

**ONLINE SUPPLEMENT FOR:  
A COMPUTATIONAL COMPARISON OF SYMMETRY HANDLING  
METHODS FOR MIXED INTEGER PROGRAMS**

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This document provides supplementary material for the article “A Computational Comparison of Symmetry Handling Methods for Mixed Integer Programs”. It gives detailed results on the computations therein. We refer to this article for details.

We recall that we use the testsets listed in Table 1. Table 2 gives an overview of the settings used. We use SCIP 3.2.0 and CPLEX 12.6.1 as LP-solver.

The experiments were run on a Linux cluster with 3.2 GHz Intel i3 processors, 8 GB of main memory, and 4 MB of cache, running a single process at a time. The exception is the analysis of the symmetry groups of the MIPLIB 2010 instances (Tables 4, 5, and 6), which was performed using an Intel i7 CPU with 3.40 GHz and 32 GB.

The different columns of the tables are explained in Table 3. At the bottom of each table, we give the Arithmetic Means (AM) and Geometric Means (GM) for most columns. Moreover, we present the Shifted Geometric Mean (SGM) for the running time and number of nodes. Recall that the shifted geometric mean of values  $t_1, \dots, t_n$  is defined as

$$\left( \prod (t_i + s) \right)^{1/n} - s$$

with shift  $s$ . We use a shift  $s = 10$  for time and  $s = 100$  for nodes in order to decrease the strong influence of the very easy instances in the mean values.

#### **Remarks.**

- The computation of some instances was prematurely interrupted, because no memory was left. In some cases, this also avoids the output of statistics. In these cases, the corresponding instances are marked with “–” in each statistical column. These instances are accounted for with a node number of 0 and time of one hour.

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*Date:* November 2017.

TABLE 1. Testsets for experiments

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Shortcut	explanation
Margot1	16 instances used by François Margot; we complemented the STS instances as described there.
Margot2	79 additional highly symmetric instances by François Margot, available on his web page
M2003-sym	all 18 instances from MIPLIB 2003 for which we found a non-trivial symmetry group after presolving ( <a href="http://miplib.zib.de/miplib2003">http://miplib.zib.de/miplib2003</a> )
M2010-sym	all 154 instances from the MIPLIB 2010 for which we found a non-trivial symmetry group after presolving ( <a href="http://miplib.zib.de">http://miplib.zib.de</a> )
M2010-bench	all 87 instances from the MIPLIB 2010 benchmark suite

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TABLE 2. Settings for experiments (all references are w.r.t. the original paper)

Setting	explanation
ISP	isomorphism pruning (ISP) with default SCIP branching rule
ISP-NST	ISP with “no subtree”: symmetry handling is turned off in the subtree of a node for which the stabilizer of the fixed variables is empty
ISP-first	isomorphism pruning with first index branching
ISP-NST-first	ISP-NST with first index branching
OB-orbit0	orbital branching with choosing the largest orbit (default)
OB-orbit1	orbital branching with choosing the orbit that locally tends to break the highest amount of symmetry
OB-orbit2	orbital branching with choosing the orbit that locally tends to preserve the highest amount of symmetry
OB-orbit3	orbital branching with choosing the orbit that maximizes the product of the size of the orbit with the maximal size of a child orbit
OB-min4	OB, only executed for orbits of size at least four
OB-NST	OB, turning off symmetry handling in the subtree of a node for which the stabilizer of the fixed variables is empty
OB-first	OB-NST with first index branching rule as a fallback rule
OF	orbital fixing as described in Section 2.1
OF-NST	OF with “no subtree”: symmetry handling is turned off in the subtree of a node for which the stabilizer of the fixed variables is empty
OF-first	OF with first index branching
OF-NST-first	OF-NST with first index branching
OP	orbital probing (OP)
OP-nod	orbit probing without deductions outside orbits
OP-ISP-NST	OP with ISP-NST
OP-OB-NST	OP with OB-NST
OP-OF-NST	OP with OF-NST
S	add inequalities (3), (4), (5) or orbitopes if applicable and apply probing
S-fund	variant S with fundamental domain inequalities (6)
S-fundnolp	variant S with (6) handled in propagation, but not added to the LP
S-nolp	as variant S, but do not add inequalities to LP – instead propagate them
S-prob	variant S with probing
S-orbitmin	add inequalities (3) for all orbits using the minimal element
lpxfix	default fixing as described in Section 2.7
lpxfix-OP	lpxfix together with orbit probing variant OP
lpxfix-fundnolp	default fixing with the addition of fundamental domains, which are propagated only
lpxfix-orbitmin	lpxfix together with variant S-orbitmin

- Since **bliss** does not allow the specification of a time limit, it might happen that the (symmetry) computation exceeds one hour.
- Table 4 is repeated from the original paper.

TABLE 3. Description of columns in results

Shortcut	explanation
Name	instance name
#Nodes	number of nodes in main SCIP
Time	total time in seconds
#Calls	number of calls to particular method
#Red	number of domain reductions performed by method
#Cutoffs	number of node cutoffs performed by method
X-time	time used for method X in seconds
#Children	number of children generated by branching method
#Fixed0	number of variables fixed to 0 by method
#Fixed1	number of variables fixed to 1 by method
#Fixed	number of variables fixed by method
#full	number of full symmetric groups handled by method
#fund	number of fundamental domains handled by method
#orb	number of orbitopes detected by method
#cyc	number of cyclic groups/orbits handled by method
#tot	total number of inequalities added by method
AM	Arithmetic Mean
GM	Geometric Mean
SGM	Shifted Geometric Mean

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TABLE 4. List of (possibly) symmetric MIPLIB 2010 instances before presolving. Additionally the  $\log_{10}$  of the order of their symmetry groups and the number of variables involved in a nontrivial symmetry is shown.

name	$\log_{10}  G $	#vars	factors
30_70_45_095_100	0.4	0.0	$S_2$
acc-tight4	4.7	97.8	1 unknown
ash608gpia-3col	0.8	100.0	$M(S_3, 3651)$
atlanta-ip	4450.0	40.5	$(S_2)^{5898}, (S_3)^{1441}, (S_4)^{284}, (S_5)^{175}, (S_6)^{165}, (S_7)^{88}$
bab3	70.1	9.5	$(S_2)^{10}, (S_5)^{16}, (S_6)^4, (S_{10})^2, (M(S_2, 12328))^3, 4 \text{ unknown}$
bab5	1.3	17.9	$(M(S_2, 968))^4$
beasleyC3	0.7	0.6	$(M(S_2, 8))^2$
biella1	217.3	11.7	$(S_2)^{261}, (S_3)^{30}, (S_4)^{20}, (S_5)^{13}, (S_6)^2, (S_7)^5, S_8, (S_9)^2, (S_{10})^2, S_{11}$
blp-ar98	0.7	0.0	$(S_2)^2$
blp-ic97	0.7	0.0	$(S_2)^2$
bnatt350	503.7	43.3	$(S_2)^{42}, (S_3)^{81}, (S_4)^{88}, (S_5)^{76}, (S_6)^{39}, (S_7)^{10}$
bnatt400	588.0	43.6	$(S_2)^{50}, (S_3)^{83}, (S_4)^{98}, (S_5)^{91}, (S_6)^{42}, (S_7)^{16}, S_8$
circ10-3	1.4	100.0	1 unknown
co-100	736.0	6.3	$(S_2)^{837}, (S_3)^{399}, (S_4)^3, (S_5)^3, S_6, (S_7)^2, S_{12}, S_{17}, S_{19}, S_{21}, S_{28}, S_{29}, S_{30}$
core2536-691	3.7	0.1	$(S_2)^5, S_5$
core4872-1529	68.9	2.0	$(S_2)^{211}, (S_3)^2, S_6, M(S_2, 8), M(S_2, 14), M(S_2, 28)$
cov1075	6.6	100.0	1 unknown
datt256	3.7	0.0	$(S_2)^{12}$
dc1c	356.6	19.8	$(S_2)^{819}, (S_3)^{64}, (S_4)^{24}, (S_5)^2, (S_6)^8$
dc1l	794.9	11.4	$(S_2)^{1640}, (S_3)^{174}, (S_4)^{69}, (S_5)^{18}, (S_6)^9, (S_7)^2$
dg012142	89.2	3.1	$S_{64}$
dolom1	468.2	19.4	$(S_2)^{907}, (S_3)^{71}, (S_4)^{25}, (S_5)^5, (S_7)^2, S_{15}, S_{33}, S_{34}$
ds-big	468.1	1.8	$(S_2)^{1516}, (S_3)^{15}$
eilB101	0.8	0.1	$S_3$
enlight13	0.4	92.3	$M(S_2, 312)$
enlight14	0.4	92.9	$M(S_2, 364)$
enlight15	0.4	93.3	$M(S_2, 420)$
enlight16	0.4	93.8	$M(S_2, 480)$
enlight9	0.4	88.9	$M(S_2, 144)$
ex1010-pi	1482.1	21.7	$(S_2)^{1324}, (S_3)^{366}, (S_4)^{148}, (S_5)^{70}, (S_6)^{32}, (S_7)^{27}, (S_8)^{20}, (S_9)^{13}, (S_{10})^3, (S_{11})^5, S_{12}, (S_{16})^2$
ex10	1.0	100.0	1 unknown
ex9	30.2	100.0	1 unknown
glass4	0.4	0.6	$S_2$
gmu-35-40	801.6	39.3	$(S_2)^{18}, (S_3)^{16}, (S_4)^3, (S_5)^3, S_{363}$
gmu-35-50	1837.7	44.5	$(S_2)^{18}, (S_3)^{16}, (S_4)^3, (S_5)^3, S_{742}$
gmut-75-50	—	—	—
gmut-77-40	40,582.7	47.2	$(S_2)^{12}, (S_3)^7, (S_4)^{20}, (S_5)^{31}, S_{11198}$
go19	3.5	99.8	$S_4, 1 \text{ unknown}$
iis-bupa-cov	2.2	2.0	$S_3, S_4$
iis-pima-cov	35.5	4.2	$S_{32}$
lectsched-1	624.4	12.4	$(S_2)^3, (S_3)^3, S_{193}, (M(S_2, 4))^{797}, (M(S_3, 6))^{18}, (M(S_4, 8))^6$
lectsched-1-obj	624.4	12.4	$(S_2)^3, (S_3)^3, S_{193}, (M(S_2, 4))^{797}, (M(S_3, 6))^{18}, (M(S_4, 8))^6$

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name	$\log_{10}  G $	#vars	factors
lectsched-2	408.6	11.7	$(\mathcal{S}_2)^3, \mathcal{S}_{148}, (M(\mathcal{S}_2, 4))^{462}, (M(\mathcal{S}_3, 6))^6, (M(\mathcal{S}_4, 8))^4$
lectsched-3	543.9	10.9	$(\mathcal{S}_2)^3, (\mathcal{S}_3)^3, \mathcal{S}_{184}, (M(\mathcal{S}_2, 4))^{633}, (M(\mathcal{S}_3, 6))^{15}$
lectsched-4-obj	217.1	13.2	$\mathcal{S}_{93}, (M(\mathcal{S}_2, 4))^{230}, (M(\mathcal{S}_3, 6))^3, M(\mathcal{S}_4, 8)$
liu	0.4	0.2	$\mathcal{S}_2$
macrophage	61.2	25.0	$(\mathcal{S}_2)^{146}, (M(\mathcal{S}_2, 4))^{15}, (M(\mathcal{S}_2, 6))^9, (M(\mathcal{S}_2, 12))^2, M(\mathcal{S}_2, 14), M(\mathcal{S}_4, 24), M(\mathcal{S}_6, 48), M(\mathcal{S}_2 \times \mathcal{S}_2, 14), 2 \text{ unknown}$
map06	—	—	—
map10	—	—	—
map14	—	—	—
map18	—	—	—
map20	—	—	—
maxgasflow	5.5	1.8	$(M(\mathcal{S}_2, 6))^{11}, M(\mathcal{S}_2, 12), M(\mathcal{S}_2, 24), M(\mathcal{S}_3, 12), M(\mathcal{S}_3, 18)$
mcsched	4.6	5.2	$(M(\mathcal{S}_2, 6))^{15}$
methanosarcina	762.7	64.7	$(\mathcal{S}_2)^{2505}, M(\mathcal{S}_2 \wr \mathcal{S}_2, 28), 4 \text{ unknown}$
mkc	77.2	61.3	$(\mathcal{S}_2)^9, (\mathcal{S}_3)^4, (M(\mathcal{S}_2, 4))^{15}, (M(\mathcal{S}_2, 6))^3, (M(\mathcal{S}_2, 8))^2, M(\mathcal{S}_2, 10), (M(\mathcal{S}_2, 12))^2, M(\mathcal{S}_2, 24), M(\mathcal{S}_2, 28), (M(\mathcal{S}_3, 6))^6, M(\mathcal{S}_3, 9), (M(\mathcal{S}_3, 12))^2, M(\mathcal{S}_3, 18), (M(\mathcal{S}_3, 24))^2, M(\mathcal{S}_3, 42), (M(\mathcal{S}_4, 8))^4, M(\mathcal{S}_4, 48), (M(\mathcal{S}_5, 10))^2, M(\mathcal{S}_6, 60), M(\mathcal{S}_7, 14), M(\mathcal{S}_8, 16), 5 \text{ unknown}$
momentum3	36.7	0.9	$(M(\mathcal{S}_3, 6))^2, M(\mathcal{S}_5, 10), M(\mathcal{S}_6, 12), M(\mathcal{S}_7, 14), (M(\mathcal{S}_9, 18))^3, M(\mathcal{S}_{13}, 26)$
msc98-ip	2673.2	33.2	$(\mathcal{S}_2)^{609}, (\mathcal{S}_3)^{266}, (\mathcal{S}_4)^{219}, (\mathcal{S}_5)^{198}, (\mathcal{S}_6)^{210}, (\mathcal{S}_7)^{108}, (\mathcal{S}_8)^{112}, (\mathcal{S}_9)^2, (\mathcal{S}_{10})^6, (M(\mathcal{S}_2, 14))^2, M(\mathcal{S}_2, 24), M(\mathcal{S}_2, 26), M(\mathcal{S}_2, 34), M(\mathcal{S}_2, 38), \mathcal{S}_2 \wr \mathcal{S}_2$
mzzv11	46.7	3.0	$(\mathcal{S}_2)^{155}$
n3seq24	9.9	11.4	$M(\mathcal{S}_2, 48), (M(\mathcal{S}_2, 50))^4, (M(\mathcal{S}_2, 54))^2, (M(\mathcal{S}_2, 62))^4, M(\mathcal{S}_2, 72), (M(\mathcal{S}_2, 90))^4, (M(\mathcal{S}_2, 110))^2, M(\mathcal{S}_2, 142), (M(\mathcal{S}_2, 180))^2, M(\mathcal{S}_2, 296), (M(\mathcal{S}_2, 490))^2, M(\mathcal{S}_2, 798), M(\mathcal{S}_2, 1018), M(\mathcal{S}_2, 3878), M(\mathcal{S}_2, 4772), M(\mathcal{S}_4, 180)$
nag	0.4	0.1	$\mathcal{S}_2$
neos-1109824	1.7	100.0	1 unknown
neos-1171692	19.8	100.0	$M(\mathcal{S}_{21}, 1638)$
neos-1171737	32.5	100.0	$M(\mathcal{S}_{30}, 2340)$
neos-1224597	504.2	100.0	$(\mathcal{S}_5)^{17}, (\mathcal{S}_{10})^3, \mathcal{S}_{35}, 2 \text{ unknown}$
neos-1311124	78.9	100.0	$M(\mathcal{S}_{21}, 84), (M(\mathcal{S}_{21}, 168))^2, M(\mathcal{S}_{21}, 672)$
neos-1337307	3.8	87.5	$M(\mathcal{S}_7, 2485)$
neos-1396125	0.8	78.3	$M(\mathcal{S}_3, 909)$
neos13	0.4	0.1	$\mathcal{S}_2$
neos-1426635	26.3	100.0	$M(\mathcal{S}_{10}, 40), (M(\mathcal{S}_{10}, 80))^2, M(\mathcal{S}_{10}, 320)$
neos-1426662	53.4	100.0	$M(\mathcal{S}_{16}, 64), (M(\mathcal{S}_{16}, 128))^2, M(\mathcal{S}_{16}, 512)$
neos-1429212	—	—	—
neos-1436709	39.2	100.0	$M(\mathcal{S}_{13}, 52), (M(\mathcal{S}_{13}, 104))^2, M(\mathcal{S}_{13}, 416)$
neos-1440460	22.3	100.0	$M(\mathcal{S}_9, 36), (M(\mathcal{S}_9, 72))^2, M(\mathcal{S}_9, 288)$
neos-1442119	43.8	100.0	$M(\mathcal{S}_{14}, 56), (M(\mathcal{S}_{14}, 112))^2, M(\mathcal{S}_{14}, 448)$
neos-1442657	34.8	100.0	$M(\mathcal{S}_{12}, 48), (M(\mathcal{S}_{12}, 96))^2, M(\mathcal{S}_{12}, 384)$
neos-1601936	432.5	9.2	$\mathcal{S}_{72}, 1 \text{ unknown}$
neos-1605061	103.8	1.8	$\mathcal{S}_{72}$
neos-1605075	103.8	1.7	$\mathcal{S}_{72}$
neos-1620770	3.8	97.2	1 unknown
neos18	247.9	36.1	$(\mathcal{S}_2)^6, (\mathcal{S}_3)^2, (\mathcal{S}_4)^2, (M(\mathcal{S}_2, 4))^{28}, (M(\mathcal{S}_2, 8))^3, (M(\mathcal{S}_3, 6))^2, (M(\mathcal{S}_3, 12))^3, (M(\mathcal{S}_4, 8))^{19}, (M(\mathcal{S}_4, 16))^3, M(\mathcal{S}_6, 12), M(\mathcal{S}_8, 16), (\mathcal{S}_2 \wr \mathcal{S}_2)^2, (\mathcal{S}_2 \wr \mathcal{S}_9)^4, (\mathcal{S}_2 \wr \mathcal{S}_{11})^2, M(\mathcal{S}_2 \wr \mathcal{S}_{10}, 40), M(\mathcal{S}_2 \wr \mathcal{S}_6, 24), M(\mathcal{S}_2 \wr \mathcal{S}_7, 28), M(\mathcal{S}_2 \wr \mathcal{S}_6, 24), M(\mathcal{S}_2 \wr \mathcal{S}_9, 36)$

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name	$\log_{10}  G $	#vars	factors
neos-476283	39.9	1.1	$M(S_2 \wr S_9, 36), M(S_2 \wr S_{11}, 44), M(S_2 \wr S_8, 32), M(S_2 \wr S_7, 28), M(S_2 \wr S_{10}, 40), M(S_2 \wr S_3, 12), M(S_2 \wr S_{10}, 40), M(S_2 \wr S_{13}, 52), M(S_2 \wr S_2, 8), M(S_2 \wr S_2, 8), M(S_2 \wr S_5, 20), M(S_2 \wr S_3, 12), M(S_2 \wr S_3, 12), M(S_2 \wr S_{10}, 40), M(S_2 \wr S_4, 16), M(S_2 \wr S_3, 12), M(S_2 \wr S_9, 36), M(S_2 \wr S_2, 8), M(S_2 \wr S_2, 8), M(S_2 \wr S_2, 8), M(S_2 \wr S_2, 8)$
neos-555424	146.4	99.9	$S_7, S_{27}, (M(S_2, 4))^{10}, (M(S_2, 24))^2, S_5 \wr S_2$ $M(S_{10}, 20), (M(S_{10}, 300))^2, M(S_{20}, 40), M(S_{30}, 60), M(S_{10} \wr S_3, 90), M(S_{10} \wr S_3, 90), 1 \text{ unknown}$
neos-631710	313.7	99.7	$M(S_{11}, 6094), M(S_{15}, 8325), M(S_{15}, 8340), M(S_{16}, 8864), M(S_{18}, 9990), M(S_{19}, 10564), M(S_{24}, 13344), M(S_{28}, 15540), M(S_{33}, 18282), M(S_{39}, 21645), M(S_{40}, 22160), M(S_{42}, 23352)$
neos6	6.6	94.9	$M(S_{10}, 8340)$
neos-738098	21.0	93.5	1 unknown
neos-777800	1.0	100.0	1 unknown
neos-785912	9.8	91.3	1 unknown
neos788725	0.7	100.0	1 unknown
neos808444	0.4	11.5	$M(S_2, 2288)$
neos-820146	106.2	100.0	1 unknown
neos-820157	557.8	100.0	1 unknown
neos-824661	936.3	100.0	1 unknown
neos-824695	936.3	100.0	1 unknown
neos-826650	475.2	98.6	2 unknown
neos-826694	973.0	99.3	2 unknown
neos-826812	141.1	99.3	1 unknown
neos-826841	41.5	98.5	1 unknown
neos-849702	3.7	100.0	1 unknown
neos-859770	769.1	98.9	$(S_2)^{11}, S_6, S_{12}, S_{20}, S_{25}, S_{32}, 1 \text{ unknown}$
neos-885086	56.1	100.0	$M(S_{45}, 4860)$
neos-885524	—	—	—
neos-911880	7.6	100.0	$(M(S_3, 111))^6, M(S_6, 222)$
neos-932816	598.6	85.3	$S_{293}, M(S_4, 17628)$
neos-933638	1184.6	93.9	$S_{42}, S_{495}, 3 \text{ unknown}$
neos-933966	1183.6	95.7	$S_{42}, S_{495}, M(S_2, 1218), M(S_3, 1827), 3 \text{ unknown}$
neos-934278	1709.5	81.4	$S_{389}, S_{396}, M(S_2, 1056), 5 \text{ unknown}$
neos-935627	5817.1	75.9	$S_{2022}, M(S_2, 236), 5 \text{ unknown}$
neos-935769	5817.5	80.9	$S_{2022}, M(S_3, 354), M(S_3, 360), M(S_3, 387), M(S_3, 405), 5 \text{ unknown}$
neos-937511	5261.9	79.7	$S_{1853}, M(S_3, 408), M(S_3, 423), M(S_3, 465), M(S_3, 480), 5 \text{ unknown}$
neos-937815	5335.7	72.6	$S_{1876}, M(S_2, 264), M(S_2, 266), M(S_2, 276), 5 \text{ unknown}$
neos-941262	5570.5	76.3	$S_{1948}, M(S_2, 170), M(S_2, 204), M(S_2, 220), M(S_2, 248), (M(S_2, 282))^2, M(S_2, 292), M(S_2, 298), M(S_2, 310), 4 \text{ unknown}$
neos-941313	—	—	—
neos-948126	4969.9	78.9	$S_{1764}, M(S_2, 204), M(S_2, 222), M(S_2, 234), M(S_2, 238), M(S_2, 282), M(S_2, 298), 5 \text{ unknown}$
neos-952987	16.5	0.3	$(S_2)^{36}, S_9$
neos-957389	33.8	75.1	$M(S_2, 126), (M(S_4, 280))^2, M(S_{10}, 690), M(S_{10}, 700), 1 \text{ unknown}$
neos-984165	4280.8	75.8	$(S_2)^{11}, S_{1549}, M(S_2, 152), M(S_2, 206), M(S_2, 218), M(S_2, 222), M(S_2, 240), M(S_2, 260), M(S_2, 266), M(S_2, 286), 4 \text{ unknown}$

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name	$\log_{10}  G $	#vars	factors
noswot	0.4	40.6	$M(\mathcal{S}_2, 52)$
ns1111636	—	—	—
ns1116954	553.4	99.9	2 unknown
ns1158817	—	—	—
ns1208400	2.8	97.8	1 unknown
ns1456591	36.8	99.8	$\mathcal{S}_{20}, M(\mathcal{S}_{20}, 8360)$
ns1606230	103.8	1.7	$\mathcal{S}_{72}$
ns1631475	31.7	0.9	$(\mathcal{S}_2)^{105}$
ns1702808	2.9	100.0	$M(\mathcal{S}_6, 804)$
ns1758913	0.4	3.0	$M(\mathcal{S}_2, 540)$
ns1830653	15.9	1.1	$\mathcal{S}_{18}$
ns1853823	0.7	56.1	1 unknown
ns1854840	2.0	88.0	1 unknown
ns1856153	0.4	92.5	$M(\mathcal{S}_2, 11102)$
ns1905797	1.4	100.0	$M(\mathcal{S}_4, 18192)$
ns1905800	1.1	100.0	1 unknown
ns1952667	69.7	3.4	$(\mathcal{S}_2)^{222}, \mathcal{S}_3, \mathcal{S}_5$
ns2081729	1.0	90.8	$(M(\mathcal{S}_2, 200))^3$
ns2118727	1161.2	0.5	$(\mathcal{S}_2)^{20}, (\mathcal{S}_3)^{45}, (\mathcal{S}_4)^2, (\mathcal{S}_5)^{10}, \mathcal{S}_{235}, \mathcal{S}_{308}, (M(\mathcal{S}_2, 4))^{18}$
ns2124243	—	—	—
ns2137859	755.8	96.0	$\mathcal{S}_{321}, 1 \text{ unknown}$
ns894236	8.7	2.4	$M(\mathcal{S}_{12}, 228)$
ns903616	17.2	2.3	$M(\mathcal{S}_4, 92), M(\mathcal{S}_{18}, 414)$
nsr8k	100.5	1.2	$(\mathcal{S}_2)^{198}, (\mathcal{S}_3)^7, \mathcal{S}_{32}$
p2m2p1m1p0n100	32.1	92.0	$(\mathcal{S}_2)^6, (\mathcal{S}_3)^8, (\mathcal{S}_4)^4, (\mathcal{S}_5)^3, (\mathcal{S}_6)^3, \mathcal{S}_7$
p6b	1.4	100.0	1 unknown
pigeon-10	119.0	93.5	$\mathcal{S}_{30}, \mathcal{S}_{60}, 1 \text{ unknown}$
pigeon-11	135.3	94.4	$\mathcal{S}_{33}, \mathcal{S}_{66}, 1 \text{ unknown}$
pigeon-12	152.0	95.2	$\mathcal{S}_{36}, \mathcal{S}_{72}, 1 \text{ unknown}$
pigeon-13	169.0	95.8	$\mathcal{S}_{39}, \mathcal{S}_{78}, 1 \text{ unknown}$
pigeon-19	277.6	97.8	$\mathcal{S}_{57}, \mathcal{S}_{114}, 1 \text{ unknown}$
protfold	0.7	98.1	1 unknown
pw-myciel4	1.1	86.9	1 unknown
qiu	1.7	100.0	1 unknown
queens-30	1.0	100.0	1 unknown
rail01	2170.5	5.6	$(\mathcal{S}_2)^{931}, (\mathcal{S}_3)^{579}, (\mathcal{S}_4)^{204}, (\mathcal{S}_5)^{170}, (\mathcal{S}_6)^{28}, (\mathcal{S}_7)^{77}, (\mathcal{S}_8)^4, (\mathcal{S}_{11})^3, (\mathcal{S}_{12})^6, (\mathcal{S}_{13})^6, (\mathcal{S}_{14})^9, (\mathcal{S}_{15})^9, (\mathcal{S}_{16})^6$
rail02	—	—	—
rail03	—	—	—
rail507	256.5	2.6	$(\mathcal{S}_2)^{788}, (\mathcal{S}_3)^{21}, \mathcal{S}_6$
ramos3	9.2	100.0	1 unknown
rococoB10-011000	56.1	1.0	$\mathcal{S}_{45}$
rococoC10-001000	62.8	4.1	$(\mathcal{S}_2)^{44}, \mathcal{S}_{41}$
rococoC11-011100	73.2	0.8	$\mathcal{S}_{55}$
rococoC12-111000	411.3	8.5	$(\mathcal{S}_5)^{34}, (\mathcal{S}_6)^{62}, (\mathcal{S}_9)^{14}, \mathcal{S}_{62}$
rvb-sub	31.1	0.6	$(\mathcal{S}_2)^{103}$
satellites1-25	60.3	4.4	$(\mathcal{S}_2)^{200}$
satellites2-60-fs	607.0	5.1	$(\mathcal{S}_2)^6, 125 \text{ unknown}$
sct1	3336.1	64.1	$(\mathcal{S}_2)^4, (\mathcal{S}_3)^{211}, (\mathcal{S}_4)^{594}, (\mathcal{S}_5)^{17}, (\mathcal{S}_6)^{121}, (\mathcal{S}_7)^5, \mathcal{S}_{471}, (M(\mathcal{S}_2, 4))^{327}, (M(\mathcal{S}_4, 8))^{23}, 9 \text{ unknown}$
sct32	397.0	49.1	$(\mathcal{S}_2)^{150}, (\mathcal{S}_3)^{15}, \mathcal{S}_4, (M(\mathcal{S}_2, 34))^{11}, (M(\mathcal{S}_3, 6))^{106}, (M(\mathcal{S}_3, 51))^4, (M(\mathcal{S}_4, 8))^8, (M(\mathcal{S}_4, 68))^4, M(\mathcal{S}_5, 10), (M(\mathcal{S}_5, 85))^3, (M(\mathcal{S}_6, 12))^{13}, (M(\mathcal{S}_6, 102))^2, (M(\mathcal{S}_7, 14))^3, M(\mathcal{S}_7, 119), M(\mathcal{S}_{24}, 408), 27 \text{ unknown}$

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name	$\log_{10}  G $	#vars	factors
sct5	3063.1	76.5	$(\mathcal{S}_2)^{314}, \mathcal{S}_4, (\mathcal{S}_5)^{65}, (\mathcal{S}_6)^{64}, (\mathcal{S}_7)^9, (\mathcal{S}_8)^6, (\mathcal{S}_9)^{10}, (\mathcal{S}_{10})^{13}, (M(\mathcal{S}_2, 4))^4, (M(\mathcal{S}_3, 6))^3, (M(\mathcal{S}_4, 8))^{161}, (M(\mathcal{S}_5, 10))^7, (M(\mathcal{S}_6, 12))^3, (M(\mathcal{S}_7, 14))^3, (M(\mathcal{S}_8, 16))^5, (M(\mathcal{S}_9, 18))^3, 10 \text{ unknown}$
seymour-disj-10	18.6	8.8	$(\mathcal{S}_2)^{41}, (\mathcal{S}_3)^4, (\mathcal{S}_4)^2, M(\mathcal{S}_2, 4)$
seymour	234.5	19.9	$(\mathcal{S}_2)^{43}, (\mathcal{S}_3)^4, (\mathcal{S}_4)^3, \mathcal{S}_6, \mathcal{S}_{117}, M(\mathcal{S}_2, 4), \mathcal{S}_2 \wr \mathcal{S}_{15}, \mathcal{S}_3 \wr \mathcal{S}_2$
shipsched	0.4	0.5	$M(\mathcal{S}_2, 70)$
shs1023	0.4	13.5	$M(\mathcal{S}_2, 60198)$
siena1	146.5	4.7	$(\mathcal{S}_2)^{271}, (\mathcal{S}_3)^{14}, (\mathcal{S}_5)^2, \mathcal{S}_7, \mathcal{S}_{11}, \mathcal{S}_{34}$
sing161	0.7	10.8	$M(\mathcal{S}_2, 27388), M(\mathcal{S}_2, 56024)$
sing245	0.4	5.3	$M(\mathcal{S}_2, 12554)$
sing2	0.4	13.7	$M(\mathcal{S}_2, 4332)$
stp3d	178.9	1.6	$(M(\mathcal{S}_2, 4))^{382}, (M(\mathcal{S}_2, 6))^{72}, (M(\mathcal{S}_2, 8))^{116}, (M(\mathcal{S}_2, 12))^{24}$
sts405	7.3	100.0	1 unknown
sts729	19.9	100.0	1 unknown
swath	816.6	7.1	$(\mathcal{S}_4)^{20}, \mathcal{S}_{83}, \mathcal{S}_{320}$
t1717	—	—	—
t1722	—	—	—
tanglegram1	—	—	—
tanglegram2	6073.1	95.5	$(\mathcal{S}_2)^{45}, (\mathcal{S}_3)^{26}, (\mathcal{S}_4)^{25}, (\mathcal{S}_5)^{11}, (\mathcal{S}_6)^{10}, (\mathcal{S}_7)^3, (\mathcal{S}_8)^9, (\mathcal{S}_9)^9, (\mathcal{S}_{10})^8, (\mathcal{S}_{11})^6, (\mathcal{S}_{12})^7, (\mathcal{S}_{14})^4, (\mathcal{S}_{15})^{10}, (\mathcal{S}_{16})^3, \mathcal{S}_{19}, (\mathcal{S}_{20})^6, (\mathcal{S}_{22})^7, \mathcal{S}_{25}, (\mathcal{S}_{27})^2, \mathcal{S}_{28}, \mathcal{S}_{30}, (\mathcal{S}_{31})^2, (\mathcal{S}_{36})^2, \mathcal{S}_{40}, \mathcal{S}_{41}, \mathcal{S}_{44}, (\mathcal{S}_{48})^3, \mathcal{S}_{49}, \mathcal{S}_{50}, \mathcal{S}_{55}, \mathcal{S}_{59}, (\mathcal{S}_{60})^2, \mathcal{S}_{89}, \mathcal{S}_{98}, \mathcal{S}_{108}, \mathcal{S}_{112}, \mathcal{S}_{130}, \mathcal{S}_{154}, \mathcal{S}_{193}, \mathcal{S}_{236}, \mathcal{S}_{287}, \mathcal{S}_{297}, \mathcal{S}_{425}, (M(\mathcal{S}_2, 4))^3, (M(\mathcal{S}_3, 6))^2, M(\mathcal{S}_5, 10), M(\mathcal{S}_2 \wr \mathcal{S}_6, 24), 4 \text{ unknown}$
timtab1	0.4	0.5	$\mathcal{S}_2$
toll-like	140.2	37.8	$(\mathcal{S}_2)^{230}, (M(\mathcal{S}_2, 4))^{10}, (M(\mathcal{S}_2, 6))^2, (M(\mathcal{S}_2, 8))^2, (M(\mathcal{S}_2, 10))^2, M(\mathcal{S}_2, 12), M(\mathcal{S}_2, 30), M(\mathcal{S}_5, 30), 9 \text{ unknown}$
uc-case11	0.8	5.9	$M(\mathcal{S}_3, 2016)$
uc-case3	0.7	14.2	$M(\mathcal{S}_2, 1008), M(\mathcal{S}_2, 4366)$
uct-subprob	29.1	14.0	$(M(\mathcal{S}_2, 4))^{58}, M(\mathcal{S}_2, 14), (M(\mathcal{S}_3, 6))^8, M(\mathcal{S}_4, 8), M(\mathcal{S}_7, 14)$
unitcal_7	304.7	52.3	$(\mathcal{S}_2)^{672}, (M(\mathcal{S}_2, 3030))^3, 1 \text{ unknown}$
van	16,059.6	39.5	$\mathcal{S}_{4928}$
vpphard2	—	—	—
vpphard	—	—	—
wachplan	1.9	96.6	1 unknown
zib54-UUE	0.4	2.4	$M(\mathcal{S}_2, 126)$

TABLE 5. List of (possibly) symmetric MIPLIB 2010 instances before presolving using the heuristic to find coordinate actions of symmetric groups. Additionally the  $\log_{10}$  of the order of their symmetry groups and the number of variables involved in a nontrivial symmetry is shown.

name	$\log_{10}  G $	#vars	factors
30_70_45_095_100	0.4	0.0	$\mathcal{S}_2$
atlanta-ip	4450.0	40.5	$(\mathcal{S}_2)^{5898}, (\mathcal{S}_3)^{1441}, (\mathcal{S}_4)^{284}, (\mathcal{S}_5)^{175}, (\mathcal{S}_6)^{165}, (\mathcal{S}_7)^{88}$
bab3	60.9	0.0	$(\mathcal{S}_2)^{10}, (\mathcal{S}_5)^{16}, (\mathcal{S}_6)^4, (\mathcal{S}_{10})^2$
biella1	217.3	11.7	$(\mathcal{S}_2)^{261}, (\mathcal{S}_3)^{30}, (\mathcal{S}_4)^{20}, (\mathcal{S}_5)^{13}, (\mathcal{S}_6)^2, (\mathcal{S}_7)^5, \mathcal{S}_8, (\mathcal{S}_9)^2, (\mathcal{S}_{10})^2, \mathcal{S}_{11}$
blp-ar98	0.7	0.0	$(\mathcal{S}_2)^2$
blp-ic97	0.7	0.0	$(\mathcal{S}_2)^2$
bnatt350	503.7	43.3	$(\mathcal{S}_2)^{42}, (\mathcal{S}_3)^{81}, (\mathcal{S}_4)^{88}, (\mathcal{S}_5)^{76}, (\mathcal{S}_6)^{39}, (\mathcal{S}_7)^{10}$
bnatt400	588.0	43.6	$(\mathcal{S}_2)^{50}, (\mathcal{S}_3)^{83}, (\mathcal{S}_4)^{98}, (\mathcal{S}_5)^{91}, (\mathcal{S}_6)^{42}, (\mathcal{S}_7)^{16}, \mathcal{S}_8$
co-100	736.0	6.3	$(\mathcal{S}_2)^{837}, (\mathcal{S}_3)^{399}, (\mathcal{S}_4)^3, (\mathcal{S}_5)^3, \mathcal{S}_6, (\mathcal{S}_7)^2, \mathcal{S}_{12}, \mathcal{S}_{17}, \mathcal{S}_{19}, \mathcal{S}_{21}, \mathcal{S}_{28}, \mathcal{S}_{29}, \mathcal{S}_{30}$
core2536-691	3.7	0.1	$(\mathcal{S}_2)^5, \mathcal{S}_5$
core4872-1529	68.0	1.8	$(\mathcal{S}_2)^{211}, (\mathcal{S}_3)^2, \mathcal{S}_6$
datt256	3.7	0.0	$(\mathcal{S}_2)^{12}$
dc1c	356.6	19.8	$(\mathcal{S}_2)^{819}, (\mathcal{S}_3)^{64}, (\mathcal{S}_4)^{24}, (\mathcal{S}_5)^2, (\mathcal{S}_6)^8$
dc1l	794.9	11.4	$(\mathcal{S}_2)^{1640}, (\mathcal{S}_3)^{174}, (\mathcal{S}_4)^{69}, (\mathcal{S}_5)^{18}, (\mathcal{S}_6)^9, (\mathcal{S}_7)^2$
dg012142	89.2	3.1	$\mathcal{S}_{64}$
dolom1	468.2	19.4	$(\mathcal{S}_2)^{907}, (\mathcal{S}_3)^{71}, (\mathcal{S}_4)^{25}, (\mathcal{S}_5)^5, (\mathcal{S}_7)^2, \mathcal{S}_{15}, \mathcal{S}_{33}, \mathcal{S}_{34}$
ds-big	468.1	1.8	$(\mathcal{S}_2)^{1516}, (\mathcal{S}_3)^{15}$
eilB101	0.8	0.1	$\mathcal{S}_3$
ex1010-pi	1482.1	21.7	$(\mathcal{S}_2)^{1324}, (\mathcal{S}_3)^{366}, (\mathcal{S}_4)^{148}, (\mathcal{S}_5)^{70}, (\mathcal{S}_6)^{32}, (\mathcal{S}_7)^{27}, (\mathcal{S}_8)^{20}, (\mathcal{S}_9)^{13}, (\mathcal{S}_{10})^3, (\mathcal{S}_{11})^5, \mathcal{S}_{12}, (\mathcal{S}_{16})^2$
ex9	29.6	1.9	$(\mathcal{S}_2)^{98}$
glass4	0.4	0.6	$\mathcal{S}_2$
gmu-35-40	801.6	39.3	$(\mathcal{S}_2)^{18}, (\mathcal{S}_3)^{16}, (\mathcal{S}_4)^3, (\mathcal{S}_5)^3, \mathcal{S}_{363}$
gmu-35-50	1837.7	44.5	$(\mathcal{S}_2)^{18}, (\mathcal{S}_3)^{16}, (\mathcal{S}_4)^3, (\mathcal{S}_5)^3, \mathcal{S}_{742}$
gmut-75-50	133,514.4	47.8	$(\mathcal{S}_2)^{11}, (\mathcal{S}_3)^9, (\mathcal{S}_4)^{27}, (\mathcal{S}_5)^{17}, \mathcal{S}_{32701}$
gmut-77-40	40,582.7	47.2	$(\mathcal{S}_2)^{12}, (\mathcal{S}_3)^7, (\mathcal{S}_4)^{20}, (\mathcal{S}_5)^{31}, \mathcal{S}_{11198}$
go19	2.6	2.7	$(\mathcal{S}_2)^4, \mathcal{S}_4$
iis-bupa-cov	2.2	2.0	$\mathcal{S}_3, \mathcal{S}_4$
iis-pima-cov	35.5	4.2	$\mathcal{S}_{32}$
lectsched-1	362.1	0.7	$(\mathcal{S}_2)^3, (\mathcal{S}_3)^3, \mathcal{S}_{193}$
lectsched-1-obj	362.1	0.7	$(\mathcal{S}_2)^3, (\mathcal{S}_3)^3, \mathcal{S}_{193}$
lectsched-2	259.4	0.9	$(\mathcal{S}_2)^3, \mathcal{S}_{148}$
lectsched-3	341.7	0.8	$(\mathcal{S}_2)^3, (\mathcal{S}_3)^3, \mathcal{S}_{184}$
lectsched-4-obj	144.1	1.2	$\mathcal{S}_{93}$
liu	0.4	0.2	$\mathcal{S}_2$
macrophage	46.1	13.5	$(\mathcal{S}_2)^{153}$
map06	320,576.1	71.9	$(\mathcal{S}_2)^{58}, (\mathcal{S}_3)^5, (\mathcal{S}_4)^2, \mathcal{S}_7, (\mathcal{S}_8)^2, \mathcal{S}_{136}, \mathcal{S}_{163}, \mathcal{S}_{178}, \mathcal{S}_{185}, \mathcal{S}_{186}, \mathcal{S}_{198}, \mathcal{S}_{199}, \mathcal{S}_{201}, \mathcal{S}_{202}, \mathcal{S}_{203}, \mathcal{S}_{204}, \mathcal{S}_{214}, \mathcal{S}_{221}, \mathcal{S}_{222}, \mathcal{S}_{225}, \mathcal{S}_{226}, \mathcal{S}_{234}, \mathcal{S}_{239}, \mathcal{S}_{241}, \mathcal{S}_{243}, \mathcal{S}_{254}, \mathcal{S}_{257}, \mathcal{S}_{263}, \mathcal{S}_{266}, \mathcal{S}_{268}, (\mathcal{S}_{269})^2, \mathcal{S}_{275}, \mathcal{S}_{280}, \mathcal{S}_{281}, \mathcal{S}_{282}, \mathcal{S}_{285}, \mathcal{S}_{287}, (\mathcal{S}_{289})^2, \mathcal{S}_{294}, \mathcal{S}_{298}, \mathcal{S}_{305}, \mathcal{S}_{311}, \mathcal{S}_{315}, \mathcal{S}_{322}, \mathcal{S}_{325}, \mathcal{S}_{329}, \mathcal{S}_{334}, \mathcal{S}_{335}, \mathcal{S}_{336}, \mathcal{S}_{337}, \mathcal{S}_{339}, \mathcal{S}_{341}, (\mathcal{S}_{343})^2, \mathcal{S}_{345}, (\mathcal{S}_{346})^2, \mathcal{S}_{349}, (\mathcal{S}_{350})^2, \mathcal{S}_{352}, \mathcal{S}_{356}, \mathcal{S}_{357}, \mathcal{S}_{358}, \mathcal{S}_{360}, \mathcal{S}_{361}, \mathcal{S}_{364}, \mathcal{S}_{366}, \mathcal{S}_{367}, (\mathcal{S}_{368})^3, \mathcal{S}_{370}, \mathcal{S}_{372}, \mathcal{S}_{373},$

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name	$\log_{10}  G $	#vars	factors
map10	320,576.1	71.9	$S_{374}, S_{383}, S_{384}, (S_{393})^2, S_{398}, (S_{400})^7, S_{413}, S_{443}, S_{452}, S_{457}, S_{458}, S_{466}, S_{479}, S_{501}, S_{505}, S_{511}, S_{582}, S_{592}, S_{601}, S_{610}, S_{613}, S_{618}, S_{676}, S_{704}, S_{713}, S_{717}, S_{735}, S_{743}, S_{744}, S_{751}, S_{769}, S_{788}, S_{791}, (S_{800})^3, S_{808}, S_{813}, S_{824}, S_{856}, S_{898}, S_{1146}, S_{1150}, S_{1226}, S_{1280}, S_{1332}, S_{1376}, S_{1624}, S_{1764}, S_{1819}, S_{1945}, S_{1953}, S_{1989}, S_{2241}, S_{2391}, S_{2422}, S_{2506}, S_{2507}, S_{2550}, S_{2728}, S_{2895}, S_{3337}, S_{3512}, S_{3694}, S_{4776}, S_{6466}, S_{8454}$ $(S_2)^{58}, (S_3)^5, (S_4)^2, S_7, (S_8)^2, S_{136}, S_{163}, S_{178}, S_{185}, S_{186}, S_{198}, S_{199}, S_{201}, S_{202}, S_{203}, S_{204}, S_{214}, S_{221}, S_{222}, S_{225}, S_{226}, S_{234}, S_{239}, S_{241}, S_{243}, S_{254}, S_{257}, S_{263}, S_{266}, S_{268}, (S_{269})^2, S_{275}, S_{280}, S_{281}, S_{282}, S_{285}, S_{287}, (S_{289})^2, S_{294}, S_{298}, S_{305}, S_{311}, S_{315}, S_{322}, S_{325}, S_{329}, S_{334}, S_{335}, S_{336}, S_{337}, S_{339}, S_{341}, (S_{343})^2, S_{345}, (S_{346})^2, S_{349}, (S_{350})^2, S_{352}, S_{356}, S_{357}, S_{358}, S_{360}, S_{361}, S_{364}, S_{366}, S_{367}, (S_{368})^3, S_{370}, S_{372}, S_{373}, S_{374}, S_{383}, S_{384}, (S_{393})^2, S_{398}, (S_{400})^7, S_{413}, S_{443}, S_{452}, S_{457}, S_{458}, S_{466}, S_{479}, S_{501}, S_{505}, S_{511}, S_{582}, S_{592}, S_{601}, S_{610}, S_{613}, S_{618}, S_{676}, S_{704}, S_{713}, S_{717}, S_{735}, S_{743}, S_{744}, S_{751}, S_{769}, S_{788}, S_{791}, (S_{800})^3, S_{808}, S_{813}, S_{824}, S_{856}, S_{898}, S_{1146}, S_{1150}, S_{1226}, S_{1280}, S_{1332}, S_{1376}, S_{1624}, S_{1764}, S_{1819}, S_{1945}, S_{1953}, S_{1989}, S_{2241}, S_{2391}, S_{2422}, S_{2506}, S_{2507}, S_{2550}, S_{2728}, S_{2895}, S_{3337}, S_{3512}, S_{3694}, S_{4776}, S_{6466}, S_{8454}$
map14	320,576.1	71.9	$(S_2)^{58}, (S_3)^5, (S_4)^2, S_7, (S_8)^2, S_{136}, S_{163}, S_{178}, S_{185}, S_{186}, S_{198}, S_{199}, S_{201}, S_{202}, S_{203}, S_{204}, S_{214}, S_{221}, S_{222}, S_{225}, S_{226}, S_{234}, S_{239}, S_{241}, S_{243}, S_{254}, S_{257}, S_{263}, S_{266}, S_{268}, (S_{269})^2, S_{275}, S_{280}, S_{281}, S_{282}, S_{285}, S_{287}, (S_{289})^2, S_{294}, S_{298}, S_{305}, S_{311}, S_{315}, S_{322}, S_{325}, S_{329}, S_{334}, S_{335}, S_{336}, S_{337}, S_{339}, S_{341}, (S_{343})^2, S_{345}, (S_{346})^2, S_{349}, (S_{350})^2, S_{352}, S_{356}, S_{357}, S_{358}, S_{360}, S_{361}, S_{364}, S_{366}, S_{367}, (S_{368})^3, S_{370}, S_{372}, S_{373}, S_{374}, S_{383}, S_{384}, (S_{393})^2, S_{398}, (S_{400})^7, S_{413}, S_{443}, S_{452}, S_{457}, S_{458}, S_{466}, S_{479}, S_{501}, S_{505}, S_{511}, S_{582}, S_{592}, S_{601}, S_{610}, S_{613}, S_{618}, S_{676}, S_{704}, S_{713}, S_{717}, S_{735}, S_{743}, S_{744}, S_{751}, S_{769}, S_{788}, S_{791}, (S_{800})^3, S_{808}, S_{813}, S_{824}, S_{856}, S_{898}, S_{1146}, S_{1150}, S_{1226}, S_{1280}, S_{1332}, S_{1376}, S_{1624}, S_{1764}, S_{1819}, S_{1945}, S_{1953}, S_{1989}, S_{2241}, S_{2391}, S_{2422}, S_{2506}, S_{2507}, S_{2550}, S_{2728}, S_{2895}, S_{3337}, S_{3512}, S_{3694}, S_{4776}, S_{6466}, S_{8454}$
map18	320,576.1	71.9	$(S_2)^{58}, (S_3)^5, (S_4)^2, S_7, (S_8)^2, S_{136}, S_{163}, S_{178}, S_{185}, S_{186}, S_{198}, S_{199}, S_{201}, S_{202}, S_{203}, S_{204}, S_{214}, S_{221}, S_{222}, S_{225}, S_{226}, S_{234}, S_{239}, S_{241}, S_{243}, S_{254}, S_{257}, S_{263}, S_{266}, S_{268}, (S_{269})^2, S_{275}, S_{280}, S_{281}, S_{282}, S_{285}, S_{287}, (S_{289})^2, S_{294}, S_{298}, S_{305}, S_{311}, S_{315}, S_{322}, S_{325}, S_{329}, S_{334}, S_{335}, S_{336}, S_{337}, S_{339}, S_{341}, (S_{343})^2, S_{345}, (S_{346})^2, S_{349}, (S_{350})^2, S_{352}, S_{356}, S_{357}, S_{358}, S_{360}, S_{361}, S_{364}, S_{366}, S_{367}, (S_{368})^3, S_{370}, S_{372}, S_{373}, S_{374}, S_{383}, S_{384}, (S_{393})^2, S_{398}, (S_{400})^7, S_{413}, S_{443}, S_{452}, S_{457}, S_{458}, S_{466}, S_{479}, S_{501}, S_{505}, S_{511}, S_{582}, S_{592}, S_{601}, S_{610}, S_{613}, S_{618}, S_{676}, S_{704}, S_{713}, S_{717}, S_{735}, S_{743}, S_{744}, S_{751}, S_{769}, S_{788}, S_{791}, (S_{800})^3, S_{808}, S_{813}, S_{824}, S_{856}, S_{898}, S_{1146}, S_{1150}, S_{1226}, S_{1280}, S_{1332}, S_{1376}, S_{1624}, S_{1764}, S_{1819}, S_{1945}, S_{1953}, S_{1989}, S_{2241}, S_{2391}, S_{2422}, S_{2506}, S_{2507}, S_{2550}, S_{2728}, S_{2895}, S_{3337}, S_{3512}, S_{3694}, S_{4776}, S_{6466}, S_{8454}$

