Random(4000000,2)	l 4		1 0		l =	1 6	l =	1 0	1.0	1 00
# of cores	1 1 70	2	3	4	5	6	7	8	16	32
serial	1.73		_		_		_	_	_	
serial_call	1.49									
serial_call_membar	1.78									
Cilk_membar	2.22	1.33	0.887	0.756	0.648	0.611	0.551	0.526	0.654	0.605
Cilk_R_membar	2.18	1.31	0.887	0.731	0.638	0.599	0.533	0.521	0.654	0.605
Tascell_LWSC_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
Tascell_CLSC_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
Tascell_XCCL_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
Tascell_XCCC_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
serial_call_800	1.68			_						
serial_call_membar_800	2.01		_		_	_	_	_	_	
Cilk_membar_800	2.69	1.61	1.02	0.815	0.687	0.615	0.597	0.548	0.685	0.644
Cilk_R_membar_800	2.56	1.52	0.898	0.738	0.639	0.627	0.548	0.520	0.685	0.644
Tascell_LWSC_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
Tascell_CLSC_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
Tascell_XCCL_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
Tascell_XCCC_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
Hypercube(21)										
# of cores	1	2	3	4	5	6	7	8	16	32
serial	1.73	2	3	4	5	6	7	8 —	16	32
serial serial_call	1.73 1.49	2	3 —	4 — —	5 — —	6 — —	7 —	8 — —	16 — —	32
serial_call serial_call_membar	1.73 1.49 1.78		— — —		— —	— —	— —		— —	
serial_call serial_call_membar Cilk_membar	1.73 1.49 1.78 2.22	2 — — — 1.33	3 ————————————————————————————————————	4 — — — 0.756		6 — — — 0.611	— — — 0.551	8 ————————————————————————————————————	16 ————————————————————————————————————	0.605
serial_call serial_call_membar Cilk_membar Cilk_R_membar	1.73 1.49 1.78 2.22 2.18					— —	— —			0.605
serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar	1.73 1.49 1.78 2.22 2.18 1.82			 0.756 0.731 0.810	0.648 0.638 0.666	0.611 0.599 0.588	0.551 0.533 0.555		0.654 0.654 0.654	0.605 0.605 0.605
serial_call serial_call_membar Cilk_membar Cilk_R_membar	1.73 1.49 1.78 2.22 2.18						- - - 0.551 0.533			0.605 0.605 0.605
serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar	1.73 1.49 1.78 2.22 2.18 1.82		0.887 0.887 0.937	 0.756 0.731 0.810	0.648 0.638 0.666	0.611 0.599 0.588	0.551 0.533 0.555	0.526 0.521 0.547	0.654 0.654 0.654	0.605 0.605 0.605 0.605
serial serial_call serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82		0.887 0.887 0.937 0.937	0.756 0.731 0.810 0.810	0.648 0.638 0.666 0.666	0.611 0.599 0.588 0.588	0.551 0.533 0.555 0.555		0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605
serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82	1.33 1.31 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810	0.648 0.638 0.666 0.666 0.666	0.611 0.599 0.588 0.588	0.551 0.533 0.555 0.555 0.555		0.654 0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605
serial serial_call serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82	1.33 1.31 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810	0.648 0.638 0.666 0.666 0.666	0.611 0.599 0.588 0.588	0.551 0.533 0.555 0.555 0.555		0.654 0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605
serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar serial_call_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.82	1.33 1.31 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810	0.648 0.638 0.666 0.666 0.666	0.611 0.599 0.588 0.588	0.551 0.533 0.555 0.555 0.555		0.654 0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605 0.605
serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar serial_call_800 serial_call_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01	1.33 1.31 1.64 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810 0.810 —	0.648 0.638 0.666 0.666 0.666	0.611 0.599 0.588 0.588 0.588 0.588	0.551 0.533 0.555 0.555 0.555 0.555	0.526 0.521 0.547 0.547 0.547 0.547 	0.654 0.654 0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605 0.605
serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_XCCL_membar Tascell_XCCL_membar serial_call_800 serial_call_membar_800 Cilk_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69	1.33 1.31 1.64 1.64 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937 0.937 	0.756 0.731 0.810 0.810 0.810 0.810 	0.648 0.638 0.666 0.666 0.666 0.666 	0.611 0.599 0.588 0.588 0.588 0.588 0.588	0.551 0.533 0.555 0.555 0.555 0.555 	0.526 0.521 0.547 0.547 0.547 0.547 0.548	0.654 0.654 0.654 0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605 0.605 0.605 0.644
serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar serial_call_800 serial_call_membar_800 Cilk_membar_800 Cilk_R_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69 2.56	1.33 1.31 1.64 1.64 1.64 1.64 1.61 1.52	0.887 0.887 0.937 0.937 0.937 0.937 	0.756 0.731 0.810 0.810 0.810 0.810 	0.648 0.638 0.666 0.666 0.666 0.666 0.687	0.611 0.599 0.588 0.588 0.588 0.588 0.615 0.627	0.551 0.533 0.555 0.555 0.555 0.555 0.597	0.526 0.521 0.547 0.547 0.547 0.547 0.548 0.520	0.654 0.654 0.654 0.654 0.654 0.654 0.685	0.605 0.605 0.605 0.605 0.605 0.605 0.605 0.604 0.644
serial serial_call serial_call_membar Cilk_membar Cilk_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar serial_call_800 serial_call_membar_800 Cilk_membar_800 Cilk_membar_800 Tascell_LWSC_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69 2.56 2.07	1.33 1.31 1.64 1.64 1.64 1.64 	0.887 0.887 0.937 0.937 0.937 0.937 	0.756 0.731 0.810 0.810 0.810 0.810 	0.648 0.638 0.666 0.666 0.666 0.666 	0.611 0.599 0.588 0.588 0.588 0.588 0.615 0.627	0.551 0.533 0.555 0.555 0.555 0.555 0.597 0.548	0.526 0.521 0.547 0.547 0.547 0.547 	0.654 0.654 0.654 0.654 0.654 0.654 	0.605 0.605 0.605 0.605 0.605 0.644 0.644 0.644
serial serial_call serial_call_membar Cilk_membar Cilk_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar serial_call_800 serial_call_membar_800 Cilk_membar_800 Cilk_membar_800 Tascell_LWSC_membar_800 Tascell_CLSC_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69 2.56 2.07 2.07	1.33 1.31 1.64 1.64 1.64 1.64 	0.887 0.887 0.937 0.937 0.937 	0.756 0.731 0.810 0.810 0.810 0.810 	0.648 0.638 0.666 0.666 0.666 0.666 	0.611 0.599 0.588 0.588 0.588 0.588 0.588 0.588 0.615 0.627 0.594	0.551 0.533 0.555 0.555 0.555 0.555 0.555 0.597 0.548 0.544 0.544	$\begin{array}{c} -\\ -\\ -\\ 0.526 \\ 0.521 \\ 0.547 \\ 0.547 \\ 0.547 \\ -\\ -\\ 0.548 \\ 0.520 \\ 0.495 \\ 0.495 \\ \end{array}$	0.654 0.654 0.654 0.654 0.654 0.654 0.685 0.685 0.685	0.605 0.605 0.605 0.605 0.605 0.605 0.644 0.644 0.644 0.644 0.644

# of cores	1	2	3	4	5	6	7	8	16	32
serial	1.73									
serial_call	1.49									
serial_call_membar	1.78									
Cilk_membar	2.22	1.33	0.887	0.756	0.648	0.611	0.551	0.526	0.654	0.605
Cilk_R_membar	2.18	1.31	0.887	0.731	0.638	0.599	0.533	0.521	0.654	0.605
Tascell_LWSC_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
Tascell_CLSC_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
Tascell_XCCL_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
Tascell_XCCC_membar	1.82	1.64	0.937	0.810	0.666	0.588	0.555	0.547	0.654	0.605
serial_call_800	1.68	1.04	0.551	0.010	0.000	0.000	0.000	0.041	0.004	0.000
serial_call_membar_800	2.01									
Cilk_membar_800	2.69	1.61	1.02	0.815	0.687	0.615	0.597	0.548	0.685	0.644
Cilk_R_membar_800	2.56	1.52	0.898	0.738	0.639	0.627	0.548	0.520	0.685	0.644
Tascell_LWSC_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
Tascell_CLSC_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
Tascell_XCCL_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
Tascell_XCCC_membar_800	2.07	1.29	0.938	0.699	0.630	0.594	0.544	0.495	0.685	0.644
		1.20	0.000	0.000	0.000	0.001	0.011	0.100	0.000	0.011
Bintree(24)										
Bintree(24) # of cores	1	2	3	4	5	6	7	8	16	32
	1.73	2	3	4	5	6	7	8	16 —	32
