

	worksize = 1,000,000			worksize = 10,000,000			média (usec)	worksize	
	repetitions			repetitions			repetitions	1,000,000	10,000,000
	1,000	2,000		1,000	2,000		1,000	5528919.233	55170509.53
	5515191	11056933		55126443	110156810		2,000	11061063.67	110341206.4
	5528449	11074700		55091445	110514610				
	5510543	11043598		55097616	110165359		média (seg)	worksize	
	5528303	11043776		55196634	110412114		repetitions	1,000,000	10,000,000
	5542360	11045311		55177518	110182412		1,000	5.528919233	55.17050953
	5526548	11054749		55190465	110426490		2,000	11.06106367	110.3412064
	5531437	11073067		55205234	110316252				
	5521508	11078058		55069281	110514783				
	5519537	11041105		55129578	110147388				
	5534248	11080646		55177872	110484988				
	5527744	11058823		55086379	110406828				
	5527901	11088046		55245687	110245716				
	5515981	11047523		55228067	110404928				
	5522407	11079788		55196501	110201487				
	5524191	11061580		55095271	110349312				
	5520660	11085030		55310902	110289986				
	5523444	11050140		55200686	110423101				
	5535530	11051883		55208856	110164426				
	5535427	11069649		55125744	110609730				
	5536561	11076658		55216825	110510108				
	5522743	11043550		55222029	110440722				
	5526892	11029301		55079526	110164063				
	5534297	11056257		55093549	110573717				
	5541493	11039011		55209246	110384566				
	5522081	11044858		55280828	110220419				
	5543008	11061493		55191633	110355684				
	5539460	11070406		55285671	110463312				
	5535291	11071044		55113932	110153251				
	5537312	11077445		55095411	110156268				
	5537030	11077482		55166457	110397361				
	média			média					
	5528919.233	11061063.67		55170509.53	110341206.4				

worksize = 1,000,000					
1,000 repetitions			2,000 repetitions		
2 threads	4 threads	8 threads	2 threads	4 threads	8 threads
2803615	2122220	2074283	5608318	4188152	4107104
2844301	2089907	2052210	5685745	4185268	4126144
2831783	2089320	2069163	5700816	4173023	4155810
2837445	2084385	2073338	5640718	4154466	4137899
2818219	2074673	2078070	5644338	4161877	4105161
2818220	2088016	2072473	5642131	4189482	4117922
2837423	2081520	2073817	5628894	4185333	4127934
2850253	2074615	2087130	5614360	4184540	4120539
2824537	2091559	2084091	5625415	4188981	4137697
2853498	2083849	2043014	5659433	4192122	4101477
2827718	2090172	2069606	5622617	4188197	4128593
2825970	2094749	2075402	5655684	4168393	4146322
2853871	2097353	2076156	5630058	4187910	4119470
2859130	2089750	2070163	5671446	4203146	4125804
2854191	2078953	2060051	5643958	4172384	4136975
2838323	2073935	2077792	5625098	4177009	4120277
2850599	2098550	2075988	5676633	4179927	4132340
2847641	2094721	2073385	5622237	4190921	4126574
2811193	2089777	2061362	5614418	4192911	4140042
2811448	2091696	2040167	5620224	4186890	4145077
2834522	2094988	2068827	5629777	4177478	4114153
2809090	2092459	2067036	5633873	4191543	4121465
2853168	2090412	2087441	5630944	4178607	4114957
2861799	2091981	2078135	5621903	4182876	4108410
2854129	2087784	2055114	5612113	4180394	4112195
2818200	2082564	2052555	5707081	4186682	4149398
2827820	2079235	2047283	5612797	4175159	4116333
2847570	2081905	2074932	5660135	4195565	4111282
2821379	2126939	2058887	5690070	4182463	4101914
2825268	2089548	2061564	5623714	4172831	4150510
média					
2835080.433	2089917.833	2067981.167	5641831.6	4182484.333	4125325.933