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name	$\log_{10}  G $	#vars	factors
map20	320,576.1	71.9	$(\mathcal{S}_2)^{58}, (\mathcal{S}_3)^5, (\mathcal{S}_4)^2, \mathcal{S}_7, (\mathcal{S}_8)^2, \mathcal{S}_{136}, \mathcal{S}_{163}, \mathcal{S}_{178}, \mathcal{S}_{185}, \mathcal{S}_{186}, \mathcal{S}_{198}, \mathcal{S}_{199}, \mathcal{S}_{201}, \mathcal{S}_{202}, \mathcal{S}_{203}, \mathcal{S}_{204}, \mathcal{S}_{214}, \mathcal{S}_{221}, \mathcal{S}_{222}, \mathcal{S}_{225}, \mathcal{S}_{226}, \mathcal{S}_{234}, \mathcal{S}_{239}, \mathcal{S}_{241}, \mathcal{S}_{243}, \mathcal{S}_{254}, \mathcal{S}_{257}, \mathcal{S}_{263}, \mathcal{S}_{266}, \mathcal{S}_{268}, (\mathcal{S}_{269})^2, \mathcal{S}_{275}, \mathcal{S}_{280}, \mathcal{S}_{281}, \mathcal{S}_{282}, \mathcal{S}_{285}, \mathcal{S}_{287}, (\mathcal{S}_{289})^2, \mathcal{S}_{294}, \mathcal{S}_{298}, \mathcal{S}_{305}, \mathcal{S}_{311}, \mathcal{S}_{315}, \mathcal{S}_{322}, \mathcal{S}_{325}, \mathcal{S}_{329}, \mathcal{S}_{334}, \mathcal{S}_{335}, \mathcal{S}_{336}, \mathcal{S}_{337}, \mathcal{S}_{339}, \mathcal{S}_{341}, (\mathcal{S}_{343})^2, \mathcal{S}_{345}, (\mathcal{S}_{346})^2, \mathcal{S}_{349}, (\mathcal{S}_{350})^2, \mathcal{S}_{352}, \mathcal{S}_{356}, \mathcal{S}_{357}, \mathcal{S}_{358}, \mathcal{S}_{360}, \mathcal{S}_{361}, \mathcal{S}_{364}, \mathcal{S}_{366}, \mathcal{S}_{367}, (\mathcal{S}_{368})^3, \mathcal{S}_{370}, \mathcal{S}_{372}, \mathcal{S}_{373}, \mathcal{S}_{374}, \mathcal{S}_{383}, \mathcal{S}_{384}, (\mathcal{S}_{393})^2, \mathcal{S}_{398}, (\mathcal{S}_{400})^7, \mathcal{S}_{413}, \mathcal{S}_{443}, \mathcal{S}_{452}, \mathcal{S}_{457}, \mathcal{S}_{458}, \mathcal{S}_{466}, \mathcal{S}_{479}, \mathcal{S}_{501}, \mathcal{S}_{505}, \mathcal{S}_{511}, \mathcal{S}_{582}, \mathcal{S}_{592}, \mathcal{S}_{601}, \mathcal{S}_{610}, \mathcal{S}_{613}, \mathcal{S}_{618}, \mathcal{S}_{676}, \mathcal{S}_{704}, \mathcal{S}_{713}, \mathcal{S}_{717}, \mathcal{S}_{735}, \mathcal{S}_{743}, \mathcal{S}_{744}, \mathcal{S}_{751}, \mathcal{S}_{769}, \mathcal{S}_{788}, \mathcal{S}_{791}, (\mathcal{S}_{800})^3, \mathcal{S}_{808}, \mathcal{S}_{813}, \mathcal{S}_{824}, \mathcal{S}_{856}, \mathcal{S}_{898}, \mathcal{S}_{1146}, \mathcal{S}_{1150}, \mathcal{S}_{1226}, \mathcal{S}_{1280}, \mathcal{S}_{1332}, \mathcal{S}_{1376}, \mathcal{S}_{1624}, \mathcal{S}_{1764}, \mathcal{S}_{1819}, \mathcal{S}_{1945}, \mathcal{S}_{1953}, \mathcal{S}_{1989}, \mathcal{S}_{2241}, \mathcal{S}_{2391}, \mathcal{S}_{2422}, \mathcal{S}_{2506}, \mathcal{S}_{2507}, \mathcal{S}_{2550}, \mathcal{S}_{2728}, \mathcal{S}_{2895}, \mathcal{S}_{3337}, \mathcal{S}_{3512}, \mathcal{S}_{3694}, \mathcal{S}_{4776}, \mathcal{S}_{6466}, \mathcal{S}_{8454}$
methanosarcina	759.6	63.6	$(\mathcal{S}_2)^{2523}$
mkc	7.7	0.8	$(\mathcal{S}_2)^{15}, (\mathcal{S}_3)^4$
msc98-ip	2671.1	32.5	$(\mathcal{S}_2)^{611}, (\mathcal{S}_3)^{266}, (\mathcal{S}_4)^{219}, (\mathcal{S}_5)^{198}, (\mathcal{S}_6)^{210}, (\mathcal{S}_7)^{108}, (\mathcal{S}_8)^{112}, (\mathcal{S}_9)^2, (\mathcal{S}_{10})^6$
mzzv11	46.7	3.0	$(\mathcal{S}_2)^{155}$
nag	0.4	0.1	$\mathcal{S}_2$
neos-1224597	495.2	14.7	$(\mathcal{S}_5)^{17}, (\mathcal{S}_{10})^3, (\mathcal{S}_{35})^{11}$
neos13	0.4	0.1	$\mathcal{S}_2$
neos-1429212	—	—	—
neos-1601936	419.2	9.2	$(\mathcal{S}_{21})^{16}, \mathcal{S}_{72}$
neos-1605061	103.8	1.8	$\mathcal{S}_{72}$
neos-1605075	103.8	1.7	$\mathcal{S}_{72}$
neos18	24.9	4.5	$(\mathcal{S}_2)^{68}, (\mathcal{S}_3)^2, (\mathcal{S}_4)^2$
neos-476283	36.0	0.4	$(\mathcal{S}_5)^2, \mathcal{S}_7, \mathcal{S}_{27}$
neos-820146	93.6	37.5	$(\mathcal{S}_5)^{45}$
neos-820157	545.3	56.2	$(\mathcal{S}_{15})^{45}$
neos-824661	629.5	2.6	$(\mathcal{S}_7)^{170}$
neos-824695	629.5	5.0	$(\mathcal{S}_7)^{170}$
neos-826650	425.1	6.5	$(\mathcal{S}_{32})^{12}$
neos-826694	829.1	3.3	$(\mathcal{S}_{90})^6$
neos-859770	767.0	39.7	$(\mathcal{S}_2)^{117}, (\mathcal{S}_4)^4, (\mathcal{S}_5)^3, \mathcal{S}_6, (\mathcal{S}_{12})^8, (\mathcal{S}_{20})^8, \mathcal{S}_{25}, (\mathcal{S}_{26})^3, (\mathcal{S}_{27})^4, (\mathcal{S}_{32})^8$
neos-885524	3778.0	24.6	$(\mathcal{S}_2)^{9850}, (\mathcal{S}_3)^{760}, (\mathcal{S}_4)^{70}, (\mathcal{S}_5)^{60}$
neos-932816	597.2	1.4	$\mathcal{S}_{293}$
neos-933638	1171.8	1.7	$\mathcal{S}_{42}, \mathcal{S}_{495}$
neos-933966	1171.8	1.7	$\mathcal{S}_{42}, \mathcal{S}_{495}$
neos-934278	1698.7	3.4	$\mathcal{S}_{389}, \mathcal{S}_{396}$
neos-935627	5808.3	19.6	$\mathcal{S}_{2022}$
neos-935769	5808.3	20.6	$\mathcal{S}_{2022}$
neos-937511	5252.7	16.4	$\mathcal{S}_{1853}$
neos-937815	5327.9	16.1	$\mathcal{S}_{1876}$
neos-941262	5564.2	20.5	$\mathcal{S}_{1948}$
neos-941313	6474.5	9.9	$(\mathcal{S}_2)^{1920}, (\mathcal{S}_3)^{1020}, (\mathcal{S}_4)^{450}, (\mathcal{S}_5)^{540}, (\mathcal{S}_6)^{150}, (\mathcal{S}_7)^{120}, (\mathcal{S}_8)^{60}, (\mathcal{S}_9)^{60}, (\mathcal{S}_{11})^{30}, (\mathcal{S}_{12})^{30}, (\mathcal{S}_{13})^{60}, (\mathcal{S}_{15})^{30}, (\mathcal{S}_{17})^{30}$
neos-948126	4962.8	18.5	$\mathcal{S}_{1764}$
neos-952987	16.5	0.3	$(\mathcal{S}_2)^{36}, \mathcal{S}_9$
neos-984165	4274.0	17.7	$(\mathcal{S}_2)^{11}, \mathcal{S}_{1549}$

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name	$\log_{10}  G $	#vars	factors
ns1111636	396,402.3	78.7	$(\mathcal{S}_{61})^{1200}, (\mathcal{S}_{64})^{1920}, (\mathcal{S}_{66})^{480}, (\mathcal{S}_{69})^{480}, (\mathcal{S}_{72})^{320}$
ns1116954	343.0	5.7	$(\mathcal{S}_6)^{120}$
ns1158817	—	—	—
ns1456591	18.4	0.2	$\mathcal{S}_{20}$
ns1606230	103.8	1.7	$\mathcal{S}_{72}$
ns1631475	31.7	0.9	$(\mathcal{S}_2)^{105}$
ns1830653	15.9	1.1	$\mathcal{S}_{18}$
ns1952667	69.7	3.4	$(\mathcal{S}_2)^{222}, \mathcal{S}_3, \mathcal{S}_5$
ns2118727	1155.7	0.5	$(\mathcal{S}_2)^{20}, (\mathcal{S}_3)^{45}, (\mathcal{S}_4)^2, (\mathcal{S}_5)^{10}, \mathcal{S}_{235}, \mathcal{S}_{308}$
ns2124243	6.4	0.0	$\mathcal{S}_3, \mathcal{S}_9$
ns2137859	666.9	0.3	$\mathcal{S}_{321}$
nsr8k	100.5	1.2	$(\mathcal{S}_2)^{198}, (\mathcal{S}_3)^7, \mathcal{S}_{32}$
p2m2p1m1p0n100	32.1	92.0	$(\mathcal{S}_2)^6, (\mathcal{S}_3)^8, (\mathcal{S}_4)^4, (\mathcal{S}_5)^3, (\mathcal{S}_6)^3, \mathcal{S}_7$
pigeon-10	114.4	18.4	$\mathcal{S}_{30}, \mathcal{S}_{60}$
pigeon-11	129.7	17.3	$\mathcal{S}_{33}, \mathcal{S}_{66}$
pigeon-12	145.4	16.4	$\mathcal{S}_{36}, \mathcal{S}_{72}$
pigeon-13	161.4	15.5	$\mathcal{S}_{39}, \mathcal{S}_{78}$
pigeon-19	263.1	11.8	$\mathcal{S}_{57}, \mathcal{S}_{114}$
rail01	2170.5	5.6	$(\mathcal{S}_2)^{931}, (\mathcal{S}_3)^{579}, (\mathcal{S}_4)^{204}, (\mathcal{S}_5)^{170}, (\mathcal{S}_6)^{28}, (\mathcal{S}_7)^{77}, (\mathcal{S}_8)^4, (\mathcal{S}_{11})^3, (\mathcal{S}_{12})^6, (\mathcal{S}_{13})^6, (\mathcal{S}_{14})^9, (\mathcal{S}_{15})^9, (\mathcal{S}_{16})^6$
rail02	35,983.9	13.4	$(\mathcal{S}_2)^{1533}, (\mathcal{S}_3)^{188}, (\mathcal{S}_4)^{400}, (\mathcal{S}_5)^{149}, (\mathcal{S}_6)^{42}, (\mathcal{S}_7)^{43}, (\mathcal{S}_8)^{69}, (\mathcal{S}_9)^9, (\mathcal{S}_{10})^8, (\mathcal{S}_{11})^3, (\mathcal{S}_{12})^{11}, (\mathcal{S}_{13})^{22}, (\mathcal{S}_{14})^{22}, (\mathcal{S}_{15})^{15}, (\mathcal{S}_{16})^{16}, (\mathcal{S}_{17})^9, (\mathcal{S}_{18})^{15}, (\mathcal{S}_{19})^{14}, (\mathcal{S}_{20})^{28}, (\mathcal{S}_{21})^{11}, (\mathcal{S}_{22})^{20}, (\mathcal{S}_{23})^7, (\mathcal{S}_{24})^{17}, (\mathcal{S}_{25})^{15}, (\mathcal{S}_{26})^{12}, (\mathcal{S}_{27})^{11}, (\mathcal{S}_{28})^{21}, (\mathcal{S}_{29})^6, (\mathcal{S}_{30})^{18}, (\mathcal{S}_{31})^{11}, (\mathcal{S}_{32})^{19}, (\mathcal{S}_{33})^8, (\mathcal{S}_{34})^{18}, (\mathcal{S}_{35})^9, (\mathcal{S}_{36})^{21}, (\mathcal{S}_{37})^{20}, (\mathcal{S}_{38})^{39}, (\mathcal{S}_{39})^{26}, (\mathcal{S}_{40})^{30}, (\mathcal{S}_{41})^{21}, (\mathcal{S}_{42})^{44}, (\mathcal{S}_{43})^{43}, (\mathcal{S}_{44})^{34}, (\mathcal{S}_{45})^{23}, (\mathcal{S}_{46})^{54}, (\mathcal{S}_{47})^2, (\mathcal{S}_{48})^{65}, (\mathcal{S}_{49})^{10}, (\mathcal{S}_{50})^{32}, (\mathcal{S}_{51})^8, (\mathcal{S}_{52})^4, \mathcal{S}_{53}, \mathcal{S}_{54}, \mathcal{S}_{55}$
rail03	69,013.9	8.6	$(\mathcal{S}_2)^{1431}, (\mathcal{S}_3)^{364}, (\mathcal{S}_4)^{342}, (\mathcal{S}_5)^{129}, (\mathcal{S}_6)^{159}, (\mathcal{S}_7)^{16}, (\mathcal{S}_8)^{68}, (\mathcal{S}_9)^{22}, (\mathcal{S}_{11})^{12}, (\mathcal{S}_{12})^{38}, (\mathcal{S}_{13})^6, (\mathcal{S}_{14})^{34}, (\mathcal{S}_{15})^9, (\mathcal{S}_{16})^3, (\mathcal{S}_{17})^{15}, (\mathcal{S}_{18})^{27}, (\mathcal{S}_{19})^{18}, (\mathcal{S}_{20})^7, (\mathcal{S}_{21})^{17}, (\mathcal{S}_{22})^{30}, (\mathcal{S}_{23})^7, (\mathcal{S}_{24})^{17}, (\mathcal{S}_{25})^{78}, (\mathcal{S}_{26})^7, (\mathcal{S}_{27})^{19}, (\mathcal{S}_{28})^{76}, (\mathcal{S}_{29})^{28}, (\mathcal{S}_{30})^{42}, (\mathcal{S}_{31})^{74}, (\mathcal{S}_{32})^{34}, (\mathcal{S}_{33})^{72}, (\mathcal{S}_{34})^{77}, (\mathcal{S}_{35})^{75}, (\mathcal{S}_{36})^{77}, (\mathcal{S}_{37})^{66}, (\mathcal{S}_{38})^{43}, (\mathcal{S}_{39})^{44}, (\mathcal{S}_{40})^{18}, (\mathcal{S}_{41})^{131}, (\mathcal{S}_{42})^{164}, (\mathcal{S}_{43})^{93}, (\mathcal{S}_{44})^{36}, (\mathcal{S}_{45})^{36}, (\mathcal{S}_{46})^{51}, (\mathcal{S}_{47})^{45}, (\mathcal{S}_{48})^{21}, (\mathcal{S}_{49})^9, (\mathcal{S}_{50})^6, (\mathcal{S}_{51})^6, (\mathcal{S}_{52})^3, (\mathcal{S}_{53})^3, (\mathcal{S}_{54})^3$
rail507	256.5	2.6	$(\mathcal{S}_2)^{788}, (\mathcal{S}_3)^{21}, \mathcal{S}_6$
rococoB10-011000	56.1	1.0	$\mathcal{S}_{45}$
rococoC10-001000	62.8	4.1	$(\mathcal{S}_2)^{44}, \mathcal{S}_{41}$
rococoC11-011100	73.2	0.8	$\mathcal{S}_{55}$
rococoC12-1111000	411.3	8.5	$(\mathcal{S}_5)^{34}, (\mathcal{S}_6)^{62}, (\mathcal{S}_9)^{14}, \mathcal{S}_{62}$
rvb-sub	31.1	0.6	$(\mathcal{S}_2)^{103}$
satellites1-25	60.3	4.4	$(\mathcal{S}_2)^{200}$
satellites2-60-fs	285.6	4.0	$(\mathcal{S}_2)^{380}, (\mathcal{S}_3)^{220}$
sct1	2959.1	24.9	$(\mathcal{S}_2)^4, (\mathcal{S}_3)^{279}, (\mathcal{S}_4)^{737}, (\mathcal{S}_5)^{79}, (\mathcal{S}_6)^{132}, (\mathcal{S}_7)^{34}, \mathcal{S}_{471}$
sct32	90.5	5.6	$(\mathcal{S}_2)^{239}, (\mathcal{S}_3)^{22}, \mathcal{S}_4$
sct5	1708.0	12.2	$(\mathcal{S}_2)^{794}, \mathcal{S}_4, (\mathcal{S}_5)^{227}, (\mathcal{S}_6)^{169}, (\mathcal{S}_7)^{12}, (\mathcal{S}_8)^6, (\mathcal{S}_9)^{12}, (\mathcal{S}_{10})^{57}$
seymour-disj-10	18.3	8.4	$(\mathcal{S}_2)^{41}, (\mathcal{S}_3)^4, (\mathcal{S}_4)^2$
seymour	221.8	19.6	$(\mathcal{S}_2)^{58}, (\mathcal{S}_3)^6, (\mathcal{S}_4)^3, \mathcal{S}_6, \mathcal{S}_{117}$
siena1	146.5	4.7	$(\mathcal{S}_2)^{271}, (\mathcal{S}_3)^{14}, (\mathcal{S}_5)^2, \mathcal{S}_7, \mathcal{S}_{11}, \mathcal{S}_{34}$
swath	816.6	7.1	$(\mathcal{S}_4)^{20}, \mathcal{S}_{83}, \mathcal{S}_{320}$

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name	$\log_{10}  G $	#vars	factors
t1717	54,603.3	90.2	$(\mathcal{S}_2)^{3015}, (\mathcal{S}_3)^{1607}, (\mathcal{S}_4)^{1045}, (\mathcal{S}_5)^{680}, (\mathcal{S}_6)^{550}, (\mathcal{S}_7)^{346}, (\mathcal{S}_8)^{302}, (\mathcal{S}_9)^{237}, (\mathcal{S}_{10})^{181}, (\mathcal{S}_{11})^{149}, (\mathcal{S}_{12})^{111}, (\mathcal{S}_{13})^{95}, (\mathcal{S}_{14})^{97}, (\mathcal{S}_{15})^{71}, (\mathcal{S}_{16})^{55}, (\mathcal{S}_{17})^{55}, (\mathcal{S}_{18})^{41}, (\mathcal{S}_{19})^{31}, (\mathcal{S}_{20})^{39}, (\mathcal{S}_{21})^{33}, (\mathcal{S}_{22})^{31}, (\mathcal{S}_{23})^{30}, (\mathcal{S}_{24})^{23}, (\mathcal{S}_{25})^{18}, (\mathcal{S}_{26})^{16}, (\mathcal{S}_{27})^{13}, (\mathcal{S}_{28})^{17}, (\mathcal{S}_{29})^{17}, (\mathcal{S}_{30})^{19}, (\mathcal{S}_{31})^{15}, (\mathcal{S}_{32})^{11}, (\mathcal{S}_{33})^{17}, (\mathcal{S}_{34})^{19}, (\mathcal{S}_{35})^{14}, (\mathcal{S}_{36})^{14}, (\mathcal{S}_{37})^8, (\mathcal{S}_{38})^{14}, (\mathcal{S}_{39})^7, (\mathcal{S}_{40})^{11}, (\mathcal{S}_{41})^{11}, (\mathcal{S}_{42})^6, (\mathcal{S}_{43})^8, (\mathcal{S}_{44})^6, (\mathcal{S}_{45})^6, (\mathcal{S}_{46})^5, (\mathcal{S}_{47})^6, (\mathcal{S}_{48})^5, (\mathcal{S}_{49})^7, (\mathcal{S}_{50})^3, (\mathcal{S}_{51})^5, (\mathcal{S}_{52})^4, (\mathcal{S}_{53})^2, (\mathcal{S}_{54})^4, (\mathcal{S}_{55})^5, \mathcal{S}_{56}, (\mathcal{S}_{57})^4, (\mathcal{S}_{58})^4, (\mathcal{S}_{59})^5, (\mathcal{S}_{60})^4, (\mathcal{S}_{61})^3, (\mathcal{S}_{62})^4, (\mathcal{S}_{63})^3, (\mathcal{S}_{64})^4, (\mathcal{S}_{65})^4, (\mathcal{S}_{66})^3, (\mathcal{S}_{67})^3, (\mathcal{S}_{68})^6, \mathcal{S}_{69}, (\mathcal{S}_{70})^4, (\mathcal{S}_{72})^2, (\mathcal{S}_{73})^3, (\mathcal{S}_{74})^2, \mathcal{S}_{75}, (\mathcal{S}_{76})^2, (\mathcal{S}_{77})^2, \mathcal{S}_{78}, (\mathcal{S}_{79})^2, (\mathcal{S}_{80})^2, (\mathcal{S}_{82})^2, \mathcal{S}_{84}, (\mathcal{S}_{85})^3, (\mathcal{S}_{86})^2, \mathcal{S}_{87}, \mathcal{S}_{90}, (\mathcal{S}_{91})^2, (\mathcal{S}_{93})^3, \mathcal{S}_{94}, (\mathcal{S}_{97})^2, (\mathcal{S}_{100})^3, \mathcal{S}_{101}, \mathcal{S}_{102}, (\mathcal{S}_{106})^2, \mathcal{S}_{108}, (\mathcal{S}_{109})^2, (\mathcal{S}_{112})^2, \mathcal{S}_{113}, \mathcal{S}_{119}, (\mathcal{S}_{121})^2, \mathcal{S}_{129}, (\mathcal{S}_{131})^2, \mathcal{S}_{132}, \mathcal{S}_{137}, \mathcal{S}_{138}, \mathcal{S}_{141}, \mathcal{S}_{146}, \mathcal{S}_{154}, (\mathcal{S}_{156})^2, \mathcal{S}_{157}, \mathcal{S}_{158}, \mathcal{S}_{160}, \mathcal{S}_{184}, \mathcal{S}_{243}, \mathcal{S}_{262}, \mathcal{S}_{356}, \mathcal{S}_{358}, \mathcal{S}_{360}$
t1722	24,389.5	89.5	$(\mathcal{S}_2)^{1822}, (\mathcal{S}_3)^{977}, (\mathcal{S}_4)^{583}, (\mathcal{S}_5)^{393}, (\mathcal{S}_6)^{314}, (\mathcal{S}_7)^{187}, (\mathcal{S}_8)^{153}, (\mathcal{S}_9)^{102}, (\mathcal{S}_{10})^{93}, (\mathcal{S}_{11})^{75}, (\mathcal{S}_{12})^{65}, (\mathcal{S}_{13})^{47}, (\mathcal{S}_{14})^{37}, (\mathcal{S}_{15})^{35}, (\mathcal{S}_{16})^{31}, (\mathcal{S}_{17})^{33}, (\mathcal{S}_{18})^{21}, (\mathcal{S}_{19})^{24}, (\mathcal{S}_{20})^{15}, (\mathcal{S}_{21})^{13}, (\mathcal{S}_{22})^{22}, (\mathcal{S}_{23})^{14}, (\mathcal{S}_{24})^{10}, (\mathcal{S}_{25})^6, (\mathcal{S}_{26})^{11}, (\mathcal{S}_{27})^5, (\mathcal{S}_{28})^9, (\mathcal{S}_{29})^6, (\mathcal{S}_{30})^5, (\mathcal{S}_{31})^4, (\mathcal{S}_{32})^6, (\mathcal{S}_{33})^3, (\mathcal{S}_{34})^7, (\mathcal{S}_{35})^7, (\mathcal{S}_{36})^5, (\mathcal{S}_{37})^8, (\mathcal{S}_{38})^3, (\mathcal{S}_{39})^6, (\mathcal{S}_{40})^4, (\mathcal{S}_{41})^4, (\mathcal{S}_{42})^2, (\mathcal{S}_{43})^2, \mathcal{S}_{44}, (\mathcal{S}_{45})^2, (\mathcal{S}_{46})^4, (\mathcal{S}_{47})^2, (\mathcal{S}_{48})^3, (\mathcal{S}_{49})^2, \mathcal{S}_{50}, \mathcal{S}_{51}, (\mathcal{S}_{52})^3, \mathcal{S}_{53}, \mathcal{S}_{54}, \mathcal{S}_{55}, \mathcal{S}_{56}, (\mathcal{S}_{57})^4, (\mathcal{S}_{58})^2, \mathcal{S}_{59}, \mathcal{S}_{63}, (\mathcal{S}_{65})^2, \mathcal{S}_{66}, \mathcal{S}_{67}, \mathcal{S}_{68}, \mathcal{S}_{69}, \mathcal{S}_{73}, \mathcal{S}_{74}, \mathcal{S}_{76}, \mathcal{S}_{79}, (\mathcal{S}_{80})^3, \mathcal{S}_{82}, \mathcal{S}_{83}, \mathcal{S}_{84}, (\mathcal{S}_{86})^2, \mathcal{S}_{87}, \mathcal{S}_{89}, (\mathcal{S}_{97})^2, \mathcal{S}_{98}, \mathcal{S}_{100}, \mathcal{S}_{123}, \mathcal{S}_{133}, \mathcal{S}_{148}, \mathcal{S}_{158}, (\mathcal{S}_{159})^2, \mathcal{S}_{178}, \mathcal{S}_{185}, \mathcal{S}_{221}, \mathcal{S}_{226}, \mathcal{S}_{292}$
tanglegram1	68,390.4	98.5	$(\mathcal{S}_2)^{220}, (\mathcal{S}_3)^{67}, (\mathcal{S}_4)^{53}, (\mathcal{S}_5)^{24}, (\mathcal{S}_6)^{31}, (\mathcal{S}_7)^{21}, (\mathcal{S}_8)^{28}, (\mathcal{S}_9)^{28}, (\mathcal{S}_{10})^{19}, (\mathcal{S}_{11})^6, (\mathcal{S}_{12})^{16}, (\mathcal{S}_{13})^{11}, (\mathcal{S}_{14})^6, (\mathcal{S}_{15})^5, (\mathcal{S}_{16})^{12}, (\mathcal{S}_{18})^6, \mathcal{S}_{19}, (\mathcal{S}_{20})^6, (\mathcal{S}_{21})^4, \mathcal{S}_{22}, (\mathcal{S}_{23})^2, (\mathcal{S}_{24})^8, (\mathcal{S}_{25})^2, (\mathcal{S}_{26})^3, (\mathcal{S}_{27})^4, (\mathcal{S}_{28})^2, \mathcal{S}_{29}, (\mathcal{S}_{30})^6, \mathcal{S}_{31}, (\mathcal{S}_{32})^{10}, (\mathcal{S}_{34})^2, (\mathcal{S}_{35})^4, \mathcal{S}_{36}, (\mathcal{S}_{38})^2, (\mathcal{S}_{39})^3, (\mathcal{S}_{40})^2, (\mathcal{S}_{42})^3, \mathcal{S}_{44}, \mathcal{S}_{45}, (\mathcal{S}_{48})^2, (\mathcal{S}_{49})^2, \mathcal{S}_{52}, \mathcal{S}_{53}, (\mathcal{S}_{54})^3, (\mathcal{S}_{55})^2, (\mathcal{S}_{56})^3, \mathcal{S}_{57}, (\mathcal{S}_{58})^4, \mathcal{S}_{59}, \mathcal{S}_{60}, (\mathcal{S}_{62})^2, (\mathcal{S}_{64})^3, \mathcal{S}_{65}, \mathcal{S}_{67}, \mathcal{S}_{68}, (\mathcal{S}_{70})^4, (\mathcal{S}_{72})^4, \mathcal{S}_{73}, \mathcal{S}_{76}, (\mathcal{S}_{77})^2, \mathcal{S}_{78}, \mathcal{S}_{81}, \mathcal{S}_{84}, \mathcal{S}_{85}, \mathcal{S}_{87}, \mathcal{S}_{88}, (\mathcal{S}_{91})^2, \mathcal{S}_{96}, \mathcal{S}_{105}, \mathcal{S}_{108}, \mathcal{S}_{110}, \mathcal{S}_{111}, (\mathcal{S}_{112})^2, \mathcal{S}_{117}, \mathcal{S}_{120}, \mathcal{S}_{124}, \mathcal{S}_{126}, (\mathcal{S}_{128})^4, \mathcal{S}_{130}, \mathcal{S}_{138}, \mathcal{S}_{140}, (\mathcal{S}_{144})^2, \mathcal{S}_{149}, (\mathcal{S}_{160})^2, \mathcal{S}_{161}, \mathcal{S}_{162}, \mathcal{S}_{168}, \mathcal{S}_{174}, \mathcal{S}_{185}, \mathcal{S}_{186}, \mathcal{S}_{196}, \mathcal{S}_{202}, (\mathcal{S}_{204})^2, \mathcal{S}_{214}, \mathcal{S}_{216}, \mathcal{S}_{229}, \mathcal{S}_{234}, \mathcal{S}_{240}, \mathcal{S}_{250}, \mathcal{S}_{273}, \mathcal{S}_{285}, \mathcal{S}_{290}, \mathcal{S}_{292}, \mathcal{S}_{309}, \mathcal{S}_{385}, \mathcal{S}_{386}, \mathcal{S}_{410}, \mathcal{S}_{432}, \mathcal{S}_{441}, \mathcal{S}_{444}, \mathcal{S}_{446}, \mathcal{S}_{464}, \mathcal{S}_{474}, \mathcal{S}_{515}, \mathcal{S}_{537}, \mathcal{S}_{581}, \mathcal{S}_{584}, (\mathcal{S}_{609})^2, \mathcal{S}_{640}, \mathcal{S}_{665}, \mathcal{S}_{791}, \mathcal{S}_{845}, \mathcal{S}_{1008}, \mathcal{S}_{1020}, \mathcal{S}_{1307}, \mathcal{S}_{1320}, \mathcal{S}_{1722}, \mathcal{S}_{1886}$

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name	$\log_{10}  G $	#vars	factors
tanglegram2	6046.4	94.4	$(\mathcal{S}_2)^{81}, (\mathcal{S}_3)^{26}, (\mathcal{S}_4)^{27}, (\mathcal{S}_5)^{11}, (\mathcal{S}_6)^{12}, (\mathcal{S}_7)^3, (\mathcal{S}_8)^9,$ $(\mathcal{S}_9)^9, (\mathcal{S}_{10})^{10}, (\mathcal{S}_{11})^6, (\mathcal{S}_{12})^7, (\mathcal{S}_{14})^4, (\mathcal{S}_{15})^{10}, (\mathcal{S}_{16})^3,$ $\mathcal{S}_{19}, (\mathcal{S}_{20})^6, (\mathcal{S}_{22})^7, \mathcal{S}_{25}, (\mathcal{S}_{27})^2, \mathcal{S}_{28}, \mathcal{S}_{30}, (\mathcal{S}_{31})^2,$ $(\mathcal{S}_{36})^2, \mathcal{S}_{40}, \mathcal{S}_{41}, \mathcal{S}_{44}, (\mathcal{S}_{48})^3, \mathcal{S}_{49}, \mathcal{S}_{50}, \mathcal{S}_{55}, \mathcal{S}_{59}, (\mathcal{S}_{60})^2,$ $\mathcal{S}_{89}, \mathcal{S}_{98}, \mathcal{S}_{108}, \mathcal{S}_{112}, \mathcal{S}_{130}, \mathcal{S}_{154}, \mathcal{S}_{193}, \mathcal{S}_{236}, \mathcal{S}_{287}, \mathcal{S}_{297},$ $\mathcal{S}_{425}$
timtab1	0.4	0.5	$\mathcal{S}_2$
toll-like	123.2	28.4	$(\mathcal{S}_2)^{409}$
unitcal_7	303.5	7.8	$(\mathcal{S}_2)^{1008}$
van	16,059.6	39.5	$\mathcal{S}_{4928}$
vpphard2	335,264.2	97.8	$(\mathcal{S}_2)^{2471}, (\mathcal{S}_3)^{3935}, (\mathcal{S}_4)^{3396}, (\mathcal{S}_5)^{2071}, (\mathcal{S}_6)^{729},$ $(\mathcal{S}_7)^{283}, (\mathcal{S}_8)^{135}, (\mathcal{S}_9)^{115}, (\mathcal{S}_{10})^{97}, (\mathcal{S}_{11})^{53}, (\mathcal{S}_{12})^{108},$ $(\mathcal{S}_{13})^{134}, (\mathcal{S}_{14})^{88}, (\mathcal{S}_{15})^{97}, (\mathcal{S}_{16})^{34}, (\mathcal{S}_{17})^{94}, (\mathcal{S}_{18})^{41},$ $(\mathcal{S}_{19})^{61}, (\mathcal{S}_{20})^{33}, (\mathcal{S}_{21})^{66}, (\mathcal{S}_{22})^{32}, (\mathcal{S}_{23})^{61}, (\mathcal{S}_{24})^{49},$ $(\mathcal{S}_{25})^{24}, (\mathcal{S}_{26})^{45}, (\mathcal{S}_{27})^{23}, (\mathcal{S}_{28})^{66}, (\mathcal{S}_{29})^{20}, (\mathcal{S}_{30})^{44},$ $(\mathcal{S}_{31})^{50}, (\mathcal{S}_{32})^{52}, (\mathcal{S}_{33})^{24}, (\mathcal{S}_{34})^{18}, (\mathcal{S}_{35})^{11}, (\mathcal{S}_{36})^{25},$ $(\mathcal{S}_{37})^{13}, (\mathcal{S}_{38})^{10}, (\mathcal{S}_{39})^{34}, (\mathcal{S}_{40})^{26}, (\mathcal{S}_{41})^{32}, (\mathcal{S}_{42})^{22},$ $(\mathcal{S}_{43})^{22}, (\mathcal{S}_{44})^{18}, (\mathcal{S}_{45})^{28}, (\mathcal{S}_{46})^{18}, (\mathcal{S}_{47})^{21}, (\mathcal{S}_{48})^3,$ $(\mathcal{S}_{49})^{31}, (\mathcal{S}_{50})^{24}, (\mathcal{S}_{51})^{11}, (\mathcal{S}_{52})^{23}, (\mathcal{S}_{53})^{10}, (\mathcal{S}_{54})^{16},$ $(\mathcal{S}_{55})^{33}, (\mathcal{S}_{56})^8, (\mathcal{S}_{57})^{18}, (\mathcal{S}_{58})^{30}, (\mathcal{S}_{59})^8, (\mathcal{S}_{60})^{13},$ $(\mathcal{S}_{61})^{26}, (\mathcal{S}_{62})^{33}, (\mathcal{S}_{63})^{13}, (\mathcal{S}_{64})^{10}, (\mathcal{S}_{66})^8, (\mathcal{S}_{67})^{28},$ $(\mathcal{S}_{68})^{13}, (\mathcal{S}_{69})^5, (\mathcal{S}_{70})^{15}, (\mathcal{S}_{71})^8, (\mathcal{S}_{72})^8, (\mathcal{S}_{73})^5,$ $(\mathcal{S}_{74})^{13}, (\mathcal{S}_{75})^{10}, (\mathcal{S}_{76})^{21}, (\mathcal{S}_{77})^{10}, (\mathcal{S}_{78})^8, (\mathcal{S}_{79})^8,$ $(\mathcal{S}_{80})^8, (\mathcal{S}_{81})^5, (\mathcal{S}_{82})^5, (\mathcal{S}_{84})^8, (\mathcal{S}_{86})^5, (\mathcal{S}_{87})^5, (\mathcal{S}_{88})^5,$ $(\mathcal{S}_{89})^{10}, (\mathcal{S}_{90})^{15}, (\mathcal{S}_{92})^5, (\mathcal{S}_{93})^3, (\mathcal{S}_{94})^{15}, (\mathcal{S}_{95})^5,$ $(\mathcal{S}_{96})^5, (\mathcal{S}_{97})^{20}, (\mathcal{S}_{98})^{10}, (\mathcal{S}_{99})^{10}, (\mathcal{S}_{101})^{15}, (\mathcal{S}_{103})^5,$ $(\mathcal{S}_{108})^5, (\mathcal{S}_{113})^5, (\mathcal{S}_{116})^{10}, (\mathcal{S}_{118})^5, (\mathcal{S}_{120})^{10}, (\mathcal{S}_{121})^{13},$ $(\mathcal{S}_{128})^{20}, (\mathcal{S}_{130})^{20}, (\mathcal{S}_{131})^5, (\mathcal{S}_{136})^5, (\mathcal{S}_{137})^5, (\mathcal{S}_{140})^5,$ $(\mathcal{S}_{142})^5, (\mathcal{S}_{144})^5, (\mathcal{S}_{146})^5, (\mathcal{S}_{150})^5, (\mathcal{S}_{152})^5, (\mathcal{S}_{154})^{15},$ $(\mathcal{S}_{156})^5, (\mathcal{S}_{159})^5, \mathcal{S}_{42851}$
vpphard	39,972.4	86.7	$(\mathcal{S}_2)^{3771}, (\mathcal{S}_3)^{3343}, (\mathcal{S}_4)^{1602}, (\mathcal{S}_5)^{354}, (\mathcal{S}_6)^{140}, (\mathcal{S}_7)^{96},$ $(\mathcal{S}_8)^{79}, (\mathcal{S}_9)^{58}, (\mathcal{S}_{10})^{47}, (\mathcal{S}_{11})^{25}, (\mathcal{S}_{12})^{42}, (\mathcal{S}_{13})^{16},$ $(\mathcal{S}_{14})^{24}, (\mathcal{S}_{15})^{26}, (\mathcal{S}_{16})^{15}, (\mathcal{S}_{17})^8, (\mathcal{S}_{18})^{10}, (\mathcal{S}_{19})^{13},$ $(\mathcal{S}_{23})^5, (\mathcal{S}_{26})^3, (\mathcal{S}_{30})^3, (\mathcal{S}_{42})^5, (\mathcal{S}_{45})^3, (\mathcal{S}_{49})^{10}, (\mathcal{S}_{50})^5,$ $(\mathcal{S}_{51})^{10}, (\mathcal{S}_{53})^{10}, (\mathcal{S}_{56})^{10}, (\mathcal{S}_{57})^{25}, (\mathcal{S}_{59})^{10}, (\mathcal{S}_{60})^5,$ $(\mathcal{S}_{62})^5, (\mathcal{S}_{63})^5, (\mathcal{S}_{67})^{10}, (\mathcal{S}_{69})^5, (\mathcal{S}_{83})^5, \mathcal{S}_{5912}$

TABLE 6. List of (possibly) symmetric MIPLIB 2010 instances after presolving. Additionally the  $\log_{10}$  of the order of their symmetry groups and the number of variables involved in a nontrivial symmetry is shown.

name	$\log_{10}  G $	#vars	factors
30_70_45_095_100	0.4	0.0	$S_2$
acc-tight4	2.9	98.2	1 unknown
ash608gpia-3col	0.8	100.0	$M(S_3, 3651)$
bab3	1.0	9.4	$(M(S_2, 12316))^3$
bab5	1.6	22.2	$(M(S_2, 952))^5$
berlin_5_8_0	0.4	7.5	$M(S_2, 74)$
biella1	213.3	11.6	$(S_2)^{262}, (S_3)^{28}, (S_4)^{18}, (S_5)^{13}, (S_6)^2, (S_7)^5, S_8, (S_9)^2, (S_{10})^2, S_{11}$
circ10-3	1.4	100.0	1 unknown
co-100	0.7	0.0	$(S_2)^2$
core2536-691	3.4	2.2	$M(S_2, 12), M(S_2, 16), M(S_2, 20), M(S_2, 22), M(S_2, 24), M(S_2, 28), (M(S_2, 30))^2, 1 \text{ unknown}$
core4872-1529	2.2	0.6	$(M(S_2, 4))^2, (M(S_2, 6))^2, M(S_2, 12), M(S_2, 28), M(S_2, 30)$
cov1075	6.6	100.0	1 unknown
dc1c	352.3	19.7	$(S_2)^{819}, (S_3)^{64}, (S_4)^{23}, (S_5)^2, (S_6)^7$
dc1l	510.0	7.9	$(S_2)^{989}, (S_3)^{134}, (S_4)^{44}, (S_5)^{15}, (S_6)^3, (S_7)^2$
dolom1	377.4	18.7	$(S_2)^{906}, (S_3)^{71}, (S_4)^{24}, (S_5)^6, S_7$
ds-big	15.1	0.1	$(S_2)^{50}$
enlight13	0.4	92.3	$M(S_2, 312)$
enlight14	0.4	92.9	$M(S_2, 364)$
enlight15	0.4	93.3	$M(S_2, 420)$
enlight16	0.4	93.8	$M(S_2, 480)$
enlight9	0.4	88.9	$M(S_2, 144)$
ex10	2.6	100.0	1 unknown
ex9	2.6	100.0	1 unknown
glass4	0.4	0.6	$S_2$
go19	1.0	99.7	1 unknown
lectsched-1	71.6	4.7	$(S_2)^{92}, (S_3)^{26}, (S_4)^5, (S_5)^4, S_6, S_9$
lectsched-1-obj	244.5	17.1	$(S_2)^{200}, (S_3)^{33}, (S_4)^7, (S_5)^7, (S_6)^2, S_7, S_9, (M(S_2, 4))^{227}, (M(S_3, 6))^{22}, (M(S_4, 8))^9, (M(S_5, 10))^4, M(S_6, 12), M(S_7, 14), M(S_{10}, 20)$
lectsched-2	42.1	4.7	$(S_2)^{61}, (S_3)^7, (S_4)^6, (S_5)^3, S_7$
lectsched-3	74.7	4.9	$(S_2)^{77}, (S_3)^{31}, (S_4)^5, (S_5)^4, S_6, S_7, S_9$
lectsched-4-obj	39.5	11.1	$(S_2)^{36}, (S_3)^5, (S_4)^3, (S_5)^2, (M(S_2, 4))^{35}, (M(S_3, 6))^4, (M(S_4, 8))^2$
macrophage	58.8	24.5	$(S_2)^{141}, (M(S_2, 4))^{13}, (M(S_2, 6))^8, (M(S_2, 12))^2, M(S_2, 14), M(S_4, 24), M(S_6, 48), M(S_2 \times S_2, 14), 2 \text{ unknown}$
map06	12.3	0.5	$(S_2)^{38}, S_3$
map10	12.3	0.5	$(S_2)^{38}, S_3$
map14	12.3	0.5	$(S_2)^{38}, S_3$
map18	12.3	0.5	$(S_2)^{38}, S_3$
map20	12.3	0.5	$(S_2)^{38}, S_3$
maxgasflow	1.4	1.2	$M(S_2, 12), M(S_2, 24), M(S_3, 18)$
mcsched	4.6	6.0	$(M(S_2, 6))^{15}$
methanosarcina	762.4	64.7	$(S_2)^{2504}, M(S_2 \wr S_2, 28), 4 \text{ unknown}$
mkc	76.9	63.3	$(S_2)^{16}, (S_3)^6, (S_4)^3, (S_5)^2, S_7, S_8, (M(S_2, 4))^9, (M(S_2, 6))^4, (M(S_2, 10))^2, (M(S_2, 12))^2, M(S_2, 14), (M(S_3, 6))^5, (M(S_3, 9))^2, (M(S_3, 12))^3, M(S_3, 18), M(S_4, 8), M(S_4, 20), M(S_6, 24), 5 \text{ unknown}$

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name	$\log_{10}  G $	#vars	factors
msc98-ip	1.3	0.9	$M(\mathcal{S}_2, 20), M(\mathcal{S}_2, 22), M(\mathcal{S}_2, 34), M(\mathcal{S}_2, 38)$
mzzv11	0.4	0.0	$\mathcal{S}_2$
n3seq24	9.9	11.4	$M(\mathcal{S}_2, 48), (M(\mathcal{S}_2, 50))^4, (M(\mathcal{S}_2, 54))^2, (M(\mathcal{S}_2, 62))^4,$ $M(\mathcal{S}_2, 72), (M(\mathcal{S}_2, 90))^4, (M(\mathcal{S}_2, 110))^2, M(\mathcal{S}_2, 142),$ $(M(\mathcal{S}_2, 180))^2, M(\mathcal{S}_2, 296), (M(\mathcal{S}_2, 490))^2,$ $M(\mathcal{S}_2, 798), M(\mathcal{S}_2, 1018), M(\mathcal{S}_2, 3878), M(\mathcal{S}_2, 4772),$ $M(\mathcal{S}_4, 180)$
n4-3	0.7	6.5	$(M(\mathcal{S}_2, 100))^2$
n9-3	1.7	9.9	$(M(\mathcal{S}_2, 156))^3, M(\mathcal{S}_3, 234)$
neos-1109824	1.7	100.0	1 unknown
neos-1171692	19.8	100.0	$M(\mathcal{S}_{21}, 1638)$
neos-1171737	32.5	100.0	$M(\mathcal{S}_{30}, 2340)$
neos-1224597	157.6	100.0	$(\mathcal{S}_{10})^{20}, 1 \text{ unknown}$
neos-1311124	19.8	100.0	$M(\mathcal{S}_{21}, 672)$
neos-1337307	3.8	87.5	$M(\mathcal{S}_7, 2485)$
neos-1396125	0.8	78.2	$M(\mathcal{S}_3, 906)$
neos13	0.4	0.1	$\mathcal{S}_2$
neos-1426635	6.6	100.0	$M(\mathcal{S}_{10}, 320)$
neos-1426662	13.4	100.0	$M(\mathcal{S}_{16}, 512)$
neos-1429212	0.7	0.3	$\mathcal{S}_2, M(\mathcal{S}_2, 134)$
neos-1436709	9.9	100.0	$M(\mathcal{S}_{13}, 416)$
neos-1440460	5.6	100.0	$M(\mathcal{S}_9, 288)$
neos-1442119	11.0	100.0	$M(\mathcal{S}_{14}, 448)$
neos-1442657	8.7	100.0	$M(\mathcal{S}_{12}, 384)$
neos-1620770	4.1	97.5	1 unknown
neos18	28.0	10.5	$(\mathcal{S}_2)^3, (\mathcal{S}_3)^8, \mathcal{S}_4, (\mathcal{S}_5)^3, \mathcal{S}_7, (\mathcal{S}_8)^2, M(\mathcal{S}_2, 8)$
neos-476283	3.7	0.7	$(M(\mathcal{S}_2, 4))^{10}, (M(\mathcal{S}_2, 24))^2$
neos-555424	89.3	100.0	2 unknown
neos-631710	313.7	99.7	$M(\mathcal{S}_{11}, 6094), M(\mathcal{S}_{15}, 8325), M(\mathcal{S}_{15}, 8340),$ $M(\mathcal{S}_{16}, 8864), M(\mathcal{S}_{18}, 9990), M(\mathcal{S}_{19}, 10564),$ $M(\mathcal{S}_{24}, 13344), M(\mathcal{S}_{28}, 15540), M(\mathcal{S}_{33}, 18282),$ $M(\mathcal{S}_{39}, 21645), M(\mathcal{S}_{40}, 22160), M(\mathcal{S}_{42}, 23352)$
neos6	6.6	98.1	$M(\mathcal{S}_{10}, 8120)$
neos-738098	21.0	95.1	1 unknown
neos-777800	1.0	100.0	1 unknown
neos-785912	9.8	91.3	1 unknown
neos788725	0.7	100.0	1 unknown
neos808444	0.4	11.5	$M(\mathcal{S}_2, 2288)$
neos-820146	12.6	100.0	1 unknown
neos-820157	10.9	100.0	1 unknown
neos-824661	306.9	100.0	$M(\mathcal{S}_{170}, 29920)$
neos-824695	306.9	100.0	$M(\mathcal{S}_{170}, 15640)$
neos-826650	35.8	99.2	1 unknown
neos-826694	138.2	99.6	$M(\mathcal{S}_{90}, 15210)$
neos-826812	138.2	100.0	$M(\mathcal{S}_{90}, 15210)$
neos-826841	35.8	100.0	1 unknown
neos-849702	3.7	100.0	1 unknown
neos-859770	27.0	91.4	$(\mathcal{S}_2)^{14}, 1 \text{ unknown}$
neos-885086	56.1	100.0	$M(\mathcal{S}_{45}, 4860)$
neos-885524	1300.7	99.2	$(\mathcal{S}_2)^{26}, 1 \text{ unknown}$
neos-911880	7.6	100.0	$(M(\mathcal{S}_3, 111))^6, M(\mathcal{S}_6, 222)$
neos-932816	1.4	83.7	$M(\mathcal{S}_4, 5328)$
neos-933638	11.0	85.0	$M(\mathcal{S}_2, 270), 4 \text{ unknown}$

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name	$\log_{10}  G $	#vars	factors
neos-933966	11.9	95.2	$M(\mathcal{S}_2, 260), M(\mathcal{S}_3, 390)$ , 3 unknown
neos-934278	9.6	79.3	$M(\mathcal{S}_2, 262), M(\mathcal{S}_2, 270), M(\mathcal{S}_2, 278)$ , 5 unknown
neos-935627	8.9	71.2	$M(\mathcal{S}_2, 236)$ , 5 unknown
neos-935769	9.3	77.4	$M(\mathcal{S}_3, 354), M(\mathcal{S}_3, 360), M(\mathcal{S}_3, 387), M(\mathcal{S}_3, 405)$ , 5 unknown
neos-937511	9.3	77.0	$M(\mathcal{S}_3, 408), M(\mathcal{S}_3, 423), M(\mathcal{S}_3, 465), M(\mathcal{S}_3, 480)$ , 5 unknown
neos-937815	7.8	68.4	$M(\mathcal{S}_2, 264), M(\mathcal{S}_2, 266), M(\mathcal{S}_2, 276)$ , 5 unknown
neos-941262	6.4	71.9	$M(\mathcal{S}_2, 170), M(\mathcal{S}_2, 204), M(\mathcal{S}_2, 220), M(\mathcal{S}_2, 248)$ , $(M(\mathcal{S}_2, 282))^2$ , $M(\mathcal{S}_2, 292), M(\mathcal{S}_2, 298), M(\mathcal{S}_2, 310)$ , 4 unknown
neos-941313	32.5	100.0	$M(\mathcal{S}_{30}, 116400)$
neos-948126	7.2	75.8	$M(\mathcal{S}_2, 204), M(\mathcal{S}_2, 222), M(\mathcal{S}_2, 234), M(\mathcal{S}_2, 238)$ , $M(\mathcal{S}_2, 282), M(\mathcal{S}_2, 298)$ , 5 unknown
neos-957389	51.9	79.9	$M(\mathcal{S}_2, 68), (M(\mathcal{S}_5, 240))^2$ , 1 unknown
neos-984165	6.9	72.8	$M(\mathcal{S}_2, 152), M(\mathcal{S}_2, 206), M(\mathcal{S}_2, 218), M(\mathcal{S}_2, 222)$ , $M(\mathcal{S}_2, 240), M(\mathcal{S}_2, 260), M(\mathcal{S}_2, 266), M(\mathcal{S}_2, 286)$ , 4 unknown
net12	1.3	1.2	$M(\mathcal{S}_2, 36), (M(\mathcal{S}_2, 38))^2, M(\mathcal{S}_2, 40)$
noswot	1.4	80.0	$M(\mathcal{S}_4, 96)$
ns1111636	48.0	100.0	$M(\mathcal{S}_{40}, 76880)$
ns1116954	11.7	99.9	1 unknown
ns1158817	375.0	100.0	$M(\mathcal{S}_{200}, 384400)$
ns1208400	2.8	97.7	1 unknown
ns1456591	3.5	59.8	$(M(\mathcal{S}_2, 670))^2, M(\mathcal{S}_3, 1005), M(\mathcal{S}_5, 1675)$
ns1702808	2.9	100.0	$M(\mathcal{S}_6, 744)$
ns1758913	0.4	3.0	$M(\mathcal{S}_2, 536)$
ns1853823	0.7	56.2	1 unknown
ns1854840	2.0	88.0	1 unknown
ns1856153	0.4	95.9	$M(\mathcal{S}_2, 9464)$
ns1905797	0.8	75.0	$M(\mathcal{S}_3, 13461)$
ns1905800	1.1	100.0	1 unknown
ns1952667	4.9	0.2	$(\mathcal{S}_2)^{16}$
ns2118727	4.0	0.4	$(M(\mathcal{S}_2, 4))^{13}$
ns2124243	4133.5	100.0	1 unknown
ns2137859	88.9	92.8	1 unknown
ns4-pr9	0.7	4.6	$(M(\mathcal{S}_2, 156))^2$
nsr8k	65.7	1.1	$(\mathcal{S}_2)^{200}, (\mathcal{S}_3)^7$
nu60-pr9	0.7	4.6	$(M(\mathcal{S}_2, 156))^2$
p2m2p1m1p0n100	32.1	92.0	$(\mathcal{S}_2)^6, (\mathcal{S}_3)^8, (\mathcal{S}_4)^4, (\mathcal{S}_5)^3, (\mathcal{S}_6)^3, \mathcal{S}_7$
p6b	1.4	100.0	1 unknown
pigeon-10	4.7	92.3	1 unknown
pigeon-11	5.6	93.5	1 unknown
pigeon-12	6.6	94.4	1 unknown
pigeon-13	7.7	95.2	1 unknown
pigeon-19	14.6	97.6	1 unknown
protfold	0.7	98.1	1 unknown
pw-myciel4	1.1	86.9	1 unknown
qiu	1.7	100.0	1 unknown
queens-30	1.0	100.0	1 unknown
ramos3	9.2	100.0	1 unknown
rvb-sub	2.5	0.0	$(\mathcal{S}_2)^8$
sct1	132.6	44.1	$\mathcal{S}_2$ , 1 unknown
sct32	103.0	37.9	$(\mathcal{S}_2)^{29}, M(\mathcal{S}_2, 6), (M(\mathcal{S}_2, 14))^6, (M(\mathcal{S}_2, 16))^2$ , $(M(\mathcal{S}_2, 26))^4, (M(\mathcal{S}_2, 28))^{11}, (M(\mathcal{S}_3, 21))^3, M(\mathcal{S}_3, 39)$ , $(M(\mathcal{S}_3, 42))^4, (M(\mathcal{S}_4, 28))^2, M(\mathcal{S}_4, 52), (M(\mathcal{S}_4, 56))^4$ , $(M(\mathcal{S}_5, 70))^3, (M(\mathcal{S}_6, 84))^2, M(\mathcal{S}_7, 98), M(\mathcal{S}_8, 104)$ , $M(\mathcal{S}_{12}, 84), M(\mathcal{S}_{20}, 260), M(\mathcal{S}_{24}, 336)$

