

"Black Box"(†) and Pipelined(*) CG (serial)

Resolution	64 ^{^3}	96 ^{^3}	128 ^{^3}	192 ^{^3}	256 ^{^3}	384 ^{^3}	512 ^{^3}
Initialization Time (s)	0.0585	0.0617	0.1403	0.3931	1.0628	2.9837	6.9207
Iterations to r=1e-4	110	165	221	332	445	667	965
Iterations to r=1e-8	181	309	367	623	822	1261	1538
Time to r=1e-4 (s)†	2.32	8.73	42.45	149.94	503.97	2558.44	9010.28
Time to r=1e-4 (s)*	1.39	7.80	21.24	113.86	340.24	1999.10	5540.92
Time to r=1e-8 (s)†	3.81	16.35	70.49	281.37	930.92	4836.87	14360.43
Time to r=1e-8 (s)*	2.09	12.70	35.10	212.68	663.44	3524.00	8831.03

Incomplete Cholesky PCG (serial)

Resolution	64 ^{^3}	96 ^{^3}	128 ^{^3}	192 ^{^3}	256 ^{^3}	384 ^{^3}	512 ^{^3}
Initialization Time (s)	0.20	0.55	1.24	4.01	9.61	32.23	76.47
Iterations to r=1e-4	36	52	72	107	138	213	278
Iterations to r=1e-8	57	78	104	149	194	295	395
Time to r=1e-4 (s)	0.94	5.04	17.00	88.22	283.10	1526.29	4679.32
Time to r=1e-8 (s)	1.50	7.56	24.55	122.85	397.98	2113.88	6648.68

Multigrid PCG (serial)

Resolution	64 ^{^3}	96 ^{^3}	128 ^{^3}	192 ^{^3}	256 ^{^3}	384 ^{^3}	512 ^{^3}
Initialization Time (s)	0.08	0.10	0.24	0.63	1.63	5.01	12.21
Iterations to r=1e-4	9	9	11	10	12	12	13
Iterations to r=1e-8	15	16	17	18	19	20	21
Time to r=1e-4 (s)	0.57	2.82	3.70	10.74	25.92	89.71	211.88
Time to r=1e-8 (s)	0.88	4.80	5.57	18.50	39.54	144.47	332.71