as expected.

Coming up on SRB burnout. We have burnout of the SRBs.

Everything is looking good.
Ten seconds to SRB jet.

And we have first pair and second pair. Both sets of SRBs have successfully jettisoned (from) the vehicle.

We have re-enabled guidance, everything is looking good.

George Diller/ NASA Commentator: This is Rob Gagnon, our United launch Alliance telemetry manager, we're hearing.

Vehicle is now 32 nautical miles in altitude, 54 miles downrange, traveling at 4,900 mph.

And we've throttled down to hold a constant 2.5 g level for payload fairing jettison.

And we fired the pyro valve, pressure rising in the RCS bottle.

Pressure increasing in the loop as expected.

And now we're hitting our 2.5 G limit, coming up on payload fairing jettison.

Approximately 10 seconds.

Fairing jet.

And we also have a successful CFOR jettison, went as expected. Throttling up on the RD-180, everything looking good.

Coming up on 89 percent thrust.