worksize = 10,000,000					
1,000 repetitions			2,000 repetitions		
2 threads	4 threads	8 threads	2 threads	4 threads	8 threads
28278488	20860761	20902523	56542351	41844651	41600016
28272876	20839856	20849648	56533632	41721469	41697183
28255635	20886107	20883540	56511207	41703803	41853705
28276617	20889603	20853285	56564041	41839710	41791981
28369154	20874237	20894482	56571211	41697104	41773835
28269264	20851213	20872264	56529449	41771103	41715712
28238725	20904420	20880543	56531254	41792100	41724551
28280247	20874960	20921526	56535339	41844764	41744075
28273829	20902795	20885202	56540446	41813797	41655295
28337612	20873922	20849111	56602167	41708204	41721484
28275413	20859377	20884678	56332563	41728162	41721087
28386193	20921105	20861962	56563220	41693299	41761268
28281416	20861268	20889570	56520802	41771267	41771273
28308726	20859820	20837449	56597810	41817840	41682639
28286054	20918444	20858815	56554252	41713769	41671291
28274435	20938323	20900239	56511049	41726679	41695854
28285021	20894749	20838677	56524665	41791565	41707018
28271695	20918087	20903537	56604901	41699235	41721545
28262124	20851735	20876291	56522639	41760257	41798343
28271886	20875584	20883868	56499562	41745216	41758489
28305547	20923937	20817415	56518452	41748790	41719184
28350009	20830944	20920444	56570552	41952166	41679867
28277928	20898123	20876066	56554859	41797630	41683250
28289173	20902539	20849676	56525289	41728389	41772282
28267302	20822413	20906570	56521388	41727268	41781491
28274947	20930838	20879385	56525231	41714759	41724318
28249440	20850256	20874898	56381842	42043134	41712897
28255815	20847046	20889008	56584189	41792331	41748044
28284857	20892315	20876118	56575634	41826683	41730464
28272236	20849336	20895565	56575566	41783853	41744201
média					
28286088.8	20879470.43	20877045.17	56534185.4	41776633.23	41728754.73

2 threads		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2835080.433	28286088.8
2,000	5641831.6	56534185.4

4 threads		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2089917.833	20879470.43
2,000	4182484.333	41776633.23

8 threads		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2067981.167	20877045.17
2,000	4125325.933	41728754.73

2 threads		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.835080433	28.2860888
2,000	5.6418316	56.5341854

4 threads		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.089917833	20.87947043
2,000	4.182484333	41.77663323

8 threads		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.067981167	20.87704517
2,000	4.125325933	41.72875473

worksize = 1,000,000					
1,000 repetitions			2,000 repetitions		
2 threads	4 threads	8 threads	2 threads	4 threads	8 threads
3081493	2108872	2617838	6143704	4248947	5191707
3070661	2105437	2576590	6154929	4195644	5210929
3074963	2140446	2581227	6151865	4225239	5201003
3073341	2089298	2613453	6158644	4206674	5230301
3078789	2113053	2610442	6154313	4219028	5214910
3072447	2126077	2590201	6150924	4212854	5229646
3081102	2115862	2608401	6157638	4206659	5210590
3074638	2102505	2563904	6149323	4210927	5216046
3076056	2107317	2579136	6150141	4201070	5231801
3075944	2131007	2603132	6151611	4191270	5182600
3075792	2121571	2579237	6150788	4209003	5147122
3077817	2109515	2623393	6154797	4195273	5228595
3074808	2111982	2597692	6148556	4233640	5196478
3076664	2129539	2608272	6150835	4201067	5234254
3080356	2123569	2593232	6155904	4254530	5192150
3076578	2111475	2611330	6151783	4208689	5217066
3076107	2103256	2577262	6152343	4223779	5161095
3072580	2111253	2555430	6150079	4213536	5251579
3077147	2131351	2578284	6146746	4241009	5179667
3075955	2109709	2581031	6153645	4234627	5242127
3072881	2101100	2608922	6153921	4238715	5174377
3073833	2109014	2558991	6155718	4224100	5169532
3081008	2100947	2579309	6150271	4208957	5194825
3077289	2121472	2594848	6150660	4222296	5218714
3073593	2113679	2609297	6158858	4210252	5190594
3075369	2114646	2592640	6147473	4218770	5211551
3073344	2105235	2596843	6161965	4222129	5198075
3079287	2117193	2589741	6145355	4190904	5198502
3075330	2110102	2585991	6150266	4260468	5157978
3079545	2105398	2621912	6149423	4241109	5231398
média					
3076150.567	2113396	2592932.7	6152082.6	4219038.833	5203840.4

