

Golfers

Instance	A000 / Simple Swap		A000 / AS swap		A000 / AS (rho) SS		A000 / AS U SS		
	Time	Iter.	Time	Iter.	Time	Iter.	Time	Iter.	
10-10-3	62,160	108	980	274	65,470	244	64,750	192	
40 cores	60,050	102	1,100	338	90,400	219	65,350	215	
	60,900	104	400	126	22,760	99	55,930	225	
	164,690	245	2,510	814	33,230	103	102,410	300	
	57,950	115	2,380	866	20,860	90	112,620	298	
	137,180	221	280	96	24,470	104	63,870	191	
	139,970	233	320	103	23,710	119	3,670	84	
	60,600	114	250	98	25,650	112	11,580	105	
	73,670	120	2,760	986	27,540	94	63,830	200	
	60,480	104	1,860	654	65,820	217	9,670	90	
	64,240	124	690	285	28,980	98	58,400	219	
	155,360	227	500	190	31,630	114	162,710	436	
	56,860	105	560	187	69,000	232	182,930	397	
	58,050	109	980	347	75,730	239	4,720	96	
	148,500	236	320	118	80,710	240	130,950	333	
	65,760	106	650	200	74,160	201	124,350	318	
	56,050	111	240	106	95,450	357	9,260	98	
	149,560	211	1,080	311	17,390	87	4,500	89	
	65,510	101	1,420	483	16,010	75	3,500	88	
	69,260	108	300	98	18,940	86	9,790	106	
	50,830	102	240	86	33,360	106	132,650	325	
	57,180	107	320	100	68,100	221	123,940	361	
	54,430	100	270	98	23,190	114	8,410	109	
	153,100	243	2,130	660	32,040	109	9,220	87	
	59,940	110	1,070	332	16,390	93	58,940	220	
	72,780	114	1,310	337	21,700	109	11,360	82	
	154,310	229	2,180	754	20,190	99	10,700	91	
	55,590	112	960	316	23,570	93	121,510	305	
	63,300	112	1,900	598	21,640	110	8,780	84	
	148,800	241	1,880	607	77,870	229	59,280	204	
	87,9021461,06135241,53214759,653198								
	41,9615879126826,0017255,019110								

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Instance	B001 / Best Impr.		B001 / First Impr.	
	Time	Itr.	Time	Itr.
5-3-7	3,020	2,714	1,370	1,308
40 cores	3,860	3,433	1,380	1,308
	880	751	2,850	2,849
	15,040	13,458	1,010	958
	6,470	5,454	2,160	2,193
	2,160	1,878	450	444
	4,350	3,756	1,060	1,087
	3,080	2,908	2,680	2,677
	4,770	4,272	1,770	1,729
	3,170	2,842	480	504
	15,150	13,470	1,710	1,769
	1,910	1,690	780	784
	7,350	6,544	850	871
	3,190	2,895	440	482
	1,450	1,256	2,290	2,329
	1,680	1,541	1,640	1,549
	2,430	2,127	540	547
	4,640	4,021	420	439
	3,570	3,266	1,920	1,874
	19,450	17,174	2,020	1,979
	1,340	1,222	910	931
	5,100	4,559	1,510	1,517
	3,680	2,987	1,770	1,715
	3,680	2,987	1,970	2,013
	1,960	1,740	1,150	1,090
	1,970	1,712	630	664
	4,740	4,166	960	956
	8,780	7,878	600	622
	2,770	2,449	1,390	1,330
	8,340	7,475	1,120	1,130
4,999 4,421 1,328 1,322				
4,430 3,938 682 676				

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Instance	B001 / Best Impr.		B001 / First Impr.	
	Time	Itr.	Time	Itr.
8-4-7	6,300	1,192	1,720	424
40 cores	5,220	991	1,620	385
	3,130	573	2,990	718
	5,450	1,023	1,390	361
	2,690	502	4,700	1,104
	5,810	1,100	1,450	373
	3,250	623	1,170	300
	3,880	724	1,780	417
	6,270	1,163	1,220	308
	2,880	541	2,320	551
	1,520	279	1,660	406
	4,180	783	2,100	518
	5,460	980	880	220
	8,270	1,564	2,190	537
	4,240	797	1,470	361
	4,650	836	1,530	387
	8,230	1,548	1,580	380
	4,790	885	940	255
	4,920	907	4,110	962
	7,850	1,455	2,280	537
	6,340	1,197	1,600	390
	3,260	605	1,450	343
	3,470	653	2,090	498
	7,380	1,384	950	261
	5,170	973	1,630	405
	3,200	594	2,020	491
	5,500	1,046	1,660	401
	7,920	1,466	1,190	313
	5,570	1,035	1,330	324
	6,340	1,189	1,720	419
5,105 954 1,825 445				
1,776 334 840 191				

