# Blocks	1	2	3	4	5	6	7	8	9	10	Average
1	5.418	5.881	8.515	12.787	11.65	8.826	6.647	12.959	12.67	10.9	9.6253
2	7.447	7.065	7.138	6.943	7.527	7.155	7.13	7.055	6.978	7.409	7.1847
4	11.93	11.79	11.982	12.098	12.53	12.131	12.062	12.11	12.036	12.419	12.1088
8	21.19	21.548	21.808	21.396	22.778	21.801	21.602	22.095	21.156	21.904	21.7278
16	39.89	40.769	41.718	40.486	42.007	41.068	41.558	41.002	39.769	42.032	41.0299
32	76.84	77.807	78.514	76.752	80.474	79.886	78.356	77.11	76.169	78.975	78.0883
64	151.34	154.098	152.741	149.451	156.907	153.971	153.458	151.563	151.03	156.185	153.0744

Team MDes5 128/256 Simon Performance Chart
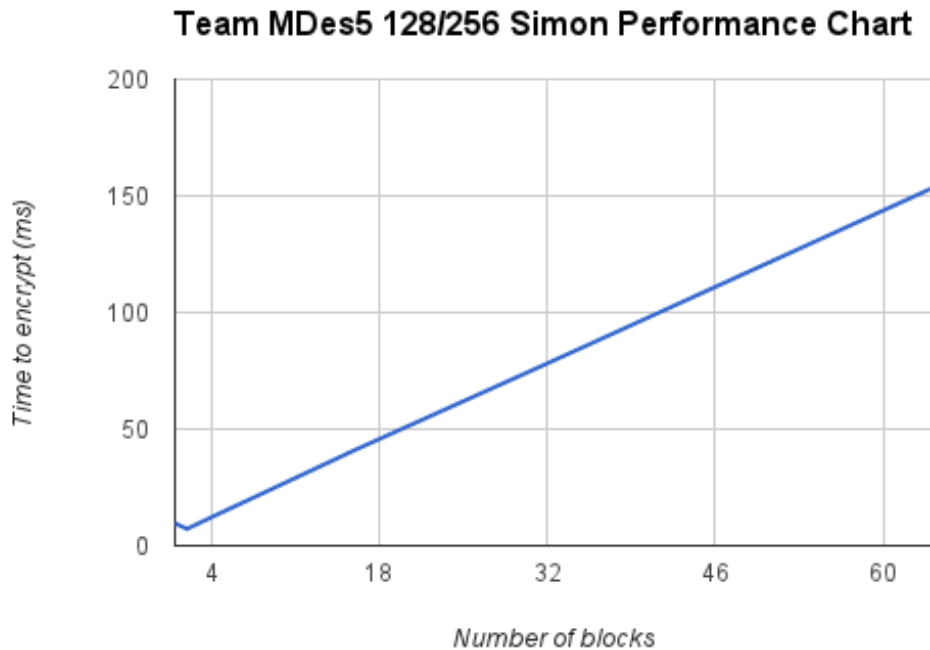
The dip found from 1 block to 2 blocks is likely caused by cache misses. In each trial, we would run 1 block ,2 blocks, 4 blocks, etc. Since 1 block ran first, there were likely some cache misses involved.

As for the rest of the graph, it is mostly linear. This is because, for each block, we perform the same computations. The only difference is the number of blocks. Thus, as expected, the run time has a linear relation to the number of blocks in the plaintext.