worksize = 10,000,000					
1,000 repetitions			2,000 repetitions		
2 threads	4 threads	8 threads	2 threads	4 threads	8 threads
30868526	21018587	22002309	61690435	42210883	43995310
30861589	21091052	22060214	61736956	42264454	44027106
30864364	21054833	22063006	61680623	42209111	44012632
30879270	21056056	22031939	61671252	42079745	44145236
30868641	21099867	22009144	61678077	42126976	43999178
30863742	21004929	21964347	61705157	41984787	43991602
30858161	21056285	22037483	61641190	42130139	43995806
30852159	21071906	22016266	61667899	42186957	44035749
30868617	21029588	21939788	61685481	42212468	44055635
30846200	21084481	21996196	61408661	42130599	43987755
30856461	30716428	22005392	61375165	41949074	44034863
30991815	21091377	22046097	61716609	42104532	44047626
30848872	21082041	22028861	61703577	42023495	44093705
30838129	20999557	21991358	61729214	42193818	44036962
30856984	21040345	22056986	61696416	42156276	44043366
30859416	21115273	22005095	61699251	41875253	43976827
30845580	21085056	21974531	61712603	42061264	44057550
30844331	21018948	22004628	61679353	42143114	43938394
30843829	21094743	22018673	61724093	42114990	44013296
30848927	21111553	22036994	61726913	42122492	44032905
30855045	21103514	22051740	61677262	42189773	44088020
30848149	21006904	22017516	61724600	42129442	44034497
30838820	21065058	21998972	61701996	42088046	43994630
30859519	20958278	22014970	61709070	42145989	43945168
30842195	20938463	22061821	61658488	42049992	44039950
30861707	21060403	22002364	61754185	42183679	43991625
30871627	21079145	22002833	61660971	42087090	44092776
30849378	21099438	22029095	61678508	42101399	44109602
30876144	21089046	21991604	61737793	42091915	44127250
30838465	21079799	21956368	61644695	42034119	43977762
média					
30860222.07	21380098.43	22013886.33	61675883.1	42112729.03	44030759.43

2 threads		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	3076150.567	30860222.07
2,000	6152082.6	61675883.1
4 threads		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2113396	21380098.43
2,000	4219038.833	42112729.03
8 threads		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2592932.7	22013886.33
2,000	5203840.4	44030759.43

2 threads		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	3.076150567	30.86022207
2,000	6.1520826	61.6758831
4 threads		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.113396	21.38009843
2,000	4.219038833	42.11272903
8 threads		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.5929327	22.01388633
2,000	5.2038404	44.03075943

worksize = 1,000,000					
1,000 repetitions			2,000 repetitions		
2 processos	4 processos	8 processos	2 processos	4 processos	8 processos
2886401	2125145	2138198	5742250	4214698	4229381
2885052	2114641	2094896	5751909	4209536	4201389
2889166	2119703	2138870	5756984	4200783	4209310
2885270	2120037	2110205	5754478	4199067	4211413
2887150	2119499	2115745	5749417	4252596	4194074
2885572	2125787	2137799	5744815	4202489	4147673
2882840	2112707	2110776	5746660	4209282	4161527
2888154	2116668	2107930	5753113	4223814	4185250
2884716	2124700	2113761	5747044	4210169	4164151
2882453	2114619	2110585	5738378	4192198	4188275
2879933	2117609	2114239	5747192	4189789	4178712
2883411	2144650	2118277	5750324	4204697	4190609
2885191	2112878	2119416	5747698	4185926	4182787
2886572	2113050	2118418	5747016	4210758	4129588
2881311	2124231	2098014	5742090	4213867	4154853
2884087	2115243	2115145	5746982	4214920	4187999
2890341	2118948	2088666	5739813	4206864	4177382
2881073	2113624	2119944	5746526	4208647	4191866
2883558	2117412	2125891	5748566	4240078	4176339
2881665	2134644	2125718	5747284	4205650	4128761
2885367	2117180	2125679	5748705	4214399	4117494
2879778	2116218	2086389	5752111	4188406	4147457
2883102	2107354	2122067	5741264	4218645	4173086
2881316	2118268	2119987	5747380	4192077	4190494
2882021	2114639	2128890	5760714	4207881	4180223
2886393	2121124	2096960	5736212	4226409	4208892
2881850	2115760	2107019	5741210	4224383	4191240
2876186	2108051	2115698	5747295	4217293	4235676
2878432	2122927	2125251	5731097	4197754	4195877
2881753	2122084	2144813	5741100	4207411	4167389
média					
2883670.467	2118980	2116507.867	5746520.9	4209682.867	4179972.233