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Instance	B001 / Best Impr.		B001 / First Impr.	
	Time	Iter.	Time	Iter.
9-4-8	6,700	722	5,150	697
40 cores	10,500	1,136	9,710	1,312
	12,320	1,342	1,630	261
	8,250	891	7,580	923
	16,480	1,805	2,930	428
	11,080	1,193	5,100	693
	10,400	1,124	7,660	1,004
	12,670	1,385	2,810	420
	7,630	817	6,440	903
	20,590	2,250	3,990	558
	13,150	1,401	4,270	597
	11,360	1,227	5,410	729
	3,090	327	7,310	996
	7,210	773	3,700	534
	3,390	351	15,430	2,037
	19,630	2,136	1,280	223
	19,290	2,105	21,620	2,817
	8,090	874	2,470	381
	18,030	1,964	15,710	2,076
	15,600	1,712	2,130	314
	19,950	2,181	7,210	987
	14,200	1,538	7,360	985
	23,010	2,502	10,660	1,403
	19,090	2,043	3,250	453
	16,470	1,781	4,260	619
	9,870	1,075	10,550	1,403
	6,620	713	3,680	528
	11,440	1,242	4,330	598
	6,700	725	6,000	826
	8,410	917	3,540	488
		12,374	1,342	6,439
	5,400	591	4,607	591

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Instance	B001 / Best Impr.		B001 / First Impr.		
	Time	Iter.	Time	Iter.	
11-7-5	8,650	565	1,340	179	
40 cores	1,910	129	2,600	302	
	6,440	447	2,490	280	
	2,340	160	2,510	297	
	2,370	160	3,460	350	
	4,170	280	1,770	235	
	6,770	469	3,720	402	
	7,720	531	3,730	402	
	4,270	283	2,520	325	
	6,490	440	1,860	228	
	2,920	194	1,300	202	
	6,510	446	2,380	286	
	6,510	446	1,390	216	
	4,540	301	1,860	245	
	6,320	433	3,630	387	
	6,260	429	2,410	278	
	5,170	339	1,950	265	
	6,370	438	1,780	233	
	6,580	427	1,660	255	
	5,290	361	2,260	275	
	6,480	446	2,690	323	
	4,520	315	2,300	276	
	4,670	317	2,280	276	
	3,570	241	1,750	217	
	3,010	193	1,800	245	
	6,670	457	2,280	281	
	4,840	327	2,270	281	
	4,080	272	1,500	196	
	5,330	348	1,600	265	
	4,990	338	1,530	197	
		5,192	351	2,221	273
		1,671	114	692	58

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Instance				100% / -- >		100% / # -- >	
Cores				Time	Iter.	Time	Iter.
5	3	7	40	1,080	1,083	520	506
Caption sender solver receiver solver receiver solver not tacking into account the received information				1,600	1,562	860	845
				740	723	580	575
				860	856	820	763
				520	609	2,130	2,139
				2,340	2,352	1,270	1,151
				1,720	1,650	1,030	979
				870	834	820	791
				1,100	1,068	520	454
				1,280	1,317	730	682
				100	116	1,220	1,234
				90	116	1,790	1,649
				1,730	1,670	540	517
				740	680	1,160	1,056
				1,380	1,291	860	761
				1,390	1,271	1,230	1,199
				2,670	2,488	1,790	1,727
				1,160	1,163	1,990	1,976
				1,410	1,381	1,880	1,793
				1,730	1,657	810	780
				1,860	1,727	1,820	1,584
				2,000	1,946	1,290	1,231
				590	601	1,180	1,080
				1,980	1,828	490	458
				770	776	1,370	1,278
				590	604	890	858
				1,590	1,493	1,080	1,095
				320	289	690	678
				1,050	961	480	464
				580	568	1,740	1,700
				1,195	1,156	1,119	1,067
				646	608	499	484
				53		80	