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name	$\log_{10}  G $	#vars	factors
sct5	416.9	68.9	$M(\mathcal{S}_2, 8), M(\mathcal{S}_3, 30), 1 \text{ unknown}$
seymour-disj-10	15.3	7.8	$(\mathcal{S}_2)^{30}, (\mathcal{S}_3)^4, (\mathcal{S}_4)^2, M(\mathcal{S}_2, 4)$
seymour	0.7	0.4	$(\mathcal{S}_2)^2$
shipsched	88.6	3.9	$(\mathcal{S}_2)^6, (\mathcal{S}_3)^{20}, (\mathcal{S}_4)^{13}, \mathcal{S}_5, \mathcal{S}_6, \mathcal{S}_7, (\mathcal{S}_8)^2, (\mathcal{S}_9)^5, \mathcal{S}_{11}$
shs1023	0.4	12.7	$M(\mathcal{S}_2, 54606)$
siena1	95.8	4.4	$(\mathcal{S}_2)^{275}, (\mathcal{S}_3)^{14}, \mathcal{S}_5$
sing161	0.7	10.5	$M(\mathcal{S}_2, 16286), M(\mathcal{S}_2, 32482)$
sing245	0.4	6.0	$M(\mathcal{S}_2, 8844)$
sing2	0.4	14.5	$M(\mathcal{S}_2, 4312)$
sts405	7.3	100.0	1 unknown
sts729	19.9	100.0	1 unknown
tanglegram1	—	—	—
tanglegram2	5814.9	95.4	$(\mathcal{S}_2)^{41}, (\mathcal{S}_3)^{23}, (\mathcal{S}_4)^{24}, (\mathcal{S}_5)^{11}, (\mathcal{S}_6)^{10}, (\mathcal{S}_7)^3, (\mathcal{S}_8)^8, (\mathcal{S}_9)^9, (\mathcal{S}_{10})^6, (\mathcal{S}_{11})^6, (\mathcal{S}_{12})^7, (\mathcal{S}_{14})^4, (\mathcal{S}_{15})^9, (\mathcal{S}_{16})^3, \mathcal{S}_{19}, (\mathcal{S}_{20})^6, (\mathcal{S}_{22})^7, \mathcal{S}_{25}, (\mathcal{S}_{27})^2, \mathcal{S}_{28}, \mathcal{S}_{30}, (\mathcal{S}_{31})^2, (\mathcal{S}_{36})^2, \mathcal{S}_{40}, \mathcal{S}_{41}, \mathcal{S}_{44}, (\mathcal{S}_{48})^3, \mathcal{S}_{49}, \mathcal{S}_{50}, \mathcal{S}_{55}, \mathcal{S}_{59}, (\mathcal{S}_{60})^2, \mathcal{S}_{89}, \mathcal{S}_{98}, \mathcal{S}_{108}, \mathcal{S}_{130}, \mathcal{S}_{154}, \mathcal{S}_{193}, \mathcal{S}_{236}, \mathcal{S}_{287}, \mathcal{S}_{297}, \mathcal{S}_{425}, (M(\mathcal{S}_2, 4))^3, (M(\mathcal{S}_3, 6))^2, M(\mathcal{S}_5, 10), 1 \text{ unknown}$
timtab1	0.4	1.0	$\mathcal{S}_2$
toll-like	139.3	37.5	$(\mathcal{S}_2)^{229}, (M(\mathcal{S}_2, 4))^9, (M(\mathcal{S}_2, 6))^2, (M(\mathcal{S}_2, 8))^2, M(\mathcal{S}_2, 10), M(\mathcal{S}_2, 12), M(\mathcal{S}_2, 30), M(\mathcal{S}_5, 30), 9 \text{ unknown}$
uc-case11	0.4	6.5	$M(\mathcal{S}_2, 1008)$
uc-case3	0.7	15.7	$M(\mathcal{S}_2, 672), M(\mathcal{S}_2, 3696)$
uct-subprob	23.6	11.8	$(\mathcal{S}_2)^{14}, (\mathcal{S}_3)^3, \mathcal{S}_4, (M(\mathcal{S}_2, 4))^{43}, M(\mathcal{S}_2, 14), (M(\mathcal{S}_3, 6))^3$
unitcal_7	1.3	44.1	$M(\mathcal{S}_2, 1008), M(\mathcal{S}_2, 2628), M(\mathcal{S}_2, 2664), M(\mathcal{S}_2, 2666)$
usAbbrv-8-25_70	0.4	2.2	$M(\mathcal{S}_2, 46)$
vpphard2	—	—	—
vpphard	6024.9	95.9	$(\mathcal{S}_2)^{611}, (\mathcal{S}_3)^{549}, (\mathcal{S}_4)^{247}, (\mathcal{S}_5)^{45}, (\mathcal{S}_6)^2, (\mathcal{S}_7)^4, (\mathcal{S}_8)^3, (\mathcal{S}_9)^2, (\mathcal{S}_{10})^2, (\mathcal{S}_{11})^2, \mathcal{S}_{13}, \mathcal{S}_{15}, 12 \text{ unknown}$
wachplan	1.9	96.6	1 unknown
zib54-UUE	0.4	2.5	$M(\mathcal{S}_2, 126)$

TABLE 7. Results of orbit probing in combination with other methods: Given are the shifted geometric means of the number of branch-and-bound nodes (#nodes) and CPU time in seconds (time), the number of instances solved to optimality (#opt), the number of instances in which orbit probing was active (#act), the number of fixed variables, and the shifted geometric mean of the time used for probing including symmetry computation (OP-time).

Setting	#nodes	time	#opt	#act	#fixed	OP-time
<b>Margot1 (16):</b>						
default	253,743.3	1174.06	5	0	—	0.00
ISP-NST	2208.4	48.31	15	0	—	0.02
OP-ISP-NST	2366.3	50.25	15	6	<b>6</b>	0.02
OB-NST	2131.0	36.70	15	0	—	0.02
OP-OB-NST	2195.6	35.41	15	6	<b>6</b>	0.02
OF-NST	2313.5	49.47	15	0	—	0.02
OP-OF-NST	2398.2	50.55	15	6	<b>6</b>	0.02
<b>Margot2 (79):</b>						
default	969.7	32.64	65	0	—	0.00
ISP-NST	521.7	20.95	69	0	—	0.00
OP-ISP-NST	525.6	20.75	68	49	<b>96</b>	0.00
OB-NST	553.6	20.91	67	0	—	0.00
OP-OB-NST	548.4	20.52	67	49	<b>96</b>	0.00
OF-NST	518.0	21.03	68	0	—	0.00
OP-OF-NST	529.9	20.75	68	49	<b>96</b>	0.00
<b>M2003-sym (18):</b>						
default	81,955.4	568.43	13	0	—	0.00
ISP-NST	69,514.8	524.47	13	0	—	0.03
OP-ISP-NST	64,821.9	553.01	12	5	<b>32</b>	0.18
OB-NST	50,106.6	510.20	13	0	—	0.03
OP-OB-NST	48,541.5	537.90	12	5	<b>32</b>	0.18
OF-NST	69,554.7	523.52	13	0	—	0.03
OP-OF-NST	65,545.1	556.27	12	5	<b>32</b>	0.18
<b>M2010-sym (154):</b>						
default	9061.6	1084.21	60	0	—	0.00
ISP-NST	5090.2	925.03	70	0	—	1.21
OP-ISP-NST	4502.4	1006.90	67	43	<b>4420</b>	8.32
OB-NST	5168.0	1215.22	59	0	—	1.22
OP-OB-NST	4921.3	1264.54	57	43	<b>4420</b>	8.38
OF-NST	5301.0	917.86	70	0	—	1.22
OP-OF-NST	4869.0	1009.51	67	43	<b>4420</b>	8.32
<b>M2010-bench (87):</b>						
default	16,375.3	580.00	62	0	—	0.00
ISP-NST	10,778.4	467.62	67	0	—	0.52
OP-ISP-NST	10,916.7	477.14	67	12	<b>675</b>	2.05
OB-NST	13,550.8	629.97	61	0	—	0.52
OP-OB-NST	12,822.4	603.19	60	12	<b>675</b>	2.05
OF-NST	10,978.2	469.00	67	0	—	0.52
OP-OF-NST	11,052.9	479.39	66	12	<b>675</b>	2.05

TABLE 8. Comparison of different methods combined with orbit probing on instances solved to optimality for all selected settings.

	Margot1 (14)		Margot2 (65)		M2003-sym (12)		M2010-sym (49)		M2010-bench (54)	
Setting	#nodes	time	#nodes	time	#nodes	time	#nodes	time	#nodes	time
default	—	—	255.2	6.9	24,462.4	149.7	769.4	148.8	6831.6	290.8
ISP-NST	961.4	25.0	113.2	3.7	17,540.4	129.1	575.9	128.7	5901.5	273.3
OP-ISP-NST	1004.3	25.0	106.6	3.3	18,370.1	129.7	591.7	138.9	6001.4	273.7
OB-NST	881.9	16.2	116.8	3.5	14,439.5	122.6	867.5	173.9	6567.8	286.0
OP-OB-NST	954.0	16.5	114.4	3.3	14,771.9	123.2	814.3	183.5	6477.1	285.1
OF-NST	1026.8	26.1	111.6	3.7	17,579.0	128.6	569.3	126.4	5904.4	273.0
OP-OF-NST	1025.0	25.4	106.6	3.3	18,676.7	131.1	587.2	137.5	6023.7	274.9

TABLE 9. Margot1 testset: default settings

Name	#Nodes	Time
cov954	45,008	71.58
cov1053	1,541,115	3600.00
cov1054	194,958	3600.00
cov1075	850,208	3600.00
cov1076	834,009	3600.00
cov1174	863,569	3600.00
sts27-complemented	3917	1.04
sts45-complemented	50,962	21.52
sts63-complemented	6,479,241	3600.00
sts81-complemented	4,706,487	3600.01
cod83	1,395,801	3600.00
cod83r	512,427	1061.60
cod93	147,278	3600.00
cod93r	294,795	3600.00
cod105	36,640	3600.00
cod105r	4907	351.58
AM (# 16)	1,122,582.6	2569.21
GM (# 16)	252,979.5	985.14
SGM (# 16)	253,743.3	1174.06

TABLE 10. Margot2 testset: default settings

Name	#Nodes	Time
bibd1032.mylp	1	0.00
bibd1042.mylp	1	0.01
bibd1054.mylp	6	0.39
bibd1152.mylp	1	0.03
bibd1154.mylp	9	0.95
bibd1265.mylp	7	2.35
bibd1331.mylp	1	0.02
bibd1341.mylp	1	0.06
bibd1342.mylp	9	1.38
bibd1531.mylp	1	0.02
bibd6310.mylp	0	0.00
bibd632.mylp	1	0.00
bibd634.mylp	0	0.00
bibd636.mylp	0	0.00
bibd638.mylp	0	0.00
bibd731.mylp	1	0.01
bibd732.mylp	1	0.00
bibd733.mylp	1	0.00
bibd734.mylp	1	0.00
bibd735.mylp	0	0.00
bibd736.mylp	0	0.00
bibd737.mylp	0	0.00
bibd738.mylp	0	0.00
bibd739.mylp	0	0.00
bibd843.mylp	1	0.00
bibd846.mylp	1	0.00
bibd931.mylp	1	0.00
bibd932.mylp	1	0.00
bibd933.mylp	1	0.00
bibd943.mylp	1	0.02
ca36243	6	0.31
ca57245	641,231	2797.38
ca77247	519,277	3600.00
clique9	1	0.06
codbt03.mylp	1	0.01
codbt04.mylp	1	0.00
codbt05.mylp	745,026	3600.00
codbt06.mylp	13,968	3600.00
codbt15.mylp	50,540	3600.00
codbt24.mylp	239,921	3600.00
codbt33.mylp	792	18.68
codbt34.mylp	21,162	3600.01
codbt42.mylp	58,580	94.45
codbt43.mylp	92,695	3600.00
codbt52.mylp	322,872	3600.01
codbt60.mylp	776	0.78
codbt61.mylp	1393	13.47
codbt70.mylp	1	0.00
codbt71.mylp	153,105	3600.00
codbt80.mylp	49,416	328.59

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Name	#Nodes	Time
codbt90.mylp	48,912	3600.01
flosn52	10,191	15.12
flosn60	31,090	53.15
flosn84	369,930	768.47
jgt18	5515	3.00
jgt30	451,853	767.59
mered	72	8.06
O4_35	1	0.11
oa25332	1	0.01
oa25342	1	0.00
oa26332	77,735	3600.00
oa36243	1	0.09
oa56243	1	0.01
oa57245	9715	21.14
oa66234	1	0.00
oa67233	1	0.00
oa68233	1	0.08
oa76234	4	0.04
oa77233	1	0.00
oa77247	318,856	586.97
of5_14_7	2309	2.32
of7_18_9	1	0.06
ofsub9	2,526,599	3600.00
pa36243	3815	3.41
pa57245	758,594	3600.00
pa77247	795,256	3600.00
sts15.mylp	71	0.06
sts21.mylp	371	0.16
sts9.mylp	1	0.00
AM (# 79)	105,338.1	707.45
GM (# 79)	76.6	9.08
SGM (# 79)	969.7	32.64

TABLE 11. M2003-sym testset: default settings

Name	#Nodes	Time
fast0507	919	95.84
glass4	5,553,875	3600.03
harp2	8,542,522	3600.01
mas74	3,583,981	822.91
mas76	490,320	101.82
misc07	33,980	29.19
mkc	491,780	3600.00
mod011	1284	60.95
msc98-ip	7410	1271.94
mzzv11	2615	776.50
net12	2502	998.60
noswot	1,106,633	314.11
nsrand-ipx	595,604	3600.00
p2756	8	1.37
protfold	30,517	3600.00
qiu	11,561	68.91
rout	61,617	67.73
seymour	74,188	3600.00
swath	336,351	3600.00
timtab1	939,220	549.63
timtab2	4,078,109	3600.01
AM (# 21)	1,235,476.0	1617.12
GM (# 21)	71,505.4	498.03
SGM (# 21)	81,955.4	568.43

TABLE 12. M2010-sym testset: default settings

Name	#Nodes	Time
30_70_45_095_100	401	1043.92
acc-tight4	913	457.55
ash608gpia-3col	14	35.54
bab3	1	3600.25
bab5	40,565	3600.01
berlin_5_8_0	2,044,575	3600.01
biella1	7869	490.48
circ10-3	45	3599.98
co-100	10,393	3600.01
core2536-691	300	118.36
core4872-1529	927	3600.01
cov1075	845,863	3600.00
dc1c	9214	3600.01
dc1l	1159	3600.78
dolom1	2914	3600.00
enlight13	1	0.01
enlight14	1	0.02
enlight15	1	0.03
enlight16	1	0.03
enlight9	1	0.00
ex1010-pi	14,383	3600.01
ex10	1	1027.26
ex9	1	91.57
glass4	5,580,299	3600.03
go19	1,196,257	3600.00
iis-bupa-cov	106,797	3600.00
lectsched-1	1812	152.56
lectsched-1-obj	78,974	3600.01
lectsched-2	299	49.75
lectsched-3	1034	97.31
lectsched-4-obj	1362	54.05
macrophage	743,843	3600.01
map06	830	1035.97
map10	1571	1176.18
map14	821	789.41
map18	213	338.02
map20	323	303.95
maxgasflow	161,314	3600.00
mcsched	13,011	124.46
methanosarcina	39,348	3600.01
mkc	494,031	3600.00
msc98-ip	7410	1276.49
mzzv11	2615	776.97
n3seq24	32,770	3600.02
n4-3	36,950	514.91
n9-3	61,544	3600.00
neos-1109824	11,639	140.84
neos-1171692	201	32.11
neos-1171737	66,584	3600.00
neos-1224597	1	2.53

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Name	#Nodes	Time
neos-1311124	4,117,822	3600.02
neos-1337307	252,917	3600.00
neos-1396125	56,634	248.63
neos13	54,138	2610.00
neos-1426635	4,457,259	3600.05
neos-1426662	988,483	3600.01
neos-1429212	2028	3600.28
neos-1436709	1,614,963	3600.01
neos-1440460	2,638,634	3600.01
neos-1442119	1,412,757	3600.01
neos-1442657	1,702,287	3600.01
neos-1620770	321,483	3600.00
neos18	5323	55.38
neos-476283	863	587.64
neos-555424	531,391	3600.00
neos-738098	3719	3600.02
neos-777800	1	1.99
neos-785912	88	14.69
neos788725	136,996	265.18
neos808444	278	1979.20
neos-820146	1,634,133	3600.00
neos-820157	1,169,788	3600.00
neos-824661	1	21.99
neos-824695	4	14.87
neos-826650	118,990	3600.00
neos-826694	1	5.97
neos-826812	1	3.38
neos-826841	313,619	3600.00
neos-849702	216,041	3600.00
neos-859770	1	156.71
neos-885086	13,826	1387.08
neos-885524	13,238	3600.00
neos-911880	3,416,051	3600.02
neos-932816	66,730	3600.00
neos-933638	106	387.89
neos-933966	24	152.94
neos-934278	231	339.68
neos-935627	597	980.78
neos-935769	375	680.31
neos-937511	43	231.05
neos-937815	5825	3600.00
neos-941262	2989	3600.01
neos-941313	20	620.59
neos-948126	2212	3600.01
neos-957389	5	19.75
neos-984165	2261	3600.01
net12	1924	579.78
noswot	1,106,633	312.27
ns1111636	395	3600.01
ns1116954	15	3600.04
ns1158817	1	115.62
ns1208400	3309	569.02
ns1456591	61,236	3600.00
ns1702808	207,366	396.55

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Name	#Nodes	Time
ns1758913	3	3600.30
ns1853823	1	3591.20
ns1854840	1	3598.53
ns1905797	40,805	3600.01
ns1905800	256,332	3600.00
ns1952667	13,279	2369.27
ns2118727	626	3600.00
ns2124243	2420	3600.02
ns2137859	104,252	3600.00
ns4-pr9	541,976	3600.01
nsr8k	73	3600.01
nu60-pr9	150,452	3600.00
p2m2p1m1p0n100	33,548,594	3600.00
p6b	92,135	3600.00
pigeon-10	5,285,798	3600.00
pigeon-11	4,048,389	3600.00
pigeon-12	3,081,907	3600.00
pigeon-13	2,337,567	3600.00
pigeon-19	1,397,518	3600.00
protfold	30,550	3600.00
pw-myciel4	413,284	3600.00
qiu	11,561	68.28
queens-30	19,525	3600.02
rail507	949	97.53
ramos3	17	3599.91
rvb-sub	53,053	3600.00
sct1	8353	3600.01
sct32	42,461	3600.00
sct5	7292	3600.01
seymour-disj-10	42,827	3600.01
seymour	74,312	3600.01
shipsched	99,528	3600.01
shs1023	1	3680.84
siena1	2050	3600.00
sing161	2	3600.19
sing245	10	3617.62
sing2	4492	3600.03
sts405	78,252	3600.02
sts729	342	3600.03
swath	340,061	3600.00
tanglegram1	55	642.98
tanglegram2	3	3.10
timtab1	939,220	548.35
toll-like	828,447	3600.01
uc-case11	1180	3600.02
uc-case3	2253	3600.16
uct-subprob	626,771	3600.00
unitcal_7	57,871	3600.01
usAbbrv-8-25_70	647,922	3600.00
vpphard2	198	3608.11
vpphard	459	3601.37
wachplan	84,430	3600.00
zib54-UUE	440,132	3600.00
AM (# 157)	598,964.6	2371.33

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Name	#Nodes	Time
GM (# 157)	4160.7	943.03
SGM (# 157)	9061.6	1084.21

TABLE 13. M2010-bench testset: default settings

Name	#Nodes	Time
30n20b8	424	306.21
acc-tight5	2029	284.28
aflow40b	285,631	2329.38
air04	119	34.87
app1-2	16,726	3572.91
ash608gpia-3col	14	35.63
bab5	40,330	3600.00
beasleyC3	525,520	3600.00
biella1	7869	491.16
bienst2	138,693	180.23
binkar10_1	207,304	348.82
bley_xl1	2	308.39
bnatt350	1154	162.14
core2536-691	300	118.59
cov1075	852,029	3600.00
csched010	685,284	3600.00
danoind	922,260	3600.00
dfn-gwin-UUM	51,474	93.15
eil33-2	693	58.27
eilB101	9340	147.47
enlight13	1	0.02
enlight14	1	0.02
ex9	1	91.79
glass4	5,589,747	3600.02
gmu-35-40	5,559,489	3600.03
iis-100-0-cov	81,999	1520.11
iis-bupa-cov	108,187	3600.01
iis-pima-cov	11,775	751.35
lectsched-4-obj	1362	53.80
m100n500k4r1	4,729,194	3600.00
macrophage	738,644	3600.00
map18	213	337.85
map20	323	304.16
mcsched	13,011	124.64
mik-250-1-100-1	4,488,404	1594.86
mine-166-5	1850	41.54
mine-90-10	151,788	801.88
msc98-ip	7410	1272.66
mspp16	—	—
mzzv11	2615	779.03
n3div36	113,461	3600.00
n3seq24	32,657	3600.00
n4-3	36,950	514.75
neos-1109824	11,639	141.60
neos-1337307	252,023	3600.00
neos-1396125	56,634	248.73
neos13	54,138	2623.34
neos-1601936	10,979	2054.31
neos18	5323	55.23
neos-476283	863	587.26

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Name	#Nodes	Time
neos-686190	7319	108.24
neos-849702	215,294	3600.00
neos-916792	312,204	3600.00
neos-934278	231	349.91
net12	1924	580.89
netdiversion	88	784.88
newdano	1,773,500	3600.00
noswot	1,106,633	317.01
ns1208400	3309	568.48
ns1688347	4220	211.82
ns1758913	3	3600.33
ns1766074	925,848	1230.28
ns1830653	46,368	652.56
opm2-z7-s2	2827	698.62
pg5_34	215,677	1270.20
pigeon-10	5,293,403	3600.00
pw-myciel4	414,262	3600.00
qiu	11,561	68.15
rail507	949	97.89
ran16x16	328,398	296.49
reblock67	122,028	342.25
rmatr100-p10	675	111.75
rmatr100-p5	357	106.05
rmine6	688,255	3600.00
rocll-4-11	26,842	592.98
rococoC10-001000	106,798	556.03
roll3000	504,127	3147.55
satellites1-25	3350	525.67
sp98ic	201,400	3600.00
sp98ir	6084	66.45
tanglegram1	55	645.72
tanglegram2	3	3.10
timtab1	939,220	549.16
triptim1	1	45.48
unitcal_7	57,430	3600.00
vpphard	459	3600.84
zib54-UUE	439,967	3600.01
AM (# 87)	454,815.5	1451.72
GM (# 87)	10,208.8	529.04
SGM (# 87)	16,375.3	580.00

TABLE 14. Margot1 testset: first settings

Name	#Nodes	Time
cov954	81,776	127.49
cov1053	1,898,593	3600.00
cov1054	257,665	3600.00
cov1075	806,805	3600.00
cov1076	932,377	3600.00
cov1174	969,235	3600.00
sts27-complemented	4853	1.18
sts45-complemented	111,683	41.98
sts63-complemented	7,222,105	3600.00
sts81-complemented	5,139,240	3600.00
cod83	2,209,192	3600.00
cod83r	480,043	778.14
cod93	44,803	3600.01
cod93r	217,456	3600.00
cod105	34,816	3600.00
cod105r	5235	272.40
AM (# 16)	1,275,992.3	2551.32
GM (# 16)	275,555.7	1036.04
SGM (# 16)	276,284.5	1210.15

TABLE 15. Margot2 testset: first settings

Name	#Nodes	Time
bibd1032.mylp	1	0.00
bibd1042.mylp	1	0.01
bibd1054.mylp	14	0.29
bibd1152.mylp	1	0.03
bibd1154.mylp	6	0.48
bibd1265.mylp	9	0.41
bibd1331.mylp	1	0.01
bibd1341.mylp	1	0.06
bibd1342.mylp	17	0.77
bibd1531.mylp	1	0.02
bibd6310.mylp	0	0.00
bibd632.mylp	1	0.00
bibd634.mylp	0	0.00
bibd636.mylp	0	0.00
bibd638.mylp	0	0.00
bibd731.mylp	1	0.00
bibd732.mylp	1	0.00
bibd733.mylp	1	0.00
bibd734.mylp	1	0.00
bibd735.mylp	0	0.00
bibd736.mylp	0	0.00
bibd737.mylp	0	0.00
bibd738.mylp	0	0.00
bibd739.mylp	0	0.00
bibd843.mylp	1	0.01
bibd846.mylp	1	0.00
bibd931.mylp	1	0.00
bibd932.mylp	1	0.00
bibd933.mylp	1	0.00
bibd943.mylp	1	0.01
ca36243	38	0.12
ca57245	117,830	541.42
ca77247	304,641	1745.22
clique9	1	0.05
codbt03.mylp	1	0.02
codbt04.mylp	1	0.01
codbt05.mylp	803,092	3600.00
codbt06.mylp	9287	3600.02
codbt15.mylp	101,022	3600.00
codbt24.mylp	500,809	3600.01
codbt33.mylp	996	7.28
codbt34.mylp	28,779	3600.00
codbt42.mylp	158,892	185.56
codbt43.mylp	123,575	3600.00
codbt52.mylp	607,747	3600.01
codbt60.mylp	848	0.60
codbt61.mylp	2223	10.45
codbt70.mylp	1	0.01
codbt71.mylp	393,819	3600.00
codbt80.mylp	91,687	438.93

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Name	#Nodes	Time
codbt90.mylp	113,368	3600.00
flosn52	20,865	61.96
flosn60	81,155	443.58
flosn84	385,495	3600.01
jgt18	5532	3.04
jgt30	328,581	3600.00
mered	24,974	101.12
O4_35	1	0.11
oa25332	1	0.01
oa25342	1	0.01
oa26332	72,420	3600.01
oa36243	30	0.04
oa56243	1	0.01
oa57245	3752	5.50
oa66234	1	0.00
oa67233	1	0.00
oa68233	1	0.07
oa76234	6	0.02
oa77233	1	0.00
oa77247	268,793	1735.93
of5_14_7	3036	1.74
of7_18_9	1	0.06
ofsub9	546,728	3600.00
pa36243	4799	4.02
pa57245	1,073,278	3600.00
pa77247	1,287,034	3600.01
sts15.mylp	109	0.03
sts21.mylp	453	0.16
sts9.mylp	1	0.00
AM (# 79)	94,503.4	750.50
GM (# 79)	95.9	9.67
SGM (# 79)	1117.8	35.94

TABLE 16. M2003-sym testset: first settings

Name	#Nodes	Time
fast0507	117,776	2417.63
glass4	3,470,053	3600.02
harp2	5,559,163	3600.02
mas74	16,331,314	3600.10
mas76	2,158,231	372.08
misc07	11,587	9.15
mkc	1,176,804	3600.00
mod011	4273	82.20
msc98-ip	3676	3600.00
mzzv11	33,977	3600.02
net12	11,437	956.57
noswot	9,595,438	3600.00
nsrand-ipx	641,642	3600.00
p2756	1000	1.94
protfold	9833	3600.00
qiu	207,816	1102.70
rout	1,102,195	836.57
seymour	74,520	3600.00
swath	412,474	3600.00
timtab1	6,520,358	3600.03
timtab2	4,596,963	3600.01
AM (# 21)	2,478,120.5	2503.76
GM (# 21)	238,576.9	1152.66
SGM (# 21)	240,519.5	1305.10

TABLE 17. M2010-sym testset: first settings

Name	#Nodes	Time
30_70_45_095_100	376	1022.03
acc-tight4	85,249	3600.00
ash608gpia-3col	18	26.02
bab3	1	3600.09
bab5	39,468	3600.11
berlin_5_8_0	2,342,486	3600.00
biella1	36,353	3600.05
circ10-3	86	3599.92
co-100	21,964	3600.02
core2536-691	34,064	3600.00
core4872-1529	1722	3600.00
cov1075	619,461	3600.00
dc1c	6849	3600.10
dc1l	690	3600.34
dolom1	4179	3600.05
enlight13	1	0.01
enlight14	1	0.02
enlight15	1	0.03
enlight16	1	0.03
enlight9	1	0.00
ex1010-pi	7684	3600.00
ex10	1	1012.90
ex9	1	92.48
glass4	3,446,978	3600.02
go19	1,784,943	3600.00
iis-bupa-cov	152,501	3600.00
lectsched-1	458,487	3600.00
lectsched-1-obj	128,794	3600.01
lectsched-2	234,544	765.59
lectsched-3	6203	124.56
lectsched-4-obj	259,726	1620.30
macrophage	1,003,692	3600.01
map06	7948	3600.01
map10	9965	3600.02
map14	15,548	3600.18
map18	7673	2753.77
map20	9689	2570.20
maxgasflow	404,305	3600.00
mcsched	673,414	3600.00
methanosarcina	96,000	3600.01
mkc	1,176,769	3600.00
msc98-ip	3686	3600.00
mzzv11	34,132	3600.05
n3seq24	51,792	3600.01
n4-3	306,497	3600.00
n9-3	51,830	3600.00
neos-1109824	537,446	3600.00
neos-1171692	201	6.42
neos-1171737	203,477	3600.00
neos-1224597	1	2.47

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Name	#Nodes	Time
neos-1311124	4,260,274	3600.03
neos-1337307	206,349	3600.03
neos-1396125	381,484	3600.00
neos13	60,240	3600.18
neos-1426635	6,400,981	3600.04
neos-1426662	1,190,996	3600.01
neos-1429212	4426	3600.06
neos-1436709	1,657,935	3600.01
neos-1440460	2,704,403	3600.01
neos-1442119	1,324,220	3600.01
neos-1442657	1,653,070	3600.02
neos-1620770	318,569	3600.00
neos18	1,018,278	3600.00
neos-476283	22,275	3600.06
neos-555424	573,046	3600.00
neos-738098	8151	3600.00
neos-777800	1	1.98
neos-785912	1,117,336	3600.00
neos788725	2,698,978	3600.00
neos808444	93,789	3600.00
neos-820146	855,178	3600.01
neos-820157	745,812	3600.00
neos-824661	6	21.72
neos-824695	21	17.16
neos-826650	561,136	3600.01
neos-826694	1	6.06
neos-826812	1	3.40
neos-826841	265,660	3600.01
neos-849702	194,827	3079.66
neos-859770	1	156.09
neos-885086	47,092	3600.01
neos-885524	110,863	3600.00
neos-911880	2,321,661	3600.02
neos-932816	180,878	3600.00
neos-933638	125	102.48
neos-933966	79	74.33
neos-934278	123	180.20
neos-935627	607	796.38
neos-935769	18	86.79
neos-937511	34	62.61
neos-937815	12,698	3600.00
neos-941262	9757	3600.00
neos-941313	40	185.79
neos-948126	4598	3600.01
neos-957389	55	12.76
neos-984165	2997	3600.01
net12	5078	487.05
noswot	9,592,461	3600.00
ns1111636	1048	3600.02
ns1116954	31	3600.09
ns1158817	1	115.21
ns1208400	16,391	3600.00
ns1456591	140,304	3600.01
ns1702808	1,006,980	2151.27

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Name	#Nodes	Time
ns1758913	28	3600.09
ns1853823	1	3591.39
ns1854840	1	3598.48
ns1905797	71,386	3600.00
ns1905800	484,010	3600.00
ns1952667	34,431	3600.00
ns2118727	816	3599.97
ns2124243	6119	3600.01
ns2137859	104,991	3600.01
ns4-pr9	433,960	3600.00
nsr8k	150	3600.01
nu60-pr9	232,123	3600.00
p2m2p1m1p0n100	34,929,769	3600.00
p6b	111,502	3600.00
pigeon-10	5,355,353	3600.00
pigeon-11	4,314,019	3600.00
pigeon-12	3,339,351	3600.00
pigeon-13	2,414,891	3600.00
pigeon-19	1,711,563	3600.00
protfold	9835	3600.00
pw-myciel4	126,236	1122.29
qiu	207,816	1102.32
queens-30	7541	3600.16
rail507	139,397	2619.69
ramos3	44	3600.06
rvb-sub	103,350	3600.09
sct1	11,012	3600.00
sct32	30,440	3600.00
sct5	2956	3600.01
seymour-disj-10	36,450	3600.01
seymour	74,510	3600.00
shipsched	147,856	3600.01
shs1023	1	3678.61
siena1	2826	3600.23
sing161	2	3621.42
sing245	14	3600.02
sing2	13,610	3602.20
sts405	106,362	3600.01
sts729	85	3600.04
swath	410,124	3600.00
tanglegram1	7833	3606.93
tanglegram2	11,868	1317.71
timtab1	6,507,909	3600.03
toll-like	1,241,729	3600.02
uc-case11	8191	3600.01
uc-case3	2283	3600.03
uct-subprob	773,126	3600.00
unitcal_7	50,681	3600.00
usAbbrv-8-25_70	1,000,900	3600.00
vpphard2	42	3605.32
vpphard	2078	3600.70
wachplan	123,325	3600.00
zib54-UUE	520,226	3600.00
AM (# 157)	772,378.2	2880.30

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Name	#Nodes	Time
GM (# 157)	10,455.7	1433.89
SGM (# 157)	20,666.9	1632.48

TABLE 18. M2010-bench testset: first settings

Name	#Nodes	Time
30n20b8	2287	872.41
acc-tight5	2433	104.03
aflow40b	894,160	3600.00
air04	239,345	3600.00
app1-2	23,879	2279.47
ash608gpia-3col	18	26.14
bab5	39,367	3600.00
beasleyC3	749,930	3600.01
biella1	36,324	3600.00
bienst2	239,996	250.79
binkar10_1	2,499,965	3600.00
bley_xl1	2	302.84
bnatt350	55,475	2492.75
core2536-691	33,981	3600.00
cov1075	619,716	3600.00
csched010	898,180	3600.00
danoind	1,244,572	3600.00
dfn-gwin-UUM	2,290,123	3600.00
eil33-2	20,906	67.52
eilB101	160,359	565.76
enlight13	1	0.00
enlight14	1	0.02
ex9	1	92.04
glass4	3,451,674	3600.02
gmu-35-40	4,730,969	3600.05
iis-100-0-cov	324,135	3600.00
iis-bupa-cov	152,622	3600.00
iis-pima-cov	93,517	3600.01
lectsched-4-obj	259,726	1618.40
m100n500k4r1	5,440,133	3600.00
macrophage	1,007,253	3600.01
map18	7673	2730.95
map20	9689	2587.80
mcsched	669,348	3600.00
mik-250-1-100-1	10,373,374	3600.00
mine-166-5	284,458	3600.00
mine-90-10	360,768	3600.00
msc98-ip	3681	3600.00
mspp16	—	—
mzzv11	34,132	3600.03
n3div36	266,392	3600.00
n3seq24	51,645	3600.01
n4-3	306,697	3600.00
neos-1109824	535,882	3600.00
neos-1337307	207,346	3600.03
neos-1396125	381,853	3600.00
neos13	60,814	3600.00
neos-1601936	2618	1112.80
neos18	1,011,223	3600.00
neos-476283	22,159	3600.03

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Name	#Nodes	Time
neos-686190	10,214	115.33
neos-849702	194,827	3079.35
neos-916792	304,688	3600.01
neos-934278	123	186.45
net12	5078	492.51
netdiversion	19	3619.87
newdano	2,077,451	3600.00
noswot	9,604,452	3600.00
ns1208400	16,387	3600.00
ns1688347	34,102	1111.80
ns1758913	28	3600.10
ns1766074	844,444	3509.01
ns1830653	403,734	3600.00
opm2-z7-s2	4121	644.55
pg5_34	389,181	1678.07
pigeon-10	5,324,641	3600.00
pw-myciel4	126,236	1116.15
qiu	207,816	1101.37
rail507	139,397	2613.02
ran16x16	5,426,934	3600.02
reblock67	923,446	3600.00
rmatr100-p10	7690	383.31
rmatr100-p5	2229	219.67
rmine6	429,199	3600.00
rocll-4-11	9674	194.21
rococoC10-001000	775,398	3600.00
roll3000	658,394	3600.00
satellites1-25	7717	1907.13
sp98ic	311,034	3600.00
sp98ir	159,360	854.69
tanglegram1	7832	3600.01
tanglegram2	11,868	1316.23
timtab1	6,533,222	3600.03
triptim1	1	46.57
unitcal_7	50,495	3600.01
vpphard	2078	3600.45
zib54-UUE	519,348	3600.01
AM (# 87)	869,237.5	2603.38
GM (# 87)	44,281.2	1527.49
SGM (# 87)	64,795.3	1628.36

TABLE 19. Margot1 testset: ISP settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
cov954	102	2.91	101	334	0	0.09
cov1053	3726	19.44	3725	3261	213	6.08
cov1054	77,516	1331.70	77,515	3131	3029	161.33
cov1075	321	6.89	320	764	6	0.34
cov1076	168,936	955.47	168,935	10,654	16,475	335.82
cov1174	600,003	3600.00	600,002	178,747	93,886	1528.76
sts27-complemented	15	0.10	14	124	0	0.00
sts45-complemented	2805	2.02	2804	149	250	0.43
sts63-complemented	5950	8.05	5949	1723	636	3.93
sts81-complemented	1939	138.36	1937	1965	522	135.05
cod83	19	4.24	18	843	0	0.03
cod83r	39	3.76	38	415	0	0.00
cod93	1745	67.32	1744	3686	158	8.82
cod93r	11,849	133.08	11,848	5949	400	20.56
cod105	5	113.10	4	1739	0	0.15
cod105r	3	34.98	2	461	0	0.04
AM (# 16)	54,685.8	401.34	54,684.8	13,371.6	7223.4	137.59
GM (# 16)	869.6	33.29		1603.4	60.4	7.17
SGM (# 16)	1844.1	55.58				18.50

TABLE 20. Margot1 testset: ISP-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
cov954	102	2.88	101	334	0	0.08
cov1053	3787	15.24	3786	2656	68	1.62
cov1054	89,679	1691.36	89,678	652	17	0.89
cov1075	321	6.76	320	756	5	0.20
cov1076	332,232	1256.24	332,231	2512	480	12.97
cov1174	849,661	3600.00	849,660	73,447	10,406	234.97
sts27-complemented	15	0.10	14	124	0	0.00
sts45-complemented	3141	1.78	3140	104	3	0.02
sts63-complemented	11,358	7.97	11,359	449	3	0.16
sts81-complemented	4688	10.43	4688	1063	36	4.85
cod83	19	4.24	18	843	0	0.03
cod83r	39	3.76	38	415	0	0.03
cod93	2059	68.70	2058	3462	68	4.23
cod93r	9723	106.59	9722	3300	82	3.04
cod105	5	113.95	4	1739	0	0.13
cod105r	3	33.29	2	461	0	0.05
AM (# 16)	81,677.0	432.71	81,676.2	5769.8	698.0	16.45
GM (# 16)	1035.7	28.07		1029.5	11.1	2.20
SGM (# 16)	2208.4	48.31				3.97

TABLE 21. Margot1 testset: ISP-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
cov954	364	1.59	363	571	14	0.31
cov1053	549	3.01	548	2026	20	0.86
cov1054	1171	20.22	1170	1088	181	1.77
cov1075	342	4.63	341	1233	30	0.27
cov1076	23,822	125.19	23,821	10,291	2777	36.91
cov1174	162,731	963.63	162,730	113,269	26,273	410.50
sts27-complemented	17	0.05	16	141	0	0.01
sts45-complemented	1820	1.17	1819	383	165	0.36
sts63-complemented	4261	5.08	4262	2675	470	2.34
sts81-complemented	895	28.62	895	1976	202	27.23
cod83	43	1.31	42	989	2	0.11
cod83r	69	1.46	68	759	1	0.03
cod93	400	13.62	399	3202	65	2.45
cod93r	2737	28.68	2736	4439	33	4.98
cod105	7	19.29	6	2101	0	0.14
cod105r	5	3.34	4	823	0	0.06
AM (# 16)	12,452.1	76.31	12,451.2	9122.9	1889.6	30.52
GM (# 16)	461.0	8.23		1772.9	35.9	2.87
SGM (# 16)	816.4	15.21				6.29

TABLE 22. Margot1 testset: ISP-NST-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
cov954	383	1.56	382	572	16	0.25
cov1053	616	2.76	615	1877	9	0.47
cov1054	1043	19.42	1042	948	49	0.51
cov1075	342	4.64	341	1233	30	0.22
cov1076	23,653	124.33	23,652	10,114	2741	35.68
cov1174	141,183	771.65	141,182	97,446	16,569	262.46
sts27-complemented	17	0.06	16	141	0	0.01
sts45-complemented	3099	1.51	3101	273	13	0.05
sts63-complemented	9185	6.38	9194	1924	119	0.64
sts81-complemented	1405	16.21	1408	1876	86	14.36
cod83	43	1.30	42	989	1	0.07
cod83r	69	1.48	68	759	1	0.05
cod93	899	16.82	898	3463	13	1.62
cod93r	2578	24.58	2577	3254	9	1.31
cod105	7	19.35	6	2101	0	0.16
cod105r	5	3.32	4	823	0	0.07
AM (# 16)	11,532.9	63.46	11,533.0	7987.1	1228.5	19.87
GM (# 16)	535.7	8.03		1631.2	18.2	2.19
SGM (# 16)	951.3	14.38				4.76

TABLE 23. Margot2 testset: ISP settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
bibd1032.mylp	1	0.00	0	0	0	0.00
bibd1042.mylp	1	0.02	0	0	0	0.00
bibd1054.mylp	6	0.40	5	55	0	0.01
bibd1152.mylp	1	0.04	0	0	0	0.01
bibd1154.mylp	8	1.04	12	2	0	0.02
bibd1265.mylp	7	2.20	13	40	0	0.04
bibd1331.mylp	1	0.02	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0.01
bibd1342.mylp	9	1.42	10	1	0	0.04
bibd1531.mylp	1	0.02	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.00	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0.00
ca36243	6	0.32	0	0	0	0.00
ca57245	641,231	2795.70	0	0	0	0.10
ca77247	519,786	3600.00	0	0	0	0.07
clique9	1	0.06	0	0	0	0.00
codbt03.mylp	1	0.00	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0.00
codbt05.mylp	555	11.89	554	1254	7	0.63
codbt06.mylp	20,152	3600.00	20,151	4558	96	77.53
codbt15.mylp	90,198	3600.00	90,197	6435	1509	286.22
codbt24.mylp	109,522	1352.74	109,521	13,480	6005	172.67
codbt33.mylp	23	7.60	21	280	0	0.01
codbt34.mylp	40,029	3600.00	40,028	6580	1115	179.60
codbt42.mylp	814	4.16	813	1404	12	0.61
codbt43.mylp	139,448	3600.00	139,447	7995	3763	282.49
codbt52.mylp	527,221	3332.54	527,220	117,806	22,467	718.43
codbt60.mylp	10	0.24	9	148	0	0.01
codbt61.mylp	45	5.38	44	447	0	0.04
codbt70.mylp	1	0.01	0	0	0	0.00
codbt71.mylp	190,733	3600.01	190,732	27,042	4197	565.46
codbt80.mylp	179	10.04	178	1219	19	0.38

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
codbt90.mylp	66,323	3600.00	66,322	9570	3390	803.38
flosn52	1892	5.27	3234	80	16	1.21
flosn60	3699	11.31	6944	72	0	3.51
flosn84	47,549	145.58	95,590	273	280	59.94
jgt18	120	0.44	175	9	0	0.04
jgt30	25,540	45.47	50,630	295	40	21.02
mered	15	3.46	15	250	0	0.06
O4_35	1	0.12	0	0	0	0.00
oa25332	1	0.01	0	0	0	0.00
oa25342	1	0.01	0	0	0	0.00
oa26332	77,746	3600.00	0	0	0	0.04
oa36243	1	0.09	0	0	0	0.00
oa56243	1	0.01	0	0	0	0.00
oa57245	9715	20.69	0	0	0	0.01
oa66234	1	0.01	0	0	0	0.00
oa67233	1	0.01	0	0	0	0.00
oa68233	1	0.08	0	0	0	0.00
oa76234	4	0.05	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	318,856	583.34	0	0	0	0.09
of5_14_7	11	0.32	10	32	0	0.00
of7_18_9	1	0.06	0	0	0	0.00
ofsub9	9118	19.28	16,908	478	299	14.83
pa36243	3815	3.40	0	0	0	0.00
pa57245	760,875	3600.00	0	0	0	0.16
pa77247	801,098	3600.00	0	0	0	0.16
sts15.mylp	11	0.04	10	18	0	0.00
sts21.mylp	11	0.08	10	47	0	0.01
sts9.mylp	1	0.01	0	0	0	0.00
AM (# 79)	55,777.4	561.58	17,200.0	2530.0	547.0	40.37
GM (# 79)	37.3	6.19		8.2	3.0	2.05
SGM (# 79)	517.4	21.75				5.03

TABLE 24. Margot2 testset: ISP-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
bibd1032.mylp	1	0.00	0	0	0	0.00
bibd1042.mylp	1	0.02	0	0	0	0.00
bibd1054.mylp	6	0.40	5	55	0	0.00
bibd1152.mylp	1	0.05	0	0	0	0.01
bibd1154.mylp	8	1.03	12	2	0	0.03
bibd1265.mylp	7	2.17	13	40	0	0.04
bibd1331.mylp	1	0.02	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0.01
bibd1342.mylp	9	1.41	10	1	0	0.03
bibd1531.mylp	1	0.02	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.01	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0.00
bibd931.mylp	1	0.01	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0.00
bibd933.mylp	1	0.01	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0.00
ca36243	6	0.32	0	0	0	0.00
ca57245	641,231	2790.67	0	0	0	0.11
ca77247	519,310	3600.00	0	0	0	0.06
clique9	1	0.05	0	0	0	0.01
codbt03.mylp	1	0.02	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0.00
codbt05.mylp	613	11.63	612	1007	1	0.08
codbt06.mylp	18,626	3600.01	18,625	3748	13	10.04
codbt15.mylp	85,924	3600.01	85,923	4312	29	13.50
codbt24.mylp	116,145	1427.60	116,144	11,699	5580	172.23
codbt33.mylp	23	7.62	21	280	0	0.01
codbt34.mylp	45,963	3600.01	45,962	4799	326	59.94
codbt42.mylp	802	3.94	801	1420	9	0.34
codbt43.mylp	151,215	3600.00	151,214	5105	122	21.81
codbt52.mylp	546,768	2875.24	546,767	76,606	3751	114.42
codbt60.mylp	10	0.25	9	148	0	0.01
codbt61.mylp	45	5.39	44	447	0	0.07
codbt70.mylp	1	0.00	0	0	0	0.00
codbt71.mylp	226,582	3600.00	226,581	22,858	1545	135.88
codbt80.mylp	179	10.00	178	1219	19	0.44

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
codbt90.mylp	74,473	3600.00	74,472	8178	293	60.14
flosn52	1939	4.08	3354	80	0	0.02
flosn60	3699	7.84	6944	72	0	0.06
flosn84	40,862	77.30	82,582	144	1	0.30
jgt18	120	0.36	175	9	0	0.00
jgt30	24,810	24.11	49,487	406	25	0.55
mered	15	3.45	15	250	0	0.06
O4_35	1	0.11	0	0	0	0.00
oa25332	1	0.01	0	0	0	0.00
oa25342	1	0.01	0	0	0	0.00
oa26332	77,729	3600.00	0	0	0	0.02
oa36243	1	0.10	0	0	0	0.00
oa56243	1	0.00	0	0	0	0.00
oa57245	9715	20.86	0	0	0	0.01
oa66234	1	0.00	0	0	0	0.00
oa67233	1	0.01	0	0	0	0.00
oa68233	1	0.07	0	0	0	0.00
oa76234	4	0.04	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	318,856	581.30	0	0	0	0.13
of5_14_7	11	0.31	10	32	0	0.00
of7_18_9	1	0.06	0	0	0	0.01
ofsub9	10,629	6.91	20,872	759	101	1.57
pa36243	3815	3.36	0	0	0	0.01
pa57245	762,931	3600.00	0	0	0	0.14
pa77247	802,843	3600.00	0	0	0	0.17
sts15.mylp	11	0.05	10	17	0	0.01
sts21.mylp	11	0.06	10	47	0	0.00
sts9.mylp	1	0.00	0	0	0	0.00
AM (# 79)	56,784.5	555.30	18,112.1	1819.5	149.6	7.50
GM (# 79)	37.6	5.94		8.0	2.1	1.49
SGM (# 79)	521.7	20.95				2.11