worksize = 10,000,000					
1,000 repetitions			2,000 repetitions		
2 processos	4 processos	8 processos	2 processos	4 processos	8 processos
28732484	21220283	21389109	57221018	42149482	42438596
28755620	21223128	21381976	57282021	42068887	42201445
28748624	21117577	21422083	57299090	42272125	42252616
28767427	21288278	21437291	57318951	42089649	42257950
28714354	21241986	21392450	57211294	42011252	42263054
28773768	21147688	21379406	57216294	42006111	42268795
28718812	21282889	21400608	57282005	42099450	42311094
28719418	21169989	21382450	57307294	42075761	42234889
28726207	21229425	21388146	57305688	42188308	42273391
28915320	21137438	21390660	57347080	42069390	42221461
28840361	21214085	21415384	57253610	42095727	42412287
28731608	21131253	21423161	57220416	41991572	42394367
28792819	21135672	21381094	57321131	42170399	42284187
28724002	21215016	21378089	57306415	42046828	42181996
28863727	21180239	21398889	57261661	41969053	42298615
28745153	21142067	21366987	57250382	42255895	42235070
28875100	21137683	21518764	57256466	41965891	42337835
28768776	21123104	21413810	57789647	42036913	42408837
28838191	21191680	21394646	57246936	42149901	42261769
28778477	21129309	21446408	57333429	42042091	42200262
28744824	21101750	21410172	57260808	41977525	42236215
28774690	21194767	21418181	57365386	42307838	42277013
28745322	21213016	21439395	57507766	42027035	42245447
28738755	21205911	21394460	57185543	42000570	42335585
28770394	21154794	21353073	57548079	42008176	42395647
28870692	21106939	21366160	57266815	42212329	42385642
28799450	21173635	21416846	57224436	42200806	42261322
28851864	21158104	21406937	57230592	42206318	42231166
28756927	21139947	21435838	57239686	41944736	42174533
28834373	21149348	21398587	57253582	42157309	42297548
média					
28780583.97	21175233.33	21404368.67	57303784.03	42093243.57	42285954.47

2 processos		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2883670.467	28780583.97
2,000	5746520.9	57303784.03

2 processos		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.883670467	28.78058397
2,000	5.7465209	57.30378403

4 processos		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2118980	21175233.33
2,000	4209682.867	42093243.57

4 processos		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.11898	21.17523333
2,000	4.209682867	42.09324357

8 processos		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2116507.867	21404368.67
2,000	4179972.233	42285954.47

8 processos		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.116507867	21.40436867
2,000	4.179972233	42.28595447

worksize = 1,000,000						
1,000 repetitions			2,000 repetitions			
2 tasks	4 tasks	8 tasks	2 tasks	4 tasks	8 tasks	
2093340	2037040	1823680	4051370	4089640	3543160	
2205060	2034190	1830530	4226320	4077250	3636300	
2074290	2050870	1911320	4101800	4101390	3722840	
2081080	2028790	1822080	4391510	4094620	3574060	
2103820	2058270	1795450	4178270	4117350	3657890	
2060810	2068580	1839220	4206220	4127330	3522020	
2057230	2038260	1814060	4229460	4092520	3630040	
2181540	2057320	1825240	4114890	4103590	3755140	
2098790	2037690	1888180	4331120	4110440	3589640	
2255520	2043780	1805990	4484540	4103110	3665470	
2017100	2040110	1801420	4407190	4094670	3689510	
2041550	2068670	1802360	4163580	4082320	3642680	
2101570	2057320	1833180	4213280	4078120	3732080	
2153930	2069490	1790660	4191660	4083230	3644710	
2152360	2067150	1846980	4110990	4073960	3660200	
2143610	2054830	1851650	4404360	4090920	3435760	
2257980	2033060	1760980	4213430	4079440	3589560	
2110380	2049960	1841570	4311970	4090180	3530030	
2106920	2071900	1824610	4213770	4099550	3627220	
2109190	2046410	1857560	4083790	4077330	3567340	
2248190	2057580	1787660	4201860	4126260	3667230	
2119000	2091060	1828080	4135050	4085290	3624790	
2112130	2041680	1822700	4139810	4221280	3632610	
2173520	2056610	1811250	4220480	4091330	3613610	
2191730	2112300	1818590	4425540	4137580	3677870	
2195070	2053400	1830540	4241940	4120190	3662270	
2055480	2099650	1798020	4302420	4082160	3659790	
2137000	2061290	1828050	4129970	4087760	3648190	
2020890	2083670	1775810	4079870	4167370	3597500	
2158800	2056580	1829730	4172080	4095600	3565180	
média						
2127262.667	2058010.333	1823238.333	4222618	4102996	3625489.667	

