

CFLAGS="march=native -DNDEBUG -Ofast -fno-finite-math-only -fvisibility-inlines-hidden", Xeon E3-1276 v3 @ 3.60GHz

	tau	vs best	vs same	cgns	vs best	vs same	dg	vs best	vs same
gcc 4.9.2, Eigen 3.2	7s 740ms	110.9 %	100.0 %	14s 600ms	120.7 %	100.0 %	20s 300ms	106.8 %	100.0 %
gcc 4.9.2, Eigen 3.3	9s 490ms	136.0 %	122.6 %	16s 600ms	137.2 %	113.7 %	20s 400ms	107.4 %	100.5 %
gcc 4.9.2, Eigen 3.3 no unaligned vec	8s 810ms	126.2 %	113.8 %	16s 800ms	138.8 %	115.1 %	20s 300ms	106.8 %	100.0 %
gcc 4.9.2, Eigen 3.3 no vec	8s 230ms	117.9 %	106.3 %	17s 300ms	143.0 %	118.5 %	21s 200ms	111.6 %	104.4 %
gcc 8.1, Eigen 3.2	7s 570ms	108.5 %	100.0 %	14s 300ms	118.2 %	100.0 %	19s 500ms	102.6 %	100.0 %
gcc 8.1, Eigen 3.3	8s 20ms	114.9 %	105.9 %	15s 300ms	126.4 %	107.0 %	20s 400ms	107.4 %	104.6 %
gcc 8.1, Eigen 3.3 no EIGEN_VECTORIZE_AVX	8s 10ms	114.8 %	105.8 %	16s 100ms	133.1 %	112.6 %	21s 500ms	113.2 %	110.3 %
gcc 8.1, Eigen 3.3 march=sse4.2 mtune=native	7s 970ms	114.2 %	105.3 %	16s 100ms	133.1 %	112.6 %	21s 300ms	112.1 %	109.2 %
gcc 8.1, Eigen 3.3 no unaligned vec	8s 470ms	121.3 %	111.9 %	15s 400ms	127.3 %	107.7 %	20s 400ms	107.4 %	104.6 %
gcc 8.1, Eigen 3.3 no unaligned vec march=sse4.2 mtune=native	8s 460ms	121.2 %	111.8 %	16s 100ms	133.1 %	112.6 %	21s 400ms	112.6 %	109.7 %
gcc 8.1 Eigen 3.3 no vec	7s 830ms	112.2 %	103.4 %	16s 700ms	138.0 %	116.8 %	20s 700ms	108.9 %	106.2 %
clang 3.8, Eigen 3.2	7s 20ms	100.6 %		12s 400ms	102.5 %		19s 200ms	101.1 %	
clang 3.8, Eigen 3.3	7s 310ms	104.7 %		12s 100ms	100.0 %		19s	100.0 %	
clang 3.8, Eigen 3.3 no EIGEN_VECTORIZE_AVX	7s 310ms	104.7 %		12s 500ms	103.3 %		20s 200ms	106.3 %	
clang 3.8, Eigen 3.3 march=sse4.2 mtune=native	7s 310ms	104.7 %		12s 700ms	105.0 %		20s 200ms	106.3 %	
clang 3.8, Eigen 3.3 no unaligned vec	7s 190ms	103.0 %		12s 500ms	103.3 %		20s 200ms	106.3 %	
clang 3.8, Eigen 3.3 no unaligned vec march=sse4.2 mtune=native	7s 220ms	103.4 %		12s 700ms	105.0 %		20s 200ms	106.3 %	
clang 3.8, Eigen 3.3 no vec	6s 980ms	100.0 %		12s 900ms	106.6 %		21s 100ms	111.1 %	
icpc 18.0.3, Eigen 3.2	12s 100ms	173.4 %		19s 300ms	159.5 %		22s 800ms	120.0 %	

Approximate Usage (T=double)

	vector sizes	matrix sizes	AutoDiffScalar
tau	5, 8	5x5	<input type="checkbox"/>
cgns	6, 13	6x6	<input checked="" type="checkbox"/>
dg	5, 8	5x5, 20x20	<input checked="" type="checkbox"/>