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Instance				100% / -- >		100% / # -- >	
Cores				Time	Iter.	Time	Iter.
8	4	7	40	1,250	287	1,500	358
Caption sender solver receiver solver receiver solver not tacking into account the received information				1,390	327	1,450	362
				1,320	321	1,990	455
				2,220	522	1,010	253
				850	213	2,130	466
				2,200	499	1,010	247
				1,040	271	820	178
				2,860	667	1,040	258
				2,710	630	1,370	309
				320	97	2,250	532
				410	102	1,930	431
				1,140	283	950	209
				870	215	1,580	356
				960	254	1,210	277
				710	184	2,620	620
				2,150	468	1,470	339
				800	207	1,160	304
				2,720	642	1,720	441
				490	152	2,470	587
				460	134	1,770	393
				1,340	335	970	234
				1,220	292	490	148
				2,040	496	740	197
				680	175	1,050	256
				1,590	382	2,210	502
				1,790	435	2,440	562
				1,030	257	930	220
				660	160	1,370	336
				1,040	283	920	221
				820	208	1,420	349
				1,303	317	1,466	347
				724	161	572	128
				77		73	

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Instance				100% / -- >		100% / # -- >	
Cores				Time	Iter.	Time	Iter.
9	4	8	40	2,050	292	6,020	809
Caption sender solver receiver solver receiver solver not tacking into account the received information				4,200	594	4,010	573
				1,880	281	4,770	641
				3,530	516	5,560	755
				1,000	175	5,250	686
				5,960	793	6,180	832
				3,730	532	15,050	2,001
				2,610	362	5,660	752
				3,990	529	8,910	1,150
				4,760	633	8,610	1,098
				3,460	462	1,620	256
				9,290	1,187	4,480	608
				2,820	387	5,300	709
				10,050	1,357	1,030	166
				11,170	1,465	2,690	393
				4,200	565	5,970	803
				2,340	324	3,100	418
				4,140	561	10,100	1,311
				4,920	669	3,700	507
				2,810	412	800	147
				7,010	957	7,250	952
				10,160	1,313	3,790	507
				3,380	465	6,020	765
				1,960	315	4,230	583
				4,750	667	6,370	873
				2,760	365	2,360	330
				2,270	349	4,890	684
				6,480	856	3,050	403
				2,220	331	11,060	1,395
				1,510	202	7,560	975
				4,380	597	5,513	736
				2,720	347	3,066	389

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Instance				100% / -- >		100% / # -- >	
Cores				Time	Iter.	Time	Iter.
11	7	5	40	1,330	180	1,790	216
Caption sender solver receiver solver receiver solver not tacking into account the received information				2,240	223	1,530	207
				1,590	215	1,200	177
				2,090	216	1,580	217
				1,790	215	1,340	150
				1,590	216	1,530	166
				1,710	187	1,080	146
				1,010	141	2,570	286
				1,790	189	1,580	205
				2,370	221	1,530	196
				1,990	220	1,300	198
				1,990	220	1,540	203
				1,320	180	1,640	170
				1,890	249	1,330	194
				1,130	143	2,140	251
				1,250	150	1,720	189
				1,390	210	1,190	160
				1,210	159	1,910	203
				1,240	149	2,130	221
				1,830	204	1,900	243
				1,610	227	1,790	223
				1,710	226	1,430	173
				2,420	272	1,360	188
				1,820	240	1,360	185
				1,830	240	1,990	219
				2,220	270	1,400	208
				2,280	266	1,520	195
				1,680	192	2,270	253
				1,810	233	1,770	212
				2,730	352	1,340	191
				1,762	214	1,625	202
				420	45	348	31