TABLE 25. Margot2 testset: ISP-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
bibd1032.mylp	1	0.01	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0.00
bibd1054.mylp	9	0.30	8	55	0	0.00
bibd1152.mylp	1	0.04	0	0	0	0.01
bibd1154.mylp	6	0.52	5	0	0	0.00
bibd1265.mylp	9	0.45	8	0	0	0.06
bibd1331.mylp	1	0.02	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0.01
bibd1342.mylp	14	0.82	15	162	0	0.07
bibd1531.mylp	1	0.01	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.01	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.00	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0.00
bibd932.mylp	1	0.01	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0.00
bibd943.mylp	1	0.01	0	0	0	0.00
ca36243	38	0.12	0	0	0	0.00
ca57245	117,830	538.54	0	0	0	0.00
ca77247	304,641	1738.78	0	0	0	0.07
clique9	1	0.06	0	0	0	0.00
codbt03.mylp	1	0.02	0	0	0	0.01
codbt04.mylp	1	0.01	0	0	0	0.00
codbt05.mylp	1460	10.91	1459	4248	93	1.58
codbt06.mylp	13,069	3600.01	13,068	15,278	491	49.10
codbt15.mylp	102,573	3600.00	102,572	38,980	9405	304.82
codbt24.mylp	383,208	3565.45	383,207	38,986	37,485	678.38
codbt33.mylp	102	2.01	101	611	2	0.06
codbt34.mylp	35,195	3600.01	35,194	12,923	4940	1727.40
codbt42.mylp	1108	2.50	1107	1852	89	0.68
codbt43.mylp	192,925	3600.00	192,924	101,900	22,768	413.81
codbt52.mylp	703,509	3600.00	703,508	546,164	51,445	984.11
codbt60.mylp	44	0.15	43	371	1	0.01
codbt61.mylp	79	1.06	78	751	1	0.06
codbt70.mylp	1	0.01	0	0	0	0.01
codbt71.mylp	295,496	3600.00	295,495	365,787	33,370	874.70
codbt80.mylp	87	2.04	86	1386	2	0.39

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
codbt90.mylp	99,742	3600.00	99,741	80,500	14,025	614.22
flosn52	856	1.70	1488	485	34	0.60
flosn60	2873	6.67	4774	709	114	2.14
flosn84	169,334	859.15	289,917	1820	5862	243.82
jgt18	384	0.44	745	13	0	0.18
jgt30	11,557	20.04	23,059	46	11	10.41
mered	217	3.96	285	334	14	2.16
O4_35	1	0.11	0	0	0	0.01
oa25332	1	0.01	0	0	0	0.00
oa25342	1	0.01	0	0	0	0.00
oa26332	72,410	3600.00	0	0	0	0.04
oa36243	30	0.04	0	0	0	0.00
oa56243	1	0.01	0	0	0	0.00
oa57245	3752	5.50	0	0	0	0.00
oa66234	1	0.01	0	0	0	0.00
oa67233	1	0.00	0	0	0	0.00
oa68233	1	0.07	0	0	0	0.00
oa76234	6	0.03	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	268,793	1758.49	0	0	0	0.18
of5_14_7	43	0.22	53	38	2	0.04
of7_18_9	1	0.05	0	0	0	0.01
ofsub9	21,546	57.20	43,634	256	120	43.67
pa36243	4799	3.97	0	0	0	0.00
pa57245	1,068,758	3600.00	0	0	0	0.18
pa77247	1,279,196	3600.01	0	0	0	0.27
sts15.mylp	17	0.03	17	26	1	0.00
sts21.mylp	19	0.04	18	67	0	0.00
sts9.mylp	1	0.00	0	0	0	0.00
AM (# 79)	65,262.8	564.33	27,754.5	15,363.9	2282.0	75.36
GM (# 79)	46.2	5.65		11.0	4.2	2.23
SGM (# 79)	555.8	21.30				6.18

TABLE 26. Margot2 testset: ISP-NST-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
bibd1032.mylp	1	0.00	0	0	0	0.00
bibd1042.mylp	1	0.02	0	0	0	0.00
bibd1054.mylp	9	0.30	8	55	0	0.01
bibd1152.mylp	1	0.05	0	0	0	0.01
bibd1154.mylp	6	0.50	5	0	0	0.00
bibd1265.mylp	9	0.44	8	0	0	0.05
bibd1331.mylp	1	0.02	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0.01
bibd1342.mylp	14	0.82	15	162	0	0.06
bibd1531.mylp	1	0.01	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.01	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.00	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0.00
bibd931.mylp	1	0.01	0	0	0	0.01
bibd932.mylp	1	0.00	0	0	0	0.00
bibd933.mylp	1	0.01	0	0	0	0.00
bibd943.mylp	1	0.01	0	0	0	0.00
ca36243	38	0.13	0	0	0	0.00
ca57245	117,830	536.96	0	0	0	0.00
ca77247	304,641	1750.65	0	0	0	0.03
clique9	1	0.06	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0.00
codbt05.mylp	1460	10.98	1459	4248	93	1.39
codbt06.mylp	13,033	3600.00	13,032	15,264	486	49.67
codbt15.mylp	315,036	3600.01	315,035	33,799	5249	206.72
codbt24.mylp	383,552	3546.47	383,551	38,679	37,408	669.06
codbt33.mylp	102	2.04	101	611	2	0.06
codbt34.mylp	128,435	3600.00	128,434	18,593	2646	132.97
codbt42.mylp	1214	2.66	1213	1834	72	0.53
codbt43.mylp	191,543	3600.00	191,542	101,791	21,575	364.47
codbt52.mylp	697,551	3600.00	697,550	517,518	52,907	974.20
codbt60.mylp	44	0.14	43	371	1	0.02
codbt61.mylp	79	1.04	78	751	1	0.08
codbt70.mylp	1	0.01	0	0	0	0.00
codbt71.mylp	301,225	3600.00	301,224	357,335	30,632	817.95
codbt80.mylp	87	2.03	86	1386	2	0.44

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
codbt90.mylp	116,766	3600.01	116,765	89,253	12,452	522.56
flosn52	1201	1.60	2101	214	1	0.03
flosn60	4259	6.50	7921	325	0	0.18
flosn84	299,633	1787.61	532,079	263	0	4.32
jgt18	384	0.26	745	13	0	0.01
jgt30	11,557	9.24	23,059	46	11	0.12
mered	217	3.99	285	334	14	2.06
O4_35	1	0.12	0	0	0	0.01
oa25332	1	0.01	0	0	0	0.00
oa25342	1	0.01	0	0	0	0.00
oa26332	72,408	3600.00	0	0	0	0.01
oa36243	30	0.04	0	0	0	0.00
oa56243	1	0.00	0	0	0	0.00
oa57245	3752	5.41	0	0	0	0.00
oa66234	1	0.00	0	0	0	0.00
oa67233	1	0.00	0	0	0	0.00
oa68233	1	0.07	0	0	0	0.00
oa76234	6	0.03	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	268,793	1749.50	0	0	0	0.13
of5_14_7	43	0.20	53	38	2	0.03
of7_18_9	1	0.06	0	0	0	0.00
ofsub9	23,247	14.35	47,740	268	73	1.29
pa36243	4799	4.04	0	0	0	0.00
pa57245	1,065,576	3600.00	0	0	0	0.22
pa77247	1,285,301	3600.01	0	0	0	0.31
sts15.mylp	17	0.03	17	26	1	0.00
sts21.mylp	19	0.05	18	67	0	0.00
sts9.mylp	1	0.01	0	0	0	0.00
AM (# 79)	71,062.6	575.17	34,989.5	14,977.8	2071.2	47.46
GM (# 79)	48.7	5.54		10.5	3.3	1.86
SGM (# 79)	589.8	21.00				4.50

TABLE 27. M2003-sym testset: ISP settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
fast0507	919	95.91	0	0	0	0.05
glass4	5,052,980	3600.02	5,700,313	8007	0	307.94
harp2	8,558,209	3600.01	0	0	0	1.62
mas74	3,592,825	859.98	3,593,644	9099	0	34.41
mas76	490,320	106.43	490,717	0	0	3.60
misc07	4903	8.79	6040	1817	0	1.60
mkc	4709	3600.89	4708	0	320	3510.41
mod011	1284	61.27	1283	0	0	0.07
msc98-ip	7410	1272.42	11,944	0	0	1.19
mzzv11	2615	777.72	3431	0	0	0.12
net12	2502	998.80	4672	0	0	0.56
noswot	1,106,633	313.05	0	0	0	0.19
nsrand-ipx	586,987	3600.00	587,028	141	0	44.43
p2756	7	1.39	3	0	0	0.01
protfold	26,125	3600.00	32,300	22	29	58.53
qiu	1406	20.17	1405	125	22	4.22
rout	61,617	67.61	0	0	0	0.00
seymour	77,494	3600.00	77,493	3	0	3.09
swath	340,628	3600.00	0	0	0	0.59
timtab1	939,220	558.17	978,532	0	0	6.63
timtab2	3,999,951	3600.01	4,336,991	0	0	45.42
AM (# 21)	1,183,749.7	1616.32	753,833.5	915.0	17.7	191.65
GM (# 21)	46,474.6	446.21		6.6	1.8	5.55
SGM (# 21)	53,800.6	526.18				13.73

TABLE 28. M2003-sym testset: ISP-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
fast0507	919	95.69	0	0	0	0.04
glass4	5,390,059	3600.02	6,077,807	9049	0	78.31
harp2	8,604,414	3600.01	0	0	0	1.73
mas74	3,592,825	858.27	3,593,644	9099	0	33.78
mas76	490,320	106.53	490,717	0	0	3.96
misc07	4903	7.92	6040	1817	0	0.81
mkc	492,544	3600.00	492,543	0	0	10.41
mod011	1284	61.12	1283	0	0	0.03
msc98-ip	7410	1272.95	11,944	0	0	1.35
mzzv11	2615	775.84	3431	0	0	0.15
net12	2502	999.20	4672	0	0	0.45
noswot	1,106,633	312.67	0	0	0	0.24
nsrand-ipx	587,273	3600.00	587,314	141	0	44.62
p2756	7	1.38	3	0	0	0.01
protfold	51,247	3600.00	76,855	23	0	0.44
qiu	1406	19.98	1405	125	22	4.04
rout	61,617	66.97	0	0	0	0.04
seymour	77,334	3600.00	77,333	3	0	2.61
swath	340,595	3600.00	0	0	0	0.47
timtab1	939,220	560.48	978,532	0	0	7.27
timtab2	4,012,231	3600.01	4,350,882	0	0	46.81
AM (# 21)	1,227,017.0	1616.14	797,828.8	964.6	1.0	11.31
GM (# 21)	60,088.7	443.34		6.6	1.2	3.20

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
SGM (# 21)	69,514.8	524.47				5.95

TABLE 29. M2010-sym testset: ISP settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
30_70_45_095_100	401	1040.66	400	0	0	0.08
acc-tight4	174	106.67	228	250	0	1.70
ash608gipa-3col	15	38.23	17	4	1	0.36
bab3	1	3613.18	0	0	0	44.87
bab5	10,706	3600.01	11,745	178,000	0	2549.45
berlin_5_8_0	1,084,591	3600.00	1,227,570	12,574	34	1572.18
biella1	4647	3607.40	5493	0	27	3306.35
circ10-3	47	3600.00	46	11	0	0.50
co-100	10,317	3600.01	11,556	0	0	1.97
core2536-691	300	122.34	312	3	0	3.59
core4872-1529	934	3600.01	933	0	0	2.42
cov1075	314	6.53	313	880	16	0.37
dc1c	1032	3645.44	1299	0	0	2917.21
dc1l	100	5898.62	99	0	0	5547.82
dolom1	73	3747.70	72	0	0	3622.88
enlight13	1	0.01	0	0	0	0.00
enlight14	1	0.01	0	0	0	0.00
enlight15	1	0.03	0	0	0	0.00
enlight16	1	0.03	0	0	0	0.00
enlight9	1	0.01	0	0	0	0.00
ex1010-pi	14,383	3600.04	0	0	0	0.05
ex10	1	1009.80	0	0	0	0.00
ex9	1	92.42	0	0	0	0.00
glass4	5,030,530	3600.02	5,675,024	7948	0	304.18
go19	964,711	3600.00	964,710	324	1274	456.90
iis-bupa-cov	108,407	3600.00	0	0	0	0.09
lectsched-1	1812	677.35	3798	0	0	524.66
lectsched-1-obj	108	3656.82	126	3	0	3393.47
lectsched-2	299	57.73	557	0	0	7.29
lectsched-3	1034	292.10	2366	0	0	194.20
lectsched-4-obj	3410	521.97	4005	0	3	450.54
macrophage	340,234	3600.00	340,236	0	2278	1928.97
map06	830	1032.33	829	0	0	0.34
map10	1571	1182.54	1570	0	0	0.43
map14	821	794.56	820	0	0	0.25
map18	213	333.63	212	0	0	0.27
map20	323	306.00	322	0	0	0.24
maxgasflow	160,326	3600.00	166,325	0	0	14.56
mcsched	13,890	135.08	13,889	1010	0	3.72
methanosarcina	38,927	3600.00	38,926	0	0	29.34
mkc	4701	3600.77	4700	0	319	3511.00
msc98-ip	7410	1272.51	11,944	0	0	1.27
mzzv11	2615	780.40	3431	0	0	0.12
n3seq24	510	3600.77	760	16,703	0	2291.83
n4-3	36,950	515.42	0	0	0	0.02
n9-3	61,610	3600.00	0	0	0	0.06
neos-1109824	91	17.96	91	551	0	0.54
neos-1171692	201	1418.93	200	336	4	1389.09
neos-1171737	612	3880.83	611	1103	10	3796.08
neos-1224597	1	2.56	0	0	0	0.07

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
neos-1311124	20,655	3600.00	20,654	2993	447	3573.29
neos-1337307	1449	95.84	1447	725	0	15.57
neos-1396125	17,112	120.21	20,584	383	361	21.73
neos13	54,138	2619.25	54,137	0	0	3.88
neos-1426635	1,111,246	3600.00	1,111,245	376,866	60,758	2899.83
neos-1426662	29,083	3600.07	29,082	47,684	868	3497.73
neos-1429212	1676	3600.03	2456	1	0	6.66
neos-1436709	228,656	3600.00	228,655	50,491	10,384	3111.00
neos-1440460	471,717	1476.35	471,716	49,053	17,533	910.66
neos-1442119	304,817	3600.00	304,816	110,621	19,354	2892.71
neos-1442657	490,024	3600.01	490,023	105,500	28,203	2635.75
neos-1620770	101,057	967.94	177,333	7864	1984	311.84
neos18	6857	124.13	9482	620	0	47.31
neos-476283	794	367.59	793	14	0	5.43
neos-555424	3509	3601.88	3768	99	71	3505.32
neos-738098	1440	3600.01	1463	638	0	725.50
neos-777800	1	1.99	0	0	0	0.03
neos-785912	85	14.81	160	443	0	0.52
neos788725	91,656	235.10	98,744	1768	1	62.22
neos808444	416	1666.91	684	1	0	104.30
neos-820146	124,868	2532.25	189,636	40,498	7084	2187.65
neos-820157	145,869	3600.00	207,838	57,086	13,498	3119.31
neos-824661	1	26.53	0	0	0	4.59
neos-824695	3	14.94	2	169	0	2.78
neos-826650	4113	3600.52	4830	14,836	17	3421.91
neos-826694	1	6.77	0	0	0	0.81
neos-826812	1	4.10	0	0	0	0.76
neos-826841	2268	3604.47	2733	5966	52	3538.29
neos-849702	3176	138.82	4653	95	0	35.17
neos-859770	1	156.24	0	0	0	0.21
neos-885086	67	4222.77	66	211	1	4138.89
neos-885524	468	3616.45	467	0	1	3548.46
neos-911880	250,664	3600.00	252,197	445,807	128	3226.33
neos-932816	47,866	3600.00	47,865	16,623	0	1010.18
neos-933638	92	359.33	109	39	0	31.47
neos-933966	15	156.21	27	231	0	6.21
neos-934278	344	774.15	343	335	0	101.73
neos-935627	548	1114.87	547	162	0	118.97
neos-935769	33	194.24	32	3	0	4.93
neos-937511	25	182.75	24	8	0	5.03
neos-937815	2889	3600.01	2924	226	0	972.53
neos-941262	2013	3600.00	2016	56	0	384.88
neos-941313	23	1465.17	21	28	0	805.57
neos-948126	1763	3600.00	1762	92	0	374.60
neos-957389	5	20.74	4	0	0	0.79
neos-984165	2061	3600.00	2066	137	0	458.04
net12	1924	581.25	3762	0	0	0.46
noswot	1,106,633	312.52	0	0	0	0.25
ns1111636	106	3600.02	105	669	0	1054.66
ns1116954	12	3599.78	11	93	0	5.95
ns1158817	1	164.22	0	0	0	49.28
ns1208400	1150	394.57	1712	1225	0	31.75
ns1456591	22,451	3600.05	36,859	7952	0	2377.53
ns1702808	32,979	170.25	52,938	94,045	1	110.02

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
ns1758913	3	3600.36	2	2	0	1.09
ns1853823	1	3591.22	0	0	0	4.18
ns1854840	1	3598.54	0	0	0	1.77
ns1905797	40,937	3600.00	0	0	0	0.39
ns1905800	182,447	3600.00	231,804	610	0	991.48
ns1952667	13,279	2384.96	0	0	0	0.02
ns2118727	623	3599.98	1751	0	0	0.12
ns2124243	2438	3600.02	2437	0	0	10.20
ns2137859	1204	3600.62	1203	0	1	3288.25
ns4-pr9	541,281	3600.00	0	0	0	0.19
nsr8k	73	3599.99	72	0	0	1.08
nu60-pr9	138,186	3600.00	142,555	362,457	6	162.55
p2m2p1m1p0n100	297,490	3600.00	297,497	291,081	0	3562.38
p6b	105,302	3600.00	105,301	180	1401	66.13
pigeon-10	97,254	288.82	97,599	2926	4731	219.57
pigeon-11	435,409	1926.96	435,833	4859	23,558	1539.70
pigeon-12	415,088	3600.00	416,355	3239	946	3068.61
pigeon-13	188,974	3600.03	189,709	2971	2263	3273.97
pigeon-19	5323	3600.36	5747	1734	0	3562.49
protfold	26,171	3600.00	32,346	22	29	58.66
pw-myciel4	137,600	1543.06	193,208	896	23	214.89
qiu	1406	20.18	1405	125	22	4.46
queens-30	14,126	3600.00	14,125	488	36	12.44
rail507	949	97.93	0	0	0	0.34
ramos3	18	3600.19	17	1217	0	0.26
rvb-sub	53,968	3600.00	55,823	25	0	16.75
sct1	8268	3600.60	8267	0	0	33.80
sct32	16,373	3600.00	16,372	0	13	572.08
sct5	146	3635.69	145	0	2	2941.84
seymour-disj-10	42,695	3600.00	42,694	11	0	5.58
seymour	77,378	3600.00	77,377	3	0	2.85
shipsched	99,105	3600.00	125,169	0	0	11.68
shs1023	1	3683.58	0	0	0	1.42
siena1	1534	3600.20	1533	0	0	744.46
sing161	2	3600.20	0	0	0	4.15
sing245	10	3606.17	9	0	0	2.60
sing2	2060	3600.02	2196	6	0	280.60
sts405	50,925	3600.01	50,924	619	5173	422.01
sts729	74	3606.34	73	5079	1	1482.74
swath	337,031	3600.00	0	0	0	0.45
tanglegram1	55	656.00	54	0	0	12.57
tanglegram2	3	9.16	2	0	0	6.02
timtab1	939,220	559.95	978,532	0	0	7.13
toll-like	506	3606.64	505	0	2	3575.13
uc-case11	2588	3600.02	2587	15	0	84.60
uc-case3	1298	3600.07	1748	37	0	181.11
uct-subprob	591,975	3600.00	614,875	0	0	191.47
unitcal_7	7628	3600.26	7777	22,552	0	2968.88
usAbbrv-8-25_70	242,320	3600.00	263,816	104	48	1859.32
vpphard2	198	3605.83	197	0	0	7.16
vpphard	462	3600.00	481	0	0	11.66
wachplan	23,731	1563.75	32,107	80,483	21	377.44
zib54-UUE	445,514	3600.00	446,446	1127	0	122.82
AM (# 157)	115,870.5	2278.36	109,789.8	15,572.8	1292.9	823.61

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
GM (# 157)	1469.9	872.94		33.7	4.1	42.79
SGM (# 157)	3334.9	1004.48				92.63

TABLE 30. M2010-sym testset: ISP-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
30_70_45_095_100	401	1034.29	400	0	0	0.10
acc-tight4	174	105.48	228	250	0	0.65
ash608gipa-3col	15	38.17	17	4	1	0.33
bab3	1	3612.68	0	0	0	44.94
bab5	10,726	3600.00	11,764	178,239	0	2544.90
berlin_5_8_0	2,160,278	3600.01	2,423,941	20,791	45	37.52
biella1	7869	492.92	9915	0	0	1.87
circ10-3	47	3600.01	46	11	0	0.43
co-100	10,360	3600.12	11,620	0	0	1.90
core2536-691	300	122.00	312	3	0	3.57
core4872-1529	932	3600.01	931	0	0	2.30
cov1075	193	6.12	192	744	9	0.16
dc1c	5913	3600.00	6497	2	0	7.62
dc1l	1139	3600.16	1138	0	0	12.54
dolom1	2909	3600.05	2908	0	0	9.29
enlight13	1	0.01	0	0	0	0.00
enlight14	1	0.02	0	0	0	0.00
enlight15	1	0.03	0	0	0	0.00
enlight16	1	0.01	0	0	0	0.00
enlight9	1	0.00	0	0	0	0.00
ex1010-pi	14,383	3600.04	0	0	0	0.08
ex10	1	1017.80	0	0	0	0.00
ex9	1	92.10	0	0	0	0.00
glass4	5,408,133	3600.02	6,098,148	9066	0	79.78
go19	1,119,458	3600.00	1,119,457	239	0	1.63
iis-bupa-cov	108,593	3600.00	0	0	0	0.07
lectsched-1	1812	152.25	3798	0	0	0.29
lectsched-1-obj	69,118	3600.01	81,981	16	0	690.38
lectsched-2	299	49.99	557	0	0	0.10
lectsched-3	1034	98.07	2366	0	0	0.21
lectsched-4-obj	1362	54.14	1679	0	0	0.18
macrophage	740,467	3600.00	740,491	0	0	11.00
map06	830	1027.58	829	0	0	0.35
map10	1571	1178.76	1570	0	0	0.39
map14	821	791.86	820	0	0	0.38
map18	213	334.77	212	0	0	0.20
map20	323	305.86	322	0	0	0.22
maxgasflow	160,485	3600.00	166,485	0	0	15.51
mcsched	13,890	135.14	13,889	1010	0	3.85
methanosarcina	39,373	3600.00	39,372	0	0	17.28
mkc	491,799	3600.00	491,798	0	0	10.99
msc98-ip	7410	1272.72	11,944	0	0	1.31
mzzv11	2615	776.75	3431	0	0	0.20
n3seq24	511	3600.01	761	16,703	0	2292.34
n4-3	36,950	514.24	0	0	0	0.07
n9-3	61,330	3600.00	0	0	0	0.10
neos-1109824	91	18.01	91	551	0	0.56
neos-1171692	401	60.52	400	318	3	25.62
neos-1171737	7739	3602.04	7738	5524	118	3229.60
neos-1224597	1	2.54	0	0	0	0.06

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
neos-1311124	12,681	3600.03	12,680	1831	523	3583.60
neos-1337307	1449	84.02	1447	725	0	4.03
neos-1396125	24,381	126.35	29,374	66	0	0.34
neos13	54,138	2634.36	54,137	0	0	3.95
neos-1426635	2,308,929	3600.00	2,308,928	374,937	35,894	2120.86
neos-1426662	39,207	3603.88	39,206	58,817	1734	3482.63
neos-1429212	1688	3600.02	2475	1	0	6.74
neos-1436709	772,664	3600.00	772,663	94,526	11,455	1983.94
neos-1440460	639,580	927.15	639,579	31,630	2232	174.72
neos-1442119	455,250	3600.00	455,249	86,269	10,835	2523.17
neos-1442657	967,664	3600.01	967,663	103,918	11,232	1584.77
neos-1620770	148,362	971.60	276,999	3728	68	15.51
neos18	6857	124.45	9482	620	0	47.61
neos-476283	794	368.15	793	14	0	5.41
neos-555424	462,327	3030.07	465,435	99	0	10.13
neos-738098	1438	3601.17	1461	638	0	722.54
neos-777800	1	2.01	0	0	0	0.02
neos-785912	85	14.78	160	443	0	0.43
neos788725	91,656	231.00	98,744	1768	1	59.50
neos808444	416	1564.50	684	1	0	0.59
neos-820146	112,684	1988.06	170,527	34,424	7291	1696.12
neos-820157	176,531	3600.00	269,912	55,057	10,778	3011.38
neos-824661	1	26.64	0	0	0	4.61
neos-824695	3	14.97	2	169	0	2.76
neos-826650	4111	3600.77	4828	14,836	17	3422.30
neos-826694	1	6.77	0	0	0	0.78
neos-826812	1	4.16	0	0	0	0.77
neos-826841	2268	3603.48	2733	5966	52	3537.55
neos-849702	3176	102.67	4653	95	0	0.55
neos-859770	1	156.69	0	0	0	0.22
neos-885086	67	4223.15	66	211	1	4139.31
neos-885524	12,951	3600.00	47,708	0	0	11.15
neos-911880	250,578	3600.01	252,110	445,545	128	3225.65
neos-932816	54,079	3600.01	54,078	17,949	0	719.93
neos-933638	92	360.32	109	39	0	31.21
neos-933966	15	155.98	27	231	0	6.16
neos-934278	344	775.30	343	335	0	101.71
neos-935627	548	1078.09	547	162	0	118.01
neos-935769	33	192.43	32	3	0	4.95
neos-937511	25	187.18	24	8	0	5.00
neos-937815	2917	3600.01	2952	247	0	953.26
neos-941262	2027	3600.01	2030	56	0	386.44
neos-941313	23	1463.63	21	28	0	799.39
neos-948126	1752	3600.18	1751	92	0	373.27
neos-957389	5	20.62	4	0	0	0.81
neos-984165	2060	3600.01	2065	137	0	459.99
net12	1924	579.88	3762	0	0	0.47
noswot	1,106,633	314.13	0	0	0	0.25
ns1111636	106	3606.95	105	669	0	1058.36
ns1116954	12	3600.04	11	93	0	5.94
ns1158817	1	164.10	0	0	0	49.12
ns1208400	1150	373.42	1712	1210	0	10.24
ns1456591	22,463	3600.02	36,872	7952	0	2381.62
ns1702808	32,979	171.29	52,938	94,045	1	110.77

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
ns1758913	3	3600.35	2	2	0	1.08
ns1853823	1	3591.21	0	0	0	4.15
ns1854840	1	3598.51	0	0	0	1.78
ns1905797	41,001	3600.01	0	0	0	0.38
ns1905800	263,354	3600.00	332,135	878	0	26.94
ns1952667	13,279	2365.71	0	0	0	0.01
ns2118727	626	3600.00	1754	0	0	0.09
ns2124243	2421	3600.02	2420	0	0	9.99
ns2137859	101,598	3600.00	135,141	5	0	13.16
ns4-pr9	536,154	3600.01	0	0	0	0.20
nsr8k	73	3600.00	72	0	0	1.10
nu60-pr9	138,616	3600.00	142,990	363,868	6	161.97
p2m2p1m1p0n100	292,647	3600.00	292,654	286,099	0	3564.48
p6b	105,765	3600.00	105,764	63	0	0.41
pigeon-10	203,137	147.93	203,593	2011	182	4.34
pigeon-11	1,579,649	1408.19	1,580,603	1640	154	7.23
pigeon-12	3,159,767	3600.00	3,164,690	4863	7	79.07
pigeon-13	2,456,680	3600.00	2,460,703	1565	13	33.63
pigeon-19	1,376,433	3600.00	1,379,313	1989	4	13.12
protfold	51,262	3600.00	76,887	23	0	0.43
pw-myciel4	177,929	1700.99	270,085	740	1	2.43
qiu	1406	20.05	1405	125	22	3.56
queens-30	13,698	3600.02	13,697	177	0	0.31
rail507	949	97.86	0	0	0	0.35
ramos3	18	3600.14	17	1217	0	0.24
rvb-sub	53,816	3600.00	55,671	25	0	16.27
sct1	8524	3600.00	8523	0	0	1.66
sct32	42,658	3600.00	42,667	0	0	1.80
sct5	7522	3600.00	7521	0	0	11.11
seymour-disj-10	42,733	3600.00	42,732	11	0	6.09
seymour	77,405	3600.00	77,404	3	0	3.08
shipsched	99,271	3600.00	125,350	0	0	5.27
shs1023	1	3684.00	0	0	0	1.43
siena1	2071	3600.01	2070	0	0	1.09
sing161	2	3600.18	0	0	0	4.15
sing245	10	3617.49	9	0	0	2.61
sing2	2277	3600.08	2413	146	0	18.05
sts405	75,482	3600.01	75,481	547	0	2.38
sts729	321	3599.84	320	5149	2	541.73
swath	340,099	3600.00	0	0	0	0.64
tanglegram1	55	658.75	54	0	0	12.39
tanglegram2	3	9.16	2	0	0	6.02
timtab1	939,220	557.49	978,532	0	0	7.02
toll-like	847,113	3600.00	847,495	1	0	32.52
uc-case11	2594	3600.31	2593	15	0	1.29
uc-case3	1298	3600.15	1744	37	0	180.58
uct-subprob	628,350	3600.00	652,708	0	0	5.48
unitcal_7	7634	3600.28	7783	22,566	0	2969.88
usAbbrv-8-25_70	712,783	3600.00	752,043	126	0	30.52
vpphard2	198	3605.54	197	0	0	7.19
vpphard	462	3600.01	481	0	0	11.57
wachplan	18,848	1285.75	26,029	52,209	32	269.52
zib54-UUE	456,368	3600.00	457,325	1127	0	51.93
AM (# 157)	211,191.0	2207.02	207,886.6	15,415.8	591.3	383.09

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
GM (# 157)	2277.5	801.75		34.1	2.3	11.85
SGM (# 157)	5090.2	925.03				29.17

TABLE 31. M2010-bench testset: ISP settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
30n20b8	424	304.32	0	0	0	0.04
acc-tight5	2029	285.22	0	0	0	0.01
aflow40b	285,631	2324.41	0	0	0	0.25
air04	119	35.01	0	0	0	0.02
app1-2	16,726	3576.57	0	0	0	0.57
ash608gpia-3col	15	38.92	17	4	1	0.37
bab5	10,690	3600.10	11,729	177,343	0	2548.84
beasleyC3	525,070	3600.00	0	0	0	0.69
biella1	4647	3602.60	5493	0	27	3301.25
bienst2	138,693	178.53	0	0	0	0.02
binkar10_1	207,304	345.97	0	0	0	0.06
bley_xl1	2	310.47	0	0	0	0.09
bnatt350	1154	162.20	0	0	0	0.02
core2536-691	300	122.05	312	3	0	3.62
cov1075	314	6.53	313	880	16	0.42
csched010	684,596	3600.00	0	0	0	0.69
danoind	923,471	3600.00	0	0	0	0.29
dfn-gwin-UUM	51,474	93.85	0	0	0	0.02
eil133-2	693	59.24	0	0	0	0.03
eilB101	9340	147.58	0	0	0	0.01
enlight13	1	0.03	0	0	0	0.00
enlight14	1	0.02	0	0	0	0.00
ex9	1	91.93	0	0	0	0.00
glass4	5,039,521	3600.02	5,685,247	7957	0	305.75
gmu-35-40	5,597,153	3600.03	0	0	0	1.24
iis-100-0-cov	81,999	1524.37	0	0	0	0.00
iis-bupa-cov	108,310	3600.00	0	0	0	0.06
iis-pima-cov	11,775	748.39	0	0	0	0.02
lectsched-4-obj	3410	520.87	4005	0	3	449.47
m100n500k4r1	4,745,998	3600.00	0	0	0	0.60
macrophage	338,522	3600.00	338,524	0	2278	1927.61
map18	213	334.99	212	0	0	0.22
map20	323	306.50	322	0	0	0.22
mcsched	13,890	134.65	13,889	1010	0	3.45
mik-250-1-100-1	4,488,404	1596.85	0	0	0	0.80
mine-166-5	1850	41.68	0	0	0	0.02
mine-90-10	151,788	800.76	0	0	0	0.06
msc98-ip	7410	1273.94	11,944	0	0	1.20
mspp16	—	—	—	—	—	—
mzzv11	2615	776.76	3431	0	0	0.20
n3div36	112,964	3600.17	0	0	0	0.59
n3seq24	510	3600.85	760	16,703	0	2291.71
n4-3	36,950	516.98	0	0	0	0.02
neos-1109824	91	18.13	91	551	0	0.51
neos-1337307	1449	96.42	1447	725	0	15.65
neos-1396125	17,112	120.20	20,584	383	361	21.72
neos13	54,138	2608.34	54,137	0	0	4.17
neos-1601936	10,979	2061.41	0	0	0	0.05
neos18	6857	124.07	9482	620	0	47.38
neos-476283	794	368.53	793	14	0	5.45

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
neos-686190	7319	108.37	0	0	0	0.02
neos-849702	3176	138.61	4653	95	0	34.85
neos-916792	313,746	3600.00	0	0	0	0.36
neos-934278	344	777.66	343	335	0	101.87
net12	1924	579.83	3762	0	0	0.44
netdiversion	88	786.74	0	0	0	0.70
newdano	1,754,225	3600.00	0	0	0	0.45
noswot	1,106,633	313.29	0	0	0	0.21
ns1208400	1150	395.18	1712	1225	0	31.86
ns1688347	4220	211.56	0	0	0	0.02
ns1758913	3	3600.38	2	2	0	1.08
ns1766074	925,848	1230.29	0	0	0	2.43
ns1830653	46,368	651.08	0	0	0	0.05
opm2-z7-s2	2827	687.69	0	0	0	0.06
pg5_34	215,677	1264.76	0	0	0	0.11
pigeon-10	97,254	287.57	97,599	2926	4731	218.57
pw-myciel4	137,600	1545.84	193,208	896	23	216.85
qiu	1406	20.15	1405	125	22	4.13
rail507	949	97.72	0	0	0	0.35
ran16x16	328,398	296.92	0	0	0	0.00
reblock67	122,028	346.60	0	0	0	0.02
rmatr100-p10	675	111.14	0	0	0	0.02
rmatr100-p5	357	106.19	0	0	0	0.04
rmine6	690,821	3600.00	0	0	0	0.44
rocll-4-11	26,842	588.60	0	0	0	0.05
rococoC10-001000	106,798	554.62	0	0	0	0.09
roll3000	504,127	3130.68	0	0	0	0.24
satellites1-25	3350	526.15	0	0	0	0.03
sp98ic	200,590	3600.00	0	0	0	0.53
sp98ir	6084	66.64	0	0	0	0.03
tanglegram1	55	661.60	54	0	0	12.24
tanglegram2	3	9.17	2	0	0	6.02
timtab1	939,220	560.40	978,532	0	0	7.70
triptim1	1	46.04	0	0	0	0.24
unitcal_7	7631	3600.15	7780	22,561	0	2969.37
vpphard	462	3600.02	481	0	0	11.48
zib54-UUE	448,471	3600.00	449,404	1127	0	123.61
AM (# 87)	364,418.3	1307.61	90,823.8	2706.7	85.8	168.76
GM (# 87)	6531.0	449.34		4.4	1.5	3.35
SGM (# 87)	10,589.4	495.80				9.72

TABLE 32. M2010-bench testset: ISP-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
30n20b8	424	304.42	0	0	0	0.03
acc-tight5	2029	285.08	0	0	0	0.02
aflow40b	285,631	2320.99	0	0	0	0.24
air04	119	34.97	0	0	0	0.02
app1-2	16,726	3573.97	0	0	0	0.49
ash608gpia-3col	15	38.34	17	4	1	0.34
bab5	10,733	3600.42	11,772	178,588	0	2545.33
beasleyC3	524,100	3600.00	0	0	0	0.84
biella1	7869	492.77	9915	0	0	1.88
bienst2	138,693	179.06	0	0	0	0.06
binkar10_1	207,304	345.51	0	0	0	0.17
bley_xl1	2	311.49	0	0	0	0.09
bnatt350	1154	162.53	0	0	0	0.01
core2536-691	300	122.77	312	3	0	3.61
cov1075	193	6.13	192	744	9	0.18
csched010	679,852	3600.00	0	0	0	0.50
danoind	915,421	3600.00	0	0	0	0.25
dfn-gwin-UUM	51,474	93.04	0	0	0	0.05
eil133-2	693	58.39	0	0	0	0.03
eilB101	9340	147.87	0	0	0	0.01
enlight13	1	0.01	0	0	0	0.00
enlight14	1	0.02	0	0	0	0.00
ex9	1	91.78	0	0	0	0.00
glass4	5,431,797	3600.03	6,124,525	9078	0	78.47
gmu-35-40	5,595,139	3600.03	0	0	0	1.41
iis-100-0-cov	81,999	1529.70	0	0	0	0.03
iis-bupa-cov	108,370	3600.00	0	0	0	0.06
iis-pima-cov	11,775	751.73	0	0	0	0.02
lectsched-4-obj	1362	54.24	1679	0	0	0.19
m100n500k4r1	4,751,595	3600.00	0	0	0	0.79
macrophage	743,421	3600.00	743,445	0	0	10.34
map18	213	334.96	212	0	0	0.20
map20	323	305.38	322	0	0	0.25
mcsched	13,890	137.18	13,889	1010	0	3.88
mik-250-1-100-1	4,488,404	1593.90	0	0	0	0.79
mine-166-5	1850	41.60	0	0	0	0.01
mine-90-10	151,788	798.22	0	0	0	0.10
msc98-ip	7410	1288.02	11,944	0	0	1.27
mspp16	—	—	—	—	—	—
mzzv11	2615	782.87	3431	0	0	0.13
n3div36	113,437	3600.00	0	0	0	0.55
n3seq24	510	3601.77	760	16,703	0	2289.39
n4-3	36,950	515.57	0	0	0	0.01
neos-1109824	91	18.02	91	551	0	0.45
neos-1337307	1449	83.75	1447	725	0	4.15
neos-1396125	24,381	126.29	29,374	66	0	0.25
neos13	54,138	2635.49	54,137	0	0	3.80
neos-1601936	10,979	2052.66	0	0	0	0.04
neos18	6857	124.27	9482	620	0	47.54
neos-476283	794	369.27	793	14	0	5.46

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	ISP-time
neos-686190	7319	108.49	0	0	0	0.03
neos-849702	3176	102.67	4653	95	0	0.61
neos-916792	312,394	3600.00	0	0	0	0.49
neos-934278	344	772.86	343	335	0	101.74
net12	1924	580.08	3762	0	0	0.43
netdiversion	88	790.08	0	0	0	0.70
newdano	1,772,696	3600.00	0	0	0	0.50
noswot	1,106,633	311.77	0	0	0	0.30
ns1208400	1150	375.10	1712	1210	0	10.35
ns1688347	4220	211.53	0	0	0	0.02
ns1758913	3	3600.36	2	2	0	1.06
ns1766074	925,848	1230.08	0	0	0	2.28
ns1830653	46,368	657.21	0	0	0	0.03
opm2-z7-s2	2827	711.85	0	0	0	0.08
pg5_34	215,677	1270.38	0	0	0	0.04
pigeon-10	203,137	149.21	203,593	2011	182	4.13
pw-myciel4	177,929	1695.06	270,085	740	1	2.49
qiu	1406	20.10	1405	125	22	3.83
rail507	949	97.92	0	0	0	0.35
ran16x16	328,398	297.52	0	0	0	0.11
reblock67	122,028	346.27	0	0	0	0.06
rmatr100-p10	675	111.19	0	0	0	0.02
rmatr100-p5	357	106.24	0	0	0	0.03
rmine6	690,658	3600.00	0	0	0	0.38
rocll-4-11	26,842	588.83	0	0	0	0.05
rococoC10-001000	106,798	559.24	0	0	0	0.09
roll3000	504,127	3145.38	0	0	0	0.29
satellites1-25	3350	526.52	0	0	0	0.04
sp98ic	201,395	3600.00	0	0	0	0.44
sp98ir	6084	66.46	0	0	0	0.03
tanglegram1	55	657.85	54	0	0	12.46
tanglegram2	3	9.29	2	0	0	6.14
timtab1	939,220	557.09	978,532	0	0	7.44
triptim1	1	46.07	0	0	0	0.24
unitcal_7	7633	3600.07	7782	22,566	0	2969.32
vpphard	462	3600.01	481	0	0	11.49
zib54-UUE	457,449	3600.00	458,406	1127	0	51.40
AM (# 87)	375,554.4	1266.87	102,856.9	2716.3	2.5	94.17
GM (# 87)	6633.4	422.99		4.3	1.1	2.15
SGM (# 87)	10,778.4	467.62				4.69

TABLE 33. Margot1 testset: OB-orbit0 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
cov954	104	1.56	64	33	0	0	0.05
cov1053	1981	8.39	556	1339	0	0	1.61
cov1054	101,796	2001.18	668	1294	9	3	50.06
cov1075	215	6.26	154	258	0	0	0.08
cov1076	832,830	3600.00	7636	8258	805	156	489.14
cov1174	509,155	2414.09	26,660	47,017	0	0	330.36
sts27-complemented	15	0.05	14	0	0	0	0.00
sts45-complemented	2121	1.36	78	38	0	0	0.16
sts63-complemented	10,576	9.03	734	990	0	0	1.80
sts81-complemented	1765	52.64	366	379	0	0	50.23
cod83	48	1.35	56	90	0	0	0.03
cod83r	103	2.02	104	33	0	0	0.04
cod93	1655	35.94	286	465	0	0	2.58
cod93r	10,532	91.47	432	706	0	0	4.74
cod105	7	19.04	6	0	0	0	0.13
cod105r	5	3.28	4	0	0	0	0.05
AM (# 16)	92,056.8	515.48	2363.6	3806.2	50.9	9.9	58.19
GM (# 16)	1080.0	19.70	193.2	151.8	1.7	1.5	4.31
SGM (# 16)	2034.1	40.90					11.19

TABLE 34. Margot1 testset: OB-orbit1 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
cov954	198	1.83	68	4	0	1	0.10
cov1053	4686	21.22	798	495	0	0	3.26
cov1054	190,769	3600.00	1282	441	0	1	87.85
cov1075	357	7.25	324	136	0	0	0.62
cov1076	776,245	3298.93	17,978	4370	539	121	398.27
cov1174	715,937	3600.00	69,008	31,921	2	0	622.06
sts27-complemented	17	0.05	16	0	0	0	0.00
sts45-complemented	4305	2.31	152	15	0	0	0.27
sts63-complemented	17,093	14.41	878	358	0	0	3.11
sts81-complemented	9573	444.43	1092	417	0	0	435.84
cod83	69	1.71	74	31	0	0	0.23
cod83r	144	3.20	144	19	0	0	0.22
cod93	2163	49.38	306	70	0	0	4.15
cod93r	20,705	180.49	834	241	0	0	10.60
cod105	7	19.12	6	0	0	0	0.11
cod105r	5	3.28	4	0	0	0	0.04
AM (# 16)	108,892.1	702.98	5810.2	2407.4	33.8	7.7	97.92
GM (# 16)	1731.9	30.44	299.8	70.5	1.5	1.3	6.15
SGM (# 16)	3113.5	58.85					16.70

TABLE 35. Margot1 testset: OB-orbit2 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
cov954	215	1.83	220	107	1	1	0.61
cov1053	1469	15.77	1504	833	0	0	10.19
cov1054	544	34.33	714	137	0	0	11.91
cov1075	502	7.39	530	298	0	0	1.69
cov1076	41,788	352.76	6484	705	130	115	184.78
cov1174	125,438	3600.00	79,926	6205	0	9	2918.54
sts27-complemented	19	0.06	18	9	0	0	0.00
sts45-complemented	4347	2.60	68	26	0	0	0.37
sts63-complemented	5310	7.28	680	251	0	0	3.16
sts81-complemented	1384	207.94	552	537	0	0	205.56
cod83	96	1.70	114	172	0	0	0.32
cod83r	571	4.34	576	173	0	0	1.55
cod93	882	104.14	1094	356	0	0	64.12
cod93r	7619	316.34	7538	1882	0	0	171.32
cod105	15	21.37	14	81	0	0	0.14
cod105r	15	4.96	14	0	0	0	0.06
AM (# 16)	11,888.4	292.68	6252.9	735.8	8.2	7.8	223.39
GM (# 16)	789.4	20.46	453.2	175.5	1.4	1.5	8.77
SGM (# 16)	1186.7	36.20					22.44

TABLE 36. Margot1 testset: OB-orbit3 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
cov954	78	1.44	58	45	0	0	0.24
cov1053	794	15.36	634	1322	0	0	9.83
cov1054	13,733	351.04	542	433	1	5	62.76
cov1075	127	3.78	128	185	0	0	0.64
cov1076	30,059	212.12	954	324	35	32	85.27
cov1174	219,004	2463.72	21,410	22,019	1	1	1469.34
sts27-complemented	15	0.07	14	0	0	0	0.00
sts45-complemented	2284	1.64	64	18	0	1	0.25
sts63-complemented	5178	7.08	228	187	0	0	3.26
sts81-complemented	1363	279.22	306	278	0	0	276.92
cod83	41	1.54	50	106	0	0	0.29
cod83r	73	2.36	90	66	0	0	0.56
cod93	337	58.89	314	456	0	0	35.13
cod93r	3806	92.41	426	500	0	0	49.31
cod105	7	19.28	6	0	0	0	0.12
cod105r	5	3.32	4	0	0	0	0.06
AM (# 16)	17,306.5	219.58	1576.8	1621.2	2.3	2.4	124.62
GM (# 16)	513.1	17.28	146.9	95.8	1.2	1.4	7.59
SGM (# 16)	976.9	33.75					19.04

TABLE 37. Margot1 testset: OB-NST settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
cov954	82	1.50	24	27	0	0	0.02
cov1053	1288	5.28	322	809	0	0	0.18
cov1054	113,122	2149.84	122	164	0	1	0.23
cov1075	201	5.91	116	239	0	0	0.04
cov1076	993,616	3600.00	146	191	2	4	1.56
cov1174	489,331	2051.39	9916	10,095	0	0	9.14
sts27-complemented	15	0.06	14	0	0	0	0.00
sts45-complemented	2417	1.37	36	1	0	0	0.01
sts63-complemented	19,797	12.70	118	44	0	0	0.09
sts81-complemented	1937	8.54	294	236	0	0	5.87
cod83	48	1.33	56	90	0	0	0.03
cod83r	103	2.02	104	33	0	0	0.02
cod93	1940	34.61	242	393	0	0	0.36
cod93r	11,039	90.78	372	334	0	0	0.27
cod105	7	19.05	6	0	0	0	0.10
cod105r	5	3.28	4	0	0	0	0.05
AM (# 16)	102,184.2	499.23	743.2	791.0	0.1	0.3	1.12
GM (# 16)	1118.7	17.19	93.6	54.8	1.0	1.1	1.32
SGM (# 16)	2131.0	36.70					0.91

TABLE 38. Margot1 testset: OB-min4 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
cov954	95	1.63	28	16	0	0	0.03
cov1053	2080	8.85	150	394	0	0	1.11
cov1054	114,055	2345.45	66	186	0	0	55.33
cov1075	169	6.25	76	193	0	0	0.10
cov1076	840,701	3600.00	260	617	97	14	473.04
cov1174	622,700	3021.51	2766	16,926	0	0	405.72
sts27-complemented	15	0.05	14	0	0	0	0.00
sts45-complemented	4113	2.30	8	11	0	0	0.16
sts63-complemented	23,683	18.97	94	226	0	0	3.93
sts81-complemented	3961	100.04	104	210	0	0	95.43
cod83	28	1.64	30	87	0	0	0.06
cod83r	411	4.10	38	27	0	0	0.14
cod93	3122	59.81	62	378	0	0	3.74
cod93r	19,851	164.01	120	269	0	0	8.43
cod105	7	19.34	6	0	0	0	0.11
cod105r	5	3.29	4	0	0	0	0.05
AM (# 16)	102,187.2	584.83	239.1	1221.2	6.1	0.9	65.46
GM (# 16)	1424.7	25.94	52.5	69.5	1.3	1.2	4.97
SGM (# 16)	2710.0	49.99					12.92

TABLE 39. Margot1 testset: OB-first settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
cov954	389	1.34	84	50	1	0	0.04
cov1053	513	2.42	318	808	0	0	0.32
cov1054	69,985	1042.92	1568	2105	107	13	39.00
cov1075	485	5.67	178	271	0	0	0.16
cov1076	1,039,672	3600.01	23,294	19,932	4737	396	614.20
cov1174	920,621	3600.01	28,436	53,849	4	2	667.94
sts27-complemented	15	0.06	14	0	0	0	0.00
sts45-complemented	5437	2.59	170	29	0	0	0.32
sts63-complemented	36,603	26.74	4078	914	0	0	6.45
sts81-complemented	2427	85.98	762	492	0	0	82.98
cod83	58	1.32	56	90	0	0	0.00
cod83r	291	2.02	106	34	0	0	0.05
cod93	1840	25.61	248	425	0	0	2.00
cod93r	13,943	104.33	670	467	0	0	5.46
cod105	7	19.31	6	0	0	0	0.10
cod105r	5	3.30	4	0	0	0	0.05
AM (# 16)	130,768.2	532.73	3749.5	4966.6	303.1	25.7	88.69
GM (# 16)	1507.6	20.03	271.4	160.6	2.5	1.8	4.85
SGM (# 16)	2685.5	42.07					13.09

TABLE 40. Margot2 testset: OB-orbit0 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
bibd1032.mylp	1	0.00	0	0	0	0	0.00
bibd1042.mylp	1	0.02	0	0	0	0	0.01
bibd1054.mylp	21	0.31	26	36	0	0	0.01
bibd1152.mylp	1	0.05	0	0	0	0	0.01
bibd1154.mylp	57	0.73	80	179	0	0	0.06
bibd1265.mylp	28	0.84	44	183	0	0	0.07
bibd1331.mylp	1	0.02	0	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0	0.01
bibd1342.mylp	14	0.81	16	65	0	0	0.02
bibd1531.mylp	1	0.02	0	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0.00
bibd734.mylp	1	0.01	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0	0.00
bibd931.mylp	1	0.01	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0.00
bibd933.mylp	1	0.01	0	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0	0.00
ca36243	6	0.31	0	0	0	0	0.00
ca57245	641,231	2787.38	0	0	0	0	0.08
ca77247	520,733	3600.00	0	0	0	0	0.02
clique9	1	0.06	0	0	0	0	0.01
codbt03.mylp	1	0.02	0	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0	0.00
codbt05.mylp	201	10.35	158	259	0	1	0.13
codbt06.mylp	17,145	3600.01	1810	1917	0	0	32.85
codbt15.mylp	195,916	3600.00	3212	2223	1	0	642.97
codbt24.mylp	369,342	3540.43	5716	6639	2	0	152.90
codbt33.mylp	39	2.22	70	163	0	0	0.03
codbt34.mylp	49,620	3600.01	1696	1422	0	0	153.27
codbt42.mylp	359	1.72	108	155	0	0	0.07
codbt43.mylp	152,001	3600.01	2708	2086	10	0	152.39
codbt52.mylp	636,676	3600.00	13,250	18,635	15	2	282.46
codbt60.mylp	20	0.12	28	22	0	0	0.00
codbt61.mylp	49	0.94	76	159	0	1	0.05
codbt70.mylp	1	0.01	0	0	0	0	0.00
codbt71.mylp	194,694	3600.00	17,380	11,019	7	2	286.90
codbt80.mylp	30	1.26	34	174	0	0	0.03