worksize = 1,000,000				
repetitions				
1,000		2,000		
forall	promotion	forall	promotion	
3371030	3967160	7582760	7587960	
3436080	3633200	7860950	7854960	
3281940	3588780	7140620	7162890	
3756710	3183290	7715590	6533730	
3425790	3915900	7845370	7790500	
3966980	3329250	7087040	7799250	
3193660	3357650	7845690	7688180	
3125340	3223890	7357010	7687350	
3400430	4013730	8664910	7773660	
3356470	3258430	7153610	8024550	
3473740	3418970	6707100	6928760	
3285290	3824610	6449950	7297770	
3404140	3854880	8025310	7755850	
3393390	3462330	6662420	7530430	
3783690	3340320	6666030	7710290	
3432010	3372330	6646540	6872210	
3977430	3823080	7073220	7193280	
3562610	3348900	6835300	7167650	
3679400	3908850	7859710	7850820	
3320600	3535760	7201870	7250820	
3441460	3138250	6664530	6907860	
3240860	3789230	7808240	7829440	
3521980	3345500	6221920	7531300	
3226370	3774240	7401530	7342100	
3448770	3839870	7053690	8344070	
3221950	3753210	7224320	7858670	
3711650	3823670	7599970	7749400	
3673870	3725660	7529960	7792920	
3325740	3100490	6945430	6743360	
3703730	3077560	6553220	8170990	
média		média		
3471437	3557633	7179460.333	7524367.333	

\* promotion = function promotion (Chapel's implicit data parallelism)

worksize = 10,000,000						
1,000 repetitions			2,000 repetitions			
2 tasks	4 tasks	8 tasks	2 tasks	4 tasks	8 tasks	
20786100	20509700	20922400	41904000	40838400	41392600	
20604100	20531200	20811500	41039700	40799700	42190600	
20295800	20133100	20708700	40755200	40858000	41708900	
20551600	20376700	20862100	41646100	40121800	41331000	
20808400	20388800	20873900	42514100	40758600	41464100	
20335700	20365700	20909000	41272000	40311400	41435900	
20424300	20362900	20808600	41632600	40798700	41373200	
20388000	20348900	20909100	43128300	40964900	41824700	
20685700	21024400	20836700	41714800	40638500	41412200	
20831900	20420500	20856800	42444900	40838800	41505100	
20853600	20423500	20835000	41793300	40946000	41616500	
20851400	20528400	20868700	42230700	41796700	41350900	
21756100	20404200	20831000	42791400	40786900	41608700	
22112000	20193100	20856100	40681200	40885800	41496500	
20982100	20155500	20787600	42163700	40809400	41507900	
21071600	20443400	20718200	42045500	40290600	41547900	
20930200	20989200	20868200	41823900	40884700	41245600	
20255200	20351500	20968900	42650700	40189200	41752200	
21095900	20378300	20875100	43536900	40803000	41598800	
21061600	20492800	20948800	43352000	40505300	41799400	
21394900	20399400	20656400	41627100	40952500	41704200	
21289000	20400500	20949700	41601900	40972600	41487700	
20855300	20338600	20890200	42449600	41281300	41385000	
21364500	20471600	20791000	40777700	41047100	41457800	
20846600	20360200	20866400	42709600	40630300	41424600	
21783000	20537200	20978800	43545600	40979100	41584500	
21955200	20402400	21054000	43549600	40094600	41456300	
20875100	20340400	20905400	40950100	40690300	41200100	
21453800	20453300	21088100	43120400	40424000	41616100	
22008100	20400700	20789300	42600100	42002300	41554600	
média						
21016893.33	20430870	20867523.33	42135090	40796683.33	41546586.67	

worksize = 10,000,000				
repetitions				
1,000		2,000		
forall	promotion	forall	promotion	
23709700	24608200	50489400	48341600	
24463900	24787200	48871800	50534000	
24078600	24590100	50889300	49039400	
25265200	25429600	49248300	49157800	
23821500	24679100	50675300	49837500	
24613900	23936500	49311300	49247900	
24733500	24601500	49864500	47515700	
24423700	24955500	49542000	50715900	
24602400	24574800	50243000	49260800	
23473700	24913200	48896900	48961800	
24556300	24357900	49016500	49013500	
24445900	24681000	49999600	49060800	
24730700	23327200	49207700	49334200	
23770300	24526400	50355200	49119000	
25165500	24561800	49183600	48751700	
23533600	25352700	49247600	49401500	
24195000	24306600	49244700	48607900	
25145500	24433200	49141600	48744300	
23710800	24463000	50269100	48918000	
24455000	24596600	48006200	49275500	
24801200	24777500	47981100	50824000	
24717600	23971000	50322300	49205100	
24904500	23596200	49128200	48410200	
23665000	23663800	49343600	49293800	
23921900	24534000	48932900	49010100	
24625200	24375900	47366400	48212600	
24956800	24361600	47274700	48858300	
24501700	24303300	48918200	49751100	
24243400	25084600	47612200	49173700	
24701600	23842900	48359300	49277900	
média		média		
24397786.67	24470430	49231416.67	49165186.67	

2 tasks		
média (sec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2127262.667	21016893.33
2,000	4222618	42135090