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Instance				Cores	50% / -- >		50% / # -- >				
					Time	Iter.	Time	Iter.			
5	3	7	40	870	848	690	735				
Caption sender solver receiver solver receiver solver not tacking into account the received information				1,060	1,087	1,020	965				
				580	580	840	844				
				870	841	710	715				
				480	484	570	557				
				1,000	953	1,340	1,248				
				2,460	2,458	310	282				
				610	579	980	989				
				1,610	1,559	210	209				
				1,710	1,744	1,150	1,112				
				1,280	1,300	900	921				
				1,580	1,527	380	387				
				1,100	1,090	1,620	1,549				
				1,260	1,195	1,600	1,613				
				780	746	1,000	1,025				
				340	342	1,120	1,078				
				1,210	1,156	2,360	2,364				
				730	741	1,020	961				
				1,140	1,042	960	961				
				720	737	1,340	1,233				
				1,240	1,189	740	738				
				620	541	1,160	1,171				
				1,300	1,205	280	277				
				750	702	1,810	1,742				
				830	826	2,000	2,037				
				1,400	1,302	650	618				
				250	227	2,020	2,050				
				1,470	1,419	680	676				
				1,000	1,036	1,040	1,002				
				1,140	1,127	880	870				
								1,046	1,019	1,046	1,031
								459	456	533	530
								43		33	

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Instance				Cores	50% / -- >		50% / # -- >	
					Time	Iter.	Time	Iter.
8	4	7	40	890	229	2,060	472	
<div>Caption</div> <div>sender solver</div> <div>receiver solver</div> <div>receiver solver not tacking into account the received information</div>				1,900	416	2,210	520	
				1,930	449	770	201	
				740	206	1,070	276	
				760	206	1,800	418	
				640	151	860	214	
				960	239	840	224	
				870	229	4,120	936	
				1,680	415	1,550	365	
				1,040	251	1,230	308	
				180	61	300	112	
				2,040	485	1,380	357	
				1,860	417	730	203	
				370	127	990	249	
				1,040	250	1,230	318	
				2,520	556	1,230	318	
				1,050	279	2,230	531	
				1,510	375	1,770	424	
				1,600	378	830	223	
				1,290	343	2,450	581	
				1,810	425	820	206	
				1,380	382	2,360	516	
				2,160	507	930	248	
				2,060	449	700	187	
				1,790	417	1,080	281	
				1,960	421	1,160	300	
				1,890	468	1,350	336	
				1,140	289	1,330	321	
				1,720	400	1,360	334	
				1,210	297	2,420	596	
				1,400	337	1,439	353	
				579	122	768	167	
				43		27		

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Instance				Cores	50% / - - >		50% / # - - >	
					Time	Iter.	Time	Iter.
9	4	8	40	4,590	640	8,980	1,143	
<div>Caption</div> <div>sender solver</div> <div>receiver solver</div> <div>receiver solver not tacking into account the received information</div>				6,570	888	14,360	1,909	
				5,530	774	7,770	999	
				5,180	714	3,800	529	
				3,360	477	1,950	282	
				2,750	401	5,870	759	
				4,050	565	5,570	755	
				8,980	1,195	2,200	286	
				8,920	1,161	7,180	970	
				2,180	299	5,420	745	
				6,570	925	1,580	255	
				8,040	1,083	8,860	1,185	
				2,970	415	6,110	846	
				3,380	469	5,590	787	
				4,390	550	3,300	442	
				3,130	421	4,090	555	
				2,840	405	3,930	572	
				3,550	500	5,550	757	
				2,450	369	4,540	631	
				6,140	847	9,990	1,301	
				1,660	240	11,020	1,427	
				3,840	538	8,060	1,067	
				3,350	478	4,590	647	
				5,430	733	3,100	438	
				3,090	456	2,050	316	
				2,760	408	3,200	488	
				5,830	764	4,210	593	
				7,520	1,004	6,390	862	
				8,510	1,103	3,040	424	
				1,920	290	10,290	1,324	
				4,649	637	5,753	776	
				2,173	279	3,067	389	