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
codbt90.mylp	89,702	3600.02	1230	958	0	0	2143.65
flosn52	797	2.38	62	45	17	1	0.11
flosn60	3742	9.21	74	38	14	1	0.97
flosn84	73,478	201.57	134	183	41	1	23.52
jgt18	145	0.36	6	0	0	0	0.01
jgt30	21,975	25.46	20	0	0	0	3.24
mered	140	1.82	140	0	0	0	0.37
O4_35	1	0.12	0	0	0	0	0.01
oa25332	1	0.00	0	0	0	0	0.00
oa25342	1	0.00	0	0	0	0	0.00
oa26332	77,724	3600.01	0	0	0	0	0.02
oa36243	1	0.09	0	0	0	0	0.00
oa56243	1	0.01	0	0	0	0	0.00
oa57245	9715	21.07	0	0	0	0	0.00
oa66234	1	0.00	0	0	0	0	0.00
oa67233	1	0.01	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0.00
oa76234	4	0.04	0	0	0	0	0.00
oa77233	1	0.01	0	0	0	0	0.00
oa77247	318,856	583.26	0	0	0	0	0.05
of5_14_7	13	0.24	12	0	0	0	0.00
of7_18_9	1	0.06	0	0	0	0	0.00
ofsub9	11,315	9.12	62	0	0	2	3.60
pa36243	3815	3.38	0	0	0	0	0.00
pa57245	759,754	3600.00	0	0	0	0	0.03
pa77247	802,488	3600.00	0	0	0	0	0.11
sts15.mylp	15	0.02	14	0	0	0	0.00
sts21.mylp	15	0.05	14	0	0	0	0.00
sts9.mylp	1	0.00	0	0	0	0	0.00
AM (# 79)	62,682.4	592.48	609.9	589.4	1.4	0.1	49.11
GM (# 79)	41.4	5.53	5.9	4.9	1.2	1.0	1.87
SGM (# 79)	533.4	21.05					4.28

TABLE 41. Margot2 testset: OB-orbit1 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
bibd1032.mylp	1	0.00	0	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0	0.00
bibd1054.mylp	53	0.63	92	20	0	0	0.17
bibd1152.mylp	1	0.04	0	0	0	0	0.01
bibd1154.mylp	84	3.16	98	31	0	0	0.89
bibd1265.mylp	48	3.34	80	99	0	0	2.04
bibd1331.mylp	1	0.02	0	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0	0.00
bibd1342.mylp	84	3.30	126	0	0	0	2.03
bibd1531.mylp	1	0.02	0	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0.00
bibd734.mylp	1	0.01	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0.00
bibd846.mylp	1	0.01	0	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0	0.00
bibd943.mylp	1	0.01	0	0	0	0	0.00
ca36243	6	0.32	0	0	0	0	0.00
ca57245	641,231	2798.02	0	0	0	0	0.02
c77247	518,628	3600.00	0	0	0	0	0.03
clique9	1	0.06	0	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0	0.00
codbt05.mylp	1279	12.88	436	227	0	0	1.04
codbt06.mylp	16,879	3600.06	1658	504	0	0	37.93
codbt15.mylp	189,829	3600.00	2876	812	0	0	958.86
codbt24.mylp	371,406	3600.01	8628	2933	5	0	192.63
codbt33.mylp	22	1.15	32	75	0	0	0.07
codbt34.mylp	33,646	3600.00	2426	669	0	0	63.02
codbt42.mylp	738	3.40	286	157	4	0	0.34
codbt43.mylp	129,094	3600.01	3934	631	11	0	124.92
codbt52.mylp	583,108	3600.00	9630	2154	5	2	294.03
codbt60.mylp	31	0.16	48	26	0	0	0.03
codbt61.mylp	32	1.00	50	63	0	0	0.21
codbt70.mylp	1	0.00	0	0	0	0	0.00
codbt71.mylp	182,213	3600.01	14,922	2283	0	0	272.11
codbt80.mylp	34	1.83	38	126	0	0	0.34

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
codbt90.mylp	101,432	3600.00	2916	856	3	0	1809.56
flosn52	1642	3.96	16	0	0	0	0.16
flosn60	4791	9.56	4	0	0	0	0.86
flosn84	50,997	106.62	8	11	5	0	14.02
jgt18	145	0.35	6	0	0	0	0.00
jgt30	21,975	25.42	20	0	0	0	3.39
mered	140	22.47	140	0	0	0	21.00
O4_35	1	0.11	0	0	0	0	0.00
oa25332	1	0.01	0	0	0	0	0.00
oa25342	1	0.01	0	0	0	0	0.00
oa26332	77,768	3600.00	0	0	0	0	0.03
oa36243	1	0.08	0	0	0	0	0.00
oa56243	1	0.01	0	0	0	0	0.00
oa57245	9715	20.86	0	0	0	0	0.00
oa66234	1	0.00	0	0	0	0	0.00
oa67233	1	0.01	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0.00
oa76234	4	0.04	0	0	0	0	0.00
oa77233	1	0.00	0	0	0	0	0.00
oa77247	318,856	586.72	0	0	0	0	0.05
of5_14_7	77	0.68	18	0	0	0	0.03
of7_18_9	1	0.06	0	0	0	0	0.01
ofsub9	14,389	11.88	38	0	0	1	4.36
pa36243	3815	3.38	0	0	0	0	0.00
pa57245	762,543	3600.00	0	0	0	0	0.10
pa77247	802,544	3600.01	0	0	0	0	0.09
sts15.mylp	13	0.02	8	0	0	0	0.00
sts21.mylp	13	0.04	12	0	0	0	0.00
sts9.mylp	1	0.01	0	0	0	0	0.00
AM (# 79)	61,257.4	592.68	614.5	147.8	0.4	0.0	48.16
GM (# 79)	45.6	6.04	5.8	3.4	1.1	1.0	1.96
SGM (# 79)	562.7	21.69					4.47

TABLE 42. Margot2 testset: OB-orbit2 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
bibd1032.mylp	1	0.01	0	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0	0.00
bibd1054.mylp	52	0.58	76	17	0	0	0.28
bibd1152.mylp	1	0.05	0	0	0	0	0.01
bibd1154.mylp	21	0.63	28	48	0	0	0.14
bibd1265.mylp	81	3.52	142	168	0	0	2.80
bibd1331.mylp	1	0.02	0	0	0	0	0.01
bibd1341.mylp	1	0.08	0	0	0	0	0.01
bibd1342.mylp	32	1.30	48	18	0	0	0.54
bibd1531.mylp	1	0.02	0	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0.00
bibd731.mylp	1	0.01	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0.00
bibd843.mylp	1	0.00	0	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0.00
bibd933.mylp	1	0.01	0	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0	0.00
ca36243	6	0.32	0	0	0	0	0.00
ca57245	641,231	2797.17	0	0	0	0	0.05
ca77247	518,565	3600.00	0	0	0	0	0.01
clique9	1	0.05	0	0	0	0	0.00
codbt03.mylp	1	0.02	0	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0	0.00
codbt05.mylp	521	10.32	530	182	2	1	5.27
codbt06.mylp	7271	3600.12	12,922	981	2	1	1475.78
codbt15.mylp	95,333	3600.03	20,142	1521	2	2	2029.64
codbt24.mylp	99,631	3600.03	31,600	2438	12	12	2526.95
codbt33.mylp	50	1.88	70	128	0	0	0.21
codbt34.mylp	19,662	3600.01	19,104	1322	11	3	1442.23
codbt42.mylp	1762	11.16	1924	244	3	1	7.09
codbt43.mylp	46,122	3600.01	48,296	2036	4	11	2212.76
codbt52.mylp	147,155	3600.00	83,054	8064	12	86	2670.30
codbt60.mylp	39	0.16	48	26	1	1	0.04
codbt61.mylp	150	2.46	218	79	0	0	0.71
codbt70.mylp	1	0.01	0	0	0	0	0.00
codbt71.mylp	44,337	3600.01	85,348	2881	5	6	2829.80
codbt80.mylp	27	1.66	30	7	0	0	0.07

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
codbt90.mylp	15,558	3600.15	28,762	1738	3	4	2428.83
flosn52	201	2.57	70	16	1	16	0.78
flosn60	1173	8.43	100	18	3	46	4.72
flosn84	36,094	676.38	158	194	44	1745	593.43
jgt18	85	0.46	6	0	0	12	0.11
jgt30	16,062	24.54	12	0	0	315	10.37
mered	9	1.34	8	0	0	0	0.35
O4_35	1	0.12	0	0	0	0	0.00
oa25332	1	0.01	0	0	0	0	0.00
oa25342	1	0.00	0	0	0	0	0.00
oa26332	77,789	3600.00	0	0	0	0	0.01
oa36243	1	0.09	0	0	0	0	0.00
oa56243	1	0.00	0	0	0	0	0.00
oa57245	9715	21.48	0	0	0	0	0.00
oa66234	1	0.00	0	0	0	0	0.00
oa67233	1	0.00	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0.00
oa76234	4	0.04	0	0	0	0	0.00
oa77233	1	0.00	0	0	0	0	0.00
oa77247	318,856	587.59	0	0	0	0	0.06
of5_14_7	49	0.33	48	6	0	0	0.15
of7_18_9	1	0.06	0	0	0	0	0.01
ofsub9	8041	10.25	86	0	0	167	6.18
pa36243	3815	3.35	0	0	0	0	0.00
pa57245	760,056	3600.00	0	0	0	0	0.09
pa77247	803,862	3600.00	0	0	0	0	0.07
sts15.mylp	9	0.03	8	0	0	0	0.00
sts21.mylp	19	0.06	18	3	0	0	0.01
sts9.mylp	1	0.00	0	0	0	0	0.00
AM (# 79)	46,499.7	599.61	4213.4	280.2	1.3	30.7	231.01
GM (# 79)	36.7	5.93	8.0	4.3	1.3	1.7	2.69
SGM (# 79)	452.8	21.93					8.88

TABLE 43. Margot2 testset: OB-orbit3 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
bibd1032.mylp	1	0.01	0	0	0	0	0.01
bibd1042.mylp	1	0.01	0	0	0	0	0.00
bibd1054.mylp	22	0.47	28	46	0	0	0.19
bibd1152.mylp	1	0.05	0	0	0	0	0.01
bibd1154.mylp	16	0.69	16	57	0	0	0.19
bibd1265.mylp	20	1.63	28	62	0	0	1.15
bibd1331.mylp	1	0.01	0	0	0	0	0.00
bibd1341.mylp	1	0.08	0	0	0	0	0.01
bibd1342.mylp	84	5.14	130	356	0	0	4.12
bibd1531.mylp	1	0.02	0	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0	0.00
bibd732.mylp	1	0.01	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0	0.01
ca36243	6	0.30	0	0	0	0	0.00
ca57245	641,231	2785.99	0	0	0	0	0.01
ca77247	519,537	3600.00	0	0	0	0	0.05
clique9	1	0.06	0	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0	0.01
codbt05.mylp	853	21.45	892	1050	0	0	12.58
codbt06.mylp	7319	3600.13	2462	2207	0	2	1851.27
codbt15.mylp	134,815	3600.00	1628	2891	5	0	1375.00
codbt24.mylp	199,907	3600.05	5346	3235	2	30	1721.04
codbt33.mylp	16	1.12	26	92	0	0	0.11
codbt34.mylp	29,621	3600.01	6376	2434	0	13	1900.88
codbt42.mylp	222	2.53	230	149	0	0	1.10
codbt43.mylp	140,759	3600.00	5160	3023	0	1	979.05
codbt52.mylp	374,275	3574.19	7772	9558	8	81	1663.38
codbt60.mylp	30	0.15	38	40	0	0	0.03
codbt61.mylp	13	0.83	20	34	0	0	0.09
codbt70.mylp	1	0.01	0	0	0	0	0.01
codbt71.mylp	131,773	3600.01	12,582	5252	1	3	2017.57
codbt80.mylp	24	1.41	28	186	0	0	0.17

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
codbt90.mylp	19,352	3600.00	3106	3865	3	2	2526.24
flosn52	1007	3.53	22	9	1	1	0.95
flosn60	3787	10.32	22	6	0	5	1.35
flosn84	39,024	80.93	10	22	0	2	12.06
jgt18	58	0.26	8	0	0	1	0.00
jgt30	16,970	20.25	10	7	1	41	4.12
mered	113	20.98	112	3	0	0	19.59
O4_35	1	0.11	0	0	0	0	0.00
oa25332	1	0.01	0	0	0	0	0.00
oa25342	1	0.01	0	0	0	0	0.00
oa26332	77,786	3600.01	0	0	0	0	0.02
oa36243	1	0.09	0	0	0	0	0.00
oa56243	1	0.01	0	0	0	0	0.00
oa57245	9715	20.97	0	0	0	0	0.00
oa66234	1	0.00	0	0	0	0	0.00
oa67233	1	0.00	0	0	0	0	0.00
oa68233	1	0.07	0	0	0	0	0.00
oa76234	4	0.04	0	0	0	0	0.00
oa77233	1	0.00	0	0	0	0	0.00
oa77247	318,856	581.93	0	0	0	0	0.04
of5_14_7	31	0.66	22	0	0	3	0.30
of7_18_9	1	0.06	0	0	0	0	0.01
ofsub9	14,227	15.32	22	0	0	166	8.01
pa36243	3815	3.32	0	0	0	0	0.00
pa57245	760,853	3600.00	0	0	0	0	0.12
pa77247	798,945	3600.00	0	0	0	0	0.13
sts15.mylp	9	0.02	8	0	0	0	0.00
sts21.mylp	15	0.05	14	1	0	0	0.00
sts9.mylp	1	0.01	0	0	0	0	0.00
AM (# 79)	53,736.0	591.84	583.8	437.8	0.3	4.4	178.49
GM (# 79)	38.0	5.89	5.6	4.7	1.1	1.4	2.52
SGM (# 79)	492.4	21.54					7.83

TABLE 44. Margot2 testset: OB-NST settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
bibd1032.mylp	1	0.00	0	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0	0.00
bibd1054.mylp	21	0.31	26	36	0	0	0.00
bibd1152.mylp	1	0.04	0	0	0	0	0.01
bibd1154.mylp	57	0.74	80	179	0	0	0.07
bibd1265.mylp	28	0.83	44	183	0	0	0.08
bibd1331.mylp	1	0.02	0	0	0	0	0.00
bibd1341.mylp	1	0.08	0	0	0	0	0.01
bibd1342.mylp	14	0.81	16	65	0	0	0.02
bibd1531.mylp	1	0.02	0	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0.00
bibd733.mylp	1	0.01	0	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0.00
bibd846.mylp	1	0.01	0	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0	0.00
bibd943.mylp	1	0.00	0	0	0	0	0.00
ca36243	6	0.31	0	0	0	0	0.00
ca57245	641,231	2792.66	0	0	0	0	0.08
c77247	518,750	3600.00	0	0	0	0	0.03
clique9	1	0.06	0	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0	0.00
codbt05.mylp	251	10.43	84	204	0	1	0.05
codbt06.mylp	17,279	3600.01	294	801	0	0	0.73
codbt15.mylp	198,926	3600.00	490	849	0	0	1.34
codbt24.mylp	396,679	3600.00	370	483	0	0	0.90
codbt33.mylp	39	2.22	70	163	0	0	0.04
codbt34.mylp	61,444	3600.01	230	445	0	0	1.03
codbt42.mylp	1162	3.16	122	150	0	0	0.03
codbt43.mylp	191,788	3600.00	420	799	10	0	1.11
codbt52.mylp	702,650	3600.00	412	614	0	0	1.46
codbt60.mylp	20	0.12	28	22	0	0	0.00
codbt61.mylp	49	0.94	76	159	0	1	0.02
codbt70.mylp	1	0.00	0	0	0	0	0.00
codbt71.mylp	212,574	3600.00	332	559	0	0	1.01
codbt80.mylp	30	1.26	34	174	0	0	0.01

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
codbt90.mylp	166,936	3600.00	392	784	0	0	1.73
flosn52	817	2.51	52	25	10	0	0.01
flosn60	3399	7.54	58	27	10	0	0.02
flosn84	75,478	185.79	102	25	5	0	0.14
jgt18	145	0.32	6	0	0	0	0.01
jgt30	21,975	20.94	20	0	0	0	0.03
mered	140	1.82	140	0	0	0	0.40
O4_35	1	0.12	0	0	0	0	0.00
oa25332	1	0.01	0	0	0	0	0.00
oa25342	1	0.00	0	0	0	0	0.00
oa26332	77,772	3600.00	0	0	0	0	0.01
oa36243	1	0.08	0	0	0	0	0.00
oa56243	1	0.00	0	0	0	0	0.00
oa57245	9715	20.86	0	0	0	0	0.00
oa66234	1	0.00	0	0	0	0	0.00
oa67233	1	0.00	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0.00
oa76234	4	0.05	0	0	0	0	0.00
oa77233	1	0.01	0	0	0	0	0.00
oa77247	318,856	588.74	0	0	0	0	0.04
of5_14_7	13	0.22	12	0	0	0	0.00
of7_18_9	1	0.05	0	0	0	0	0.00
ofsub9	11,605	5.50	56	0	0	2	0.05
pa36243	3815	3.40	0	0	0	0	0.00
pa57245	758,224	3600.00	0	0	0	0	0.11
pa77247	795,586	3600.00	0	0	0	0	0.12
sts15.mylp	15	0.03	14	0	0	0	0.00
sts21.mylp	15	0.06	14	0	0	0	0.00
sts9.mylp	1	0.01	0	0	0	0	0.00
AM (# 79)	65,665.1	593.07	50.6	85.4	0.4	0.1	0.14
GM (# 79)	42.9	5.51	4.6	3.9	1.1	1.0	1.02
SGM (# 79)	553.6	20.91					0.13

TABLE 45. Margot2 testset: OB-min4 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
bibd1032.mylp	1	0.00	0	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0	0.00
bibd1054.mylp	14	0.34	16	32	0	0	0.01
bibd1152.mylp	1	0.04	0	0	0	0	0.01
bibd1154.mylp	58	0.88	76	159	0	0	0.08
bibd1265.mylp	28	0.84	44	182	0	0	0.08
bibd1331.mylp	1	0.01	0	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0	0.00
bibd1342.mylp	14	0.80	16	64	0	0	0.04
bibd1531.mylp	1	0.02	0	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0	0.00
bibd931.mylp	1	0.01	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0	0.01
ca36243	6	0.30	0	0	0	0	0.00
ca57245	641,231	2790.51	0	0	0	0	0.03
ca77247	520,569	3600.00	0	0	0	0	0.04
clique9	1	0.05	0	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0	0.00
codbt05.mylp	277	11.27	56	158	0	1	0.19
codbt06.mylp	16,434	3600.02	154	639	0	0	31.05
codbt15.mylp	112,082	3600.00	272	733	0	0	222.95
codbt24.mylp	375,626	3600.01	162	1421	0	0	203.28
codbt33.mylp	49	4.74	24	128	0	0	0.00
codbt34.mylp	37,737	3600.00	478	700	2	0	77.26
codbt42.mylp	1251	4.50	52	155	0	0	0.34
codbt43.mylp	117,877	3600.00	322	804	11	0	112.40
codbt52.mylp	619,153	3600.00	542	2067	9	0	279.38
codbt60.mylp	16	0.12	22	22	0	0	0.00
codbt61.mylp	18	0.84	30	58	0	0	0.01
codbt70.mylp	1	0.00	0	0	0	0	0.00
codbt71.mylp	198,010	3600.00	2426	2471	2	1	310.41
codbt80.mylp	22	1.25	26	170	0	0	0.01

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
codbt90.mylp	66,678	3600.01	754	1153	0	0	585.69
flosn52	1612	3.91	4	0	0	0	0.31
flosn60	5949	11.66	4	0	0	0	1.02
flosn84	75,917	166.25	4	0	0	0	20.77
jgt18	1411	1.19	4	3	0	0	0.16
jgt30	106,682	245.73	4	9	0	0	17.74
mered	21	2.78	12	0	0	0	0.11
O4_35	1	0.12	0	0	0	0	0.01
oa25332	1	0.01	0	0	0	0	0.00
oa25342	1	0.00	0	0	0	0	0.00
oa26332	77,731	3600.00	0	0	0	0	0.01
oa36243	1	0.08	0	0	0	0	0.00
oa56243	1	0.00	0	0	0	0	0.00
oa57245	9715	20.75	0	0	0	0	0.00
oa66234	1	0.00	0	0	0	0	0.00
oa67233	1	0.00	0	0	0	0	0.00
oa68233	1	0.07	0	0	0	0	0.00
oa76234	4	0.05	0	0	0	0	0.00
oa77233	1	0.00	0	0	0	0	0.00
oa77247	318,856	587.78	0	0	0	0	0.02
of5_14_7	13	0.23	12	0	0	0	0.00
of7_18_9	1	0.06	0	0	0	0	0.00
ofsub9	28,575	24.65	32	96	6	2	8.63
pa36243	3815	3.40	0	0	0	0	0.00
pa57245	760,758	3600.00	0	0	0	0	0.09
pa77247	799,576	3600.00	0	0	0	0	0.13
sts15.mylp	11	0.03	6	0	0	0	0.00
sts21.mylp	11	0.06	6	0	0	0	0.00
sts9.mylp	1	0.01	0	0	0	0	0.00
AM (# 79)	61,998.0	596.02	70.4	142.1	0.4	0.1	23.70
GM (# 79)	42.4	5.99	3.6	4.0	1.1	1.0	1.86
SGM (# 79)	568.5	22.35					3.94

TABLE 46. Margot2 testset: OB-first settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
bibd1032.mylp	1	0.01	0	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0	0.00
bibd1054.mylp	79	0.39	100	69	0	0	0.07
bibd1152.mylp	1	0.05	0	0	0	0	0.01
bibd1154.mylp	87	0.69	70	140	0	0	0.07
bibd1265.mylp	214	1.60	180	419	0	0	0.43
bibd1331.mylp	1	0.02	0	0	0	0	0.01
bibd1341.mylp	1	0.07	0	0	0	0	0.01
bibd1342.mylp	24	0.83	16	65	0	0	0.01
bibd1531.mylp	1	0.02	0	0	0	0	0.01
bibd6310.mylp	0	0.00	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0.01
bibd846.mylp	1	0.01	0	0	0	0	0.00
bibd931.mylp	1	0.01	0	0	0	0	0.00
bibd932.mylp	1	0.01	0	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0	0.00
bibd943.mylp	1	0.01	0	0	0	0	0.00
ca36243	38	0.10	0	0	0	0	0.00
ca57245	117,830	536.49	0	0	0	0	0.03
ca77247	304,641	1737.12	0	0	0	0	0.01
clique9	1	0.05	0	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0	0.00
codbt05.mylp	2149	10.06	212	345	0	1	0.64
codbt06.mylp	33,598	3600.01	1378	1464	0	0	54.12
codbt15.mylp	240,046	3600.01	12,750	4569	10	0	1412.43
codbt24.mylp	502,527	3600.00	16,530	10,640	1	0	387.57
codbt33.mylp	39	1.94	70	163	0	0	0.03
codbt34.mylp	58,920	3600.01	3784	2001	0	0	257.59
codbt42.mylp	993	2.40	300	192	0	0	0.27
codbt43.mylp	229,714	3600.00	10,058	8532	24	1	234.22
codbt52.mylp	790,543	3600.00	5356	5115	7	4	411.90
codbt60.mylp	20	0.13	28	22	0	0	0.00
codbt61.mylp	49	0.93	76	159	0	1	0.01
codbt70.mylp	1	0.01	0	0	0	0	0.00
codbt71.mylp	332,953	3600.00	39,420	12,680	23	1	461.15
codbt80.mylp	30	1.26	34	174	0	0	0.02

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
codbt90.mylp	110,589	3600.01	10,570	8124	51	0	1640.12
flosn52	1377	1.94	64	27	9	2	0.25
flosn60	4902	9.14	62	45	14	0	0.98
flosn84	209,375	1444.41	196	465	149	103	78.62
jgt18	363	0.24	6	0	0	0	0.04
jgt30	23,083	30.52	20	0	0	2	3.92
mered	140	1.82	140	0	0	0	0.35
O4_35	1	0.11	0	0	0	0	0.00
oa25332	1	0.01	0	0	0	0	0.00
oa25342	1	0.00	0	0	0	0	0.00
oa26332	72,434	3600.00	0	0	0	0	0.02
oa36243	30	0.05	0	0	0	0	0.00
oa56243	1	0.01	0	0	0	0	0.00
oa57245	3752	5.42	0	0	0	0	0.00
oa66234	1	0.00	0	0	0	0	0.00
oa67233	1	0.00	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0.00
oa76234	6	0.03	0	0	0	0	0.00
oa77233	1	0.01	0	0	0	0	0.00
oa77247	268,793	1734.81	0	0	0	0	0.09
of5_14_7	830	0.67	12	0	0	0	0.14
of7_18_9	1	0.05	0	0	0	0	0.01
ofsub9	21,814	20.23	68	0	0	2	7.13
pa36243	4799	3.95	0	0	0	0	0.00
pa57245	1,069,421	3600.00	0	0	0	0	0.09
pa77247	1,293,829	3600.01	0	0	0	0	0.14
sts15.mylp	17	0.02	14	0	0	0	0.00
sts21.mylp	15	0.05	14	0	0	0	0.00
sts9.mylp	1	0.01	0	0	0	0	0.00
AM (# 79)	72,153.1	571.49	1285.2	701.4	3.6	1.5	62.69
GM (# 79)	54.4	5.60	6.8	5.2	1.4	1.1	2.02
SGM (# 79)	624.3	21.31					5.20

TABLE 47. M2003-sym testset: OB-orbit0 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
fast0507	919	95.84	0	0	0	0	0.04
glass4	4,146,010	3600.01	25,634	0	0	0	751.97
harp2	8,608,481	3600.01	0	0	0	0	1.01
mas74	3,515,080	966.75	26,490	0	0	0	134.02
mas76	490,320	123.01	0	0	0	0	19.10
misc07	252	1.90	206	2	0	0	0.07
mkc	7731	3600.43	15,036	164	0	0	3501.85
mod011	1284	61.21	0	0	0	0	0.08
msc98-ip	5427	3600.00	12	0	0	0	2171.85
mzzv11	2615	1029.42	0	0	0	0	252.46
net12	2502	1005.64	0	0	0	0	5.73
noswot	1,106,633	313.80	0	0	0	0	0.03
nsrand-ipx	52,595	3600.09	254	0	0	0	3106.07
p2756	7	1.49	0	0	0	0	0.12
protfold	25,476	3600.00	14	0	0	0	30.38
qiu	1995	17.57	120	22	0	1	0.95
rout	61,617	67.47	0	0	0	0	0.01
seymour	76,797	3600.01	2	0	0	0	227.59
swath	337,786	3600.00	0	0	0	0	0.18
timtab1	939,220	564.72	0	0	0	0	11.68
timtab2	3,871,172	3600.01	0	0	0	0	118.40
AM (# 21)	1,107,329.5	1745.21	3227.0	9.0	0.0	0.0	492.08
GM (# 21)	36,392.4	446.18	11.6	1.5	1.0	1.0	18.89
SGM (# 21)	42,699.9	553.40					47.98

TABLE 48. M2003-sym testset: OB-orbit1 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
fast0507	919	95.70	0	0	0	0	0.04
glass4	4,136,455	3600.01	25,578	0	0	0	759.01
harp2	8,601,874	3600.01	0	0	0	0	0.96
mas74	3,515,080	976.67	26,490	0	0	0	142.67
mas76	490,320	121.82	0	0	0	0	18.10
misc07	252	1.94	206	0	0	0	0.07
mkc	180	3607.18	360	0	0	0	3601.70
mod011	1284	61.19	0	0	0	0	0.08
msc98-ip	5415	3600.33	12	0	0	0	2176.25
mzzv11	2615	1030.88	0	0	0	0	255.03
net12	2502	1003.85	0	0	0	0	6.50
noswot	1,106,633	313.63	0	0	0	0	0.08
nsrand-ipx	52,997	3600.06	260	0	0	0	3109.04
p2756	7	1.47	0	0	0	0	0.12
protfold	25,504	3600.00	14	0	0	0	29.84
qiu	1818	17.67	96	2	0	1	0.77
rout	61,617	67.24	0	0	0	0	0.01
seymour	76,293	3600.00	2	0	0	0	223.78
swath	337,751	3600.00	0	0	0	0	0.17
timtab1	939,220	563.32	0	0	0	0	11.91
timtab2	3,889,175	3600.01	0	0	0	0	116.64
AM (# 21)	1,107,043.4	1745.86	2524.7	0.1	0.0	0.0	497.75
GM (# 21)	30,294.1	446.33	9.6	1.0	1.0	1.0	19.03
SGM (# 21)	36,271.2	553.41					48.18

TABLE 49. M2003-sym testset: OB-orbit2 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
fast0507	919	95.93	0	0	0	0	0.04
glass4	4,130,359	3600.01	0	0	0	18	752.69
harp2	8,602,830	3600.01	0	0	0	0	0.96
mas74	3,515,080	973.38	26,490	0	0	0	140.28
mas76	490,320	122.35	0	0	0	0	18.52
misc07	3170	6.94	16	0	0	1	2.09
mkc	66	3624.85	0	0	0	0	3614.39
mod011	1284	61.13	0	0	0	0	0.14
msc98-ip	5420	3600.41	12	0	0	0	2175.70
mzzv11	2615	1033.25	0	0	0	0	255.11
net12	2502	1005.25	0	0	0	0	5.75
noswot	1,106,633	315.39	0	0	0	0	0.09
nsrand-ipx	52,038	3600.06	0	0	0	0	3120.57
p2756	7	1.48	0	0	0	0	0.13
protfold	37,348	3600.00	100	2	0	0	62.09
qiu	4360	38.12	182	12	0	1	4.67
rout	61,617	67.09	0	0	0	0	0.02
seymour	76,797	3600.00	2	0	0	0	224.52
swath	340,807	3600.00	0	0	0	0	0.19
timtab1	939,220	563.26	0	0	0	0	11.80
timtab2	3,903,486	3600.01	0	0	0	0	115.32
AM (# 21)	1,108,422.8	1748.04	1276.3	0.7	0.0	1.0	500.24
GM (# 21)	34,591.0	492.44	3.4	1.2	1.0	1.1	21.82
SGM (# 21)	41,718.4	578.59					51.11

TABLE 50. M2003-sym testset: OB-orbit3 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
fast0507	919	95.99	0	0	0	0	0.04
glass4	4,130,762	3600.01	0	0	0	18	762.38
harp2	8,607,469	3600.01	0	0	0	0	1.01
mas74	3,515,080	965.24	26,490	0	0	0	137.89
mas76	490,320	121.90	0	0	0	0	18.47
misc07	3170	6.98	16	0	0	1	1.97
mkc	315	3604.12	628	0	0	0	3596.98
mod011	1284	61.08	0	0	0	0	0.07
msc98-ip	5390	3600.38	12	0	0	0	2176.80
mzzv11	2615	1032.96	0	0	0	0	254.87
net12	2502	1005.98	0	0	0	0	6.12
noswot	1,106,633	312.42	0	0	0	0	0.06
nsrand-ipx	51,841	3600.06	0	0	0	0	3121.21
p2756	7	1.51	0	0	0	0	0.12
protfold	37,275	3600.00	100	2	0	0	73.54
qiu	2752	22.91	48	2	0	1	1.80
rout	61,617	66.62	0	0	0	0	0.01
seymour	77,026	3600.01	2	0	0	0	225.92
swath	338,157	3600.00	0	0	0	0	0.18
timtab1	939,220	565.39	0	0	0	0	11.76
timtab2	3,912,624	3600.01	0	0	0	0	114.34
AM (# 21)	1,108,903.7	1745.88	1299.8	0.2	0.0	1.0	500.26
GM (# 21)	36,433.2	480.54	4.4	1.1	1.0	1.1	21.01
SGM (# 21)	42,636.6	567.38					50.88

TABLE 51. M2003-sym testset: OB-NST settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
fast0507	919	95.73	0	0	0	0	0.04
glass4	5,540,667	3600.03	0	0	0	0	5.09
harp2	8,526,349	3600.01	0	0	0	0	1.04
mas74	3,583,981	825.77	0	0	0	0	2.23
mas76	490,320	102.51	0	0	0	0	0.31
misc07	252	1.87	206	2	0	0	0.06
mkc	9420	3600.03	15,672	35	0	0	3466.82
mod011	1284	61.17	0	0	0	0	0.02
msc98-ip	7410	1287.74	0	0	0	0	0.61
mzzv11	2615	778.83	0	0	0	0	0.20
net12	2502	999.85	0	0	0	0	0.10
noswot	1,106,633	313.37	0	0	0	0	0.07
nsrand-ipx	595,239	3600.00	0	0	0	0	2.86
p2756	7	1.37	0	0	0	0	0.02
protfold	25,841	3600.00	14	0	0	0	0.17
qiu	2009	17.36	62	12	0	1	0.01
rout	61,617	67.97	0	0	0	0	0.01
seymour	82,305	3600.01	2	0	0	0	0.29
swath	334,521	3600.00	0	0	0	0	0.28
timtab1	939,220	547.54	0	0	0	0	0.61
timtab2	4,050,333	3600.01	0	0	0	0	3.67
AM (# 21)	1,207,783.0	1614.34	759.8	2.3	0.0	0.0	165.93
GM (# 21)	42,709.3	409.70	2.9	1.4	1.0	1.0	1.85
SGM (# 21)	50,106.6	510.20					4.23

TABLE 52. M2003-sym testset: OB-min4 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
fast0507	919	95.99	0	0	0	0	0.04
glass4	4,183,821	3600.02	0	0	0	0	774.74
harp2	8,572,202	3600.01	0	0	0	0	0.74
mas74	3,583,981	966.18	0	0	0	0	131.32
mas76	490,320	122.57	0	0	0	0	17.83
misc07	33,980	32.74	0	0	0	0	3.34
mkc	5899	3600.29	3418	10	0	0	3497.32
mod011	1284	61.12	0	0	0	0	0.08
msc98-ip	7058	3600.46	0	0	0	0	2353.52
mzzv11	2615	1030.69	0	0	0	0	253.15
net12	2502	1005.10	0	0	0	0	5.73
noswot	1,106,633	313.69	0	0	0	0	0.12
nsrand-ipx	52,920	3600.05	0	0	0	0	3116.83
p2756	7	1.47	0	0	0	0	0.13
protfold	25,502	3600.00	14	0	0	0	29.74
qiu	4792	37.58	6	0	0	0	2.54
rout	61,617	66.87	0	0	0	0	0.00
seymour	71,860	3600.00	0	0	0	0	109.07
swath	337,044	3600.00	0	0	0	0	0.27
timtab1	939,220	562.57	0	0	0	0	11.68
timtab2	3,925,301	3600.01	0	0	0	0	113.98
AM (# 21)	1,114,737.0	1747.50	163.7	0.5	0.0	0.0	496.29
GM (# 21)	47,853.4	529.04	1.8	1.1	1.0	1.0	20.16
SGM (# 21)	55,223.0	604.05					47.21

TABLE 53. M2010-sym testset: OB-orbit0 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30_70_45_095_100	631	1047.75	2	0	0	0	229.06
acc-tight4	599	249.57	246	0	0	0	1.56
ash608gipa-3col	11	27.60	8	0	0	0	0.34
bab3	1	5002.93	0	0	0	0	1433.72
bab5	2239	3601.30	1558	13,493	2	0	3216.60
berlin_5_8_0	1,248,431	3600.00	58	2	0	0	1064.88
biella1	290	3606.62	440	0	0	0	3527.91
circ10-3	49	3600.01	4	0	0	0	0.43
co-100	996	3600.34	0	0	0	0	1283.85
core2536-691	5730	3600.09	5198	0	0	0	2974.93
core4872-1529	734	3601.01	92	0	0	0	793.89
cov1075	177	4.94	166	250	0	2	0.11
dc1c	13	4096.90	24	0	0	0	4078.04
dc1l	8	5748.32	14	0	0	0	5675.02
dolom1	10	3688.39	18	0	0	0	3659.49
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.01	0	0	0	0	0.00
enlight15	1	0.02	0	0	0	0	0.00
enlight16	1	0.02	0	0	0	0	0.01
enlight9	1	0.00	0	0	0	0	0.00
ex1010-pi	14,383	3600.04	0	0	0	0	0.03
ex10	1	1009.56	0	0	0	0	0.00
ex9	1	91.69	0	0	0	0	0.00
glass4	4,107,761	3600.01	25,486	0	0	0	750.50
go19	1,083,151	3600.00	44	23	10	0	247.87
iis-bupa-cov	108,431	3600.01	0	0	0	0	0.06
lectsched-1	476	610.71	154	0	0	0	462.32
lectsched-1-obj	62	3633.88	122	0	0	0	3492.66
lectsched-2	230	112.87	122	0	0	0	62.81
lectsched-3	1670	897.30	160	0	0	0	798.35
lectsched-4-obj	34,793	3600.08	18,566	1927	247	4	3326.17
macrophage	8670	3600.43	15,350	0	0	0	3537.70
map06	830	1032.40	0	0	0	0	0.27
map10	1571	1176.17	0	0	0	0	0.31
map14	821	791.61	0	0	0	0	0.27
map18	213	334.41	0	0	0	0	0.19
map20	323	306.18	0	0	0	0	0.23
maxgasflow	82,922	3600.04	2448	0	0	0	1949.71
mcsched	230,953	3600.00	253,670	42	0	0	1627.86
methanosarcina	18	4386.38	32	0	0	0	4382.32
mkc	7735	3600.16	15,044	164	0	0	3501.71
msc98-ip	5432	3600.52	12	0	0	0	2173.29
mzzv11	2615	1029.03	0	0	0	0	252.39
n3seq24	26	3722.16	50	0	0	0	3383.66
n4-3	36,950	515.96	0	0	0	0	0.01
n9-3	61,546	3600.00	0	0	0	0	0.04
neos-1109824	5605	122.51	2966	2557	0	0	17.12
neos-1171692	201	2143.69	350	1	0	0	2134.59
neos-1224597	1	2.56	0	0	0	0	0.05
neos-1311124	44	3764.27	64	1	0	0	3763.60

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-1337307	4005	178.96	1554	798	0	0	33.42
neos-1396125	47,058	257.67	600	719	2	0	18.86
neos13	54,138	2856.42	0	0	0	0	233.60
neos-1426635	2,249,490	3600.01	442,850	26,621	1	0	2085.09
neos-1426662	2254	3610.40	4490	59	0	0	3585.99
neos-1429212	333	3600.47	22	0	0	0	2699.99
neos-1436709	412,410	3600.00	79,618	13,314	0	1	2835.38
neos-1440460	1,811,113	3600.00	132,770	17,527	0	0	1102.38
neos-1442119	21,669	3600.03	12,106	584	0	2	3551.21
neos-1442657	1,018,223	3600.00	151,996	15,720	5	6	1766.57
neos-1620770	345,743	2324.85	1470	1896	138	11	275.32
neos18	212,769	3600.00	60,882	21	1789	209	2239.68
neos-476283	568	552.96	12	0	0	0	55.04
neos-555424	4491	3600.49	5320	878	325	434	3518.51
neos-738098	3339	3600.00	6652	0	0	0	895.62
neos-777800	1	2.00	0	0	0	0	0.02
neos-785912	3634	50.56	3946	6138	0	0	19.04
neos788725	405,797	635.36	70	39	0	1	49.60
neos808444	637	907.31	592	0	0	0	398.50
neos-820146	653,018	3600.00	1408	1425	10	394	1383.26
neos-820157	533,956	3600.00	3512	6656	52	547	1315.82
neos-824661	23	54.21	32	0	0	0	29.65
neos-824695	31	67.38	52	17	0	0	44.91
neos-826650	2082	3602.27	4066	1584	80	1	3493.87
neos-826694	1	6.81	0	0	0	0	0.80
neos-826812	1	4.12	0	0	0	0	0.76
neos-826841	468	3603.43	788	684	10	0	3576.10
neos-849702	3629	206.30	232	3	0	0	11.05
neos-859770	1	157.15	0	0	0	0	0.21
neos-885086	697	7736.12	1266	44	0	0	7474.26
neos-885524	873	3600.24	44	0	0	0	3508.66
neos-911880	519,605	3600.00	495,948	300,472	36	9	2739.06
neos-932816	31,005	3600.01	3924	7	1	0	385.77
neos-933638	98	421.57	186	15	0	0	20.20
neos-933966	61	174.74	116	566	0	0	8.45
neos-934278	486	686.52	942	227	0	0	69.00
neos-935627	685	1370.90	1288	186	0	0	124.31
neos-935769	767	1188.80	1534	7	0	0	112.66
neos-937511	973	1806.19	1904	89	0	0	213.53
neos-937815	2801	3600.18	2684	51	0	0	695.01
neos-941262	2426	3600.17	4850	6	0	0	407.10
neos-941313	8	217.93	14	92	0	0	86.66
neos-948126	1890	3600.00	3780	58	0	0	312.89
neos-957389	290	48.20	550	0	0	0	32.62
neos-984165	2489	3600.25	3392	0	0	0	505.51
net12	1924	582.76	0	0	0	0	3.83
noswot	1,106,633	314.39	0	0	0	0	0.10
ns1111636	484	3600.52	960	22	0	0	272.00
ns1116954	31	3599.92	60	0	0	0	4.73
ns1158817	1	164.11	0	0	0	0	49.02
ns1208400	1841	422.16	80	325	0	0	14.16
ns1456591	18,449	3600.04	16,614	273	0	0	2790.12
ns1702808	24,740	70.59	6734	13,654	142	0	20.59
ns1758913	130	3601.23	258	1	0	0	124.24

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
ns1853823	1	3915.84	0	0	0	0	328.99
ns1854840	1	3746.16	0	0	0	0	149.36
ns1905797	40,984	3600.01	0	0	0	0	0.36
ns1905800	211,794	3600.01	234	0	0	0	656.98
ns1952667	13,279	2359.84	0	0	0	0	0.01
ns2118727	590	3600.01	0	0	0	0	35.96
ns2124243	1041	3600.71	0	0	0	0	1555.11
ns2137859	1369	3601.00	2736	651	0	0	2912.77
ns4-pr9	541,644	3600.00	0	0	0	0	0.30
nsr8k	74	3605.53	106	0	0	0	402.96
nu60-pr9	22,685	3600.09	928	45	2	0	2847.71
p2m2p1m1p0n100	761,523	3600.00	673,838	0	0	0	3503.80
p6b	88,683	3600.00	20	5	0	0	25.78
pigeon-10	444,222	629.34	2096	3563	405	5	311.33
pigeon-11	1,624,314	3600.00	1904	3362	364	169	2121.38
pigeon-12	632,440	3600.00	22,502	26,975	490	46	2837.29
pigeon-13	807,672	3600.00	86	311	3	133	2299.42
pigeon-19	214,237	3600.04	160	283	3	0	2978.36
protfold	25,503	3600.00	14	0	0	0	29.37
pw-myciel4	486,703	3600.01	1520	198	12	0	222.51
qiu	1995	17.51	120	22	0	1	0.80
queens-30	13,957	3600.06	254	117	0	0	8.27
rail507	949	97.96	0	0	0	0	0.35
ramos3	120	3600.21	32	1692	0	0	1.05
rvb-sub	108	3600.74	0	0	0	0	3435.84
sct1	6643	3600.04	0	0	0	0	1720.80
sct32	3590	3600.39	6094	203	0	0	3095.69
sct5	115	3615.52	224	0	0	0	3016.00
seymour-disj-10	30,259	3600.02	3514	0	0	0	249.83
seymour	76,964	3600.00	2	0	0	0	230.09
shipsched	20,261	3600.06	0	0	0	0	1901.27
shs1023	1	3686.40	0	0	0	0	1.38
siena1	833	3600.11	1644	0	0	0	2218.11
sing161	1	4885.24	0	0	0	0	1627.07
sing245	17	3600.91	12	0	0	0	1077.47
sing2	4801	3600.04	44	0	0	0	523.48
sts405	81,551	3600.02	260	6	6	1	254.15
sts729	50	3616.90	24	0	0	0	2726.27
swath	335,014	3600.00	0	0	0	0	0.15
tanglegram1	10	3858.38	16	0	0	0	3735.18
tanglegram2	11	3695.04	14	0	0	0	3692.26
timtab1	939,220	564.39	0	0	0	0	12.36
toll-like	418	3604.18	814	0	63	0	3595.62
uc-case11	1474	3600.02	134	0	0	0	14.19
uc-case3	1153	3600.79	76	0	0	0	558.09
uct-subprob	244,997	3600.01	4494	0	0	0	2110.19
unitcal_7	26,240	3600.04	334	0	101	0	1548.28
usaBbrv-8-25_70	291,060	3600.01	18	0	0	0	1509.16
vpphard2	56	3650.72	0	0	0	0	3327.59
vpphard	303	3605.10	6	0	0	0	1533.24
wachplan	83,021	3600.01	10,136	21,727	456	1	186.18
zib54-UUE	322,064	3600.00	2	0	0	0	915.17
AM (# 156)	160,087.5	2557.73	16,275.9	3130.8	30.5	12.7	1199.01
GM (# 156)	1587.5	1123.22	86.4	8.8	1.8	1.4	136.15

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
SGM (# 156)	3493.9	1276.23					234.13

TABLE 54. M2010-sym testset: OB-orbit1 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30_70_45_095_100	631	1037.32	2	0	0	0	229.34
acc-tight4	599	265.86	246	0	0	0	17.20
ash608gpia-3col	11	28.28	8	0	0	0	1.35
bab3	1	9,254,053,768.66	0	0	0	0	44.83
bab5	1753	3,683,968,168.12	1310	11,172	0	0	3,683,967,835.93
berlin_5_8_0	912,952	13,121,276,470.20	58	2	0	0	784.19
biella1	24	9,455,020,034.37	48	0	0	0	9,455,020,015.61
circ10-3	32	12,679,848,265.52	4	0	0	0	0.43
co-100	420	14,399,210,965.04	0	0	0	0	14,399,208,772.68
core2536-691	3136	11,551,233,503.66	3006	0	0	0	11,551,233,061.01
core4872-1529	511	14,430,101,451.54	68	0	0	0	7,188,312,770.99
cov1075	358	7.06	318	129	1	1	0.49
dc1c	1	4,413,516,243.47	2	0	0	0	4,413,516,226.95
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.02	0	0	0	0	0.00
enlight15	1	0.02	0	0	0	0	0.00
enlight16	1	0.03	0	0	0	0	0.00
enlight9	1	0.01	0	0	0	0	0.00
ex1010-pi	3285	12,953,590,451.88	0	0	0	0	0.03
ex10	1	1011.09	0	0	0	0	0.00
ex9	1	91.62	0	0	0	0	0.00
glass4	1,259,284	17,980,476,322.73	11,560	0	0	0	243.05
go19	230,214	11,737,767,069.75	46	0	1	0	55.54
iis-bupa-cov	26,856	9,150,960,516.24	0	0	0	0	0.02
lectsched-1	18	2,164,027,261.31	36	0	0	0	2,164,027,213.11
lectsched-2	173	1,550,459,905.01	138	0	24	0	1,550,459,854.62
lectsched-3	240	4,716,287,183.12	102	0	1	0	4,716,287,120.14
lectsched-4-obj	14,801	3600.04	12,052	233	53	0	3437.58
macrophage	113	3632.98	220	0	0	0	3626.28
map06	830	1030.22	0	0	0	0	0.28
map10	1571	1184.51	0	0	0	0	0.38
map14	821	791.48	0	0	0	0	0.23
map18	213	334.26	0	0	0	0	0.19
map20	323	306.36	0	0	0	0	0.22
maxgasflow	81,947	3600.00	1826	0	0	0	2001.13
mcsched	130,589	3600.01	149,142	34	0	0	2390.93
mkc	181	3601.41	362	0	0	0	3595.97
msc98-ip	5390	3600.08	12	0	0	0	2170.95
mzzv11	2615	1033.40	0	0	0	0	255.61
n3seq24	17	3613.86	32	0	0	0	3276.96
n4-3	36,950	516.32	0	0	0	0	0.02
n9-3	61,529	3600.00	0	0	0	0	0.00
neos-1109824	5059	124.83	3078	1302	0	0	24.92
neos-1171692	836	149.37	1440	564	0	0	126.67
neos-1171737	3487	3601.36	6112	363	0	0	3375.65
neos-1224597	1	2.57	0	0	0	0	0.06
neos-1311124	45,193	3600.27	27,572	13,554	2	243	3539.42
neos-1337307	3939	294.11	1510	606	0	0	142.89
neos-1396125	70,379	363.09	598	360	2	0	28.72
neos13	54,138	2860.84	0	0	0	0	239.53

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-1426635	2,157,844	3600.00	234,648	91,230	1	60	2102.57
neos-1426662	269,056	3600.00	111,118	27,942	0	13	3082.81
neos-1429212	338	3601.25	22	0	0	0	2700.59
neos-1436709	700,336	3600.00	60,060	15,424	0	8	1943.24
neos-1440460	1,741,369	3600.00	54,046	18,156	51	5	1154.60
neos-1442119	536,745	3600.00	80,932	20,187	3	0	2172.72
neos-1442657	918,498	3600.00	100,736	36,246	0	1	1843.91
neos-1620770	217,130	1390.96	796	180	11	1	163.58
neos18	170,551	3600.03	55,718	4	1346	12	2669.78
neos-476283	568	552.20	12	0	0	0	55.67
neos-555424	79	3627.24	140	3	0	0	3610.28
neos-738098	94	3610.13	188	0	0	0	3438.73
neos-777800	1	2.00	0	0	0	0	0.02
neos-785912	3325	862.58	3630	5514	0	1	832.98
neos-788725	406,217	655.43	80	6	0	1	48.59
neos808444	637	906.00	592	0	0	0	398.02
neos-820146	720,612	3600.00	6986	962	4	101	1376.00
neos-820157	554,917	3600.00	1558	471	3	108	1343.25
neos-824661	36	3849.70	60	0	0	0	3788.43
neos-824695	18	694.38	34	1	0	0	675.39
neos-826650	489	3610.32	872	115	8	1	3567.60
neos-826694	1	6.84	0	0	0	0	0.80
neos-826812	1	4.20	0	0	0	0	0.78
neos-826841	1287	3602.78	2258	1133	9	9	3531.60
neos-849702	10,695	336.48	184	0	0	0	37.92
neos-859770	1	156.56	0	0	0	0	0.21
neos-885086	1190	3600.67	2054	158	0	0	3373.21
neos-885524	88	3915.54	4	0	0	0	3894.98
neos-911880	37,538	3600.12	51,724	19,690	1	1	3513.75
neos-932816	23,459	3600.01	3876	5	2	0	652.15
neos-933638	283	1309.82	528	21	0	0	528.66
neos-933966	61	251.22	116	0	0	0	143.83
neos-934278	894	3602.88	1762	307	0	0	2469.04
neos-935627	685	3007.57	1288	186	0	0	1750.87
neos-935769	791	3600.09	1580	0	0	0	2645.90
neos-937511	838	3422.43	1632	2	0	0	1960.61
neos-937815	414	3600.23	822	0	0	0	2894.17
neos-941262	437	3604.40	874	0	0	0	2747.58
neos-941313	8	1037.63	14	92	0	0	906.19
neos-948126	338	3607.92	676	0	0	0	2842.13
neos-957389	161	93.74	314	199	0	0	79.64
neos-984165	572	3601.87	1070	0	0	0	2114.29
net12	1924	582.50	0	0	0	0	4.21
noswot	1,106,633	313.35	0	0	0	0	0.10
ns1111636	45	3645.50	88	0	0	0	3094.56
ns1116954	30	3599.76	58	0	0	0	104.67
ns1158817	1	164.42	0	0	0	0	49.23
ns1208400	8693	1679.86	212	72	0	0	92.50
ns1456591	16,872	3600.02	15,024	265	0	0	2839.10
ns1702808	24,740	78.12	6734	13,653	142	0	28.06
ns1758913	130	3601.24	258	1	0	0	125.37
ns1853823	1	3916.89	0	0	0	0	329.92
ns1854840	1	3746.55	0	0	0	0	149.79
ns1905797	40,824	3600.01	0	0	0	0	0.41

