MPI Time elapsed	d Ar	rray Size						MPI speed up (Tserial / T parallel)	1024	2048	4069	8192	16834					
Cores		1024	2048	4069	8192	16,834		1	0.8	0.89	1.03	1	1.21					
	1	0.000198	0.000307	0.00048	0.00091	0.001712		2	0.83	1.74	2.4	2.17	1.322					
	2	0.000191	0.000158	0.000201	0.00042	0.001574		4	1.15	1.589	2.175	2.54	1.31					
	4	0.000138	0.000173	0.000228	0.000354	0.001585		8	0.914	1.28	2.12	2.31	1					
	8	0.000175	0.000173	0.000223	0.000395	0.002067		16		0.17	0.11	0.02	0.122					
	16	0.015495	0.015393	0.043776	0.030621	0.016946		10	0.01	0.17	0.11	0.02	0.122					
	10	0.013493	0.010090	0.043770	0.030021	0.010940												
								MPI efficiencies										
								(Speed up /p)	1024	2048	4069	8192	16834					
								1	0.8	0.89	1.03	1	1.21					
								2		0.87	1.2	1.085	0.661					
Cores	Ar	ray Size						4		0.397	0.54375	0.635	0.3275					
		1024	2048	4069	8192	16,834		. 8		0.16	0.265	0.288	0.125					
	1	0.000249	0.000378	0.000597	0.001102	0.002163		16		0.0106	11/1600		61/8000					
	2	0.000243	0.000370	0.000337	0.000756	0.002103		10	171000	0.0100	11/1000	17000	3170000					
	4	0.000220	0.000433	0.000479	0.000730	0.001489												
	8	0.00048	0.000321	0.000707	0.003196	0.003755												
	16																	
	16	0.002347	0.003089	0.003501	0.003913	0.005133												
							T serial	1024		4069	8192	16,834						
								0.00016	0.000275	0.000496	0.000915	0.002082						
openMP speedu)	1024	2048	4069	8192	16,834												
	1 0.6425702811 0.7275132275 0.8308207705 0.8303085299 0.9625520111					Note :	Since I'm using a processor cor (7 9Gth, you migh notice paralleliazation logner time in array size 1024, 2048, Because at that point. Over head of communication between core will take more time between processing itself you can see it time is much better while size oping higher.											
			0.6070640177	1.035490605	1.21031746	1.398253862		Note .	between core will t	ake more time be	tween processin	y itself you can se	e it tille is much	Detter Writie Size	going nigher.			
		0.7079646018																
		0.3333333333	0.2747252747	0.6466753585	1.055363322	1.150276243												
		0.1299756296	0.2747252747		0.2862953692	0.554460719												
	16 (U.U081/213464	0.08902557462	U.1416/38075	0.2338359315	0.4056107539												
open MP effecien		1024	2048	4069	8192	16,834												
		0.6425702811		0.8308207705														
		0.3539823009	0.3035320088	0.5177453027	0.6051587302													
	4 (0.08333333333	0.06868131868	0.1616688396	0.2638408304	0.2875690608												
	8	0.0162469537	0.03434065934	0.03227485685	0.03578692115	0.06930758988												
	16 0.	.004260758415	0.005564098414	0.008854612968	0.01461474572	0.02535067212												