Input size - Small

Equation / Program	With O3 optimization		Without O3 optimization		Parameters				
	Parallel	Sequential	Parallel	Sequential					
2mm	0.005747	0.001717	0.013545	0.003444	NI = 40	NJ = 50	NK = 70	NL = 80	
3mm	0.014246	0.002413	0.042974	0.002973	NI = 40	NJ = 50	NK = 60	NL = 70	NM = 80
atax	0.014566	0.000034	0.014772	0.000136	M = 116	N = 124			
bicg	0.024413	0.000062	0.024413	0.000117	M = 116	N = 124			
cholesky	0.027257	0.000383	0.027074	0.001322	N = 120				
correlation	0.05354	0.000726	0.028991	0.002157	M = 80	N = 100			
covariance	0.038518	0.000447	0.039046	0.001533	M = 80	N = 100			
doitgen	0.035183	0.000715	0.046967	0.00238	NQ = 20	NR 25	NP = 30		
gemm	0.029682	0.000714	0.023975	0.001829	NI = 60	NJ = 70	NK = 80		
gemver	0.059706	0.000063	0.059206	0.000437	N = 120				
gesummv	0.03113	0.000039	0.030304	0.000182	N = 90				
gramschmidt	0.027991	0.000438	0.02712	0.001745	M = 60	N = 80			
heat-3d	0.021602	0.00067	0.029348	0.009748	TSTEPS = 40	N = 20			
jacobi-1d	0.018474	0.000008	0.020463	0.000036	TSTEPS = 40	N = 120			
jacobi-2d	0.017228	0.000514	0.018249	0.00356	TSTEPS = 40	N = 90			
lu	0.012693	0.000763	0.021399	0.002649	N = 120				
ludcmp	0.061782	0.000763	0.07725	0.002403	N = 120				
mvt	0.030852	0.000043	0.027705	0.000122	N = 120				
seidel-2d	0.02224	0.007232	0.02561	0.007529	TSTEPS = 40	N = 120			
symm	0.022991	0.000193	0.024143	0.00125	M = 60	N = 80			
syr2k	0.01973	0.000244	0.02802	0.001977	M = 60	N = 80			
syrk	0.017501	0.000103	0.020074	0.000954	M = 60	N = 80			
trisolv	0.016367	0.000015	0.020552	0.000035	N = 120				
trmm	0.021554	0.000142	0.020454	0.000635	M = 60	N = 80			

Input size - Medium

Equation / Program	With O3 optimization		Without O3 optimization		Parameters				
	Parallel	Sequential	Parallel	Sequential					
2mm	0.045188	0.032068	0.107011	0.106809	NI = 180	NJ = 190	NK = 210	NL = 220	
3mm	0.128521	0.039214	0.124576	0.149018	NI = 180	NJ = 190	NK = 200	NL = 210	NM = 220
atax	0.024706	0.00041	0.032554	0.001346	M = 390	N = 410			
bicg	0.032275	0.000671	0.025038	0.00128	M = 390	N = 410			
cholesky	0.029906	0.012758	0.046089	0.051399	N = 400				
correlation	0.131816	0.014215	0.149036	0.05579	M = 240	N = 260			
covariance	0.043543	0.010664	0.04347	0.038285	M = 240	N = 260			
doitgen	0.145829	0.009747	0.150917	0.039009	NQ = 40	NR = 50	NP = 60		
gemm	0.083886	0.005481	0.129101	0.054672	NI = 200	NJ = 220	NK = 240		
gemver	0.049138	0.002239	0.039772	0.003089	N = 400				
gesummv	0.021075	0.000308	0.024549	0.000702	N = 250				
gramschmidt	0.020969	0.015993	0.026655	0.05675	M = 200	N = 240			
heat-3d	0.03251	0.016149	0.11876	0.226741	TSTEPS = 100	N = 40			
jacobi-1d	0.022729	0.000061	0.027921	0.00033	TSTEPS = 100	N = 400			
jacobi-2d	0.030861	0.009669	0.053856	0.068962	TSTEPS = 100	N = 250			
lu	0.038625	0.027313	0.078724	0.111279	N = 400				
ludcmp	0.908393	0.039494	0.974337	0.095793	N = 400				
mvt	0.021437	0.000529	0.036026	0.001521	N = 400				
seidel-2d	0.037067	0.195316	0.104603	0.210763	TSTEPS = 100	N = 400			
symm	0.191532	0.012408	0.201057	0.037441	M = 200	N = 240			
syr2k	0.047947	0.008958	0.057977	0.064242	M = 200	N = 240			
syrk	0.035667	0.004422	0.0405	0.031185	M = 200	N = 240			
trisolv	0.020033	0.000132	0.027715	0.000363	N = 400				
trmm	0.035119	0.006021	0.03417	0.023882	M = 200	N = 240			