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
ns1905800	210,903	3600.00	234	0	0	0	655.84
ns1952667	13,279	2356.88	0	0	0	0	0.00
ns2118727	589	3600.05	0	0	0	0	36.01
ns2124243	1042	3600.78	0	0	0	0	1554.00
ns2137859	49	3631.52	98	0	0	0	3594.72
ns4-pr9	540,296	3600.00	0	0	0	0	0.22
nsr8k	56	3605.49	92	0	0	0	565.98
nu60-pr9	22,645	3600.00	956	49	1	0	2904.14
p2m2p1m1p0n100	396,937	3600.00	364,072	0	0	0	3548.56
p6b	87,263	3600.00	20	0	0	0	24.62
pigeon-10	352,336	503.31	2230	1742	231	8	249.31
pigeon-11	1,740,423	3600.00	6044	5370	2064	71	1986.26
pigeon-12	1,066,981	3600.00	418	1104	176	23	2286.05
pigeon-13	667,524	3600.03	23,510	39,941	9220	29	2565.21
pigeon-19	206,495	3600.01	114	213	3	0	3008.60
protfold	25,488	3600.01	14	0	0	0	29.69
pw-myciel4	466,711	3600.00	1648	207	0	0	208.64
qiu	1818	17.73	96	2	0	1	0.85
queens-30	13,798	3600.11	258	10	0	0	8.60
rail507	949	97.73	0	0	0	0	0.35
ramos3	94	3600.20	32	1048	0	0	3.82
rvb-sub	108	3601.77	0	0	0	0	3436.27
sct1	6643	3600.05	0	0	0	0	1733.47
sct32	577	3608.10	1040	6	0	0	3386.16
sct5	23	3737.81	46	0	0	0	3540.08
seymour-disj-10	29,886	3600.00	3492	0	0	0	283.32
seymour	75,899	3600.00	2	0	0	0	222.73
shipsched	21,078	3600.02	0	0	0	0	1891.16
shs1023	1	3685.58	0	0	0	0	1.41
siena1	92	3600.01	184	0	0	0	3374.22
sing161	1	4904.19	0	0	0	0	1634.39
sing245	17	3608.08	12	0	0	0	1079.82
sing2	4795	3600.03	44	0	0	0	524.16
sts405	70,021	3600.01	8	0	0	0	217.14
sts729	82	4023.98	22	0	0	1	1580.85
swath	339,276	3600.00	0	0	0	0	0.25
tanglegram1	2	3841.01	2	0	0	0	3766.87
tanglegram2	3	3707.38	6	0	0	0	3706.33
timtab1	939,220	566.45	0	0	0	0	12.47
toll-like	8	4094.21	14	0	0	0	4092.37
uc-case11	1475	3600.03	134	0	0	0	14.38
uc-case3	1117	3600.02	76	0	0	0	587.47
uct-subprob	240,252	3600.01	4432	0	0	0	2128.11
unitcal_7	25,033	3600.01	334	0	101	0	1615.83
usAbbrv-8-25_70	290,710	3600.00	18	0	0	0	1506.06
vpphard2	56	3654.37	0	0	0	0	3330.72
vpphard	26	5187.42	4	0	0	0	4647.86
wachplan	71,039	3600.02	8492	3952	121	0	457.74
zib54-UUE	323,039	3600.00	2	0	0	0	912.37
AM (# 153)	136,575.7	1,001,582,649.35	9441.1	2184.2	88.8	4.6	386,419,707.66
GM (# 153)	1296.9	5861.35	68.7	7.0	1.6	1.3	430.13
SGM (# 153)	3107.9	6673.38					731.44

TABLE 55. M2010-sym testset: OB-orbit2 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30_70_45_095_100	401	1186.71	0	0	0	0	147.54
acc-tight4	6187	1629.42	370	4	0	4	254.61
ash608gipa-3col	14	42.24	2	0	0	2	8.18
bab3	1	5002.75	0	0	0	0	1430.66
bab5	2109	3600.24	1502	12,995	2	0	3230.47
berlin_5_8_0	394,410	3600.00	0	0	0	458	2615.51
biella1	29	3679.68	0	0	0	0	3628.72
circ10-3	46	3600.00	14	31	0	0	6.01
co-100	1027	3601.09	0	0	0	0	1281.14
core2536-691	625	550.39	754	0	0	0	375.47
core4872-1529	724	3600.41	90	0	0	0	780.26
cov1075	501	6.66	542	255	0	0	1.90
dc1c	1	6972.36	0	0	0	0	6955.80
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.02	0	0	0	0	0.00
enlight15	1	0.01	0	0	0	0	0.00
enlight16	1	0.04	0	0	0	0	0.00
enlight9	1	0.01	0	0	0	0	0.00
ex1010-pi	14,383	3600.03	0	0	0	0	0.02
ex10	1	1014.03	0	0	0	0	0.00
ex9	1	91.69	0	0	0	0	0.00
glass4	4,183,404	3600.01	0	0	0	18	764.97
go19	1,099,099	3600.00	64	22	0	1	250.93
iis-bupa-cov	108,355	3600.00	0	0	0	0	0.02
lectsched-1	290	3605.25	0	0	0	0	3488.42
lectsched-2	299	224.73	0	0	0	0	174.57
lectsched-3	1034	2103.28	0	0	0	0	2005.64
lectsched-4-obj	2757	3054.75	0	0	0	37	2987.48
macrophage	162	3601.49	0	0	0	0	3585.00
map06	830	1029.36	0	0	0	0	0.32
map10	1571	1185.13	0	0	0	0	0.40
map14	821	799.21	0	0	0	0	0.27
map18	213	336.86	0	0	0	0	0.20
map20	323	306.46	0	0	0	0	0.19
maxgasflow	81,876	3600.00	2378	0	0	0	1966.13
mcsched	131,693	3600.00	150,414	34	0	0	2389.07
mkc	67	3610.84	0	0	0	0	3600.27
msc98-ip	5396	3600.28	12	0	0	0	2176.50
mzzv11	2615	1034.44	0	0	0	0	254.60
n3seq24	17	3663.84	32	0	0	0	3329.94
n4-3	36,950	514.27	0	0	0	0	0.00
n9-3	61,440	3600.00	0	0	0	0	0.02
neos-1109824	2235	85.08	742	1634	0	1	29.83
neos-1171692	201	71.18	360	74	0	0	63.29
neos-1171737	463	3669.34	900	135	0	0	3606.69
neos-1224597	1	2.57	0	0	0	0	0.06
neos-1311124	21	3970.36	38	0	0	0	3969.71
neos-1337307	3328	339.87	788	628	0	3	207.96
neos-1396125	53,933	250.94	14	59	1	65	33.58
neos13	54,138	2855.69	0	0	0	0	232.64

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-1426635	1,427,885	3600.01	250,828	9407	0	5	2746.57
neos-1426662	31,789	3600.04	62,504	3554	0	0	3394.69
neos-1429212	337	3601.28	22	0	0	0	2695.83
neos-1436709	265,793	3602.37	33,762	4794	12	5	3127.44
neos-1440460	1,482,345	3600.00	17,672	5298	0	4	1660.15
neos-1442119	148,769	3600.00	35,180	3207	8	0	3292.42
neos-1442657	510,563	3600.00	67,704	12,146	0	2	2760.20
neos-1620770	161,623	3600.00	54,300	10,125	76	939	2238.36
neos18	168,530	3600.00	37,162	10	682	8	2533.93
neos-476283	568	552.53	12	0	0	0	55.51
neos-555424	91	3600.78	0	0	0	0	3570.02
neos-738098	156	3614.16	312	0	0	0	2523.09
neos-777800	1	2.00	0	0	0	0	0.01
neos-785912	20,664	3600.01	23,168	21,255	0	35	3505.39
neos-788725	167,058	464.66	16	0	0	17	122.12
neos808444	278	2090.20	0	0	0	0	112.34
neos-820146	1234	56.02	1254	160	3	3	53.80
neos-820157	19,401	1465.16	19,624	4594	102	153	1423.61
neos-824661	1	41.41	0	0	0	0	19.47
neos-824695	4	51.27	0	0	0	0	36.27
neos-826650	473	3602.86	880	218	7	0	3554.09
neos-826694	1	6.81	0	0	0	0	0.80
neos-826812	1	4.12	0	0	0	0	0.76
neos-849702	3281	769.00	1054	125	0	60	458.35
neos-859770	1	156.48	0	0	0	0	0.22
neos-885086	365	3603.18	672	96	0	0	3539.74
neos-885524	40	3697.09	0	0	0	0	3681.93
neos-911880	107,074	3600.00	108,932	39,257	4	69	3410.87
neos-932816	19,540	3600.00	1530	29	3	0	1926.42
neos-933638	154	571.06	306	0	0	0	313.67
neos-933966	503	2245.14	998	0	0	0	1801.47
neos-934278	423	1646.57	844	35	0	0	1126.89
neos-935627	829	3600.09	1656	11	0	0	2801.14
neos-935769	857	3600.42	1714	0	0	0	2673.24
neos-937511	764	3602.60	1510	0	0	0	2103.71
neos-937815	396	3600.99	792	0	0	0	2922.93
neos-941262	441	3603.18	882	0	0	0	2819.01
neos-941313	8	1036.56	14	92	0	0	905.45
neos-948126	347	3603.88	694	0	0	0	2926.23
neos-957389	170	182.74	266	0	0	0	168.10
neos-984165	508	3603.90	1016	0	0	0	2720.31
net12	1924	584.78	0	0	0	0	4.00
noswot	1,106,633	312.66	0	0	0	0	0.07
ns1111636	45	3642.06	88	0	0	0	3091.04
ns1116954	58	3600.04	114	0	0	0	107.23
ns1158817	1	164.49	0	0	0	0	49.32
ns1208400	1261	625.59	482	2739	0	0	210.92
ns1456591	14,217	3600.04	15,752	100	0	0	2708.51
ns1702808	23,832	76.27	6808	13,839	147	0	27.49
ns1758913	3	3601.31	0	0	0	0	6.24
ns1853823	1	3918.47	0	0	0	0	331.55
ns1854840	1	3746.24	0	0	0	0	149.47
ns1905797	41,006	3600.01	0	0	0	0	0.35
ns1905800	140,643	3600.00	0	0	0	0	1515.39

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
ns1952667	13,279	2366.05	0	0	0	0	0.00
ns2118727	590	3600.00	0	0	0	0	36.16
ns2124243	1038	3600.55	0	0	0	0	1556.28
ns2137859	29	3663.31	0	0	0	0	3602.97
ns4-pr9	540,621	3600.00	0	0	0	0	0.24
nsr8k	47	3600.14	0	0	0	0	605.17
nu60-pr9	22,440	3600.15	20	2	1	24	2833.76
p2m2p1m1p0n100	398,968	3600.00	358,528	0	0	0	3549.39
p6b	96,899	3600.01	80	6	0	0	42.87
pigeon-10	134,080	254.36	2828	1802	101	93	155.73
pigeon-11	1,188,329	3600.00	6322	4623	254	120	2527.64
pigeon-12	765,435	3600.00	5228	1438	522	4202	2738.59
pigeon-13	151,943	3600.04	960	401	66	747	3375.94
pigeon-19	17,430	3600.01	1008	195	52	685	3553.02
protfold	37,314	3600.00	100	2	0	0	62.15
pw-myciel4	392,391	3600.00	78	22	0	57	289.99
qiu	4360	38.13	182	12	0	1	4.09
queens-30	22,322	3600.00	50	0	0	0	48.62
rail507	949	97.77	0	0	0	0	0.35
ramos3	42	3600.09	80	505	1	1	22.37
rvb-sub	106	3600.35	0	0	0	0	3435.80
sct1	6643	3600.02	0	0	0	0	1733.12
sct32	305	3602.45	0	0	0	0	3413.10
sct5	20	3857.49	0	0	0	0	3502.70
seymour-disj-10	32,194	3600.02	4676	0	0	0	317.04
seymour	76,164	3600.00	2	0	0	0	223.32
shipsched	21,037	3600.08	0	0	0	0	1889.64
shs1023	1	3686.19	0	0	0	0	1.40
siena1	72	3605.45	0	0	0	0	3304.96
sing161	1	4902.37	0	0	0	0	1633.10
sing245	9	3698.55	0	0	0	0	1577.87
sing2	1514	3600.01	0	0	0	0	1587.07
sts405	13,652	3600.02	776	68	337	34	2244.15
sts729	35	4082.42	46	8	4	1	3155.70
swath	335,762	3600.00	0	0	0	0	0.20
tanglegram1	2	3850.19	0	0	0	0	3776.05
tanglegram2	3	1482.32	0	0	0	0	1479.20
timtab1	939,220	561.35	0	0	0	0	12.13
toll-like	5	3722.94	0	0	0	0	3720.10
uc-case11	693	3600.04	0	0	0	0	1438.79
uc-case3	1113	3600.27	76	0	0	0	586.26
uct-subprob	183,338	3600.00	0	0	0	0	2421.12
unitcal_7	24,927	3600.10	334	0	101	0	1608.71
usAbbrv-8-25_70	68,598	3600.00	0	0	0	0	2701.16
vpphard2	56	3640.54	0	0	0	0	3317.00
vpphard	26	5201.10	0	0	0	0	4661.26
wachplan	30,122	2672.83	392	1269	0	25	1258.25
zib54-UUE	300,229	3600.00	0	0	0	46	1074.64
AM (# 152)	118,100.3	2576.52	8495.4	1035.0	16.4	52.1	1452.91
GM (# 152)	971.7	1164.47	25.3	5.7	1.6	2.0	211.43
SGM (# 152)	2482.3	1322.42					341.19

TABLE 56. M2010-sym testset: OB-orbit3 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30_70_45_095_100	401	1183.74	0	0	0	0	147.84
acc-tight4	14,818	3600.01	296	35	0	13	791.16
ash608gpia-3col	14	76.13	2	0	0	2	41.90
bab3	1	5005.49	0	0	0	0	1431.21
bab5	279	3600.29	348	294	0	0	3408.32
berlin_5_8_0	394,808	3600.00	0	0	0	458	2610.64
biella1	37	3641.47	72	0	0	0	3616.04
circ10-3	46	3600.02	14	31	0	0	6.46
co-100	1002	3601.47	0	0	0	0	1287.72
core2536-691	1381	3601.35	1420	0	0	0	3322.64
core4872-1529	713	3601.02	90	0	0	0	834.60
cov1075	156	4.35	160	314	0	1	0.88
dc1c	1	7028.22	2	0	0	0	7011.74
enlight13	1	0.02	0	0	0	0	0.01
enlight14	1	0.02	0	0	0	0	0.00
enlight15	1	0.03	0	0	0	0	0.00
enlight16	1	0.02	0	0	0	0	0.00
enlight9	1	0.00	0	0	0	0	0.00
ex1010-pi	14,383	3600.01	0	0	0	0	0.02
ex10	1	1011.55	0	0	0	0	0.00
ex9	1	92.25	0	0	0	0	0.00
glass4	4,150,438	3600.01	0	0	0	18	765.67
go19	1,098,297	3600.00	64	22	0	1	247.75
iis-bupa-cov	108,360	3600.01	0	0	0	0	0.03
lectsched-1	476	1454.28	154	0	0	0	1304.97
lectsched-2	230	177.74	122	0	0	0	127.21
lectsched-3	1670	1338.58	160	0	0	0	1238.93
lectsched-4-obj	12,612	3600.05	9908	65	65	0	3451.99
macrophage	100	3635.68	194	0	0	0	3630.61
map06	830	1028.94	0	0	0	0	0.28
map10	1571	1183.08	0	0	0	0	0.44
map14	821	792.64	0	0	0	0	0.25
map18	213	334.44	0	0	0	0	0.20
map20	323	307.56	0	0	0	0	0.22
maxgasflow	81,945	3600.02	2382	0	0	0	1973.80
mcsched	80,983	3600.00	93,934	27	0	0	2792.38
mkc	315	3602.38	628	0	0	0	3595.45
msc98-ip	5371	3600.04	12	0	0	0	2175.97
mzzv11	2615	1032.18	0	0	0	0	255.97
n4-3	36,950	514.92	0	0	0	0	0.01
n9-3	61,498	3600.01	0	0	0	0	0.02
neos-1109824	1442	98.62	646	1594	0	0	50.41
neos-1171692	27	3622.62	48	0	0	0	3618.50
neos-1171737	16	4658.51	32	0	0	0	4653.47
neos-1224597	1	2.55	0	0	0	0	0.06
neos-1311124	20	4788.07	32	0	0	0	4787.43
neos-1337307	3328	1239.61	788	628	0	3	1108.29
neos-1396125	53,933	250.81	14	59	1	65	33.57
neos13	54,138	2856.86	0	0	0	0	235.63
neos-1426635	1,279,053	3600.01	183,380	11,411	4	3	2725.53

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-1426662	708	3601.27	1414	28	0	0	3591.16
neos-1429212	318	3604.34	22	0	0	0	2724.91
neos-1436709	113,367	3600.07	27,874	2052	0	1	3390.08
neos-1440460	1,225,384	3600.00	30,814	7709	26	6	1862.17
neos-1442119	5938	3600.18	2402	146	1	0	3583.37
neos-1442657	506,177	3600.00	67,876	9334	4	12	2681.89
neos-1620770	400,722	3600.00	4184	1691	77	378	930.40
neos18	150,646	3600.08	56,606	119	3628	99	2824.46
neos-476283	568	552.99	12	0	0	0	56.12
neos-555424	73	3652.35	126	3	0	0	3647.27
neos-738098	42	3645.15	84	0	0	0	3464.63
neos-777800	1	2.02	0	0	0	0	0.03
neos-785912	17,805	3600.31	18,758	14,081	0	3	3521.88
neos788725	167,058	462.55	16	0	0	17	122.92
neos808444	278	2092.21	0	0	0	0	112.35
neos-820146	287,146	3600.00	560	672	24	1632	2640.65
neos-820157	152,890	3600.05	662	1256	24	2105	2981.00
neos-824661	23	771.91	32	0	0	0	747.18
neos-824695	31	1315.83	52	17	0	0	1293.34
neos-826650	160	3619.19	278	70	3	0	3604.63
neos-826694	1	6.85	0	0	0	0	0.82
neos-826812	1	4.16	0	0	0	0	0.76
neos-826841	155	3646.13	282	399	0	0	3632.80
neos-849702	38,970	985.54	160	35	0	0	200.19
neos-859770	1	156.36	0	0	0	0	0.22
neos-885086	30	5407.02	58	0	0	0	5392.24
neos-885524	88	3919.28	4	0	0	0	3898.77
neos-911880	74,109	3600.14	32,184	17,192	0	75	3430.69
neos-932816	135	3611.89	270	0	0	0	3394.81
neos-933638	378	3600.30	582	145	0	0	2592.31
neos-933966	163	2296.51	312	578	0	0	1959.85
neos-934278	162	3606.38	310	0	0	0	3376.62
neos-935627	130	3611.26	260	1	0	0	3335.49
neos-935769	197	3611.15	394	21	0	0	3360.00
neos-937511	189	3601.44	378	0	0	0	3119.07
neos-937815	67	3634.21	134	0	0	0	3493.11
neos-941262	68	3621.59	136	0	0	0	3417.15
neos-941313	1	5176.51	2	64	0	0	5082.60
neos-948126	59	3611.07	118	0	0	0	3458.55
neos-957389	118	202.82	188	0	0	0	188.07
neos-984165	91	3600.13	180	0	0	0	3387.62
net12	1924	583.19	0	0	0	0	4.08
noswot	1,106,633	312.96	0	0	0	0	0.10
ns1111636	37	3601.56	72	0	0	0	3223.21
ns1116954	25	3599.90	48	0	0	0	227.77
ns1158817	1	164.65	0	0	0	0	49.59
ns1208400	1648	809.62	296	1385	0	0	499.13
ns1456591	8110	3600.05	6896	123	0	0	3056.92
ns1702808	23,832	83.77	6808	13,839	147	0	35.71
ns1758913	3	3601.31	0	0	0	0	6.24
ns1853823	1	3915.02	0	0	0	0	328.04
ns1854840	1	3747.53	0	0	0	0	150.74
ns1905797	40,946	3600.01	0	0	0	0	0.36
ns1905800	140,512	3600.00	0	0	0	0	1508.87

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
ns1952667	13,279	2391.32	0	0	0	0	0.00
ns2118727	589	3600.01	0	0	0	0	35.78
ns2124243	1042	3601.22	0	0	0	0	1559.13
ns2137859	23	3602.15	46	0	0	0	3567.63
ns4-pr9	542,446	3600.00	0	0	0	0	0.32
nsr8k	46	3601.18	82	0	0	0	1037.26
nu60-pr9	22,418	3600.02	20	2	1	24	2834.52
p2m2p1m1p0n100	402,813	3600.00	363,608	0	0	0	3548.64
p6b	97,143	3600.00	80	6	0	0	41.91
pigeon-10	274,087	433.23	116	280	10	102	232.49
pigeon-11	1,045,211	2945.50	1132	2720	192	61	1980.37
pigeon-12	741,059	3600.02	62	215	3	33	2550.15
pigeon-13	383,588	3600.00	174	557	72	28	2982.38
pigeon-19	55,027	3600.00	168	634	18	1	3404.80
protfold	37,215	3600.00	100	2	0	0	73.27
pw-myciel4	392,271	3600.00	78	22	0	57	299.73
qiu	2752	22.71	48	2	0	1	1.94
queens-30	21,675	3600.00	50	0	0	0	47.28
rail507	949	98.00	0	0	0	0	0.34
ramos3	57	3600.19	104	2135	0	0	132.60
rvb-sub	106	3601.18	0	0	0	0	3436.53
sct1	6643	3600.00	0	0	0	0	1730.34
sct32	323	3606.32	646	192	0	0	3468.50
sct5	18	3643.42	36	0	0	0	3477.63
seymour-disj-10	29,886	3600.00	3492	0	0	0	293.24
seymour	76,985	3600.00	2	0	0	0	228.32
shipsched	20,898	3600.07	0	0	0	0	1884.45
shs1023	1	3685.88	0	0	0	0	1.43
siena1	80	3600.00	160	0	0	0	3393.55
sing161	1	4887.30	0	0	0	0	1623.18
sing245	9	3700.41	0	0	0	0	1575.48
sing2	1515	3601.03	0	0	0	0	1588.58
sts405	67,097	3600.00	40	49	36	9	483.54
sts729	23	3965.05	28	0	0	0	3280.64
swath	338,612	3600.00	0	0	0	0	0.30
tanglegram1	2	3942.21	2	0	0	0	3868.12
tanglegram2	7	3660.08	6	0	0	0	3658.07
timtab1	939,220	560.67	0	0	0	0	12.09
toll-like	9	3698.49	12	0	0	0	3696.67
uc-case11	693	3600.12	0	0	0	0	1438.08
uc-case3	350	3600.03	36	0	0	0	1510.02
uct-subprob	239,372	3600.00	4424	0	0	0	2137.97
unitcal_7	24,046	3600.04	310	0	90	0	1680.02
usAbbrv-8-25_70	68,702	3600.02	0	0	0	0	2702.18
vpphard2	55	3603.70	0	0	0	0	3283.53
vpphard	26	5227.26	4	0	0	0	4688.20
wachplan	38,781	3600.00	934	8845	66	62	1733.27
zib54-UUE	300,354	3600.00	0	0	0	46	1077.37
AM (# 152)	119,218.7	2778.27	6136.5	665.1	29.6	35.0	1678.69
GM (# 152)	869.0	1371.13	30.4	5.5	1.5	1.8	262.31
SGM (# 152)	2289.4	1554.07					422.50

TABLE 57. M2010-sym testset: OB-NST settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30_70_45_095_100	631	807.63	2	0	0	0	0.81
acc-tight4	599	249.20	246	0	0	0	0.64
ash608gpia-3col	11	27.20	8	0	0	0	0.33
bab3	1	4995.45	0	0	0	0	1427.31
bab5	40,277	3600.00	558	95	0	0	534.04
berlin_5_8_0	1,984,479	3600.01	46	0	0	0	3.68
biella1	1394	3610.21	448	0	0	0	3408.24
circ10-3	49	3599.99	4	0	0	0	0.39
co-100	10,327	3600.01	0	0	0	0	3.39
core2536-691	13,584	3600.23	5126	0	0	0	1945.93
core4872-1529	1358	3600.02	26	0	0	0	26.15
cov1075	165	5.33	140	249	0	2	0.03
dc1c	13	4085.95	24	0	0	0	4067.14
dc1l	8	5764.31	14	0	0	0	5691.05
dolom1	10	3681.74	18	0	0	0	3652.76
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.01	0	0	0	0	0.00
enlight15	1	0.02	0	0	0	0	0.00
enlight16	1	0.01	0	0	0	0	0.00
enlight9	1	0.01	0	0	0	0	0.00
ex1010-pi	14,383	3600.00	0	0	0	0	0.02
ex10	1	1013.43	0	0	0	0	0.00
ex9	1	92.12	0	0	0	0	0.00
glass4	5,499,480	3600.02	0	0	0	0	5.59
go19	1,119,397	3600.00	16	0	0	0	1.09
iis-bupa-cov	108,461	3600.00	0	0	0	0	0.02
lectsched-1	10,959	359.93	198	0	7	0	71.85
lectsched-1-obj	62	3628.20	122	0	0	0	3486.39
lectsched-2	226	57.52	110	0	0	0	9.07
lectsched-3	1911	126.45	108	0	0	0	26.32
lectsched-4-obj	119,709	1788.29	11,650	183	135	0	1026.82
macrophage	8696	3600.27	15,398	0	0	0	3537.85
map06	830	1029.47	0	0	0	0	0.22
map10	1571	1183.36	0	0	0	0	0.21
map14	821	789.65	0	0	0	0	0.20
map18	213	333.24	0	0	0	0	0.19
map20	323	306.07	0	0	0	0	0.19
maxgasflow	193,715	3600.00	8	0	0	0	1.19
mcsched	245,188	3600.01	247,434	20	0	0	1565.61
methanosarcina	18	4392.67	32	0	0	0	4388.65
mkc	9429	3600.26	15,690	35	0	0	3466.76
msc98-ip	7410	1271.87	0	0	0	0	0.61
mzzv11	2615	774.94	0	0	0	0	0.18
n3seq24	25	3657.68	48	0	0	0	3319.87
n4-3	36,950	514.92	0	0	0	0	0.01
n9-3	61,258	3600.00	0	0	0	0	0.03
neos-1109824	4373	90.26	2040	2535	0	0	7.44
neos-1171692	201	2144.40	350	1	0	0	2135.47
neos-1224597	1	2.56	0	0	0	0	0.06
neos-1311124	44	3760.39	64	1	0	0	3759.75

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-1337307	4005	166.22	1554	798	0	0	21.59
neos-1396125	78,585	369.55	46	0	0	0	0.12
neos13	54,138	2636.51	0	0	0	0	0.82
neos-1426635	4,581,574	3600.02	361,674	7691	0	0	371.79
neos-1426662	2254	3635.82	4490	59	0	0	3611.43
neos-1429212	3412	3600.50	4	0	0	0	44.66
neos-1436709	1,807,238	3600.00	73,168	3055	0	0	254.74
neos-1440460	2,607,784	3600.00	31,930	1912	0	0	26.28
neos-1442119	534,876	3600.00	30,472	1732	0	0	2673.07
neos-1442657	1,959,377	3600.01	32,428	1860	0	0	46.24
neos-1620770	267,268	1593.85	260	217	5	0	1.86
neos18	362,051	3600.01	53,086	0	54	0	821.02
neos-476283	1163	589.35	2	0	0	0	4.08
neos-555424	17,889	3601.01	11,244	2722	1555	16	3358.50
neos-738098	3233	3600.01	6418	0	0	0	864.24
neos-777800	1	2.01	0	0	0	0	0.02
neos-785912	3634	50.51	3946	6138	0	0	18.88
neos788725	418,549	626.31	28	5	0	0	0.34
neos808444	637	855.31	592	0	0	0	350.35
neos-820146	1,015,534	3600.00	296	0	0	0	4.10
neos-820157	852,093	3600.00	322	176	0	5	3.62
neos-824661	23	54.43	32	0	0	0	29.73
neos-824695	31	67.53	52	17	0	0	45.03
neos-826650	2082	3603.74	4066	1584	80	1	3495.19
neos-826694	1	6.83	0	0	0	0	0.80
neos-826812	1	4.13	0	0	0	0	0.76
neos-826841	468	3602.75	788	684	10	0	3575.39
neos-849702	3629	195.28	232	3	0	0	0.76
neos-859770	1	156.43	0	0	0	0	0.21
neos-885086	697	7735.91	1266	44	0	0	7474.60
neos-885524	12,971	3600.00	0	0	0	0	13.95
neos-911880	942,415	3600.01	712,570	517,216	23	11	2280.58
neos-932816	32,457	3600.06	3924	7	1	0	219.93
neos-933638	124	645.12	168	10	0	0	17.30
neos-933966	61	174.78	116	566	0	0	8.42
neos-934278	486	687.89	942	227	0	0	69.34
neos-935627	5268	3600.00	2024	634	0	0	187.45
neos-935769	767	1182.78	1534	7	0	0	112.86
neos-937511	975	1838.64	1900	89	0	0	212.33
neos-937815	3125	3600.01	2246	93	0	0	303.19
neos-941262	2441	3600.16	4880	6	0	0	407.90
neos-941313	8	218.49	14	92	0	0	87.27
neos-948126	1837	3600.03	3672	34	0	0	303.76
neos-957389	184	30.77	234	0	0	0	10.98
neos-984165	2478	3600.00	1524	0	0	0	119.11
net12	1924	579.50	0	0	0	0	0.09
noswot	1,106,633	312.74	0	0	0	0	0.06
ns1111636	484	3600.50	960	22	0	0	272.27
ns1116954	31	3599.91	60	0	0	0	4.74
ns1158817	1	164.21	0	0	0	0	49.24
ns1208400	1841	408.80	80	325	0	0	0.88
ns1456591	46,420	3600.00	1514	316	0	0	129.64
ns1702808	36,334	66.42	492	540	0	0	0.43
ns1758913	130	3601.23	258	1	0	0	124.27

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
ns1853823	1	3914.78	0	0	0	0	327.75
ns1854840	1	3746.11	0	0	0	0	149.40
ns1905797	40,738	3600.02	0	0	0	0	0.38
ns1905800	261,385	3600.00	220	0	0	0	5.21
ns1952667	13,279	2378.55	0	0	0	0	0.01
ns2118727	623	3600.00	0	0	0	0	0.12
ns2124243	2438	3600.02	0	0	0	0	10.74
ns2137859	1369	3601.44	2736	651	0	0	2913.37
ns4-pr9	541,159	3600.01	0	0	0	0	0.25
nsr8k	82	3600.04	94	0	0	0	245.19
nu60-pr9	135,592	3600.00	14	0	0	0	3.04
p2m2p1m1p0n100	31,490,910	3600.00	620	0	0	0	39.55
p6b	85,541	3600.00	12	0	0	0	0.31
pigeon-10	491,299	344.09	46	170	0	0	0.37
pigeon-11	2,832,362	2517.65	220	512	11	0	2.80
pigeon-12	3,128,222	3600.00	104	366	0	0	3.16
pigeon-13	2,526,450	3600.00	82	304	1	0	3.56
pigeon-19	1,339,436	3600.00	160	283	3	0	5.36
protfold	25,830	3600.00	14	0	0	0	0.11
pw-myciel4	513,628	3600.00	1518	188	12	0	3.91
qiu	2009	17.29	62	12	0	1	0.03
queens-30	17,881	3600.14	68	0	0	0	0.20
rail507	949	97.79	0	0	0	0	0.34
ramos3	121	3600.09	32	1692	0	0	0.16
rvb-sub	53,125	3600.03	0	0	0	0	9.10
sct1	8595	3600.00	0	0	0	0	1.03
sct32	9595	3600.01	6802	360	0	0	2336.82
sct5	117	3627.16	222	0	0	0	2991.13
seymour-disj-10	34,045	3600.01	2414	0	0	0	19.71
seymour	81,986	3600.00	2	0	0	0	0.29
shipsched	99,104	3600.00	0	0	0	0	1.93
shs1023	1	3686.30	0	0	0	0	1.44
siena1	870	3600.34	1706	0	0	0	2311.98
sing161	1	4891.99	0	0	0	0	1629.10
sing245	17	3610.06	12	0	0	0	1076.37
sing2	5873	3600.51	68	0	0	0	58.08
sts405	92,465	3600.01	72	0	0	0	2.29
sts729	722	3599.90	40	0	0	0	16.03
swath	338,160	3600.00	0	0	0	0	0.18
tanglegram1	55	665.44	0	0	0	0	22.68
tanglegram2	11	3700.88	14	0	0	0	3698.12
timtab1	939,220	548.94	0	0	0	0	0.60
toll-like	414	3602.00	806	0	63	0	3593.15
uc-case11	1484	3600.02	134	0	0	0	3.74
uc-case3	1596	3600.41	76	0	0	0	29.76
uct-subprob	598,340	3600.00	2	0	0	0	3.06
unitcal_7	51,778	3600.00	338	0	104	0	12.17
usaBbrv-8-25_70	672,181	3600.00	18	0	0	0	2.54
vpphard2	198	3605.23	0	0	0	0	65.38
vpphard	462	3600.02	0	0	0	0	15.93
wachplan	80,663	3600.00	9426	15,808	152	0	81.96
zib54-UUE	441,382	3600.00	2	0	0	0	1.45
AM (# 156)	469,529.3	2501.08	10,805.1	3668.9	14.2	0.2	649.43
GM (# 156)	2402.3	1068.19	49.9	5.8	1.4	1.0	21.17

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
SGM (# 156)	5168.0	1215.22					52.08

TABLE 58. M2010-sym testset: OB-min4 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30_70_45_095_100	401	1190.61	0	0	0	0	145.56
acc-tight4	599	250.04	246	0	0	0	1.39
ash608gipa-3col	14	35.63	0	0	0	0	0.45
bab3	1	4986.48	0	0	0	0	1423.32
bab5	2342	3600.75	0	0	0	0	3206.28
berlin_5_8_0	1,200,963	3600.00	0	0	0	0	1325.78
biella1	2628	3609.88	412	0	0	0	3348.05
circ10-3	49	3599.98	4	0	0	0	0.45
co-100	1043	3601.71	0	0	0	0	1286.08
core2536-691	523	370.83	8	0	0	0	246.95
core4872-1529	689	3601.02	0	0	0	0	687.92
cov1075	343	6.78	92	284	0	1	0.16
dc1c	1425	4030.94	0	0	0	0	2968.44
dc1l	95	4071.93	0	0	0	0	3748.50
dolom1	19	3750.24	4	0	0	0	3662.90
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.01	0	0	0	0	0.00
enlight15	1	0.03	0	0	0	0	0.00
enlight16	1	0.02	0	0	0	0	0.00
enlight9	1	0.01	0	0	0	0	0.00
ex1010-pi	14,383	3600.00	0	0	0	0	0.04
ex10	1	1011.29	0	0	0	0	0.00
ex9	1	92.04	0	0	0	0	0.00
glass4	4,209,033	3600.02	0	0	0	0	779.65
go19	1,041,586	3600.01	16	0	0	0	235.92
iis-bupa-cov	108,408	3600.00	0	0	0	0	0.03
lectsched-1	2318	1139.64	40	0	4	0	1001.21
lectsched-1-obj	57	3680.16	70	0	0	0	3482.80
lectsched-2	173	71.62	6	0	0	0	22.59
lectsched-3	7835	3310.70	32	0	0	0	3126.42
lectsched-4-obj	7141	707.75	44	0	0	0	608.61
macrophage	13,459	3600.20	1784	0	0	0	3475.22
map06	830	1030.65	0	0	0	0	0.32
map10	1571	1178.03	0	0	0	0	0.37
map14	821	792.42	0	0	0	0	0.26
map18	213	334.72	0	0	0	0	0.23
map20	323	306.11	0	0	0	0	0.25
maxgasflow	121,444	3600.00	0	0	0	0	857.50
mcsched	13,011	168.44	0	0	0	0	43.05
methanosarcina	5726	3600.23	0	0	0	0	2790.12
mkc	5884	3600.41	3416	10	0	0	3498.01
msc98-ip	7046	3600.48	0	0	0	0	2351.72
mzzv11	2615	1027.95	0	0	0	0	252.90
n3seq24	21	3632.93	30	0	0	0	2922.44
n4-3	36,950	514.45	0	0	0	0	0.03
n9-3	61,237	3600.00	0	0	0	0	0.03
neos-1109824	9886	174.57	766	422	0	0	40.05
neos-1171692	370	3606.30	606	0	0	0	3588.33
neos-1224597	1	2.55	0	0	0	0	0.07
neos-1311124	44	3763.81	64	0	0	0	3763.14

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-1337307	4988	189.88	260	384	0	0	41.77
neos-1396125	56,634	274.20	0	0	0	0	21.70
neos13	54,138	2866.79	0	0	0	0	233.64
neos-1426635	2,143,072	3600.01	4870	3774	0	0	2200.83
neos-1426662	3811	3649.68	6602	32	0	0	3612.46
neos-1429212	245	3605.47	0	0	0	0	2290.96
neos-1436709	82,334	3600.00	552	6	0	0	3453.20
neos-1440460	1,672,383	3600.01	246	172	0	0	1170.30
neos-1442119	16,662	3600.45	1070	44	0	0	3561.73
neos-1442657	909,605	3600.01	800	211	0	0	1787.70
neos-1620770	264,925	1807.53	146	279	0	2	205.12
neos18	148,034	3600.00	9656	0	85	0	1981.74
neos-476283	863	673.88	0	0	0	0	87.71
neos-555424	2635	3601.46	1422	878	0	0	3525.34
neos-738098	2991	3600.00	5650	0	0	0	720.50
neos-777800	1	2.01	0	0	0	0	0.03
neos-785912	992	18.77	1160	999	0	0	5.46
neos788725	407,681	623.00	14	0	0	0	46.73
neos808444	278	2051.96	0	0	0	0	74.07
neos-820146	679,462	3600.00	970	76	0	20	1994.22
neos-820157	605,051	3600.00	230	832	0	76	1583.54
neos-824661	23	54.32	32	0	0	0	29.59
neos-824695	17	39.06	30	0	0	0	20.05
neos-826650	319	3675.80	588	195	10	0	3639.22
neos-826694	1	6.85	0	0	0	0	0.80
neos-826812	1	4.13	0	0	0	0	0.77
neos-826841	3873	3600.89	4984	476	5	0	3447.78
neos-849702	5915	294.63	126	32	0	0	17.73
neos-859770	1	156.23	0	0	0	0	0.22
neos-885524	338	4964.04	0	0	0	0	4901.00
neos-911880	600,526	3600.00	7588	1468	0	0	2472.14
neos-932816	26,149	3600.11	120	0	0	0	1073.22
neos-933638	121	504.31	212	12	0	0	26.06
neos-933966	73	214.68	138	477	0	0	10.94
neos-934278	213	285.57	410	6	0	0	28.81
neos-935627	563	1044.34	1114	139	0	0	96.19
neos-935769	841	1479.82	1598	72	0	0	125.80
neos-937511	331	892.21	650	0	0	0	69.64
neos-937815	1981	3600.38	3086	0	0	0	549.86
neos-941262	2544	3600.14	1270	0	0	0	588.59
neos-941313	8	219.26	14	92	0	0	88.20
neos-948126	1575	3600.18	3064	0	0	0	250.85
neos-957389	290	48.16	550	0	0	0	32.48
neos-984165	2366	3600.00	638	0	0	0	585.68
net12	1924	584.58	0	0	0	0	4.26
noswot	1,106,633	313.77	0	0	0	0	0.09
ns1111636	481	3600.22	954	22	0	0	271.22
ns1116954	31	3599.91	60	0	0	0	4.74
ns1158817	1	164.49	0	0	0	0	49.33
ns1208400	2881	901.35	288	15	0	0	19.91
ns1456591	15,965	3600.14	6264	148	0	0	2478.48
ns1702808	27,683	79.04	6318	11,876	156	0	23.54
ns1758913	3	3601.30	0	0	0	0	5.79
ns1853823	1	3916.42	0	0	0	0	329.47

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
ns1854840	1	3746.62	0	0	0	0	149.84
ns1905797	40,820	3600.01	0	0	0	0	0.36
ns1905800	164,229	3600.01	0	0	0	0	1186.43
ns1952667	13,279	2372.40	0	0	0	0	0.00
ns2118727	588	3600.00	0	0	0	0	35.73
ns2124243	1034	3601.19	0	0	0	0	1552.20
ns2137859	1375	3600.94	2748	641	0	0	3102.25
ns4-pr9	535,772	3600.00	0	0	0	0	0.34
nsr8k	64	3603.86	0	0	0	0	253.18
nu60-pr9	19,143	3600.03	0	0	0	0	3039.69
p2m2p1m1p0n100	684,636	3600.00	149,472	0	0	0	3524.69
p6b	86,695	3600.00	12	0	0	0	24.45
pigeon-10	739,822	1117.80	122	251	0	0	597.31
pigeon-11	1,382,021	3600.00	116	264	3	13	2357.32
pigeon-12	1,228,562	3600.00	94	313	0	2	2001.60
pigeon-13	374,390	3600.01	34	257	0	0	2915.77
pigeon-19	135,539	3600.01	112	215	0	0	3180.20
protfold	25,506	3600.00	14	0	0	0	29.89
pw-myciel4	408,077	3600.00	72	0	0	0	205.48
qiu	4792	37.57	6	0	0	0	2.45
queens-30	17,888	3600.03	68	0	0	0	12.48
rail507	949	97.82	0	0	0	0	0.34
ramos3	109	3600.20	36	1690	0	0	1.04
rvb-sub	108	3600.94	0	0	0	0	3436.45
sct1	6643	3600.01	0	0	0	0	1724.94
sct32	4385	3600.15	3632	236	0	0	2791.02
sct5	110	3617.82	64	1	0	0	2986.37
seymour-disj-10	38,534	3600.01	46	0	0	0	105.88
seymour	72,434	3600.01	0	0	0	0	105.95
shipsched	20,316	3600.11	0	0	0	0	1908.21
shs1023	1	3634.20	0	0	0	0	1.39
siena1	1294	3600.01	0	0	0	0	1114.67
sing161	1	4886.02	0	0	0	0	1630.92
sing245	10	3682.81	0	0	0	0	1531.41
sing2	2342	3600.01	0	0	0	0	1026.24
sts405	68,589	3600.38	10	0	0	0	263.89
sts729	50	3615.99	24	0	0	0	2724.36
swath	338,501	3600.00	0	0	0	0	0.30
tanglegram1	10	3912.52	16	0	0	0	3789.02
tanglegram2	11	3690.74	14	0	0	0	3687.99
timtab1	939,220	563.10	0	0	0	0	12.14
toll-like	428	3603.38	828	0	57	0	3594.56
uc-case11	1162	3600.06	0	0	0	0	46.22
uc-case3	1362	3600.26	0	0	0	0	714.12
uct-subprob	566,362	3600.00	0	0	0	0	309.73
unitcal_7	27,714	3600.05	0	0	0	0	1811.80
usAbbrv-8-25_70	207,244	3600.00	0	0	0	0	1773.36
vpphard2	56	3656.32	0	0	0	0	3333.06
vpphard	306	3600.46	0	0	0	0	1544.29
wachplan	70,507	3600.00	6518	6397	0	0	389.25
zib54-UUE	434,357	3600.00	0	0	0	0	40.27
AM (# 155)	157,492.5	2489.74	1583.5	217.4	2.1	0.7	1105.20
GM (# 155)	1628.7	1085.07	16.2	3.6	1.1	1.1	120.39
SGM (# 155)	3551.1	1232.82					207.71

TABLE 59. M2010-bench testset: OB-orbit0 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30n20b8	424	303.87	0	0	0	0	0.02
acc-tight5	2029	285.09	0	0	0	0	0.01
aflow40b	285,631	2327.48	0	0	0	0	0.10
air04	119	35.02	0	0	0	0	0.02
app1-2	16,726	3585.02	0	0	0	0	0.48
ash608gpia-3col	11	27.31	8	0	0	0	0.35
bab5	2237	3601.34	1558	13,493	2	0	3217.44
beasleyC3	525,030	3600.01	0	0	0	0	0.20
biella1	280	3612.63	432	0	0	0	3534.24
bienst2	138,693	178.63	0	0	0	0	0.02
binkar10_1	207,304	346.77	0	0	0	0	0.07
bley_xl1	2	311.11	0	0	0	0	0.08
bnatt350	1154	163.62	0	0	0	0	0.01
core2536-691	5707	3600.00	5176	0	0	0	2972.06
cov1075	177	4.92	166	250	0	2	0.11
csched010	687,392	3600.00	0	0	0	0	0.19
danoind	922,105	3600.00	0	0	0	0	0.09
dfn-gwin-UUM	51,474	92.78	0	0	0	0	0.01
eil33-2	693	58.41	0	0	0	0	0.02
eilB101	9340	148.19	0	0	0	0	0.01
enlight13	1	0.01	0	0	0	0	0.00
enlight14	1	0.02	0	0	0	0	0.00
ex9	1	91.75	0	0	0	0	0.00
glass4	4,061,613	3600.01	25,348	0	0	0	749.02
gmu-35-40	5,585,899	3600.03	0	0	0	0	0.81
iis-100-0-cov	81,999	1528.69	0	0	0	0	0.05
iis-bupa-cov	108,215	3600.01	0	0	0	0	0.03
iis-pima-cov	11,775	746.84	0	0	0	0	0.02
lectsched-4-obj	34,767	3600.12	18,564	1927	247	4	3324.87
m100n500k4r1	4,758,964	3600.00	0	0	0	0	0.42
macrophage	8702	3600.39	15,408	0	0	0	3536.98
map18	213	335.86	0	0	0	0	0.21
map20	323	306.49	0	0	0	0	0.17
mcsched	225,610	3600.00	248,162	42	0	0	1671.35
mik-250-1-100-1	4,488,404	1596.74	0	0	0	0	0.43
mine-166-5	1850	41.57	0	0	0	0	0.02
mine-90-10	151,788	802.41	0	0	0	0	0.05
msc98-ip	5437	3600.02	12	0	0	0	2174.06
mspp16	—	—	—	—	—	—	—
mzzv11	2615	1036.06	0	0	0	0	253.44
n3div36	113,717	3600.45	0	0	0	0	0.54
n3seq24	25	3601.95	48	0	0	0	3263.79
n4-3	36,950	514.92	0	0	0	0	0.01
neos-1109824	5605	122.04	2966	2557	0	0	17.17
neos-1337307	4005	178.99	1554	798	0	0	34.16
neos-1396125	47,058	257.76	600	719	2	0	18.61
neos13	54,138	2876.71	0	0	0	0	237.69
neos-1601936	10,979	2057.25	0	0	0	0	0.03
neos18	213,294	3600.00	60,984	21	1790	212	2233.80
neos-476283	568	553.37	12	0	0	0	55.36

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-686190	7319	108.22	0	0	0	0	0.02
neos-849702	3629	206.55	232	3	0	0	11.15
neos-916792	313,428	3600.00	0	0	0	0	0.37
neos-934278	486	694.32	942	227	0	0	69.08
net12	1924	586.95	0	0	0	0	4.26
netdiversion	88	786.78	0	0	0	0	0.70
newdano	1,762,774	3600.00	0	0	0	0	0.18
noswot	1,106,633	313.83	0	0	0	0	0.14
ns1208400	1841	423.63	80	325	0	0	14.48
ns1688347	4220	212.16	0	0	0	0	0.02
ns1758913	130	3601.23	258	1	0	0	124.66
ns1766074	925,848	1228.90	0	0	0	0	0.20
ns1830653	46,368	652.06	0	0	0	0	0.01
opm2-z7-s2	2827	705.34	0	0	0	0	0.08
pg5_34	215,677	1275.13	0	0	0	0	0.07
pigeon-10	444,222	626.61	2096	3563	405	5	310.61
pw-myciel4	480,933	3600.00	1520	198	12	0	218.62
qiu	1995	17.52	120	22	0	1	0.82
rail507	949	97.91	0	0	0	0	0.35
ran16x16	328,398	297.62	0	0	0	0	0.02
reblock67	122,028	345.76	0	0	0	0	0.02
rmatr100-p10	675	111.16	0	0	0	0	0.04
rmatr100-p5	357	106.39	0	0	0	0	0.04
rmine6	692,275	3600.00	0	0	0	0	0.31
roccll-4-11	26,842	589.35	0	0	0	0	0.03
rococoC10-001000	106,798	556.58	0	0	0	0	0.03
roll3000	504,127	3149.58	0	0	0	0	0.23
satellites1-25	3350	528.80	0	0	0	0	0.04
sp98ic	201,572	3600.00	0	0	0	0	0.43
sp98ir	6084	66.49	0	0	0	0	0.03
tanglegram1	10	3896.16	16	0	0	0	3772.63
tanglegram2	11	3715.51	14	0	0	0	3712.79
timtab1	939,220	562.26	0	0	0	0	11.46
triptim1	1	46.01	0	0	0	0	0.25
unitcal_7	26,191	3600.00	334	0	101	0	1543.47
vpphard	301	3604.99	6	0	0	0	1543.72
zib54-UUE	322,080	3600.00	2	0	0	0	915.81
AM (# 87)	361,754.7	1609.73	4443.9	277.5	29.4	2.6	454.66
GM (# 87)	7564.0	606.78	6.9	2.5	1.4	1.1	7.02
SGM (# 87)	12,040.2	663.83					24.74

TABLE 60. M2010-bench testset: OB-orbit1 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30n20b8	424	304.75	0	0	0	0	0.02
acc-tight5	2029	285.69	0	0	0	0	0.01
aflow40b	285,631	2325.79	0	0	0	0	0.17
air04	119	35.02	0	0	0	0	0.03
app1-2	16,726	3569.11	0	0	0	0	0.49
ash608gpia-3col	11	28.54	8	0	0	0	1.35
bab5	2104	3600.28	1502	12,995	2	0	3229.69
beasleyC3	526,372	3600.01	0	0	0	0	0.17
biella1	36	3637.63	70	0	0	0	3612.03
bienst2	138,693	179.76	0	0	0	0	0.01
binkar10_1	207,304	345.21	0	0	0	0	0.00
bley_xl1	2	309.94	0	0	0	0	0.09
bnatt350	1154	162.63	0	0	0	0	0.02
core2536-691	5279	3600.50	4804	0	0	0	3002.58
cov1075	358	7.08	318	129	1	1	0.48
csched010	686,713	3600.00	0	0	0	0	0.15
danoind	924,945	3600.00	0	0	0	0	0.05
dfn-gwin-UUM	51,474	92.98	0	0	0	0	0.00
eil33-2	693	58.39	0	0	0	0	0.02
eilB101	9340	147.49	0	0	0	0	0.02
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.01	0	0	0	0	0.00
ex9	1	92.12	0	0	0	0	0.00
glass4	4,081,009	3600.01	25,434	0	0	0	756.73
gmu-35-40	5,584,442	3600.03	0	0	0	0	0.88
iis-100-0-cov	81,999	1526.83	0	0	0	0	0.03
iis-bupa-cov	108,017	3600.00	0	0	0	0	0.06
iis-pima-cov	11,775	746.64	0	0	0	0	0.02
lectsched-4-obj	14,832	3600.14	12,080	233	53	0	3438.59
m100n500k4r1	4,740,285	3600.00	0	0	0	0	0.42
macrophage	112	3603.36	218	0	0	0	3596.73
map18	213	335.47	0	0	0	0	0.21
map20	323	306.27	0	0	0	0	0.21
mcsched	132,022	3600.01	150,798	34	0	0	2387.12
mik-250-1-100-1	4,488,404	1601.28	0	0	0	0	0.41
mine-166-5	1850	41.51	0	0	0	0	0.01
mine-90-10	151,788	799.77	0	0	0	0	0.05
msc98-ip	5404	3600.28	12	0	0	0	2172.57
mspp16	—	—	—	—	—	—	—
mzzv11	2615	1036.25	0	0	0	0	254.70
n3div36	113,121	3600.01	0	0	0	0	0.52
n3seq24	17	3609.04	32	0	0	0	3271.93
n4-3	36,950	516.06	0	0	0	0	0.00
neos-1109824	5059	125.32	3078	1302	0	0	25.26
neos-1337307	3939	294.00	1510	606	0	0	142.37
neos-1396125	70,379	365.49	598	360	2	0	30.05
neos13	54,138	2873.23	0	0	0	0	233.21
neos-1601936	10,979	2054.24	0	0	0	0	0.04
neos18	170,318	3600.00	55,668	4	1344	12	2665.73
neos-476283	568	553.72	12	0	0	0	55.34