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Instance				50% / -- >		50% / # -- >	
Cores				Time	Iter.	Time	Iter.
11	7	5	40	1,010	154	1,390	151
Caption sender solver receiver solver receiver solver not tacking into account the received information				1,960	220	1,810	238
				1,540	220	2,030	249
				2,640	276	2,260	253
				1,970	230	2,030	276
				1,640	209	2,080	248
				2,160	195	1,540	213
				1,640	183	1,510	181
				1,640	219	2,280	258
				2,290	257	1,390	176
				1,800	228	1,300	217
				1,800	218	1,640	179
				2,670	298	1,340	199
				1,640	206	1,400	200
				1,620	234	2,170	210
				2,160	232	1,940	259
				2,130	279	2,040	187
				1,900	237	1,900	206
				1,630	216	1,600	201
				1,840	197	1,280	153
				1,540	206	2,550	275
				2,290	248	2,500	301
				1,200	198	1,830	230
				1,410	187	1,360	186
				1,910	254	1,570	224
				1,680	211	2,660	288
				1,570	193	1,920	255
				1,050	145	1,890	196
				1,890	223	1,430	202
				2,250	234	2,020	252
				1,816	220	1,822	222
				401	33	395	39

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Instance				Cores	25% / - - >		25% / # - >				
					Time	Iter.	Time	Iter.			
5	3	7	40	1,820	1,745	510	518				
Caption sender solver receiver solver receiver solver not tacking into account the received information				980	905	1,330	1,266				
				610	547	990	994				
				2,030	1,884	890	844				
				410	419	1,350	1,264				
				330	321	380	363				
				1,710	1,675	1,430	1,305				
				390	382	820	807				
				1,560	1,451	1,090	1,079				
				790	774	2,180	2,072				
				520	450	730	727				
				470	481	1,100	1,163				
				1,350	1,370	810	849				
				550	563	830	819				
				820	776	2,040	2,005				
				580	587	910	871				
				280	312	990	926				
				450	444	1,440	1,388				
				1,310	1,282	690	643				
				570	542	2,740	2,622				
				1,210	1,251	960	904				
				1,370	1,330	450	441				
				1,200	1,187	680	708				
				400	393	150	169				
				260	272	2,820	2,805				
				870	850	1,550	1,527				
				1,610	1,616	610	682				
				470	483	1,380	1,372				
				1,260	1,195	2,380	2,385				
				930	932	1,600	1,594				
								904	881	1,194	1,170
								514	492	675	655
								40		33	

Golfers

Instance				Cores	25% / - - >		25% / # - >	
					Time	Iter.	Time	Iter.
8	4	7	40	800	209	1,490	337	
Caption sender solver receiver solver receiver solver not tacking into account the received information				1,570	396	790	194	
				890	221	960	247	
				1,130	308	1,360	324	
				1,470	359	1,820	419	
				1,590	380	1,410	349	
				2,160	496	1,510	356	
				2,080	508	2,640	621	
				880	222	1,660	368	
				1,770	397	1,410	346	
				1,070	275	1,050	278	
				1,230	323	1,120	292	
				1,220	323	1,830	427	
				1,610	384	1,810	419	
				1,090	270	1,620	388	
				1,910	430	1,220	323	
				780	215	1,680	436	
				870	223	1,410	331	
				1,090	282	1,270	316	
				1,580	396	1,340	324	
				1,490	368	1,810	427	
				2,160	500	1,330	310	
				1,500	329	1,500	356	
				1,590	384	1,660	395	
				1,580	384	760	186	
				720	188	1,070	247	
				1,830	435	1,730	417	
				1,880	433	1,560	385	
				1,600	374	710	191	
				820	203	2,450	565	
				1,399	341	1,466	352	
				435	94	434	96	
				30		27		

Golfers

Instance				25% / -- >		25% / # -- >	
Cores				Time	Iter.	Time	Iter.
9	4	8	40	3,280	472	7,040	923
Caption sender solver receiver solver receiver solver not tacking into account the received information				6,380	876	7,440	994
				6,570	882	1,920	315
				3,150	405	2,180	348
				1,990	293	3,940	510
				4,010	545	5,510	754
				5,130	658	5,130	689
				5,460	750	3,210	465
				6,360	856	4,050	565
				4,030	564	3,110	434
				8,970	1,235	5,160	714
				1,660	270	2,580	384
				1,710	252	2,360	359
				3,530	503	2,450	372
				4,130	588	4,370	602
				3,950	592	3,660	530
				1,630	272	7,130	991
				5,660	775	2,790	403
				7,110	914	9,110	1,178
				5,500	709	2,790	393
				3,870	541	2,550	390
				2,700	366	4,560	591
				3,290	450	6,390	873
				6,430	851	2,340	345
				7,860	1,083	5,560	766
				3,330	486	4,750	651
				2,840	412	6,480	843
				3,220	459	7,160	950
				3,700	512	7,700	1,021
				2,520	389	2,630	394
				4,332	599	4,535	625
				1,920	248	2,019	251

