RTX 3090

PCIe 4th Gen x16lane

| NAND constants | | Size of Matrix | Sparsity | Basic CUDA | Complete CUDA | StoRM | Speed-up factor |
|---|---|---|---|---|---|---|---|
| N | K | | % | mS | mS | mS | $\frac{StoRM}{Complete}$ |
| 20 | 1 | 78332 x 78332 | 99.99802 | 383.0 | 275.7 | 1352.3 | 4.9 |
| 20 | 2 | 154942 x 154942 | 99.999001 | 571.3 | 331.7 | 3274.0 | 9.9 |
| 20 | 3 | 231552 x 231552 | 99.99933 | 751.3 | 391.7 | 3424.3 | 8.7 |
| 20 | 4 | 308162 x 308162 | 99.9995 | 923.3 | 457.3 | 7204.7 | 15.8 |
| 40 | 1 | 1004862 x 1004862 | 99.99984 | 2260.3 | 1131.0 | 17149.3 | 15.2 |
| 40 | 2 | 2003082 x 2003082 | 99.99992 | 3957.7 | 1945.3 | 34162.3 | 17.6 |
| 40 | 3 | 3001302 x 3001302 | 99.99995 | 5579.7 | 2637.7 | 50461.7 | 19.1 |
| 40 | 4 | 3999522 x 3999522 | 99.99996 | 7054.0 | 3530.7 | 67648.7 | 19.2 |
| 60 | 1 | 4717592 x 4717592 | 99.99997 | 8292.7 | 4065.7 | 80398.0 | 19.8 |
| 60 | 2 | 9420422 x 9420422 | 99.999983 | 27721.0 | 7434.7 | 160595.0 | 21.6 |
| 60 | 3 | 14123252 x 14123252 | 99.999989 | 34884.3 | 10809.0 | 239025.0 | 22.1 |
| 60 | 4 | 18826082 x 18826082 | 99.999992 | 43033.7 | 14203.7 | 321569.7 | 22.6 |

| Model Name | Matrix Size | Sparsity | Basic CUDA | Complete CUDA | StoRM CPU | Speed-up factor |
|---|---|---|---|---|---|---|
| | | % | mS | mS | mS | $\frac{StoRM}{Complete}$ |
| Herman3 | 8 x 8 | 56.25 | 203.00 | 196.00 | 6.00 | 0.03 |
| Herman5 | 32 x 32 | 76.17 | 208.00 | 196.67 | 12.00 | 0.06 |
| Herman7 | 128 x 128 | 86.64 | 216.33 | 196.33 | 28.00 | 0.14 |
| Herman9 | 512 x 512 | 92.5 | 199.67 | 197.67 | 144.00 | 0.73 |
| Herman11 | 2048 x 2048 | 95.8 | 220.67 | 217.00 | 1564.33 | 7.21 |
| Herman13 | 8192 x 8192 | 97.62 | 1366.33 | 369.33 | 13844.33 | 37.48 |
| Herman15 | 32768 x 32768 | 98.66 | 8019.33 | 1307.33 | 104995.00 | 80.31 |