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-686190	7319	108.45	0	0	0	0	0.02
neos-849702	10,695	336.59	184	0	0	0	37.59
neos-916792	312,232	3600.00	0	0	0	0	0.39
neos-934278	894	3605.10	1762	307	0	0	2470.46
net12	1924	583.77	0	0	0	0	4.17
netdiversion	88	786.84	0	0	0	0	0.70
newdano	1,760,058	3600.00	0	0	0	0	0.13
noswot	1,106,633	313.21	0	0	0	0	0.05
ns1208400	8693	1677.65	212	72	0	0	93.21
ns1688347	4220	212.55	0	0	0	0	0.01
ns1758913	130	3601.21	258	1	0	0	124.62
ns1766074	925,848	1231.96	0	0	0	0	0.17
ns1830653	46,368	651.41	0	0	0	0	0.02
opm2-z7-s2	2827	707.36	0	0	0	0	0.07
pg5_34	215,677	1266.61	0	0	0	0	0.06
pigeon-10	352,336	499.92	2230	1742	231	8	247.76
pw-myciel4	469,623	3600.00	1648	207	0	0	206.88
qiu	1818	17.68	96	2	0	1	0.81
rail507	949	98.19	0	0	0	0	0.34
ran16x16	328,398	296.41	0	0	0	0	0.04
reblock67	122,028	344.61	0	0	0	0	0.02
rmatr100-p10	675	111.31	0	0	0	0	0.03
rmatr100-p5	357	106.39	0	0	0	0	0.03
rmine6	694,201	3600.00	0	0	0	0	0.41
roccll-4-11	26,842	590.67	0	0	0	0	0.03
rococoC10-001000	106,798	554.37	0	0	0	0	0.06
roll3000	504,127	3153.83	0	0	0	0	0.13
satellites1-25	3350	526.90	0	0	0	0	0.04
sp98ic	201,455	3600.00	0	0	0	0	0.49
sp98ir	6084	66.26	0	0	0	0	0.03
tanglegram1	2	3877.52	2	0	0	0	3803.10
tanglegram2	3	3700.00	6	0	0	0	3698.92
timtab1	939,220	563.08	0	0	0	0	11.98
triptim1	1	46.23	0	0	0	0	0.24
unitcal_7	24,872	3600.66	328	0	101	0	1606.37
vpphard	26	5199.14	4	0	0	0	4659.04
zib54-UUE	322,490	3600.01	2	0	0	0	914.97
AM (# 87)	359,071.6	1678.25	3021.5	206.8	19.9	0.3	537.52
GM (# 87)	6736.5	642.08	6.3	2.2	1.3	1.1	7.94
SGM (# 87)	11,443.3	700.40					28.60

TABLE 61. M2010-bench testset: OB-orbit2 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30n20b8	424	304.05	0	0	0	0	0.03
acc-tight5	2029	285.13	0	0	0	0	0.01
aflow40b	285,631	2323.40	0	0	0	0	0.09
air04	119	35.03	0	0	0	0	0.02
app1-2	16,726	3573.82	0	0	0	0	0.47
ash608gpia-3col	14	42.19	2	0	0	2	8.13
bab5	2104	3601.46	1502	12,995	2	0	3230.90
beasleyC3	524,171	3600.00	0	0	0	0	0.14
biella1	28	3648.38	0	0	0	0	3597.83
bienst2	138,693	177.88	0	0	0	0	0.01
binkar10_1	207,304	348.65	0	0	0	0	0.03
bley_xl1	2	310.14	0	0	0	0	0.08
bnatt350	1154	163.28	0	0	0	0	0.01
core2536-691	625	551.08	754	0	0	0	375.42
cov1075	501	6.63	542	255	0	0	1.97
csched010	683,646	3600.00	0	0	0	0	0.19
danoindt	919,652	3600.00	0	0	0	0	0.14
dfn-gwin-UUM	51,474	93.08	0	0	0	0	0.00
eil33-2	693	58.36	0	0	0	0	0.01
eilB101	9340	147.81	0	0	0	0	0.00
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.01	0	0	0	0	0.00
ex9	1	92.35	0	0	0	0	0.00
glass4	4,186,677	3600.01	0	0	0	18	759.62
gmu-35-40	5,581,883	3600.03	0	0	0	0	0.95
iis-100-0-cov	81,999	1522.83	0	0	0	0	0.02
iis-bupa-cov	108,304	3600.00	0	0	0	0	0.03
iis-pima-cov	11,775	748.87	0	0	0	0	0.01
lectsched-4-obj	2757	3060.39	0	0	0	37	2993.55
m100n500k4r1	4,760,779	3600.00	0	0	0	0	0.47
macrophage	164	3605.02	0	0	0	0	3588.46
map18	213	333.79	0	0	0	0	0.19
map20	323	307.40	0	0	0	0	0.23
mcsched	131,192	3600.00	149,826	34	0	0	2389.16
mik-250-1-100-1	4,488,404	1591.07	0	0	0	0	0.31
mine-166-5	1850	41.68	0	0	0	0	0.01
mine-90-10	151,788	801.38	0	0	0	0	0.06
msc98-ip	5372	3600.39	12	0	0	0	2162.90
mspp16	—	—	—	—	—	—	—
mzzv11	2615	1033.98	0	0	0	0	254.83
n3div36	113,150	3600.13	0	0	0	0	0.56
n3seq24	17	3676.67	32	0	0	0	3341.54
n4-3	36,950	516.58	0	0	0	0	0.01
neos-1109824	2235	85.56	742	1634	0	1	29.39
neos-1337307	3328	340.69	788	628	0	3	208.72
neos-1396125	53,933	251.95	14	59	1	65	34.28
neos13	54,138	2858.99	0	0	0	0	233.36
neos-1601936	10,979	2057.19	0	0	0	0	0.04
neos18	167,847	3600.00	36,992	10	682	8	2523.53
neos-476283	568	552.30	12	0	0	0	55.66

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-686190	7319	108.31	0	0	0	0	0.02
neos-849702	3281	769.38	1054	125	0	60	457.56
neos-916792	309,970	3600.00	0	0	0	0	0.36
neos-934278	423	1656.62	844	35	0	0	1132.62
net12	1924	584.08	0	0	0	0	4.16
netdiversion	88	786.53	0	0	0	0	0.70
newdano	1,764,992	3600.00	0	0	0	0	0.16
noswot	1,106,633	313.53	0	0	0	0	0.08
ns1208400	1261	626.13	482	2739	0	0	211.30
ns1688347	4220	211.73	0	0	0	0	0.01
ns1758913	3	3601.33	0	0	0	0	6.23
ns1766074	925,848	1232.02	0	0	0	0	0.06
ns1830653	46,368	652.65	0	0	0	0	0.03
opm2-z7-s2	2827	690.91	0	0	0	0	0.07
pg5_34	215,677	1263.21	0	0	0	0	0.08
pigeon-10	134,080	253.94	2828	1802	101	93	156.46
pw-myciel4	390,751	3600.00	78	22	0	57	290.61
qiu	4360	38.14	182	12	0	1	4.77
rail507	949	97.98	0	0	0	0	0.34
ran16x16	328,398	296.54	0	0	0	0	0.04
reblock67	122,028	344.48	0	0	0	0	0.01
rmatr100-p10	675	111.30	0	0	0	0	0.02
rmatr100-p5	357	106.17	0	0	0	0	0.04
rmine6	690,589	3600.00	0	0	0	0	0.27
roccll-4-11	26,842	585.99	0	0	0	0	0.03
rococoC10-001000	106,798	559.94	0	0	0	0	0.04
roll3000	504,127	3124.57	0	0	0	0	0.18
satellites1-25	3350	529.66	0	0	0	0	0.03
sp98ic	199,449	3600.00	0	0	0	0	0.44
sp98ir	6084	66.30	0	0	0	0	0.04
tanglegram1	2	3862.24	0	0	0	0	3788.17
tanglegram2	3	1475.38	0	0	0	0	1472.21
timtab1	939,220	561.50	0	0	0	0	11.89
triptim1	1	46.42	0	0	0	0	0.25
unitcal_7	24,884	3600.08	334	0	101	0	1614.85
vpphard	26	5220.55	0	0	0	0	4681.88
zib54-UUE	299,173	3600.00	0	0	0	46	1079.60
AM (# 87)	356,052.3	1578.47	2264.6	233.9	10.2	4.5	467.92
GM (# 87)	5843.8	612.54	3.6	2.2	1.2	1.4	8.04
SGM (# 87)	10,272.5	666.24					27.95

TABLE 62. M2010-bench testset: OB-orbit3 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30n20b8	424	303.62	0	0	0	0	0.02
acc-tight5	2029	285.01	0	0	0	0	0.00
aflow40b	285,631	2329.01	0	0	0	0	0.06
air04	119	35.06	0	0	0	0	0.03
app1-2	16,726	3589.19	0	0	0	0	0.50
ash608gpia-3col	14	75.68	2	0	0	2	41.66
bab5	277	3600.02	348	294	0	0	3408.50
beasleyC3	525,889	3600.00	0	0	0	0	0.29
biella1	37	3639.15	72	0	0	0	3613.74
bienst2	138,693	179.33	0	0	0	0	0.00
binkar10_1	207,304	346.95	0	0	0	0	0.03
bley_xl1	2	312.47	0	0	0	0	0.08
bnatt350	1154	162.41	0	0	0	0	0.01
core2536-691	1376	3600.17	1416	0	0	0	3318.94
cov1075	156	4.36	160	314	0	1	0.83
csched010	681,424	3600.00	0	0	0	0	0.17
danoindt	922,925	3600.00	0	0	0	0	0.11
dfn-gwin-UUM	51,474	93.17	0	0	0	0	0.01
eil133-2	693	58.45	0	0	0	0	0.01
eilB101	9340	147.95	0	0	0	0	0.00
enlight13	1	0.01	0	0	0	0	0.00
enlight14	1	0.02	0	0	0	0	0.00
ex9	1	92.26	0	0	0	0	0.00
glass4	4,170,506	3600.01	0	0	0	18	769.39
gmu-35-40	5,588,934	3600.03	0	0	0	0	0.74
iis-100-0-cov	81,999	1529.08	0	0	0	0	0.01
iis-bupa-cov	108,490	3600.00	0	0	0	0	0.04
iis-pima-cov	11,775	749.99	0	0	0	0	0.01
lectsched-4-obj	12,606	3600.09	9898	65	65	0	3452.44
m100n500k4r1	4,753,254	3600.00	0	0	0	0	0.39
macrophage	99	3609.11	192	0	0	0	3604.13
map18	213	334.41	0	0	0	0	0.21
map20	323	306.85	0	0	0	0	0.20
mcsched	81,981	3600.01	95,098	27	0	0	2788.16
mik-250-1-100-1	4,488,404	1600.45	0	0	0	0	0.45
mine-166-5	1850	41.57	0	0	0	0	0.01
mine-90-10	151,788	799.53	0	0	0	0	0.07
msc98-ip	5379	3600.29	12	0	0	0	2175.03
mspp16	—	—	—	—	—	—	—
mzzv11	2615	1037.83	0	0	0	0	255.91
n3div36	113,902	3600.00	0	0	0	0	0.54
n4-3	36,950	515.85	0	0	0	0	0.02
neos-1109824	1442	98.56	646	1594	0	0	50.09
neos-1337307	3328	1243.32	788	628	0	3	1111.91
neos-1396125	53,933	251.52	14	59	1	65	34.19
neos13	54,138	2889.07	0	0	0	0	240.12
neos-1601936	10,979	2053.71	0	0	0	0	0.04
neos18	150,404	3600.01	56,508	117	3627	99	2822.47
neos-476283	568	553.37	12	0	0	0	55.87
neos-686190	7319	108.51	0	0	0	0	0.02

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-849702	38,970	990.71	160	35	0	0	202.01
neos-916792	313,624	3600.00	0	0	0	0	0.36
neos-934278	162	3618.95	310	0	0	0	3379.75
net12	1924	584.03	0	0	0	0	4.47
netdiversion	88	787.66	0	0	0	0	0.69
newdano	1,768,855	3600.00	0	0	0	0	0.14
noswot	1,106,633	314.77	0	0	0	0	0.13
ns1208400	1648	816.63	296	1385	0	0	505.34
ns1688347	4220	212.09	0	0	0	0	0.02
ns1758913	3	3601.31	0	0	0	0	6.23
ns1766074	925,848	1232.78	0	0	0	0	0.04
ns1830653	46,368	651.28	0	0	0	0	0.01
opm2-z7-s2	2827	693.38	0	0	0	0	0.07
pg5_34	215,677	1264.69	0	0	0	0	0.07
pigeon-10	274,087	430.59	116	280	10	102	231.14
pw-myciel4	391,135	3600.00	78	22	0	57	299.35
qiu	2752	22.82	48	2	0	1	1.81
rail507	949	97.94	0	0	0	0	0.35
ran16x16	328,398	296.35	0	0	0	0	0.05
reblock67	122,028	345.23	0	0	0	0	0.03
rmatr100-p10	675	111.09	0	0	0	0	0.03
rmatr100-p5	357	106.09	0	0	0	0	0.03
rmine6	688,952	3600.00	0	0	0	0	0.25
rocll-4-11	26,842	587.70	0	0	0	0	0.03
rococoC10-001000	106,798	554.65	0	0	0	0	0.02
roll3000	504,127	3125.45	0	0	0	0	0.18
satellites1-25	3350	526.85	0	0	0	0	0.03
sp98ic	201,336	3600.00	0	0	0	0	0.42
sp98ir	6084	66.80	0	0	0	0	0.03
tanglegram1	2	3959.67	2	0	0	0	3885.26
tanglegram2	7	3661.70	6	0	0	0	3659.71
timtab1	939,220	561.64	0	0	0	0	11.75
triptim1	1	46.10	0	0	0	0	0.24
unitcal_7	23,934	3600.02	310	0	90	0	1680.45
vpphard	26	5227.34	4	0	0	0	4687.44
zib54-UUE	299,948	3600.00	0	0	0	46	1074.45
AM (# 86)	361,473.5	1663.65	1936.0	56.1	44.1	4.6	550.93
GM (# 86)	6309.2	642.65	4.0	2.1	1.2	1.4	8.18
SGM (# 86)	10,914.7	702.22					29.52

TABLE 63. M2010-bench testset: OB-NST settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30n20b8	424	304.65	0	0	0	0	0.03
acc-tight5	2029	284.90	0	0	0	0	0.00
aflow40b	285,631	2324.70	0	0	0	0	0.17
air04	119	34.99	0	0	0	0	0.02
app1-2	16,726	3568.74	0	0	0	0	0.49
ash608gpia-3col	11	27.44	8	0	0	0	0.33
bab5	40,213	3600.13	558	95	0	0	529.32
beasleyC3	524,191	3600.00	0	0	0	0	0.16
biella1	1393	3608.75	446	0	0	0	3406.73
bienst2	138,693	177.68	0	0	0	0	0.03
binkar10_1	207,304	347.53	0	0	0	0	0.03
bley_xl1	2	309.08	0	0	0	0	0.09
bnatt350	1154	162.81	0	0	0	0	0.01
core2536-691	13,565	3600.33	5120	0	0	0	1941.58
cov1075	165	5.39	140	249	0	2	0.07
csched010	680,629	3600.00	0	0	0	0	0.17
danoindt	918,455	3600.00	0	0	0	0	0.12
dfn-gwin-UUM	51,474	93.10	0	0	0	0	0.00
eil33-2	693	59.05	0	0	0	0	0.01
eilB101	9340	147.90	0	0	0	0	0.01
enlight13	1	0.01	0	0	0	0	0.00
enlight14	1	0.02	0	0	0	0	0.00
ex9	1	91.80	0	0	0	0	0.00
glass4	5,541,099	3600.03	0	0	0	0	4.88
gmu-35-40	5,587,407	3600.03	0	0	0	0	0.67
iis-100-0-cov	81,999	1522.48	0	0	0	0	0.02
iis-bupa-cov	108,366	3600.01	0	0	0	0	0.07
iis-pima-cov	11,775	747.49	0	0	0	0	0.03
lectsched-4-obj	119,709	1785.96	11,650	183	135	0	1024.84
m100n500k4r1	4,736,596	3600.00	0	0	0	0	0.38
macrophage	8663	3600.22	15,338	0	0	0	3536.83
map18	213	333.70	0	0	0	0	0.19
map20	323	308.49	0	0	0	0	0.19
mcsched	243,222	3600.01	245,608	20	0	0	1575.23
mik-250-1-100-1	4,488,404	1598.20	0	0	0	0	0.46
mine-166-5	1850	41.69	0	0	0	0	0.01
mine-90-10	151,788	802.57	0	0	0	0	0.05
msc98-ip	7410	1274.16	0	0	0	0	0.62
mspp16	—	—	—	—	—	—	—
mzzv11	2615	781.89	0	0	0	0	0.18
n3div36	113,688	3600.00	0	0	0	0	0.52
n3seq24	25	3654.10	48	0	0	0	3315.23
n4-3	36,950	515.00	0	0	0	0	0.03
neos-1109824	4373	90.54	2040	2535	0	0	7.48
neos-1337307	4005	167.01	1554	798	0	0	21.54
neos-1396125	78,585	368.98	46	0	0	0	0.13
neos13	54,138	2653.19	0	0	0	0	0.80
neos-1601936	10,979	2054.12	0	0	0	0	0.02
neos18	361,000	3600.00	52,958	0	54	0	823.98
neos-476283	1163	589.50	2	0	0	0	4.09

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-686190	7319	107.87	0	0	0	0	0.02
neos-849702	3629	195.22	232	3	0	0	0.88
neos-916792	314,238	3600.00	0	0	0	0	0.41
neos-934278	486	688.35	942	227	0	0	69.01
net12	1924	580.29	0	0	0	0	0.11
netdiversion	88	787.16	0	0	0	0	0.69
newdano	1,770,775	3600.00	0	0	0	0	0.20
noswot	1,106,633	314.17	0	0	0	0	0.12
ns1208400	1841	408.68	80	325	0	0	0.82
ns1688347	4220	211.74	0	0	0	0	0.01
ns1758913	130	3601.21	258	1	0	0	124.98
ns1766074	925,848	1232.26	0	0	0	0	0.09
ns1830653	46,368	652.57	0	0	0	0	0.02
opm2-z7-s2	2827	689.53	0	0	0	0	0.06
pg5_34	215,677	1267.73	0	0	0	0	0.14
pigeon-10	491,299	346.45	46	170	0	0	0.38
pw-myciel4	513,983	3600.00	1518	188	12	0	4.15
qiu	2009	17.30	62	12	0	1	0.02
rail507	949	97.89	0	0	0	0	0.35
ran16x16	328,398	296.94	0	0	0	0	0.00
reblock67	122,028	345.80	0	0	0	0	0.01
rmatr100-p10	675	111.48	0	0	0	0	0.03
rmatr100-p5	357	106.02	0	0	0	0	0.03
rmine6	688,973	3600.00	0	0	0	0	0.33
roccll-4-11	26,842	591.04	0	0	0	0	0.04
rococoC10-001000	106,798	557.18	0	0	0	0	0.03
roll3000	504,127	3130.18	0	0	0	0	0.17
satellites1-25	3350	529.42	0	0	0	0	0.03
sp98ic	201,439	3600.01	0	0	0	0	0.43
sp98ir	6084	66.60	0	0	0	0	0.04
tanglegram1	55	669.41	0	0	0	0	22.66
tanglegram2	11	3692.60	14	0	0	0	3689.84
timtab1	939,220	550.16	0	0	0	0	0.55
triptim1	1	46.01	0	0	0	0	0.25
unitcal_7	51,451	3600.01	338	0	104	0	12.49
vpphard	462	3600.03	0	0	0	0	15.95
zib54-UUE	440,362	3600.00	2	0	0	0	1.47
AM (# 87)	384,821.1	1516.43	3896.6	55.2	3.5	0.0	231.55
GM (# 87)	8682.9	576.29	5.0	1.9	1.2	1.0	2.97
SGM (# 87)	13,550.8	629.97					9.61

TABLE 64. M2010-bench testset: OB-min4 settings

Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
30n20b8	424	306.52	0	0	0	0	0.02
acc-tight5	2029	285.05	0	0	0	0	0.01
aflow40b	285,631	2327.32	0	0	0	0	0.09
air04	119	35.21	0	0	0	0	0.02
app1-2	16,681	3600.02	0	0	0	0	0.48
ash608gpia-3col	14	36.00	0	0	0	0	0.48
bab5	2286	3601.09	0	0	0	0	3214.37
beasleyC3	524,650	3600.00	0	0	0	0	0.15
biella1	2624	3611.02	408	0	0	0	3350.48
bienst2	138,693	179.77	0	0	0	0	0.02
binkar10_1	207,304	346.45	0	0	0	0	0.02
bley_xl1	2	310.26	0	0	0	0	0.08
bnatt350	1154	163.13	0	0	0	0	0.01
core2536-691	523	371.82	8	0	0	0	247.15
cov1075	343	6.83	92	284	0	1	0.16
csched010	684,072	3600.00	0	0	0	0	0.11
danoind	920,637	3600.00	0	0	0	0	0.11
dfn-gwin-UUM	51,474	94.02	0	0	0	0	0.03
eil33-2	693	58.89	0	0	0	0	0.01
eilB101	9340	148.21	0	0	0	0	0.01
enlight13	1	0.02	0	0	0	0	0.00
enlight14	1	0.02	0	0	0	0	0.00
ex9	1	92.03	0	0	0	0	0.00
glass4	4,189,989	3600.02	0	0	0	0	775.83
gmu-35-40	5,560,082	3600.03	0	0	0	0	0.74
iis-100-0-cov	81,999	1517.45	0	0	0	0	0.02
iis-bupa-cov	108,285	3600.00	0	0	0	0	0.04
iis-pima-cov	11,775	746.54	0	0	0	0	0.02
lectsched-4-obj	7141	705.46	44	0	0	0	606.48
m100n500k4r1	4,749,355	3600.00	0	0	0	0	0.39
macrophage	13,505	3600.33	1784	0	0	0	3475.09
map18	213	334.66	0	0	0	0	0.22
map20	323	306.29	0	0	0	0	0.21
mcsched	13,011	168.10	0	0	0	0	42.12
mik-250-1-100-1	4,488,404	1599.22	0	0	0	0	0.42
mine-166-5	1850	41.53	0	0	0	0	0.02
mine-90-10	151,788	797.02	0	0	0	0	0.08
msc98-ip	6980	3600.00	0	0	0	0	2336.58
mspp16	—	—	—	—	—	—	—
mzzv11	2615	1030.62	0	0	0	0	253.03
n3div36	113,673	3600.00	0	0	0	0	0.54
n3seq24	21	3622.65	30	0	0	0	2914.42
n4-3	36,950	516.54	0	0	0	0	0.00
neos-1109824	9886	175.59	766	422	0	0	40.41
neos-1337307	4988	190.27	260	384	0	0	41.67
neos-1396125	56,634	274.46	0	0	0	0	21.31
neos13	54,138	2889.89	0	0	0	0	233.29
neos-1601936	10,979	2059.11	0	0	0	0	0.04
neos18	147,452	3600.02	9654	0	85	0	1979.19
neos-476283	863	676.76	0	0	0	0	87.49

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Name	#Nodes	Time	#Children	#Fixed0	#Fixed1	#Cutoffs	OB-time
neos-686190	7319	108.57	0	0	0	0	0.01
neos-849702	5915	295.17	126	32	0	0	17.61
neos-916792	312,927	3600.00	0	0	0	0	0.41
neos-934278	213	287.96	410	6	0	0	28.67
net12	1924	586.01	0	0	0	0	4.35
netdiversion	88	788.90	0	0	0	0	0.70
newdano	1,774,345	3600.00	0	0	0	0	0.23
noswot	1,106,633	312.59	0	0	0	0	0.14
ns1208400	2881	899.81	288	15	0	0	19.88
ns1688347	4220	212.15	0	0	0	0	0.02
ns1758913	3	3601.31	0	0	0	0	5.82
ns1766074	925,848	1226.04	0	0	0	0	0.11
ns1830653	46,368	653.06	0	0	0	0	0.04
opm2-z7-s2	2827	694.28	0	0	0	0	0.07
pg5_34	215,677	1273.09	0	0	0	0	0.14
pigeon-10	739,822	1131.72	122	251	0	0	602.20
pw-myciel4	407,557	3600.00	72	0	0	0	203.06
qiu	4792	37.54	6	0	0	0	2.48
rail507	949	98.27	0	0	0	0	0.35
ran16x16	328,398	297.25	0	0	0	0	0.04
reblock67	122,028	342.85	0	0	0	0	0.04
rmatr100-p10	675	111.63	0	0	0	0	0.02
rmatr100-p5	357	106.15	0	0	0	0	0.03
rmine6	689,589	3600.00	0	0	0	0	0.25
rocll-4-11	26,842	586.85	0	0	0	0	0.03
rococoC10-001000	106,798	558.47	0	0	0	0	0.04
roll3000	504,127	3145.78	0	0	0	0	0.16
satellites1-25	3350	528.40	0	0	0	0	0.03
sp98ic	202,334	3600.13	0	0	0	0	0.43
sp98ir	6084	66.53	0	0	0	0	0.04
tanglegram1	10	3906.45	16	0	0	0	3782.77
tanglegram2	11	3698.90	14	0	0	0	3696.12
timtab1	939,220	563.13	0	0	0	0	11.15
triptim1	1	46.76	0	0	0	0	0.24
unitcal_7	27,662	3600.07	0	0	0	0	1814.70
vpphard	306	3600.17	0	0	0	0	1521.49
zib54-UUE	434,212	3600.00	0	0	0	0	38.79
AM (# 87)	363,493.2	1510.26	162.1	16.0	1.0	0.0	360.65
GM (# 87)	7209.6	579.09	2.6	1.4	1.1	1.0	6.17
SGM (# 87)	11,832.2	629.75					20.60

TABLE 65. Margot1 testset: OF settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
cov954	102	2.89	101	334	0	0.05
cov1053	4532	19.37	4531	3735	0	3.78
cov1054	81,652	1589.81	81,651	1820	1	83.27
cov1075	564	8.16	563	1126	2	0.34
cov1076	443,902	2170.49	443,901	11,682	65	504.86
cov1174	628,536	3600.00	628,535	165,823	0	875.46
sts27-complemented	15	0.11	14	124	0	0.00
sts45-complemented	3296	2.21	3295	187	0	0.26
sts63-complemented	8187	9.04	8187	1702	0	2.92
sts81-complemented	2525	196.96	2526	2881	0	192.74
cod83	19	4.22	18	843	0	0.01
cod83r	39	3.78	38	415	0	0.02
cod93	2824	78.96	2823	4845	0	6.69
cod93r	9137	111.80	9136	4337	0	8.58
cod105	5	114.72	4	1739	0	0.12
cod105r	3	33.77	2	461	0	0.07
AM (# 16)	74,083.6	496.64	74,082.8	12,628.4	4.2	104.95
GM (# 16)	1035.3	36.97		1659.8	1.4	6.18
SGM (# 16)	2192.5	61.70				16.28

TABLE 66. Margot1 testset: OF-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
cov954	102	2.83	101	334	0	0.03
cov1053	4387	16.34	4386	2758	0	0.86
cov1054	109,110	2069.93	109,109	757	2	0.78
cov1075	542	7.69	541	1050	2	0.28
cov1076	285,136	1103.76	285,135	2930	19	10.28
cov1174	873,213	3600.00	873,212	84,868	0	183.15
sts27-complemented	15	0.10	14	124	0	0.00
sts45-complemented	3330	1.85	3329	124	0	0.01
sts63-complemented	11,544	7.94	11,544	454	0	0.11
sts81-complemented	3580	11.64	3580	1480	2	6.84
cod83	19	4.20	18	843	0	0.01
cod83r	39	3.77	38	415	0	0.00
cod93	2882	74.11	2881	3823	0	2.04
cod93r	9185	108.31	9184	3342	0	2.29
cod105	5	113.08	4	1739	0	0.12
cod105r	3	34.03	2	461	0	0.06
AM (# 16)	81,443.2	447.47	81,442.4	6593.9	1.6	12.93
GM (# 16)	1090.5	28.96		1126.7	1.4	1.99
SGM (# 16)	2313.5	49.47				3.50

TABLE 67. Margot1 testset: OF-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
cov954	364	1.47	363	571	2	0.16
cov1053	788	3.42	787	2171	0	0.75
cov1054	1127	23.79	1126	1044	5	0.99
cov1075	427	5.12	426	1472	0	0.35
cov1076	66,222	316.06	66,221	26,429	114	63.43
cov1174	308,049	1601.41	308,048	188,255	50	449.69
sts27-complemented	17	0.06	16	141	0	0.01
sts45-complemented	5220	2.86	5222	633	0	0.54
sts63-complemented	8373	8.45	8379	4089	0	3.16
sts81-complemented	2630	204.79	2640	4151	0	201.72
cod83	43	1.25	42	989	0	0.06
cod83r	69	1.46	68	778	0	0.05
cod93	244	11.02	243	2949	0	0.90
cod93r	2353	25.23	2352	4999	0	2.47
cod105	7	19.29	6	2101	0	0.13
cod105r	5	3.30	4	823	0	0.06
AM (# 16)	24,746.1	139.31	24,746.4	15,099.7	10.7	45.28
GM (# 16)	605.7	11.05		2190.8	2.0	3.01
SGM (# 16)	1097.8	21.16				8.40

TABLE 68. Margot1 testset: OF-NST-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
cov954	399	1.47	398	584	1	0.14
cov1053	623	2.48	622	1924	0	0.28
cov1054	1127	23.24	1126	1010	5	0.39
cov1075	427	5.09	426	1472	0	0.26
cov1076	67,650	319.83	67,649	26,544	112	64.33
cov1174	308,633	1492.19	308,632	181,639	42	337.29
sts27-complemented	17	0.06	16	141	0	0.00
sts45-complemented	6974	2.90	6977	458	0	0.07
sts63-complemented	10,579	7.32	10,590	2620	0	0.64
sts81-complemented	3517	47.61	3522	2799	0	43.83
cod83	43	1.25	42	989	0	0.02
cod83r	69	1.46	68	778	0	0.05
cod93	244	10.51	243	2839	0	0.39
cod93r	1009	16.54	1008	3167	0	0.74
cod105	7	19.29	6	2101	0	0.13
cod105r	5	3.32	4	823	0	0.05
AM (# 16)	25,082.7	122.16	25,083.1	14,368.0	10.0	28.04
GM (# 16)	599.9	9.48		1955.2	1.9	2.36
SGM (# 16)	1089.9	17.78				6.03

TABLE 69. Margot2 testset: OF settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
bibd1032.mylp	1	0.00	0	0	0	0.00
bibd1042.mylp	1	0.02	0	0	0	0.01
bibd1054.mylp	6	0.39	5	55	0	0.00
bibd1152.mylp	1	0.05	0	0	0	0.01
bibd1154.mylp	8	1.04	12	2	0	0.01
bibd1265.mylp	7	2.17	13	40	0	0.05
bibd1331.mylp	1	0.02	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0.01
bibd1342.mylp	9	1.38	10	1	0	0.01
bibd1531.mylp	1	0.02	0	0	0	0.01
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0.00
bibd732.mylp	1	0.01	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.00	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0.00
ca36243	6	0.30	0	0	0	0.00
ca57245	641,231	2791.31	0	0	0	0.08
c77247	520,061	3600.00	0	0	0	0.04
clique9	1	0.06	0	0	0	0.00
codbt03.mylp	1	0.02	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0.00
codbt05.mylp	561	11.67	560	1254	0	0.31
codbt06.mylp	19,444	3600.01	19,443	3745	0	40.62
codbt15.mylp	84,202	3600.00	84,201	6681	1	131.70
codbt24.mylp	115,929	1415.73	115,928	14,887	0	117.03
codbt33.mylp	23	7.61	21	280	0	0.03
codbt34.mylp	69,448	3600.01	69,447	4504	0	357.64
codbt42.mylp	713	3.71	712	1302	0	0.16
codbt43.mylp	149,427	3600.01	149,426	7904	1	179.12
codbt52.mylp	614,727	3600.00	614,726	134,674	4	450.17
codbt60.mylp	10	0.25	9	148	0	0.00
codbt61.mylp	45	5.37	44	447	0	0.04
codbt70.mylp	1	0.01	0	0	0	0.00
codbt71.mylp	203,620	3600.00	203,619	33,380	1	323.13
codbt80.mylp	90	10.37	89	1136	0	0.09

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
codbt90.mylp	62,623	3600.00	62,622	13,424	1	406.98
flosn52	1939	4.93	3354	80	0	0.77
flosn60	3699	9.84	6944	72	0	1.96
flosn84	38,852	107.08	78,399	186	1	33.33
jgt18	120	0.39	175	9	0	0.02
jgt30	24,637	36.50	49,044	386	22	11.71
mered	15	3.44	15	250	0	0.04
O4_35	1	0.12	0	0	0	0.00
oa25332	1	0.00	0	0	0	0.00
oa25342	1	0.00	0	0	0	0.00
oa26332	77,800	3600.00	0	0	0	0.08
oa36243	1	0.09	0	0	0	0.00
oa56243	1	0.01	0	0	0	0.00
oa57245	9715	20.84	0	0	0	0.00
oa66234	1	0.00	0	0	0	0.00
oa67233	1	0.00	0	0	0	0.00
oa68233	1	0.08	0	0	0	0.00
oa76234	4	0.04	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	318,856	578.21	0	0	0	0.19
of5_14_7	11	0.30	10	32	0	0.00
of7_18_9	1	0.07	0	0	0	0.01
ofsub9	12,635	19.76	24,823	963	95	13.24
pa36243	3815	3.38	0	0	0	0.00
pa57245	760,574	3600.00	0	0	0	0.29
pa77247	799,938	3600.00	0	0	0	0.28
sts15.mylp	11	0.05	10	18	0	0.01
sts21.mylp	11	0.07	10	47	0	0.00
sts9.mylp	1	0.01	0	0	0	0.00
AM (# 79)	57,403.2	565.02	18,780.6	2859.6	1.6	26.19
GM (# 79)	37.3	6.13		8.3	1.1	1.92
SGM (# 79)	520.1	21.56				4.24

TABLE 70. Margot2 testset: OF-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
bibd1032.mylp	1	0.00	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0.00
bibd1054.mylp	6	0.40	5	55	0	0.00
bibd1152.mylp	1	0.04	0	0	0	0.00
bibd1154.mylp	8	1.01	12	2	0	0.02
bibd1265.mylp	7	2.17	13	40	0	0.04
bibd1331.mylp	1	0.02	0	0	0	0.01
bibd1341.mylp	1	0.07	0	0	0	0.00
bibd1342.mylp	9	1.38	10	1	0	0.02
bibd1531.mylp	1	0.02	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0.00
bibd732.mylp	1	0.01	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.00	0	0	0	0.00
bibd846.mylp	1	0.01	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0.00
ca36243	6	0.32	0	0	0	0.00
ca57245	641,231	2794.17	0	0	0	0.12
c77247	521,724	3600.00	0	0	0	0.03
clique9	1	0.06	0	0	0	0.00
codbt03.mylp	1	0.02	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0.00
codbt05.mylp	613	11.66	612	1007	0	0.04
codbt06.mylp	21,245	3600.01	21,244	3189	0	4.91
codbt15.mylp	88,602	3600.01	88,601	4570	0	9.40
codbt24.mylp	116,153	1405.38	116,152	13,844	1	105.56
codbt33.mylp	23	7.58	21	280	0	0.00
codbt34.mylp	33,418	3600.00	33,417	5656	0	36.49
codbt42.mylp	713	3.68	712	1301	0	0.15
codbt43.mylp	152,821	3600.01	152,820	5972	0	15.90
codbt52.mylp	695,123	3600.00	695,122	117,632	8	101.24
codbt60.mylp	10	0.25	9	148	0	0.01
codbt61.mylp	45	5.35	44	447	0	0.01
codbt70.mylp	1	0.01	0	0	0	0.00
codbt71.mylp	226,875	3600.01	226,874	26,853	3	89.07
codbt80.mylp	90	10.35	89	1136	0	0.08

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
codbt90.mylp	65,514	3600.00	65,513	11,372	9	115.35
flosn52	1939	4.12	3354	80	0	0.05
flosn60	3699	7.81	6944	72	0	0.02
flosn84	40,862	76.71	82,582	144	1	0.32
jgt18	120	0.38	175	9	0	0.01
jgt30	24,810	23.90	49,487	406	25	0.40
mered	15	3.42	15	250	0	0.03
O4_35	1	0.12	0	0	0	0.00
oa25332	1	0.01	0	0	0	0.00
oa25342	1	0.00	0	0	0	0.00
oa26332	77,697	3600.00	0	0	0	0.03
oa36243	1	0.07	0	0	0	0.00
oa56243	1	0.01	0	0	0	0.00
oa57245	9715	20.70	0	0	0	0.03
oa66234	1	0.00	0	0	0	0.00
oa67233	1	0.00	0	0	0	0.00
oa68233	1	0.08	0	0	0	0.00
oa76234	4	0.05	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	318,856	578.88	0	0	0	0.20
of5_14_7	11	0.32	10	32	0	0.01
of7_18_9	1	0.06	0	0	0	0.00
ofsub9	11,265	7.44	22,320	983	104	1.52
pa36243	3815	3.38	0	0	0	0.00
pa57245	756,445	3600.00	0	0	0	0.24
pa77247	798,378	3600.00	0	0	0	0.29
sts15.mylp	11	0.05	10	17	0	0.00
sts21.mylp	11	0.08	10	47	0	0.00
sts9.mylp	1	0.00	0	0	0	0.00
AM (# 79)	58,378.7	564.20	19,825.0	2475.3	1.9	6.10
GM (# 79)	37.2	5.96		8.1	1.2	1.45
SGM (# 79)	518.0	21.03				1.88

TABLE 71. Margot2 testset: OF-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
bibd1032.mylp	1	0.01	0	0	0	0.01
bibd1042.mylp	1	0.02	0	0	0	0.00
bibd1054.mylp	9	0.30	8	55	0	0.01
bibd1152.mylp	1	0.04	0	0	0	0.00
bibd1154.mylp	6	0.51	5	0	0	0.02
bibd1265.mylp	9	0.43	8	0	0	0.05
bibd1331.mylp	1	0.02	0	0	0	0.00
bibd1341.mylp	1	0.07	0	0	0	0.01
bibd1342.mylp	14	0.79	15	162	0	0.03
bibd1531.mylp	1	0.01	0	0	0	0.01
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.01	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.01	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0.00
bibd931.mylp	1	0.01	0	0	0	0.00
bibd932.mylp	1	0.01	0	0	0	0.01
bibd933.mylp	1	0.00	0	0	0	0.00
bibd943.mylp	1	0.02	0	0	0	0.00
ca36243	38	0.12	0	0	0	0.00
ca57245	117,830	537.67	0	0	0	0.02
ca77247	304,641	1738.53	0	0	0	0.04
clique9	1	0.05	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0.00
codbt05.mylp	1654	12.56	1653	4691	0	1.19
codbt06.mylp	10,714	3600.01	10,713	17,397	0	30.65
codbt15.mylp	252,491	3600.00	252,490	63,475	0	1230.95
codbt24.mylp	365,940	3600.00	365,939	40,078	0	427.58
codbt33.mylp	102	1.98	101	611	0	0.07
codbt34.mylp	78,047	3600.00	78,046	11,988	0	1021.29
codbt42.mylp	1370	3.04	1369	2164	0	0.44
codbt43.mylp	172,868	3600.01	172,867	154,620	2	250.91
codbt52.mylp	668,928	3600.00	668,927	573,432	28	609.53
codbt60.mylp	44	0.14	43	371	0	0.03
codbt61.mylp	86	1.08	85	757	0	0.06
codbt70.mylp	1	0.00	0	0	0	0.00
codbt71.mylp	264,870	3600.00	264,869	408,050	9	534.02
codbt80.mylp	203	2.20	202	1514	0	0.47

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
codbt90.mylp	80,405	3600.00	80,404	71,963	5	312.68
flosn52	946	1.67	1685	468	10	0.49
flosn60	3288	7.06	5886	802	17	2.05
flosn84	232,702	1262.95	418,155	1973	143	253.08
jgt18	384	0.36	745	13	0	0.13
jgt30	12,525	17.45	25,024	46	3	6.63
mered	219	3.35	312	333	5	1.48
O4_35	1	0.10	0	0	0	0.00
oa25332	1	0.00	0	0	0	0.00
oa25342	1	0.01	0	0	0	0.00
oa26332	72,399	3600.00	0	0	0	0.04
oa36243	30	0.05	0	0	0	0.00
oa56243	1	0.00	0	0	0	0.00
oa57245	3752	5.45	0	0	0	0.00
oa66234	1	0.01	0	0	0	0.00
oa67233	1	0.01	0	0	0	0.00
oa68233	1	0.07	0	0	0	0.00
oa76234	6	0.02	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	268,793	1752.35	0	0	0	0.22
of5_14_7	41	0.20	54	37	3	0.00
of7_18_9	1	0.06	0	0	0	0.00
ofsub9	23,247	42.73	47,740	268	73	29.24
pa36243	4799	4.01	0	0	0	0.00
pa57245	1,069,464	3600.00	0	0	0	0.28
pa77247	1,288,207	3600.00	0	0	0	0.38
sts15.mylp	17	0.02	17	26	0	0.00
sts21.mylp	19	0.05	18	67	0	0.01
sts9.mylp	1	0.00	0	0	0	0.00
AM (# 79)	67,103.0	569.59	30,346.6	17,156.5	3.8	59.67
GM (# 79)	48.0	5.66		11.2	1.4	2.13
SGM (# 79)	576.9	21.36				5.64

TABLE 72. Margot2 testset: OF-NST-first settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
bibd1032.mylp	1	0.00	0	0	0	0.00
bibd1042.mylp	1	0.01	0	0	0	0.00
bibd1054.mylp	9	0.29	8	55	0	0.02
bibd1152.mylp	1	0.04	0	0	0	0.01
bibd1154.mylp	6	0.51	5	0	0	0.02
bibd1265.mylp	9	0.43	8	0	0	0.04
bibd1331.mylp	1	0.02	0	0	0	0.01
bibd1341.mylp	1	0.07	0	0	0	0.01
bibd1342.mylp	14	0.80	15	162	0	0.02
bibd1531.mylp	1	0.02	0	0	0	0.00
bibd6310.mylp	0	0.00	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0.00
bibd943.mylp	1	0.01	0	0	0	0.00
ca36243	38	0.12	0	0	0	0.00
ca57245	117,830	536.92	0	0	0	0.02
ca77247	304,641	1745.47	0	0	0	0.04
clique9	1	0.05	0	0	0	0.00
codbt03.mylp	1	0.01	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0.00
codbt05.mylp	1654	12.53	1653	4691	0	1.00
codbt06.mylp	10,750	3600.01	10,749	16,961	0	27.44
codbt15.mylp	242,248	3600.01	242,247	74,561	0	388.89
codbt24.mylp	366,094	3600.00	366,093	39,129	0	424.73
codbt33.mylp	102	2.00	101	611	0	0.06
codbt34.mylp	225,671	3600.01	225,670	14,750	0	67.30
codbt42.mylp	1245	2.78	1244	1884	0	0.36
codbt43.mylp	166,502	3600.00	166,501	147,584	2	212.83
codbt52.mylp	673,010	3600.00	673,009	546,283	21	616.69
codbt60.mylp	44	0.15	43	371	0	0.02
codbt61.mylp	86	1.08	85	757	0	0.03
codbt70.mylp	1	0.01	0	0	0	0.00
codbt71.mylp	273,328	3600.01	273,327	427,431	4	513.22
codbt80.mylp	203	2.11	202	1514	0	0.39

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
codbt90.mylp	87,184	3600.00	87,183	67,614	4	279.82
flosn52	1201	1.58	2101	214	1	0.03
flosn60	4259	6.34	7921	325	0	0.08
flosn84	299,633	1772.83	532,079	263	0	4.43
jgt18	384	0.26	745	13	0	0.00
jgt30	12,525	10.41	25,024	46	3	0.11
mered	219	3.34	312	333	5	1.54
O4_35	1	0.11	0	0	0	0.00
oa25332	1	0.01	0	0	0	0.00
oa25342	1	0.01	0	0	0	0.00
oa26332	72,400	3600.00	0	0	0	0.04
oa36243	30	0.05	0	0	0	0.00
oa56243	1	0.01	0	0	0	0.00
oa57245	3752	5.39	0	0	0	0.00
oa66234	1	0.00	0	0	0	0.00
oa67233	1	0.00	0	0	0	0.00
oa68233	1	0.07	0	0	0	0.00
oa76234	6	0.02	0	0	0	0.00
oa77233	1	0.00	0	0	0	0.00
oa77247	268,793	1756.00	0	0	0	0.24
of5_14_7	41	0.20	54	37	3	0.02
of7_18_9	1	0.06	0	0	0	0.00
ofsub9	23,247	13.74	47,740	268	73	0.95
pa36243	4799	4.00	0	0	0	0.00
pa57245	1,065,665	3600.00	0	0	0	0.39
pa77247	1,289,462	3600.01	0	0	0	0.29
sts15.mylp	17	0.04	17	26	0	0.01
sts21.mylp	19	0.06	18	67	0	0.00
sts9.mylp	1	0.01	0	0	0	0.00
AM (# 79)	69,837.4	575.70	33,723.5	17,037.3	1.5	32.17
GM (# 79)	49.1	5.55		10.7	1.2	1.77
SGM (# 79)	591.9	21.03				3.95

TABLE 73. M2003-sym testset: OF settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
fast0507	919	95.84	0	0	0	0.05
glass4	5,168,959	3600.03	5,829,485	8588	0	217.83
harp2	8,583,312	3600.01	0	0	0	1.79
mas74	3,592,825	847.17	3,593,644	9099	0	26.07
mas76	490,320	105.50	490,717	0	0	2.88
misc07	4903	8.13	6040	1817	0	1.16
mkc	5908	3600.38	5907	0	0	3492.66
mod011	1284	61.26	1283	0	0	0.06
msc98-ip	7410	1271.31	11,944	0	0	1.35
mzzv11	2615	783.44	3431	0	0	0.10
net12	2502	999.01	4672	0	0	0.56
noswot	1,106,633	314.27	0	0	0	0.38
nsrand-ipx	585,208	3600.00	585,249	141	0	29.83
p2756	7	1.36	3	0	0	0.02
protfold	13,028	3600.00	18,131	25	0	26.56
qiu	1446	19.96	1445	126	0	3.56
rout	61,617	66.71	0	0	0	0.05
seymour	77,586	3600.00	77,585	3	0	2.28
swath	342,974	3600.00	0	0	0	0.88
timtab1	939,220	557.34	978,532	0	0	6.55
timtab2	4,004,046	3600.01	4,341,469	0	0	39.72
AM (# 21)	1,190,129.6	1615.80	759,501.8	942.8	0.0	183.54
GM (# 21)	45,577.7	443.25		6.6	1.0	4.86
SGM (# 21)	52,754.7	524.34				11.86

TABLE 74. M2003-sym testset: OF-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
fast0507	919	95.93	0	0	0	0.04
glass4	5,457,208	3600.03	6,152,967	9114	0	57.56
harp2	8,596,585	3600.01	0	0	0	1.86
mas74	3,592,825	848.39	3,593,644	9099	0	28.32
mas76	490,320	105.34	490,717	0	0	3.08
misc07	4903	7.63	6040	1817	0	0.49
mkc	489,020	3600.00	489,019	0	0	11.04
mod011	1284	60.95	1283	0	0	0.08
msc98-ip	7410	1271.65	11,944	0	0	1.25
mzzv11	2615	775.67	3431	0	0	0.15
net12	2502	999.36	4672	0	0	0.55
noswot	1,106,633	316.59	0	0	0	0.37
nsrand-ipx	581,531	3600.00	581,571	141	0	30.24
p2756	7	1.37	3	0	0	0.01
protfold	51,241	3600.01	76,849	23	0	0.53
qiu	1446	19.93	1445	126	0	3.62
rout	61,617	67.00	0	0	0	0.04
seymour	77,523	3600.00	77,522	3	0	2.42
swath	336,795	3600.00	0	0	0	0.83
timtab1	939,220	555.98	978,532	0	0	6.37
timtab2	4,013,321	3600.01	4,352,022	0	0	40.92
AM (# 21)	1,229,282.1	1615.52	801,031.5	967.8	0.0	9.04
GM (# 21)	60,128.5	441.94		6.6	1.0	2.98

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
SGM (# 21)	69,554.7	523.52				5.27

TABLE 75. M2010-sym testset: OF settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
30_70_45_095_100	401	1040.36	400	0	0	0.08
acc-tight4	174	106.09	228	250	0	1.14
ash608gipa-3col	15	38.17	17	4	1	0.33
bab3	1	3609.56	0	0	0	44.98
bab5	12,795	3600.27	13,903	210,869	0	2375.62
berlin_5_8_0	1,214,857	3600.00	1,372,396	13,945	34	1354.75
biella1	2336	3613.59	2593	0	0	3389.37
circ10-3	47	3600.02	46	11	0	0.47
co-100	10,375	3600.01	11,635	0	0	1.89
core2536-691	300	121.37	312	3	0	2.81
core4872-1529	915	3600.01	914	0	0	2.40
cov1075	239	6.08	238	849	0	0.18
dc1c	1032	3647.08	1299	0	0	2917.71
dc1l	100	5899.01	99	0	0	5552.97
dolom1	73	3751.95	72	0	0	3627.71
enlight13	1	0.02	0	0	0	0.00
enlight14	1	0.02	0	0	0	0.00
enlight15	1	0.02	0	0	0	0.00
enlight16	1	0.02	0	0	0	0.01
enlight9	1	0.01	0	0	0	0.00
ex1010-pi	14,383	3600.02	0	0	0	0.16
ex10	1	1010.93	0	0	0	0.00
ex9	1	91.96	0	0	0	0.00
glass4	5,172,608	3600.02	5,833,635	8610	0	218.22
go19	961,889	3600.00	961,888	381	0	344.85
iis-bupa-cov	108,451	3600.00	0	0	0	0.07
lectsched-1	1812	590.95	3798	0	0	438.74
lectsched-1-obj	89	3683.01	108	0	0	3434.10
lectsched-2	299	55.52	557	0	0	5.59
lectsched-3	1034	259.15	2366	0	0	161.84
lectsched-4-obj	1362	176.23	1679	0	0	122.12
macrophage	25,115	3600.11	25,117	0	0	3425.81
map06	830	1031.19	829	0	0	0.26
map10	1571	1178.95	1570	0	0	0.35
map14	821	789.92	820	0	0	0.26
map18	213	333.32	212	0	0	0.20
map20	323	305.94	322	0	0	0.23
maxgasflow	160,793	3600.01	166,793	0	0	13.29
mcsched	13,890	133.81	13,889	1010	0	2.88
methanosarcina	39,226	3600.01	39,225	0	0	26.03
mkc	5906	3600.48	5905	0	0	3492.95
msc98-ip	7410	1278.41	11,944	0	0	1.34
mzzv11	2615	776.27	3431	0	0	0.12
n3seq24	816	3600.61	1066	16,804	0	2244.40
n4-3	36,950	514.93	0	0	0	0.03
n9-3	61,530	3600.00	0	0	0	0.13
neos-1109824	91	18.05	91	551	0	0.45
neos-1171692	201	36.09	200	119	0	9.31
neos-1171737	5071	3600.03	5070	3873	0	3341.34
neos-1224597	1	2.53	0	0	0	0.06