Golfers

Instance				25% / -- >		25% / # -- >	
Cores				Time	Iter.	Time	Iter.
11	7	5	40	2,330	268	2,180	250
Caption sender solver receiver solver receiver solver not tacking into account the received information				2,590	300	2,150	258
				2,600	300	1,760	237
				2,600	300	1,760	260
				1,420	211	2,510	277
				2,680	280	2,470	271
				1,830	221	2,420	286
				2,190	261	2,400	286
				2,220	268	1,840	220
				770	139	2,120	221
				1,280	170	1,710	218
				2,020	210	2,040	244
				1,520	207	2,050	244
				2,030	263	2,150	258
				2,550	269	1,760	241
				1,140	180	1,390	197
				2,530	280	1,540	196
				2,520	319	1,730	220
				1,530	201	2,200	246
				2,580	286	1,930	261
				1,560	161	1,090	179
				1,510	215	1,800	195
				1,980	270	1,200	179
				2,130	271	1,510	209
				1,640	211	1,810	229
				2,150	265	1,680	233
				1,260	150	1,830	250
				1,470	204	1,500	218
				2,730	320	2,070	225
				2,440	274	2,080	237
				1,993	242	1,630	224
				546	51	358	29

Costas Array

Instance	Cores	AS		St_a / 100% 1-1		St_a / 100% 1-n	
		Time	Iter.	Time	Iter.	Time	Iter.
17	40	1,810	19,861	860	9,481	1,000	13,702
		250	4,672	810	7,954	170	1,648
		120	1,234	830	7,870	350	4,172
		440	5,205	240	2,947	350	3,617
		1,570	16,639	180	2,252	210	2,593
		340	4,840	300	3,106	200	1,976
		450	4,831	280	3,978	160	1,617
		120	2,306	190	2,392	370	4,336
		1,020	10,638	200	1,868	1,040	16,596
		200	2,539	740	6,670	150	1,891
		1,160	14,293	380	6,395	230	2,566
		910	16,289	200	2,320	800	9,874
		550	6,652	700	9,247	920	9,599
		700	12,914	170	1,700	130	1,486
		280	2,884	1,030	10,403	780	8,361
		1,160	11,834	760	13,045	800	10,440
		850	14,665	760	7,660	340	4,647
		390	4,630	500	6,751	1,040	13,030
		890	9,382	160	1,360	380	4,243
		560	9,262	140	1,528	360	3,763
		1,580	16,999	120	1,198	500	6,985
		1,620	29,008	380	4,804	110	1,312
		310	5,462	220	1,981	100	1,066
		280	2,974	180	2,833	150	2,560
		180	3,367	190	1,928	560	5,119
		380	3,631	980	8,974	590	9,214
		270	3,064	1,130	10,750	650	7,919
		1,000	10,571	260	2,572	160	1,922
		1,280	14,581	380	3,324	260	2,638
		230	4,099	120	1,465	80	1,035
		100	1,752	40	689	540	11,224
		560	6,574	790	13,384	760	13,072
		1,150	12,022	80	844	370	5,209
		720	10,345	610	5,650	110	2,298
		1,210	13,006	470	4,748	120	1,182
		280	3,023	100	1,036	420	4,527
		110	1,195	50	562	100	1,069
		990	10,448	480	7,780	80	1,054
		910	9,787	510	4,883	690	7,756
		1,020	18,244	630	11,797	80	871
		920	10,564	610	6,125	1,100	18,772
		730	10,939	260	2,734	80	872
		780	12,232	270	3,322	690	7,912
		1,430	24,616	240	2,500	910	14,065
		900	15,970	210	2,041	420	7,740
		727	9,557	416	4,819	431	5,723
		469	6,439	296	3,589	317	4,744