Input size - Large

Equation / Program	With O3 optimization		Without O3 optimization		Parameters				
	Parallel	Sequential	Parallel	Sequential					
2mm	4.558677	4.055247	4.923089	15.325242	NI = 800	NJ = 900	NK = 1100	NL = 1200	
3mm	7.520792	6.882747	7.821672	29.554805	NI = 800	NJ = 900	NK = 1000	NL = 1100	NM = 1200
atax	0.058149	0.010543	0.065926	0.033761	M = 1900	N = 2100			
bicg	0.062222	0.016732	0.064309	0.032049	M = 1900	N = 2100			
cholesky	1.964618	2.224261	2.938363	6.213006	N = 2000				
correlation	6.345747	9.851602	6.357717	12.248975	M = 1200	N = 1400			
covariance	4.004571	8.363129	4.380864	10.796705	M = 1200	N = 1400			
doitgen	6.267724	0.925295	6.171616	2.907082	NQ = 140	NR = 150	NP = 160		
gemm	3.269834	0.944892	3.625855	6.443166	NI = 1000	NJ = 1100	NK = 1200		
gemver	0.124803	0.042413	0.125882	0.085601	N = 2000				
gesummv	0.036883	0.006965	0.035758	0.013367	N = 1300				
gramschmidt	4.744549	12.377357	5.014884	12.614381	M = 1000	N = 1200			
heat-3d	1.993227	2.66589	10.85862	25.462138	TSTEPS = 500	N = 120			
jacobi-1d	0.019501	0.00098	0.025684	0.007069	TSTEPS = 500	N = 2000			
jacobi-2d	0.941094	2.00271	3.877299	9.255358	TSTEPS = 500	N = 1300			
lu	2.576429	7.747571	5.644697	17.654252	N = 2000				
ludcmp	99.37267	9.283333	108.556122	18.278748	N = 2000				
mvt	0.052735	0.025641	0.055019	0.042965	N = 2000				
seidel-2d	2.769346	22.599716	10.514967	26.125882	TSTEPS = 500	N = 2000			
symm	21.007619	3.501708	21.103957	7.518667	M = 1000	N = 1200			
syr2k	2.414147	6.759835	3.701115	11.042348	M = 1000	N = 1200			
syrk	1.48773	1.359539	1.980925	4.53432	M = 1000	N = 1200			
trisolv	0.022575	0.00351	0.025038	0.006869	N = 2000				
trmm	1.790451	2.909926	1.852058	4.490973	M = 1000	N = 1200			

Input size - Extra Large

Equation / Program	With O3 optimization		Without O3 optimization		Parameters				
	Parallel	Sequential	Parallel	Sequential					
2mm	37.507842	87.256729	35.417223	161.059713	NI = 1600	NJ = 1800	NK = 2200	NL = 2400	
3mm	62.52201	144.642312	62.172548	257.708745	NI = 1600	NJ = 1800	NK = 2000	NL = 2200	NM = 2400
atax	0.066283	0.010042	0.055139	0.032738	M = 1800	N = 2200			
bicg	0.062289	0.016507	0.071204	0.036269	M = 1800	N = 2200			
cholesky	18.35998	19.767206	25.543572	50.038352	N = 4000				
correlation	75.489831	113.606864	78.968346	124.609043	M = 2600	N = 3000			
covariance	52.194754	139.063638	46.902778	154.364502	M = 2600	N = 3000			
doitgen	31.955456	6.674387	30.692503	22.785419	NQ = 220	NR = 250	NP = 270		
gemm	29.042474	10.131359	31.325338	60.655196	NI = 2000	NJ = 2300	NK = 2600		
gemver	0.275022	0.195251	0.315273	0.453217	N = 4000				
gesummv	0.031344	0.023348	0.054055	0.049157	N = 2800				
gramschmidt	54.166836	157.223258	57.685842	145.864135	M = 2000	N = 2600			
heat-3d	20.966739	26.552123	116.505661	274.958476	TSTEPS = 1000	N = 200			
jacobi-1d	0.026884	0.005512	0.023172	0.025237	TSTEPS = 1000	N = 4000			
jacobi-2d	10.450167	19.345277	38.776256	89.900152	TSTEPS = 1000	N = 2800			
lu	41.518402	142.28827	41.518402	252.433271	N = 4000				
ludcmp	794.995867	105.724308	824.225696	146.27392	N = 4000				
mvt	0.115151	0.137185	0.132288	0.210295	N = 4000				
seidel-2d	17.905087	180.893027	87.075608	212.388509	TSTEPS = 1000	N = 4000			
symm	188.267581	53.593758	192.18552	81.043792	M = 2000	N = 2600			
syr2k	22.536698	99.177302	24.882166	128.324794	M = 2000	N = 2600			
syrk	17.596151	29.59881	20.520247	56.53132	M = 2000	N = 2600			
trisolv	0.033556	0.012417	0.039455	0.026487	N = 4000				
trmm	18.607444	49.066083	20.85152	59.65904	M = 2000	N = 2600			