4 tasks		
média (sec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2058010.333	20430870
2,000	4102996	40796683.33

forall		
média (sec)	worksize	
repetitions	1,000,000	10,000,000
1,000	3471437	24397786.67
2,000	7179460.333	49231416.67

promotion		
média (sec)	worksize	
repetitions	1,000,000	10,000,000
1,000	3557633	24470430
2,000	7524367.333	49165186.67

2 tasks		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.127262667	21.01689333
2,000	4.222618	42.13509

4 tasks		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.058010333	20.43087
2,000	4.102996	40.79668333

forall		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	3.471437	24.39778667
2,000	7.179460333	49.23141667

promotion		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	3.557633	24.47043
2,000	7.524367333	49.16518667

C++ backend	worksize = 1,000,000					
	1,000 repetitions			2,000 repetitions		
	2 activities	4 activities	8 activities	2 activities	4 activities	8 activities
	2187016	2093032	2058117	4317506	4160708	4049487
2157219	2094220	2010749	4780078	4164448	4068660	
2246186	2086539	1974970	4328219	4163854	4125404	
2163835	2084450	2063951	4318435	4160371	4116796	
2156121	2078112	2052766	4320922	4161633	3999593	
2175643	2083065	2060630	4327149	4153334	4097899	
2160104	2091036	1983938	4328322	4157959	4095773	
2158683	2088728	2051400	4311751	4136900	4106802	
2159689	2083095	2010252	4309239	4177714	4098111	
2229792	2091572	2071033	4497477	4161019	4105861	
2164509	2084224	2004711	4320480	4173222	4102704	
2155800	2085738	2030577	4330297	4161595	4112878	
2163699	2081980	2022991	4331619	4157935	4078247	
2248943	2080692	2056122	4335728	4159270	3978629	
2385417	2081856	20525436	4332254	4160316	4013216	
2166669	2079836	2073217	4329001	4151175	4026766	
2160245	2082139	2032414	4318975	4171038	4110549	
2165425	2077316	1985864	4624192	4167401	4114629	
2159190	2080092	2017285	4317589	4148794	4134730	
2156914	2114385	2021587	4318731	4155230	4117162	
2158150	2086656	2010158	4477939	4160092	3972313	
2156664	2076630	2066589	4318035	4156778	4149810	
2162852	2089926	2016884	4330114	4168526	4005415	
2161967	2083164	2037934	4326166	4184223	4027551	
2385240	2082340	2040972	4318091	4166535	4111103	
2162516	2071412	2079830	4339889	4177921	4126644	
2165979	2083766	2056519	4310193	4158714	4139626	
2180699	2085847	2062864	4316860	4162432	3963385	
2160043	2079939	2065939	4571785	4166577	4114439	
2161744	2084584	2061734	4532111	4164974	4129104	
média						
2185897.767	2084966.7	2035094.433	4374481.633	4162422.933	4081292.867	

Java backend	worksize = 1,000,000					
	1,000 repetitions			2,000 repetitions		
	2 activities	4 activities	8 activities	2 activities	4 activities	8 activities
2008091	2187618	2057652	3935747	4261695	4234933	
2002461	2182709	2193868	3922946	4215500	4218034	
2006325	2189181	2170824	3922013	4258134	4210808	
1985970	2195035	2172815	3902974	4252258	4191353	
2018568	2195402	2173602	4386517	4240498	3816825	
2002239	2190080	2189549	3923065	4238780	4164865	
2000184	2178787	2182114	4012828	4263533	4146692	
2000738	2185286	2171750	3957240	4280958	4204662	
2019446	2175872	2205257	3916167	4261046	4175153	
2050088	2190483	2209537	3941007	4250374	4193489	
1996082	2170641	2121257	3889570	4255096	4192767	
2068221	2194328	2158237	3915648	4253722	4219190	
1993317	2192883	2148282	3940171	4246398	4219395	
2012622	2186034	2150583	3908109	4253028	4166810	
2012132	2132434	2133571	3903164	4249484	4245660	
2007958	2201308	2148800	3930457	4253681	4206265	
2019323	2182153	2165659	3924813	4257941	4183089	
1998065	2184763	2171296	3914913	4246325	4176171	
2134765	2172686	2164842	3922729	4246240	4190900	
2063900	2192453	2190983	3980028	4269892	4283465	
2006226	2212039	2163544	3908096	4258297	4134519	
2010798	2178069	2179175	3937009	4276654	4241221	
1996085	2149757	2167416	3921886	4274931	4267854	
2011818	2213485	2155981	3919929	4239305	4146322	
2048525	2173360	2168266	3915701	4254337	4192250	
2018090	2171139	2170526	4347039	4276701	4172741	
2021709	2212386	2174779	3931242	4245224	4227883	
2050720	2181836	2020547	3916311	4255573	4232624	
1983075	2179757	2152389	3945185	4275834	4233492	
2001026	2178955	2182737	3902665	4274927	4161515	
média						
2018343.567	2184190.633	2156892.267	3957338.967	4256209.8	4188364.4	