Costas Array

Instance	Cores	St_a / 50% 1-1		St_a / 50% 1-n	
		Time	Iter.	Time	Iter.
17	40	330	3,964	760	12,946
		550	10,750	140	1,963
		840	15,835	120	1,384
		280	3,019	780	9,553
		960	11,142	720	12,013
		1,030	15,841	20	172
		340	5,251	570	7,855
		330	4,153	110	1,259
		260	3,313	290	3,496
		290	4,834	1,270	22,888
		10	119	1,020	20,027
		170	3,730	1,430	16,756
		370	8,019	460	6,115
		1,640	23,068	290	5,632
		1,060	20,573	40	571
		360	5,329	1,700	23,350
		410	5,146	430	8,873
		580	7,987	420	5,695
		810	9,737	990	11,596
		90	1,112	250	3,478
		220	2,644	210	2,500
		530	10,198	300	3,691
		1,310	13,846	490	7,138
		70	1,348	760	7,840
		570	6,703	440	7,016
		550	6,703	1,540	30,901
		20	427	1,640	19,264
		300	3,779	1,380	27,048
		180	2,364	180	3,737
		750	8,929	720	8,287
		630	9,292	1,430	24,226
		50	681	660	6,959
		600	7,396	160	2,191
		1,330	15,478	470	9,328
		780	14,206	40	402
		790	12,373	350	4,260
		100	1,171	490	10,333
		340	4,189	960	11,074
		260	3,493	60	616
		620	8,236	30	328
		510	5,246	380	5,173
		660	6,893	220	2,638
		20	241	480	6,091
		1,330	21,556	960	12,664
		1,920	39,955	320	5,176
		559	8,228	588	8,767
		443	7,556	477	7,774

Costas Array

Instance	Cores	St_b / 100% 1-1		St_b / 100% 1-n	
		Time	Iter.	Time	Iter.
17	40	10	322	2,420	32,411
		320	5,560	1,690	17,034
		790	9,226	650	6,397
		40	541	1,200	22,472
		1,280	20,420	640	6,389
		1,240	12,358	610	5,670
		850	10,123	920	9,427
		280	4,840	250	3,058
		880	10,507	960	16,715
		430	5,125	940	9,898
		60	625	100	1,243
		340	6,875	870	17,608
		60	583	180	1,885
		980	11,539	790	7,738
		90	949	470	5,982
		230	2,281	130	1,366
		830	12,990	120	1,780
		550	6,721	170	1,932
		330	6,537	40	432
		320	3,317	320	3,547
		760	11,194	200	3,073
		420	4,405	80	1,360
		160	1,955	20	130
		90	1,105	430	7,915
		200	3,649	30	373
		300	3,982	210	2,869
		160	1,748	50	544
		790	8,998	470	5,890
		280	3,715	370	3,932
		120	1,318	170	2,164
		1,370	14,143	90	1,546
		390	4,216	1,160	14,086
		630	7,579	120	1,447
		170	1,990	120	1,186
		90	1,012	300	5,012
		1,590	16,567	300	3,133
		320	3,976	20	280
		1,310	17,230	470	6,574
		120	1,567	260	2,423
		190	3,301	90	1,048
		210	2,143	360	3,436
		470	9,954	600	7,060
		360	5,307	290	3,217
		160	1,691	380	5,341
		1,020	17,737	280	2,581
		480	6,265	452	5,769
		417	5,321	477	6,578

Costas Array

Instance	Cores	St_b / 50% 1-1		St_b / 50% 1-n	
		Time	Iter.	Time	Iter.
17	40	990	13,492	220	4,852
		130	1,654	2,190	27,028
		960	19,321	810	13,510
		570	12,136	80	814
		230	4,858	680	12,859
		740	8,590	630	6,412
		410	5,498	120	1,390
		320	4,429	440	4,309
		300	4,039	490	5,614
		320	4,123	450	9,082
		1,180	15,841	110	1,252
		420	7,598	2,330	42,391
		50	616	140	1,780
		1,620	18,894	120	1,557
		1,890	26,893	500	5,965
		130	1,924	1,310	27,804
		1,280	13,420	500	7,017
		160	1,861	430	5,332
		10	211	290	3,736
		110	1,369	80	859
		120	1,573	160	3,142
		100	872	40	507
		60	691	100	1,219
		1,050	14,983	580	6,859
		1,670	34,654	100	1,486
		490	6,250	170	2,440
		1,560	26,260	200	2,719
		10	187	40	382
		130	1,246	430	6,370
		300	4,066	630	7,480
		290	3,562	360	4,621
		1,030	13,999	1,500	17,857
		500	10,426	1,240	16,702
		300	3,451	660	9,184
		110	1,441	160	1,642
		970	20,263	200	2,668
		40	988	170	2,218
		320	6,691	260	2,918
		480	10,150	620	13,171
		640	6,592	1,030	19,681
		20	451	90	1,036
		90	1,609	1,100	13,264
		480	8,611	440	4,471
		270	3,601	280	3,415
		940	15,943	210	2,746
		529	8,118	504	7,372
		506	8,192	524	8,544