# of cores		2 — —	3	4 —	5 —	6	7 — —	8	16 — —	32
# of cores serial	1.73	2 — —	3 — — —	<u>4</u> 	5 — —	6 — —	7 — —	8 — —	16 — —	32
# of cores serial serial_call	1.73 1.49	2 	3 ————————————————————————————————————	4 — — — 0.756	5 ————————————————————————————————————	6 — — — 0.611	7 ————————————————————————————————————	8 ————————————————————————————————————	16 ————————————————————————————————————	32
# of cores serial serial_call serial_call_membar	1.73 1.49 1.78		— — —		— — —	— —	— —	— — —	— — —	
# of cores serial serial_call serial_call_membar Cilk_membar	1.73 1.49 1.78 2.22									0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar	1.73 1.49 1.78 2.22 2.18					 0.611 0.599	- - 0.551 0.533	- - 0.526 0.521		0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar	1.73 1.49 1.78 2.22 2.18 1.82		0.887 0.887 0.937	0.756 0.731 0.810	 0.648 0.638 0.666	 0.611 0.599 0.588	 0.551 0.533 0.555	0.526 0.521 0.547	0.654 0.654 0.654	0.605 0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar	1.73 1.49 1.78 2.22 2.18 1.82 1.82		0.887 0.887 0.937	0.756 0.731 0.810 0.810	0.648 0.638 0.666 0.666	0.611 0.599 0.588 0.588	0.551 0.533 0.555 0.555	0.526 0.521 0.547	0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar	1.73 1.49 1.78 2.22 2.18 1.82 1.82	1.33 1.31 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810			0.551 0.533 0.555 0.555 0.555			0.605 0.605 0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_Membar Tascell_LWSC_membar Tascell_CLSC_membar Tascell_XCCL_membar Tascell_XCCC_membar	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82	1.33 1.31 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810			0.551 0.533 0.555 0.555 0.555			0.605 0.605 0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_XCCL_membar Tascell_XCCL_membar serial_call_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.82	1.33 1.31 1.64 1.64 1.64	0.887 0.887 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810			0.551 0.533 0.555 0.555 0.555			0.605 0.605 0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_XCCL_membar Tascell_XCCL_membar serial_call_800 serial_call_membar_800 Cilk_membar_800 Cilk_R_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69 2.56	1.33 1.31 1.64 1.64 1.64 1.64 	0.887 0.887 0.937 0.937 0.937 0.937	0.756 0.731 0.810 0.810 0.810 0.810 —	0.648 0.638 0.666 0.666 0.666 0.666 	0.611 0.599 0.588 0.588 0.588 0.588	0.551 0.533 0.555 0.555 0.555 0.555	0.526 0.521 0.547 0.547 0.547 0.547 -	0.654 0.654 0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_XCCL_membar Tascell_XCCL_membar serial_call_800 serial_call_membar_800 Cilk_membar_800 Cilk_R_membar_800 Tascell_LWSC_membar_800 Tascell_LWSC_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69 2.56 2.07		0.887 0.887 0.937 0.937 0.937 0.937 	0.756 0.731 0.810 0.810 0.810 0.810 	0.648 0.638 0.666 0.666 0.666 0.666 0.687 0.639	0.611 0.599 0.588 0.588 0.588 0.588 0.615 0.627	0.551 0.533 0.555 0.555 0.555 0.555 0.555	0.526 0.521 0.547 0.547 0.547 0.547 	0.654 0.654 0.654 0.654 0.654 0.654 0.654	0.605 0.605 0.605 0.605 0.605 0.605
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_XCCL_membar Tascell_XCCL_membar serial_call_800 serial_call_membar_800 Cilk_membar_800 Cilk_R_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69 2.56	1.33 1.31 1.64 1.64 1.64 1.64 	0.887 0.887 0.937 0.937 0.937 0.937 	0.756 0.731 0.810 0.810 0.810 0.810 	0.648 0.638 0.666 0.666 0.666 0.666 	0.611 0.599 0.588 0.588 0.588 0.588 0.588 0.615	0.551 0.533 0.555 0.555 0.555 0.555 0.555 0.597	0.526 0.521 0.547 0.547 0.547 0.547 	0.654 0.654 0.654 0.654 0.654 0.654 0.654 0.685	0.605 0.605 0.605 0.605 0.605 0.605 0.604 0.644 0.644
# of cores serial serial_call serial_call_membar Cilk_membar Cilk_R_membar Tascell_LWSC_membar Tascell_XCCL_membar Tascell_XCCL_membar serial_call_800 serial_call_membar_800 Cilk_membar_800 Cilk_R_membar_800 Tascell_LWSC_membar_800 Tascell_LWSC_membar_800	1.73 1.49 1.78 2.22 2.18 1.82 1.82 1.82 1.68 2.01 2.69 2.56 2.07		0.887 0.887 0.937 0.937 0.937 0.937 	0.756 0.731 0.810 0.810 0.810 0.810 	0.648 0.638 0.666 0.666 0.666 0.666 0.687 0.639	0.611 0.599 0.588 0.588 0.588 0.588 0.615 0.627	0.551 0.533 0.555 0.555 0.555 0.555 0.597 0.548 0.544	0.526 0.521 0.547 0.547 0.547 0.547 	0.654 0.654 0.654 0.654 0.654 0.654 	0.605 0.605 0.605 0.605 0.605 0.605 0.604 0.644