worksize = 10,000,000						
1,000 repetitions			2,000 repetitions			
2 activities	4 activities	8 activities	2 activities	4 activities	8 activities	
21502985	20692866	20675774	43137952	41345334	41432049	
21511167	20707819	20738467	43482855	41396399	42222447	
21521237	20693683	20653026	43022715	41617361	41758260	
21540579	20718215	20821016	43031973	41329457	41490027	
21630315	20674277	20765188	43005142	41363162	41328174	
21506657	20716178	20896793	43032341	41361502	41390323	
21544537	20703337	20829898	43042143	41422962	41405367	
21487383	20718491	20724490	43011515	41381765	41372948	
21562257	20722300	20904252	43025569	41408981	41621379	
21533797	20615380	20699158	43036741	41391480	41367820	
21645383	20686233	20729360	43004019	41417902	41353372	
21605389	20641222	20658145	43055948	41335622	42426117	
21515365	20699984	20712649	43033246	41407125	41387749	
21514364	20639971	20741776	43244015	41397197	41412477	
21615205	20681415	20878801	42986004	41402067	41449090	
21536910	20697098	20700805	43140227	41445943	41428690	
22437872	20754992	20748957	42987164	41415459	41441530	
22557697	20710402	20676555	43236819	41386675	41311549	
21498556	20698721	20714740	43002984	41347374	41392702	
21507960	20686768	20662126	43072237	41413193	41375716	
22113185	20716778	20692690	43068756	41320368	41347979	
22900518	20676603	20722398	43037892	41404271	41468629	
21535067	20707395	20684165	43043316	41431601	41393950	
22267747	20668862	21104179	43049248	41421272	41468896	
21530064	20685650	20713142	43137276	41405523	41365677	
21601562	20727229	20711261	43062538	41388449	41368019	
21595931	20653529	20698588	43135096	41399619	41385291	
21601562	20688635	20920929	43046411	41349873	41303072	
21525641	20671064	20743216	43014978	41390841	41405425	
21535695	20648857	20706821	43417305	41446180	41906255	
média						
21700250.43	20689831.8	20754582.37	43098717.5	41398292.23	41044540.50	

worksize = 10,000,000						
1,000 repetitions			2,000 repetitions			
2 activities	4 activities	8 activities	2 activities	4 activities	8 activities	
18994661	20696143	20714563	37883583	41306966	41405810	
19027415	20735106	20719120	37937207	41346714	41349103	
18977326	20726254	20567817	38055444	41279592	41372087	
19001282	20730714	20720973	37900145	41325491	41331651	
18992615	20733712	20758884	37957121	41354731	41354733	
18936489	20710289	20785977	37874876	41370733	41326270	
18996438	20719130	20774728	37868885	41357144	41379650	
19007374	20671852	20736140	37940002	41321392	41344794	
18977928	20698635	20720262	37913148	41370963	41393625	
18950646	20761718	20706736	37882110	41399370	41343005	
19044474	20685509	20427287	37965567	41284937	41559777	
18980714	20690824	20697729	37920695	41408312	41384143	
18995377	20734669	20724661	37949013	41346515	41373011	
18909002	20695023	20772533	37887722	41312529	41364564	
1894237	20686158	20770281	37908127	41325644	41355282	
18957498	20707311	20720841	37895629	41311471	41344956	
18930527	20696410	20729307	37919577	41381824	41360139	
18987758	20713021	20725796	37820212	41325336	41348431	
18956917	20695193	20753099	37878474	41357435	41355108	
18983068	20691098	20716478	37912043	41349125	41311953	
18970506	20712983	20687951	37888555	41328354	41330733	
18979856	20695905	20747416	37933565	41335099	41369961	
19276073	20722464	20722203	37911121	41349982	41382269	
18982646	20705138	20722189	37917276	41294547	41322460	
18943564	20703908	20721981	37934415	41340188	41287888	
18959274	20727300	20770472	37950956	41341391	41314866	
18995717	20743475	20719268	37878422	41541712	40655604	
18984192	20728987	20798946	37912652	41381137	41327005	
18983581	20686033	20726433	37949659	41366332	41339047	
19002248	20719330	20739923	37919430	41298274	41320262	
média						
18995196.77	20710809.73	20736691.47	37915534.03	41347594.67	41326962.92	