Costas Array

Instance	Cores	St_c / 100% 1-1		St_c / 100% 1-n	
		Time	Iter.	Time	Iter.
17	40	40	340	960	18,532
		200	1,936	980	10,132
		180	1,966	290	3,196
		1,170	11,605	540	5,428
		520	10,654	1,300	26,122
		390	5,275	180	2,005
		380	4,012	140	2,065
		660	6,797	170	1,849
		340	4,321	180	2,233
		240	2,527	400	4,198
		320	3,799	680	7,546
		310	3,484	780	7,377
		400	4,138	890	11,849
		1,100	21,040	870	9,637
		1,110	19,507	110	1,406
		240	3,493	120	1,315
		1,250	25,261	250	2,574
		320	6,529	660	9,044
		360	4,054	200	2,683
		340	3,547	630	12,604
		1,070	10,996	630	6,409
		320	3,574	570	5,563
		340	7,062	800	7,642
		360	4,459	500	10,312
		1,100	19,301	500	8,659
		160	1,672	590	6,070
		1,410	16,363	130	1,423
		150	1,615	1,820	30,643
		300	3,160	830	16,030
		1,310	15,066	720	8,838
		1,360	25,852	740	8,437
		590	12,271	100	1,027
		230	2,788	600	7,387
		10	313	580	6,493
		390	8,149	170	1,957
		390	6,727	150	1,771
		370	7,654	340	4,627
		20	250	570	6,751
		120	1,518	500	5,932
		100	1,201	20	265
		170	2,237	280	3,910
		230	2,767	250	2,785
		490	6,028	190	2,368
		480	8,626	180	3,091
		920	9,349	450	5,035
		495	7,184	501	6,783
		400	6,632	359	6,218

Costas Array

Instance	Cores	St_c / 50% 1-1		St_c / 50% 1-n	
		Time	Iter.	Time	Iter.
17	40	1,990	24,955	70	793
		40	551	360	5,321
		720	15,226	220	2,374
		730	7,378	210	2,416
		1,200	14,257	540	7,306
		720	9,265	40	583
		870	10,972	410	4,288
		270	5,617	870	12,076
		190	2,620	580	11,218
		1,010	19,234	720	8,242
		1,280	15,586	1,600	30,455
		330	4,636	1,600	15,751
		870	11,847	180	2,164
		300	4,129	2,080	25,051
		80	1,066	1,350	18,460
		410	5,167	1,380	13,921
		1,570	29,595	440	4,351
		860	9,987	380	4,663
		80	1,765	370	5,008
		390	3,992	230	4,882
		310	3,754	320	3,643
		960	10,719	130	2,618
		970	11,053	400	4,690
		910	17,042	230	2,917
		1,150	15,991	400	4,807
		320	3,959	110	1,393
		120	2,460	260	3,580
		520	8,194	1,280	25,900
		520	5,842	400	5,084
		590	12,658	300	4,077
		220	3,193	290	2,944
		100	1,184	200	2,211
		10	241	210	2,983
		700	8,263	220	2,239
		390	5,312	310	3,288
		720	11,386	770	7,825
		160	2,080	1,790	22,204
		640	12,271	180	1,978
		870	10,204	1,710	36,013
		530	5,959	470	4,819
		390	8,155	660	12,346
		160	1,985	910	10,369
		810	10,024	920	11,116
		180	3,850	440	4,474
		280	3,375	420	5,179
		588	8,378	599	8,178
		432	6,437	525	8,289