

		-O0		-O2		-O3	
CPU(s)	Input size	Total time [ms]	Comm time [ms]	Total time [ms]	Comm time [ms]	Total time [ms]	Comm time [ms]
1	100000	164.65	4.351	92.071	3.694	87.128	3.827
2	100000	85.363	8.726	49.907	6.619	46.618	5.812
4	100000	41.644	3.865	69.864	48.826	22.577	2.976
8	100000	22.902	5.265	12.805	2.683	12.304	3.122
16	100000	72.614	51.689	80.704	72.865	61.38	54.252
32	100000	154.426	146.463	227.695	210.115	124.981	122.197
64	100000	1069.071	1015.529	430.127	419.683	335.704	330.948
1	200000	344.233	6.959	193.633	7.654	183.08	7.122
2	200000	172.53	9.469	100.144	7.997	92.664	7.607
4	200000	86.328	5.949	49.758	4.941	47.084	4.743
8	200000	41.939	2.737	24.936	2.864	23.901	2.825
16	200000	40.502	21.577	77.67	67.32	82.349	72.65
32	200000	251.399	231.29	135.8	123.831	298.55	275.234
64	200000	423.083	407.538	495.035	486.789	493.53	483.92
1	500000	929.749	19.623	529.042	20.098	493.047	17.301
2	500000	467.554	19.644	269.459	18.402	253.17	19.853
4	500000	243.585	25.115	140.731	20.931	130.895	15.959
8	500000	112.517	9.526	66.768	10.243	63.61	9.667
16	500000	74.566	20.013	52.587	23.703	55.97	23.665
32	500000	228.566	188.966	440.77	413.191	349.617	284.822
64	500000	284.272	252.422	525.364	506.062	251.272	239.919
1	1000000	1977.825	39.55	1107.855	38.07	1050.569	38.201
2	1000000	1031.753	104.275	573.417	51.244	550.189	59.923
4	1000000	484.808	43.471	286.622	45.988	269.836	40.715
8	1000000	235.147	27.724	135.2	20.622	126.519	17.309
16	1000000	149.289	25.655	90.86	22.403	102.182	48.518
32	1000000	342.212	254.94	480.312	401.428	577.284	531.796
64	1000000	415.808	358.792	518.13	480.365	408.795	366.338
1	2000000	3991.621	77.812	2260.005	76.02	2118.72	67.598
2	2000000	2072.761	83.217	1176.873	77.214	1128.031	79.913
4	2000000	1009.665	79.152	584.01	65.856	555.174	72.214
8	2000000	480.646	44.04	311.718	76.335	265.163	40.302
16	2000000	302.168	76.914	193.741	48.773	178.228	39.031
32	2000000	702.003	567.206	716.765	607.244	584.43	506.7
64	2000000	1019.532	902.248	1096.1	1023.19	1048.803	987.093