2 activities			
média (usec)	worksize		
repetitions	1,000,000	10,000,000	
1,000	2185897.767	21700250.43	
2,000	4374481.633	43098717.5	

  

4 activities			
média (usec)	worksize		
repetitions	1,000,000	10,000,000	
1,000	2084966.7	20688931.8	
2,000	4162422.933	41398292.23	

  

8 activities			
média (usec)	worksize		
repetitions	1,000,000	10,000,000	
1,000	2035094.433	20754582.37	
2,000	4081292.867	41504450.3	

2 activities		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2018343.567	18995196.77
2,000	3957338.967	37915534.03

2 activities		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.018343567	18.99519677
2,000	3.957338967	37.91553403

4 activities		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2184190.633	20710809.73
2,000	4256209.8	41347594.67

4 activities		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.184190633	20.71080973
2,000	4.2562098	41.34759467

8 activities		
média (usec)	worksize	
repetitions	1,000,000	10,000,000
1,000	2156892.267	20736691.47
2,000	4188364.9	41326962.9

8 activities		
média (seg)	worksize	
repetitions	1,000,000	10,000,000
1,000	2.156892267	20.73669147
2,000	4.1883649	41.3269629

MÉDIA DOS TEMPOS DE EXECUÇÃO						SPEEDUP									
MÉTODO		U.P.	WORKSIZE				MÉTODO		U.P.	WORKSIZE					
			1,000,000 (1 milhão)		10,000,000 (10 milhões)					1,000,000 (1 milhão)		10,000,000 (10 milhões)			
			1,000 repetições	2,000 repetições	1,000 repetições	2,000 repetições				1,000 repetições	2,000 repetições	1,000 repetições	2,000 repetições		
Sequencial		-	5.5289	11.0611	55.1705	110.3412									
Pthreads	2 threads		2.8351	5.6418	28.2861	56.5342	Pthreads	2 threads		1.9502	1.9606	1.9504	1.9518		
	4 threads		2.0899	4.1825	20.8795	41.7766		4 threads		2.6455	2.6446	2.6423	2.6412		
	8 threads		2.068	4.1253	20.877	41.7288		8 threads		2.6735	2.6813	2.6426	2.6442		
OpenMP	2 threads		3.0762	6.1521	30.8602	61.6759	OpenMP	2 threads		1.7973	1.7979	1.7878	1.789		
	4 threads		2.1134	4.219	21.3801	42.1127		4 threads		2.6161	2.6217	2.5805	2.6201		
	8 threads		2.5929	5.2038	22.0139	44.0308		8 threads		2.1323	2.1256	2.5062	2.506		
MPI	2 processos		2.8837	5.7465	28.7806	57.3038	MPI	2 processos		1.9173	1.9248	1.9169	1.9255		
	4 processos		2.119	4.2097	21.1752	42.0932		4 processos		2.6092	2.6275	2.6054	2.6214		
	8 processos		2.1165	4.18	21.4044	42.286		8 processos		2.6123	2.6462	2.5775	2.6094		
Chapel	2 tasks		2.1273	4.2226	21.0169	42.1351	Chapel	2 tasks		2.599	2.6195	2.6251	2.6187		
	4 tasks		2.058	4.103	20.4309	40.7967		4 tasks		2.6865	2.6959	2.7003	2.7047		
	8 tasks		1.8232	3.6255	20.8675	41.5466		8 tasks		3.0325	3.0509	2.6438	2.6558		
	forall		3.4714	7.1795	24.3978	49.2314		forall		1.5927	1.5407	2.2613	2.2413		
	promotion		3.5576	7.5244	24.4704	49.1652		promotion		1.5541	1.47	2.2546	2.2443		
X10	C++	2 activities		2.1859	4.3745	21.7003	43.0987	X10	C++	2 activities		2.5293	2.5285	2.5424	2.5602
		4 activities		2.085	4.1624	20.6898	41.3983			4 activities		2.6518	2.6574	2.6666	2.6654
		8 activities		2.0351	4.0813	20.7546	41.5045			8 activities		2.7168	2.7102	2.6582	2.6585
	Java	2 activities		2.0183	3.9573	18.9952	37.9155		Java	2 activities		2.7394	2.7951	2.9044	2.9102
		4 activities		2.1842	4.2562	20.7108	41.3476			4 activities		2.5313	2.5988	2.6639	2.6686
		8 activities		2.1569	4.1884	20.7367	41.327			8 activities		2.5634	2.6409	2.6605	2.67