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
neos-1311124	57,919	3603.10	57,918	5383	50	3535.57
neos-1337307	1449	91.86	1447	725	0	11.75
neos-1396125	19,926	128.21	24,720	461	6	19.12
neos13	54,138	2620.41	54,137	0	0	2.55
neos-1426635	1,546,176	3600.00	1,546,175	541,822	1967	2536.96
neos-1426662	52,261	3601.38	52,260	86,814	2	3452.06
neos-1429212	1718	3600.00	2520	1	0	5.09
neos-1436709	400,357	3600.01	400,356	117,339	2	2743.92
neos-1440460	811,255	2005.66	811,254	71,967	4	1035.21
neos-1442119	249,620	3600.00	249,619	66,235	5	2956.48
neos-1442657	622,794	3600.00	622,793	192,324	3	2270.14
neos-1620770	121,347	1009.88	226,364	7104	48	249.31
neos18	6857	112.86	9482	620	0	36.01
neos-476283	794	367.82	793	14	0	4.97
neos-555424	5055	3600.63	5481	0	0	3483.78
neos-738098	1570	3600.65	1637	641	0	677.40
neos-777800	1	2.02	0	0	0	0.02
neos-785912	85	14.70	160	443	0	0.43
neos788725	91,656	223.58	98,744	1768	0	51.09
neos808444	416	1665.80	684	1	0	95.93
neos-820146	128,237	1095.41	201,020	39,785	5267	775.30
neos-820157	235,021	3600.00	355,713	90,926	11,057	2854.61
neos-824661	1	26.55	0	0	0	4.61
neos-824695	4	18.17	3	0	0	3.12
neos-826650	7046	3601.58	8327	19,282	15	3335.41
neos-826694	1	6.84	0	0	0	0.81
neos-826812	1	4.20	0	0	0	0.76
neos-826841	2569	3602.05	3248	7101	9	3535.83
neos-849702	3176	130.16	4653	95	0	26.65
neos-859770	1	157.01	0	0	0	0.22
neos-885086	273	3651.06	272	537	0	3542.07
neos-885524	339	5339.26	338	0	0	5276.81
neos-911880	365,903	3600.00	368,526	675,208	186	3079.28
neos-932816	49,629	3600.07	49,628	17,052	0	926.90
neos-933638	92	350.10	109	39	0	25.69
neos-933966	15	155.83	27	231	0	5.32
neos-934278	344	750.82	343	335	0	79.99
neos-935627	548	1059.28	547	162	0	92.97
neos-935769	33	192.46	32	3	0	4.17
neos-937511	25	179.78	24	8	0	4.35
neos-937815	3085	3600.01	3120	295	0	848.29
neos-941262	2083	3600.01	2089	57	0	314.33
neos-941313	23	1442.44	21	28	0	778.49
neos-948126	1800	3600.00	1799	94	0	308.56
neos-957389	5	20.55	4	0	0	0.83
neos-984165	2136	3600.00	2141	138	0	371.61
net12	1924	579.41	3762	0	0	0.44
noswot	1,106,633	313.53	0	0	0	0.39
ns1111636	109	3605.62	108	700	0	1049.68
ns1116954	12	3599.77	11	93	0	5.69
ns1158817	1	164.43	0	0	0	49.29
ns1208400	1150	387.61	1712	1225	0	24.73
ns1456591	24,063	3600.01	40,147	8820	0	2267.20
ns1702808	32,979	144.24	52,938	94,045	1	83.12

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
ns1758913	3	3600.37	2	2	0	1.06
ns1853823	1	3591.37	0	0	0	4.14
ns1854840	1	3598.54	0	0	0	1.80
ns1905797	40,945	3600.00	0	0	0	0.38
ns1905800	196,907	3600.00	249,994	650	0	816.22
ns1952667	13,279	2398.72	0	0	0	0.02
ns2118727	593	3600.00	1721	0	0	0.12
ns2124243	2434	3600.02	2433	0	0	9.41
ns2137859	2012	3601.12	2031	0	0	3223.16
ns4-pr9	542,996	3600.01	0	0	0	0.59
nsr8k	73	3599.99	72	0	0	1.09
nu60-pr9	140,505	3600.00	144,813	373,416	9	121.68
p2m2p1m1p0n100	382,104	3600.00	382,111	373,541	0	3553.18
p6b	108,507	3600.00	108,506	145	0	57.00
pigeon-10	185,552	393.48	186,072	4628	76	258.80
pigeon-11	1,003,487	3600.00	1,003,971	13,501	95	2658.29
pigeon-12	690,532	3600.00	692,580	5239	165	2755.09
pigeon-13	273,076	3600.00	273,720	1569	8	3129.51
pigeon-19	42,087	3600.02	42,695	1734	0	3442.66
protfold	13,006	3600.00	18,098	25	0	26.72
pw-myciel4	110,928	1346.47	169,132	911	1	138.85
qiu	1446	20.00	1445	126	0	3.35
queens-30	13,534	3600.03	13,533	216	0	8.63
rail507	949	97.68	0	0	0	0.34
ramos3	18	3600.00	17	1217	0	0.17
rvb-sub	53,678	3600.00	55,533	25	0	11.46
sct1	8274	3600.11	8273	0	0	31.68
sct32	17,268	3600.16	17,267	0	0	679.94
sct5	163	3609.90	162	0	0	2757.70
seymour-disj-10	42,720	3600.01	42,719	11	0	5.57
seymour	77,296	3600.00	77,295	3	0	2.44
shipsched	98,724	3600.00	124,701	0	0	9.99
shs1023	1	3684.64	0	0	0	1.40
siena1	1584	3602.20	1583	0	0	678.50
sing161	2	3600.20	0	0	0	4.13
sing245	10	3605.45	9	0	0	2.58
sing2	2073	3600.08	2209	6	0	267.06
sts405	61,442	3600.02	61,441	568	1	357.50
sts729	89	3612.92	88	5153	2	1400.27
swath	337,130	3600.00	0	0	0	0.93
tanglegram1	55	654.43	54	0	0	12.14
tanglegram2	3	9.17	2	0	0	6.03
timtab1	939,220	558.32	978,532	0	0	6.63
toll-like	705	3601.61	704	0	0	3562.22
uc-case11	2594	3600.19	2593	15	0	73.51
uc-case3	1324	3600.12	1777	37	0	160.64
uct-subprob	599,730	3600.00	622,941	0	0	140.71
unitcal_7	8429	3600.34	8578	24,480	0	2929.90
usAbbrv-8-25_70	276,574	3600.00	300,910	104	0	1707.05
vpphard2	198	3607.36	197	0	0	7.23
vpphard	462	3600.01	481	0	0	11.22
wachplan	23,818	1524.04	32,251	86,470	22	317.86
zib54-UUE	452,097	3600.00	453,052	1127	0	88.53
AM (# 157)	131,555.8	2275.47	126,357.8	20,395.7	121.2	795.22

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
GM (# 157)	1577.2	845.51		32.9	1.6	37.93
SGM (# 157)	3560.7	974.22				83.52

TABLE 76. M2010-sym testset: OF-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
30_70_45_095_100	401	1036.95	400	0	0	0.07
acc-tight4	174	105.43	228	250	0	0.44
ash608gipa-3col	15	38.38	17	4	1	0.33
bab3	1	3615.70	0	0	0	45.06
bab5	12,788	3600.33	13,896	210,557	0	2376.66
berlin_5_8_0	2,168,094	3600.01	2,432,706	20,810	45	27.02
biella1	7869	491.89	9915	0	0	1.23
circ10-3	47	3600.02	46	11	0	0.41
co-100	10,378	3600.00	11,638	0	0	1.79
core2536-691	300	121.48	312	3	0	2.84
core4872-1529	927	3600.00	926	0	0	2.40
cov1075	358	6.96	357	945	1	0.21
dc1c	9136	3600.01	10,072	0	0	7.70
dc1l	1163	3600.07	1162	0	0	11.98
dolom1	2909	3600.26	2908	0	0	9.03
enlight13	1	0.00	0	0	0	0.00
enlight14	1	0.02	0	0	0	0.00
enlight15	1	0.03	0	0	0	0.01
enlight16	1	0.02	0	0	0	0.00
enlight9	1	0.01	0	0	0	0.00
ex1010-pi	14,383	3600.01	0	0	0	0.18
ex10	1	1015.02	0	0	0	0.00
ex9	1	91.98	0	0	0	0.00
glass4	5,470,868	3600.02	6,168,155	9132	0	56.19
go19	1,122,107	3600.00	1,122,106	239	0	1.59
iis-bupa-cov	108,581	3600.00	0	0	0	0.06
lectsched-1	1812	152.33	3798	0	0	0.26
lectsched-1-obj	79,098	3600.00	104,019	0	0	7.67
lectsched-2	299	49.95	557	0	0	0.11
lectsched-3	1034	97.21	2366	0	0	0.20
lectsched-4-obj	1362	53.95	1679	0	0	0.05
macrophage	741,924	3600.00	741,948	0	0	11.71
map06	830	1028.96	829	0	0	0.30
map10	1571	1183.52	1570	0	0	0.50
map14	821	796.43	820	0	0	0.29
map18	213	336.00	212	0	0	0.18
map20	323	306.93	322	0	0	0.23
maxgasflow	160,629	3600.01	166,629	0	0	13.52
mcsched	13,890	133.85	13,889	1010	0	2.90
methanosarcina	39,415	3600.01	39,414	0	0	16.31
mkc	494,514	3600.00	494,513	0	0	11.20
msc98-ip	7410	1272.29	11,944	0	0	1.16
mzzv11	2615	775.85	3431	0	0	0.15
n3seq24	818	3600.96	1068	16,805	0	2249.67
n4-3	36,950	514.52	0	0	0	0.06
n9-3	61,552	3600.00	0	0	0	0.10
neos-1109824	91	18.03	91	551	0	0.42
neos-1171692	201	28.43	200	113	0	1.71
neos-1171737	14,038	3600.53	14,037	11,589	0	2896.53
neos-1224597	1	2.54	0	0	0	0.06

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
neos-1311124	22,268	3600.05	22,267	3910	11	3571.81
neos-1337307	1449	83.41	1447	725	0	3.33
neos-1396125	24,381	126.48	29,374	66	0	0.27
neos13	54,138	2617.72	54,137	0	0	2.27
neos-1426635	2,915,799	3600.00	2,915,798	526,548	3945	1723.26
neos-1426662	32,439	6979.60	32,438	61,613	0	6867.97
neos-1429212	1686	3600.16	2466	1	0	5.13
neos-1436709	713,042	3600.00	713,041	123,465	11	2094.03
neos-1440460	441,062	599.53	441,061	20,887	1	73.36
neos-1442119	672,178	3600.00	672,177	111,698	18	2083.47
neos-1442657	1,188,562	3600.00	1,188,561	141,467	6	1292.96
neos-1620770	148,686	976.37	276,863	3771	39	11.42
neos18	6857	112.91	9482	620	0	35.92
neos-476283	794	367.65	793	14	0	4.88
neos-555424	529,599	3600.00	536,285	0	0	12.43
neos-738098	1566	3600.33	1633	641	0	672.91
neos-777800	1	2.00	0	0	0	0.04
neos-785912	85	14.72	160	443	0	0.53
neos788725	91,656	219.72	98,744	1768	0	49.29
neos808444	416	1562.55	684	1	0	0.58
neos-820146	85,856	656.66	131,539	32,492	4333	436.89
neos-820157	328,280	3363.83	511,629	115,505	15,293	2192.77
neos-824661	1	26.53	0	0	0	4.63
neos-824695	4	17.02	3	0	0	1.95
neos-826650	7047	3603.33	8328	19,282	15	3337.09
neos-826694	1	6.84	0	0	0	0.80
neos-826812	1	4.13	0	0	0	0.75
neos-826841	2568	3602.57	3247	7101	9	3535.90
neos-849702	3176	102.59	4653	95	0	0.52
neos-859770	1	156.41	0	0	0	0.23
neos-885086	273	3649.64	272	537	0	3541.22
neos-885524	12,867	3600.01	47,465	0	0	11.05
neos-911880	365,629	3600.00	368,252	674,765	186	3083.76
neos-932816	54,410	3600.00	54,409	18,017	0	707.84
neos-933638	92	365.55	109	39	0	25.86
neos-933966	15	157.38	27	231	0	5.31
neos-934278	344	750.45	343	335	0	79.77
neos-935627	548	1061.16	547	162	0	92.86
neos-935769	33	192.73	32	3	0	4.09
neos-937511	25	182.69	24	8	0	4.40
neos-937815	3153	3600.12	3188	295	0	829.38
neos-941262	2087	3600.00	2093	57	0	314.99
neos-941313	23	1434.67	21	28	0	772.98
neos-948126	1754	3600.00	1753	92	0	300.47
neos-957389	5	20.54	4	0	0	0.80
neos-984165	2133	3600.00	2138	138	0	370.28
net12	1924	578.98	3762	0	0	0.40
noswot	1,106,633	313.00	0	0	0	0.33
ns1111636	109	3609.16	108	700	0	1050.52
ns1116954	12	3599.74	11	93	0	5.69
ns1158817	1	164.03	0	0	0	48.97
ns1208400	1150	371.47	1712	1210	0	8.67
ns1456591	24,090	3600.03	40,205	8831	0	2263.29
ns1702808	32,979	143.78	52,938	94,045	1	83.28

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
ns1758913	3	3600.36	2	2	0	1.07
ns1853823	1	3590.93	0	0	0	4.15
ns1854840	1	3598.56	0	0	0	1.78
ns1905797	40,966	3600.01	0	0	0	0.45
ns1905800	264,038	3600.01	332,966	880	0	25.16
ns1952667	13,279	2363.07	0	0	0	0.02
ns2118727	626	3600.01	1754	0	0	0.13
ns2124243	2438	3600.02	2437	0	0	9.24
ns2137859	103,089	3600.01	136,231	0	0	12.90
ns4-pr9	543,926	3600.00	0	0	0	0.43
nsr8k	73	3600.00	72	0	0	1.09
nu60-pr9	140,442	3600.00	144,748	373,214	9	121.62
p2m2p1m1p0n100	383,448	3600.00	383,455	374,814	0	3552.22
p6b	106,303	3600.00	106,302	63	0	0.47
pigeon-10	313,737	222.81	314,328	2042	2	3.27
pigeon-11	1,821,625	1642.44	1,821,994	3495	0	22.68
pigeon-12	3,169,533	3600.00	3,174,452	4903	2	48.25
pigeon-13	2,511,336	3600.00	2,515,785	1745	0	27.79
pigeon-19	1,410,108	3600.00	1,412,779	1986	0	12.24
protfold	51,241	3600.00	76,849	23	0	0.43
pw-myciel4	177,929	1698.97	270,085	740	1	2.01
qiu	1446	19.94	1445	126	0	3.47
queens-30	13,745	3600.01	13,744	177	0	0.24
rail507	949	97.84	0	0	0	0.34
ramos3	18	3599.74	17	1217	0	0.14
rvb-sub	53,861	3600.01	55,716	25	0	11.45
sct1	8536	3600.00	8535	0	0	0.90
sct32	42,622	3600.01	42,631	0	0	1.58
sct5	7521	3600.01	7520	0	0	8.48
seymour-disj-10	42,627	3600.01	42,626	11	0	5.28
seymour	77,362	3600.01	77,361	3	0	2.39
shipsched	97,931	3600.00	123,677	0	0	5.20
shs1023	1	3686.22	0	0	0	1.44
siena1	2056	3600.01	2055	0	0	1.07
sing161	2	3600.20	0	0	0	4.12
sing245	10	3607.22	9	0	0	2.56
sing2	2268	3600.03	2404	146	0	18.05
sts405	75,083	3600.01	75,082	547	0	2.43
sts729	321	3600.03	320	5153	2	428.22
swath	340,436	3600.00	0	0	0	0.74
tanglegram1	55	655.40	54	0	0	12.13
tanglegram2	3	9.11	2	0	0	5.96
timtab1	939,220	556.99	978,532	0	0	6.90
toll-like	820,791	3600.00	820,890	0	0	23.50
uc-case11	2594	3600.02	2593	15	0	1.00
uc-case3	1311	3600.03	1762	37	0	158.92
uct-subprob	627,890	3600.00	652,232	0	0	6.21
unitcal_7	8424	3600.31	8573	24,445	0	2930.21
usAbbrv-8-25_70	713,563	3600.01	752,850	126	0	23.67
vpphard2	198	3605.46	197	0	0	7.20
vpphard	462	3600.01	481	0	0	11.09
wachplan	21,435	1359.61	29,032	63,257	25	269.33
zib54-UUE	459,069	3600.00	460,026	1127	0	43.48
AM (# 157)	222,240.5	2217.77	219,547.8	19,770.9	152.6	364.52

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
GM (# 157)	2385.1	795.35		32.3	1.5	10.41
SGM (# 157)	5301.0	917.86				26.00

TABLE 77. M2010-bench testset: OF settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
30n20b8	424	305.16	0	0	0	0.02
acc-tight5	2029	285.47	0	0	0	0.01
aflow40b	285,631	2320.65	0	0	0	0.27
air04	119	34.94	0	0	0	0.02
app1-2	16,726	3573.76	0	0	0	0.56
ash608gpia-3col	15	38.47	17	4	1	0.36
bab5	12,748	3600.30	13,855	209,935	0	2370.26
beasleyC3	525,099	3600.01	0	0	0	1.30
biella1	2229	3603.47	2479	0	0	3386.20
bienst2	138,693	177.73	0	0	0	0.03
binkar10_1	207,304	347.63	0	0	0	0.13
bley_xl1	2	309.28	0	0	0	0.08
bnatt350	1154	162.65	0	0	0	0.01
core2536-691	300	121.79	312	3	0	2.88
cov1075	239	6.09	238	849	0	0.17
csched010	682,731	3600.00	0	0	0	0.79
danoind	922,513	3600.00	0	0	0	0.31
dfn-gwin-UUM	51,474	93.27	0	0	0	0.02
eil133-2	693	58.83	0	0	0	0.01
eilB101	9340	148.05	0	0	0	0.01
enlight13	1	0.02	0	0	0	0.00
enlight14	1	0.01	0	0	0	0.00
ex9	1	92.77	0	0	0	0.00
glass4	5,165,541	3600.02	5,825,538	8581	0	218.19
gmu-35-40	5,592,172	3600.03	0	0	0	1.48
iis-100-0-cov	81,999	1520.45	0	0	0	0.05
iis-bupa-cov	108,310	3600.00	0	0	0	0.08
iis-pima-cov	11,775	748.26	0	0	0	0.01
lectsched-4-obj	1362	176.98	1679	0	0	122.63
m100n500k4r1	4,758,110	3600.00	0	0	0	0.89
macrophage	25,109	3600.10	25,111	0	0	3425.74
map18	213	334.47	212	0	0	0.19
map20	323	306.72	322	0	0	0.21
mcsched	13,890	133.84	13,889	1010	0	2.61
mik-250-1-100-1	4,488,404	1600.93	0	0	0	0.76
mine-166-5	1850	41.76	0	0	0	0.01
mine-90-10	151,788	802.17	0	0	0	0.20
msc98-ip	7410	1274.93	11,944	0	0	1.36
mspp16	—	—	—	—	—	—
mzzv11	2615	778.23	3431	0	0	0.13
n3div36	112,836	3600.00	0	0	0	0.63
n3seq24	816	3600.46	1066	16,804	0	2246.33
n4-3	36,950	514.79	0	0	0	0.04
neos-1109824	91	18.13	91	551	0	0.48
neos-1337307	1449	91.62	1447	725	0	11.47
neos-1396125	19,926	128.48	24,720	461	6	18.90
neos13	54,138	2641.81	54,137	0	0	2.61
neos-1601936	10,979	2057.82	0	0	0	0.05
neos18	6857	113.68	9482	620	0	36.46
neos-476283	794	367.88	793	14	0	4.80

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
neos-686190	7319	108.35	0	0	0	0.03
neos-849702	3176	129.90	4653	95	0	26.81
neos-916792	308,989	3600.00	0	0	0	0.61
neos-934278	344	775.30	343	335	0	80.08
net12	1924	579.63	3762	0	0	0.48
netdiversion	88	787.20	0	0	0	0.71
newdano	1,770,372	3600.00	0	0	0	0.46
noswot	1,106,633	312.93	0	0	0	0.41
ns1208400	1150	388.41	1712	1225	0	24.85
ns1688347	4220	211.50	0	0	0	0.02
ns1758913	3	3600.36	2	2	0	1.07
ns1766074	925,848	1232.84	0	0	0	3.27
ns1830653	46,368	651.25	0	0	0	0.03
opm2-z7-s2	2827	692.09	0	0	0	0.08
pg5_34	215,677	1268.72	0	0	0	0.15
pigeon-10	185,552	396.86	186,072	4628	76	260.54
pw-myciel4	110,928	1342.10	169,132	911	1	139.78
qiu	1446	19.95	1445	126	0	3.55
rail507	949	97.88	0	0	0	0.36
ran16x16	328,398	297.28	0	0	0	0.03
reblock67	122,028	346.15	0	0	0	0.12
rmatr100-p10	675	111.34	0	0	0	0.02
rmatr100-p5	357	106.19	0	0	0	0.04
rmine6	687,223	3600.00	0	0	0	0.57
rocll-4-11	26,842	588.39	0	0	0	0.04
rococoC10-001000	106,798	557.38	0	0	0	0.10
roll3000	504,127	3131.97	0	0	0	0.47
satellites1-25	3350	527.22	0	0	0	0.03
sp98ic	200,097	3600.00	0	0	0	0.58
sp98ir	6084	66.40	0	0	0	0.02
tanglegram1	55	656.31	54	0	0	12.41
tanglegram2	3	9.22	2	0	0	6.04
timtab1	939,220	554.85	978,532	0	0	6.36
triptim1	1	46.02	0	0	0	0.24
unitcal_7	8411	3600.09	8560	24,370	0	2927.89
vpphard	459	3600.66	477	0	0	11.44
zib54-UUE	452,573	3600.01	453,528	1127	0	87.73
AM (# 87)	363,168.8	1302.63	89,644.1	3130.8	1.0	177.67
GM (# 87)	6297.9	443.48		4.5	1.1	3.21
SGM (# 87)	10,216.5	489.68				9.09

TABLE 78. M2010-bench testset: OF-NST settings

Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
30n20b8	424	304.19	0	0	0	0.04
acc-tight5	2029	285.26	0	0	0	0.01
aflow40b	285,631	2326.01	0	0	0	0.24
air04	119	35.09	0	0	0	0.03
app1-2	16,726	3592.12	0	0	0	0.56
ash608gpia-3col	15	38.23	17	4	1	0.32
bab5	12,780	3602.95	13,888	210,335	0	2375.14
beasleyC3	525,587	3600.00	0	0	0	0.80
biella1	7869	492.28	9915	0	0	1.21
bienst2	138,693	178.20	0	0	0	0.06
binkar10_1	207,304	346.32	0	0	0	0.14
bley_xl1	2	310.73	0	0	0	0.08
bnatt350	1154	163.02	0	0	0	0.02
core2536-691	300	121.87	312	3	0	2.76
cov1075	358	6.95	357	945	1	0.18
csched010	684,310	3600.00	0	0	0	0.62
danoind	921,022	3600.00	0	0	0	0.30
dfn-gwin-UUM	51,474	92.90	0	0	0	0.00
eil133-2	693	58.91	0	0	0	0.01
eilB101	9340	148.05	0	0	0	0.02
enlight13	1	0.02	0	0	0	0.00
enlight14	1	0.02	0	0	0	0.00
ex9	1	92.50	0	0	0	0.00
glass4	5,417,727	3600.03	6,108,817	9071	0	55.89
gmu-35-40	5,580,347	3600.03	0	0	0	1.52
iis-100-0-cov	81,999	1531.31	0	0	0	0.05
iis-bupa-cov	108,220	3600.00	0	0	0	0.04
iis-pima-cov	11,775	747.16	0	0	0	0.02
lectsched-4-obj	1362	53.99	1679	0	0	0.07
m100n500k4r1	4,756,223	3600.00	0	0	0	0.79
macrophage	739,933	3600.00	739,957	0	0	12.31
map18	213	333.73	212	0	0	0.20
map20	323	305.82	322	0	0	0.22
mcsched	13,890	134.36	13,889	1010	0	2.84
mik-250-1-100-1	4,488,404	1598.27	0	0	0	0.80
mine-166-5	1850	41.68	0	0	0	0.02
mine-90-10	151,788	801.64	0	0	0	0.16
msc98-ip	7410	1272.07	11,944	0	0	1.29
mspp16	—	—	—	—	—	—
mzzv11	2615	777.07	3431	0	0	0.13
n3div36	112,960	3600.74	0	0	0	0.59
n3seq24	818	3600.46	1068	16,805	0	2246.94
n4-3	36,950	516.79	0	0	0	0.05
neos-1109824	91	18.01	91	551	0	0.47
neos-1337307	1449	83.37	1447	725	0	3.51
neos-1396125	24,381	126.70	29,374	66	0	0.27
neos13	54,138	2629.08	54,137	0	0	2.31
neos-1601936	10,979	2055.26	0	0	0	0.03
neos18	6857	113.31	9482	620	0	36.85
neos-476283	794	368.65	793	14	0	4.70

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Name	#Nodes	Time	#Calls	#Red	#Cutoffs	OF-time
neos-686190	7319	108.27	0	0	0	0.02
neos-849702	3176	102.86	4653	95	0	0.50
neos-916792	313,143	3600.00	0	0	0	0.66
neos-934278	344	755.52	343	335	0	79.99
net12	1924	579.57	3762	0	0	0.49
netdiversion	88	786.13	0	0	0	0.70
newdano	1,771,042	3600.00	0	0	0	0.56
noswot	1,106,633	313.89	0	0	0	0.21
ns1208400	1150	372.00	1712	1210	0	8.62
ns1688347	4220	212.26	0	0	0	0.05
ns1758913	3	3600.39	2	2	0	1.08
ns1766074	925,848	1229.96	0	0	0	3.05
ns1830653	46,368	651.85	0	0	0	0.06
opm2-z7-s2	2827	690.00	0	0	0	0.06
pg5_34	215,677	1272.81	0	0	0	0.17
pigeon-10	313,737	223.41	314,328	2042	2	3.70
pw-myciel4	177,929	1700.20	270,085	740	1	2.13
qiu	1446	19.98	1445	126	0	3.16
rail507	949	98.07	0	0	0	0.34
ran16x16	328,398	296.89	0	0	0	0.08
reblock67	122,028	342.59	0	0	0	0.06
rmatr100-p10	675	111.47	0	0	0	0.01
rmatr100-p5	357	106.18	0	0	0	0.03
rmine6	690,752	3600.00	0	0	0	0.51
rocll-4-11	26,842	591.43	0	0	0	0.05
rococoC10-001000	106,798	556.65	0	0	0	0.05
roll3000	504,127	3158.74	0	0	0	0.41
satellites1-25	3350	528.07	0	0	0	0.04
sp98ic	201,930	3600.00	0	0	0	0.68
sp98ir	6084	66.58	0	0	0	0.03
tanglegram1	55	656.46	54	0	0	12.12
tanglegram2	3	9.33	2	0	0	6.16
timtab1	939,220	557.00	978,532	0	0	6.55
triptim1	1	46.09	0	0	0	0.24
unitcal_7	8399	3600.05	8548	24,370	0	2926.90
vpphard	459	3600.12	477	0	0	11.33
zib54-UUE	457,453	3600.00	458,410	1127	0	43.10
AM (# 87)	376,667.6	1267.24	103,948.1	3105.7	0.1	90.44
GM (# 87)	6773.8	424.65		4.3	1.0	2.07
SGM (# 87)	10,978.2	469.00				4.45

TABLE 79. Margot1 testset: OP settings

Name	#Nodes	Time	#Fixed	OP-time
cov954	8351	15.09	1	0.01
cov1053	1,743,997	3600.00	1	0.01
cov1054	203,500	3600.00	1	0.02
cov1075	316,704	1288.81	1	0.02
cov1076	809,486	3600.00	1	0.01
cov1174	951,615	3600.00	1	0.06
sts27-complemented	3917	1.08	0	0.00
sts45-complemented	50,962	21.55	0	0.00
sts63-complemented	6,463,116	3600.00	0	0.01
sts81-complemented	4,700,630	3600.00	0	0.01
cod83	1,402,963	3600.00	0	0.00
cod83r	512,427	1049.62	0	0.01
cod93	146,858	3600.00	0	0.00
cod93r	294,306	3600.00	0	0.00
cod105	35,694	3600.01	0	0.12
cod105r	4907	353.22	0	0.05
AM (# 16)	1,103,089.6	2420.59	0.4	0.02
GM (# 16)	216,825.2	839.93	1.0	1.00
SGM (# 16)	217,600.5	1021.72		0.02

TABLE 80. Margot1 testset: OP-nod settings

Name	#Nodes	Time	#Fixed	OP-time
cov954	8351	15.07	1	0.01
cov1053	1,734,149	3600.00	1	0.01
cov1054	203,611	3600.00	1	0.02
cov1075	316,704	1285.10	1	0.02
cov1076	807,861	3600.00	1	0.02
cov1174	955,764	3600.00	1	0.05
sts27-complemented	3917	1.09	0	0.00
sts45-complemented	50,962	21.31	0	0.00
sts63-complemented	6,464,717	3600.00	0	0.01
sts81-complemented	4,707,743	3600.00	0	0.01
cod83	1,394,424	3600.00	0	0.00
cod83r	512,427	1044.32	0	0.00
cod93	146,544	3600.01	0	0.00
cod93r	294,722	3600.01	0	0.00
cod105	35,444	3600.00	0	0.12
cod105r	4907	354.30	0	0.05
AM (# 16)	1,102,640.4	2420.08	0.4	0.02
GM (# 16)	216,623.7	839.50	1.0	1.00
SGM (# 16)	217,398.5	1020.92		0.02

TABLE 81. Margot1 testset: OP-ISP-NST settings

Name	#Nodes	Time	#Fixed	OP-time
cov954	174	2.02	1	0.00
cov1053	4364	15.80	1	0.01
cov1054	90,035	1781.25	1	0.01
cov1075	369	7.36	1	0.02
cov1076	522,445	2048.06	1	0.02
cov1174	893,725	3600.00	1	0.05
sts27-complemented	15	0.10	0	0.00
sts45-complemented	3141	1.78	0	0.00
sts63-complemented	11,358	8.03	0	0.01
sts81-complemented	4688	10.44	0	0.01
cod83	19	4.24	0	0.01
cod83r	39	3.78	0	0.00
cod93	2059	68.57	0	0.01
cod93r	9723	106.45	0	0.00
cod105	5	112.59	0	0.12
cod105r	3	33.57	0	0.05
AM (# 16)	96,385.1	487.75	0.4	0.02
GM (# 16)	1124.9	28.63	1.0	1.00
SGM (# 16)	2366.3	50.25		0.02

TABLE 82. Margot1 testset: OP-OB-NST settings

Name	#Nodes	Time	#Fixed	OP-time
cov954	89	1.44	1	0.01
cov1053	4478	14.07	1	0.01
cov1054	105,091	1924.87	1	0.02
cov1075	155	3.11	1	0.02
cov1076	289,389	1093.61	1	0.02
cov1174	983,424	3600.00	1	0.05
sts27-complemented	15	0.06	0	0.00
sts45-complemented	2417	1.36	0	0.01
sts63-complemented	19,797	12.67	0	0.01
sts81-complemented	1937	8.54	0	0.01
cod83	48	1.38	0	0.01
cod83r	103	2.01	0	0.00
cod93	1940	34.75	0	0.00
cod93r	11,039	90.87	0	0.01
cod105	7	19.74	0	0.12
cod105r	5	3.34	0	0.06
AM (# 16)	88,745.9	425.74	0.4	0.02
GM (# 16)	1151.2	16.81	1.0	1.00
SGM (# 16)	2195.6	35.41		0.02

TABLE 83. Margot1 testset: OP-OF-NST settings

Name	#Nodes	Time	#Fixed	OP-time
cov954	174	2.00	1	0.01
cov1053	4376	15.14	1	0.00
cov1054	107,924	1859.76	1	0.01
cov1075	369	7.32	1	0.02
cov1076	499,751	1891.43	1	0.01
cov1174	885,108	3600.00	1	0.05
sts27-complemented	15	0.09	0	0.00
sts45-complemented	3330	1.88	0	0.00
sts63-complemented	11,544	7.92	0	0.01
sts81-complemented	3580	11.80	0	0.01
cod83	19	4.22	0	0.01
cod83r	39	3.79	0	0.01
cod93	2882	74.08	0	0.01
cod93r	9185	108.17	0	0.01
cod105	5	112.92	0	0.11
cod105r	3	33.46	0	0.05
AM (# 16)	95,519.0	483.37	0.4	0.02
GM (# 16)	1140.1	28.92	1.0	1.00
SGM (# 16)	2398.2	50.55		0.02

TABLE 84. Margot2 testset: OP settings

Name	#Nodes	Time	#Fixed	OP-time
bibd1032.mylp	1	0.01	1	0.00
bibd1042.mylp	1	0.02	1	0.01
bibd1054.mylp	4	0.43	1	0.00
bibd1152.mylp	1	0.05	1	0.01
bibd1154.mylp	6	0.84	1	0.00
bibd1265.mylp	6	1.95	1	0.02
bibd1331.mylp	1	0.02	4	0.01
bibd1341.mylp	1	0.03	1	0.01
bibd1342.mylp	4	1.07	1	0.01
bibd1531.mylp	1	0.02	4	0.01
bibd6310.mylp	0	0.00	0	0.00
bibd632.mylp	1	0.00	2	0.00
bibd634.mylp	0	0.00	0	0.00
bibd636.mylp	0	0.00	0	0.00
bibd638.mylp	0	0.00	0	0.00
bibd731.mylp	1	0.00	4	0.00
bibd732.mylp	1	0.00	1	0.00
bibd733.mylp	1	0.00	2	0.00
bibd734.mylp	1	0.00	3	0.00
bibd735.mylp	0	0.00	0	0.00
bibd736.mylp	0	0.00	0	0.00
bibd737.mylp	0	0.00	0	0.00
bibd738.mylp	0	0.00	0	0.00
bibd739.mylp	0	0.00	0	0.00
bibd843.mylp	1	0.00	1	0.00
bibd846.mylp	1	0.00	1	0.00
bibd931.mylp	1	0.01	4	0.00
bibd932.mylp	1	0.01	1	0.00
bibd933.mylp	1	0.00	1	0.00
bibd943.mylp	4	0.15	1	0.01
ca36243	6	0.30	0	0.00
ca57245	641,231	2787.79	0	0.00
ca77247	520,859	3600.00	0	0.00
clique9	1	0.04	1	0.01
codbt03.mylp	1	0.00	1	0.00
codbt04.mylp	1	0.01	1	0.00
codbt05.mylp	169,357	877.26	1	0.00
codbt06.mylp	14,054	3600.02	1	0.02
codbt15.mylp	62,301	3600.00	1	0.00
codbt24.mylp	358,888	3600.00	1	0.01
codbt33.mylp	13	4.84	1	0.01
codbt34.mylp	27,880	3600.01	1	0.02
codbt42.mylp	9953	25.22	1	0.00
codbt43.mylp	101,190	3600.01	1	0.01
codbt52.mylp	380,871	3600.00	1	0.01
codbt60.mylp	92	0.32	1	0.00
codbt61.mylp	384	6.54	1	0.01
codbt70.mylp	1	0.01	1	0.01
codbt71.mylp	245,259	3600.00	1	0.01
codbt80.mylp	4799	42.77	1	0.01

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Name	#Nodes	Time	#Fixed	OP-time
codbt90.mylp	66,022	3600.00	1	0.00
flosn52	1312	2.66	4	0.00
flosn60	4384	7.12	4	0.00
flosn84	17,226	30.25	4	0.01
jgt18	337	0.36	2	0.00
jgt30	41,299	41.95	2	0.00
mered	336	8.13	7	0.03
O4_35	1	0.08	1	0.00
oa25332	1	0.01	0	0.00
oa25342	1	0.01	0	0.00
oa26332	77,768	3600.00	0	0.00
oa36243	1	0.08	0	0.00
oa56243	1	0.01	0	0.00
oa57245	9715	20.83	0	0.00
oa66234	1	0.00	0	0.00
oa67233	1	0.01	0	0.00
oa68233	1	0.07	0	0.00
oa76234	4	0.05	0	0.00
oa77233	1	0.01	0	0.00
oa77247	318,856	591.37	0	0.00
of5_14_7	1	0.10	4	0.00
of7_18_9	1	0.09	9	0.01
ofsub9	453,991	687.51	4	0.00
pa36243	3815	3.39	0	0.00
pa57245	759,665	3600.00	0	0.00
pa77247	801,221	3600.00	0	0.00
sts15.mylp	71	0.05	0	0.00
sts21.mylp	371	0.16	0	0.00
sts9.mylp	1	0.00	0	0.00
AM (# 79)	64,475.8	611.95	1.2	0.00
GM (# 79)	51.2	6.98	1.3	1.00
SGM (# 79)	686.5	25.18		0.00

TABLE 85. Margot2 testset: OP-nod settings

Name	#Nodes	Time	#Fixed	OP-time
bibd1032.mylp	1	0.00	1	0.00
bibd1042.mylp	1	0.01	1	0.00
bibd1054.mylp	4	0.42	1	0.00
bibd1152.mylp	1	0.05	1	0.01
bibd1154.mylp	6	0.84	1	0.01
bibd1265.mylp	6	1.94	1	0.03
bibd1331.mylp	1	0.01	0	0.00
bibd1341.mylp	1	0.03	1	0.01
bibd1342.mylp	4	1.08	1	0.02
bibd1531.mylp	1	0.01	0	0.01
bibd6310.mylp	0	0.00	0	0.00
bibd632.mylp	1	0.00	2	0.00
bibd634.mylp	0	0.00	0	0.00
bibd636.mylp	0	0.00	0	0.00
bibd638.mylp	0	0.00	0	0.00
bibd731.mylp	1	0.01	0	0.01
bibd732.mylp	1	0.01	1	0.00
bibd733.mylp	1	0.00	2	0.00
bibd734.mylp	1	0.01	3	0.00
bibd735.mylp	0	0.00	0	0.00
bibd736.mylp	0	0.00	0	0.00
bibd737.mylp	0	0.00	0	0.00
bibd738.mylp	0	0.00	0	0.00
bibd739.mylp	0	0.00	0	0.00
bibd843.mylp	1	0.01	1	0.00
bibd846.mylp	1	0.01	1	0.00
bibd931.mylp	1	0.01	0	0.01
bibd932.mylp	1	0.00	1	0.00
bibd933.mylp	1	0.00	1	0.00
bibd943.mylp	4	0.14	1	0.00
ca36243	6	0.31	0	0.00
ca57245	641,231	2783.43	0	0.00
ca77247	517,189	3600.00	0	0.00
clique9	1	0.03	1	0.00
codbt03.mylp	1	0.00	1	0.00
codbt04.mylp	1	0.00	1	0.00
codbt05.mylp	169,357	875.93	1	0.01
codbt06.mylp	13,914	3600.02	1	0.02
codbt15.mylp	62,122	3600.00	1	0.01
codbt24.mylp	358,268	3600.01	1	0.00
codbt33.mylp	13	4.83	1	0.01
codbt34.mylp	27,665	3600.01	1	0.02
codbt42.mylp	9953	25.18	1	0.00
codbt43.mylp	101,229	3600.00	1	0.01
codbt52.mylp	381,138	3600.00	1	0.01
codbt60.mylp	92	0.31	1	0.00
codbt61.mylp	384	6.57	1	0.00
codbt70.mylp	1	0.01	1	0.00
codbt71.mylp	245,248	3600.00	1	0.00
codbt80.mylp	4799	42.61	1	0.00

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Name	#Nodes	Time	#Fixed	OP-time
codbt90.mylp	66,138	3600.00	1	0.02
flosn52	1312	2.64	4	0.00
flosn60	4384	7.16	4	0.00
flosn84	17,226	30.50	4	0.01
jgt18	337	0.35	2	0.00
jgt30	41,299	41.88	2	0.00
mered	336	8.10	7	0.03
O4_35	1	0.08	1	0.00
oa25332	1	0.01	0	0.00
oa25342	1	0.01	0	0.00
oa26332	77,678	3599.99	0	0.00
oa36243	1	0.08	0	0.00
oa56243	1	0.01	0	0.00
oa57245	9715	20.82	0	0.00
oa66234	1	0.00	0	0.00
oa67233	1	0.01	0	0.00
oa68233	1	0.08	0	0.00
oa76234	4	0.04	0	0.00
oa77233	1	0.01	0	0.00
oa77247	318,856	584.72	0	0.00
of5_14_7	1	0.09	4	0.00
of7_18_9	1	0.10	9	0.02
ofsub9	453,991	689.66	4	0.00
pa36243	3815	3.39	0	0.00
pa57245	759,932	3600.00	0	0.00
pa77247	795,639	3600.00	0	0.00
sts15.mylp	71	0.06	0	0.00
sts21.mylp	371	0.18	0	0.00
sts9.mylp	1	0.01	0	0.00
AM (# 79)	64,351.5	611.82	1.0	0.00
GM (# 79)	51.2	6.98	1.2	1.00
SGM (# 79)	686.1	25.18		0.00

TABLE 86. Margot2 testset: OP-ISP-NST settings

Name	#Nodes	Time	#Fixed	OP-time
bibd1032.mylp	1	0.00	1	0.00
bibd1042.mylp	1	0.02	1	0.01
bibd1054.mylp	3	0.36	1	0.01
bibd1152.mylp	1	0.04	1	0.02
bibd1154.mylp	6	0.77	1	0.01
bibd1265.mylp	6	1.25	1	0.02
bibd1331.mylp	1	0.01	4	0.00
bibd1341.mylp	1	0.03	1	0.01
bibd1342.mylp	4	1.07	1	0.01
bibd1531.mylp	1	0.03	4	0.01
bibd6310.mylp	0	0.00	0	0.00
bibd632.mylp	1	0.01	2	0.00
bibd634.mylp	0	0.00	0	0.00
bibd636.mylp	0	0.00	0	0.00
bibd638.mylp	0	0.00	0	0.00
bibd731.mylp	1	0.01	4	0.00
bibd732.mylp	1	0.00	1	0.00
bibd733.mylp	1	0.01	2	0.00
bibd734.mylp	1	0.01	3	0.00
bibd735.mylp	0	0.00	0	0.00
bibd736.mylp	0	0.00	0	0.00
bibd737.mylp	0	0.00	0	0.00
bibd738.mylp	0	0.00	0	0.00
bibd739.mylp	0	0.00	0	0.00
bibd843.mylp	1	0.00	1	0.00
bibd846.mylp	1	0.00	1	0.00
bibd931.mylp	1	0.01	4	0.01
bibd932.mylp	1	0.01	1	0.00
bibd933.mylp	1	0.00	1	0.00
bibd943.mylp	7	0.15	1	0.00
ca36243	6	0.32	0	0.00
ca57245	641,231	2790.97	0	0.00
ca77247	519,180	3600.00	0	0.00
clique9	1	0.04	1	0.01
codbt03.mylp	1	0.00	1	0.00
codbt04.mylp	1	0.01	1	0.01
codbt05.mylp	1677	21.26	1	0.00
codbt06.mylp	19,583	3600.01	1	0.02
codbt15.mylp	82,777	3600.01	1	0.01
codbt24.mylp	394,812	3215.72	1	0.01
codbt33.mylp	7	2.72	1	0.00
codbt34.mylp	41,536	3600.01	1	0.02
codbt42.mylp	441	2.94	1	0.01
codbt43.mylp	119,112	3600.00	1	0.00
codbt52.mylp	654,719	3600.00	1	0.01
codbt60.mylp	11	0.22	1	0.00
codbt61.mylp	34	4.97	1	0.00
codbt70.mylp	1	0.01	1	0.00
codbt71.mylp	266,396	3600.00	1	0.01
codbt80.mylp	268	9.16	1	0.00

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Name	#Nodes	Time	#Fixed	OP-time
codbt90.mylp	78,422	3600.00	1	0.01
flosn52	1312	2.72	4	0.00
flosn60	4384	7.17	4	0.00
flosn84	17,226	30.55	4	0.01
jgt18	155	0.26	2	0.01
jgt30	14,801	12.95	2	0.00
mered	11	3.05	7	0.03
O4_35	1	0.08	1	0.00
oa25332	1	0.01	0	0.00
oa25342	1	0.00	0	0.00
oa26332	77,615	3600.00	0	0.00
oa36243	1	0.09	0	0.00
oa56243	1	0.01	0	0.00
oa57245	9715	20.72	0	0.00
oa66234	1	0.00	0	0.00
oa67233	1	0.00	0	0.00
oa68233	1	0.07	0	0.00
oa76234	4	0.05	0	0.00
oa77233	1	0.01	0	0.00
oa77247	318,856	582.12	0	0.00
of5_14_7	1	0.09	4	0.00
of7_18_9	1	0.10	9	0.02
ofsub9	15,127	7.88	4	0.01
pa36243	3815	3.38	0	0.00
pa57245	761,857	3600.00	0	0.00
pa77247	800,968	3600.00	0	0.00
sts15.mylp	11	0.04	0	0.00
sts21.mylp	11	0.08	0	0.00
sts9.mylp	1	0.00	0	0.00
AM (# 79)	61,343.5	586.37	1.2	0.00
GM (# 79)	36.2	5.74	1.3	1.00
SGM (# 79)	525.6	20.75		0.00

TABLE 87. Margot2 testset: OP-OB-NST settings

Name	#Nodes	Time	#Fixed	OP-time
bibd1032.mylp	1	0.00	1	0.00
bibd1042.mylp	1	0.01	1	0.00
bibd1054.mylp	10	0.27	1	0.00
bibd1152.mylp	1	0.03	1	0.00
bibd1154.mylp	54	1.03	1	0.02
bibd1265.mylp	124	6.90	1	0.02
bibd1331.mylp	1	0.02	4	0.01
bibd1341.mylp	1	0.04	1	0.01
bibd1342.mylp	208	1.83	1	0.01
bibd1531.mylp	1	0.02	4	0.01
bibd6310.mylp	0	0.00	0	0.00
bibd632.mylp	1	0.00	2	0.00
bibd634.mylp	0	0.00	0	0.00
bibd636.mylp	0	0.00	0	0.00
bibd638.mylp	0	0.00	0	0.00
bibd731.mylp	1	0.00	4	0.00
bibd732.mylp	1	0.01	1	0.00
bibd733.mylp	1	0.01	2	0.00
bibd734.mylp	1	0.00	3	0.00
bibd735.mylp	0	0.00	0	0.00
bibd736.mylp	0	0.00	0	0.00
bibd737.mylp	0	0.00	0	0.00
bibd738.mylp	0	0.00	0	0.00
bibd739.mylp	0	0.00	0	0.00
bibd843.mylp	1	0.00	1	0.00
bibd846.mylp	1	0.01	1	0.00
bibd931.mylp	1	0.01	4	0.01
bibd932.mylp	1	0.00	1	0.00
bibd933.mylp	1	0.01	1	0.00
bibd943.mylp	13	0.12	1	0.01
ca36243	6	0.32	0	0.00
ca57245	641,231	2790.23	0	0.00
ca77247	521,074	3600.00	0	0.00
clique9	1	0.04	1	0.00
codbt03.mylp	1	0.00	1	0.00
codbt04.mylp	1	0.01	1	0.01
codbt05.mylp	1021	13.46	1	0.01
codbt06.mylp	16,544	3600.02	1	0.01
codbt15.mylp	179,906	3600.00	1	0.01
codbt24.mylp	418,986	3600.00	1	0.00
codbt33.mylp	19	0.98	1	0.01
codbt34.mylp	34,060	3600.01	1	0.02
codbt42.mylp	875	2.97	1	0.00
codbt43.mylp	189,103	3600.00	1	0.01
codbt52.mylp	627,168	3600.00	1	0.01
codbt60.mylp	19	0.12	1	0.00
codbt61.mylp	38	1.05	1	0.01
codbt70.mylp	1	0.01	1	0.00
codbt71.mylp	211,132	3600.01	1	0.01
codbt80.mylp	55	4.98	1	0.01

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Name	#Nodes	Time	#Fixed	OP-time
codbt90.mylp	107,245	3600.00	1	0.01
flosn52	1312	2.69	4	0.00
flosn60	4384	7.15	4	0.00
flosn84	17,226	30.26	4	0.00
jgt18	2	0.04	2	0.00
jgt30	14,334	12.16	2	0.00
mered	213	1.96	7	0.03
O4_35	1	0.08	1	0.00
oa25332	1	0.01	0	0.00
oa25342	1	0.00	0	0.00
oa26332	77,726	3600.01	0	0.00
oa36243	1	0.09	0	0.00
oa56243	1	0.01	0	0.00
oa57245	9715	20.68	0	0.00
oa66234	1	0.00	0	0.00
oa67233	1	0.00	0	0.00
oa68233	1	0.07	0	0.00
oa76234	4	0.04	0	0.00
oa77233	1	0.00	0	0.00
oa77247	318,856	586.12	0	0.00
of5_14_7	1	0.09	4	0.01
of7_18_9	1	0.11	9	0.02
ofsub9	13,693	6.90	4	0.00
pa36243	3815	3.39	0	0.00
pa57245	759,961	3600.00	0	0.00
pa77247	796,504	3600.00	0	0.00
sts15.mylp	15	0.03	0	0.00
sts21.mylp	15	0.06	0	0.00
sts9.mylp	1	0.01	0	0.00
AM (# 79)	62,869.6	591.09	1.2	0.00
GM (# 79)	41.8	5.61	1.3	1.00
SGM (# 79)	548.4	20.52		0.00

TABLE 88. Margot2 testset: OP-OF-NST settings

Name	#Nodes	Time	#Fixed	OP-time
bibd1032.mylp	1	0.02	1	0.01
bibd1042.mylp	1	0.02	1	0.00
bibd1054.mylp	3	0.36	1	0.00
bibd1152.mylp	1	0.04	1	0.02
bibd1154.mylp	6	0.75	1	0.01
bibd1265.mylp	6	1.24	1	0.03
bibd1331.mylp	1	0.02	4	0.00
bibd1341.mylp	1	0.03	1	0.01
bibd1342.mylp	4	1.09	1	0.01
bibd1531.mylp	1	0.03	4	0.01
bibd6310.mylp	0	0.00	0	0.00
bibd632.mylp	1	0.00	2	0.00
bibd634.mylp	0	0.00	0	0.00
bibd636.mylp	0	0.00	0	0.00
bibd638.mylp	0	0.00	0	0.00
bibd731.mylp	1	0.00	4	0.00
bibd732.mylp	1	0.00	1	0.00
bibd733.mylp	1	0.00	2	0.00
bibd734.mylp	1	0.00	3	0.00
bibd735.mylp	0	0.00	0	0.00
bibd736.mylp	0	0.00	0	0.00
bibd737.mylp	0	0.00	0	0.00
bibd738.mylp	0	0.00	0	0.00
bibd739.mylp	0	0.00	0	0.00
bibd843.mylp	1	0.01	1	0.00
bibd846.mylp	1	0.01	1	0.00
bibd931.mylp	1	0.00	4	0.00
bibd932.mylp	1	0.01	1	0.00
bibd933.mylp	1	0.00	1	0.00
bibd943.mylp	7	0.16	1	0.00
ca36243	6	0.30	0	0.00
ca57245	641,231	2788.99	0	0.00
ca77247	519,111	3600.00	0	0.00
clique9	1	0.03	1	0.00
codbt03.mylp	1	0.01	1	0.00
codbt04.mylp	1	0.00	1	0.00
codbt05.mylp	1691	21.91	1	0.00
codbt06.mylp	21,716	3600.01	1	0.02
codbt15.mylp	79,533	3600.01	1	0.00
codbt24.mylp	383,542	3122.28	1	0.01
codbt33.mylp	7	2.70	1	0.00
codbt34.mylp	72,949	3600.00	1	0.01
codbt42.mylp	441	2.93	1	0.00
codbt43.mylp	118,763	3600.00	1	0.00
codbt52.mylp	668,793	3600.00	1	0.01
codbt60.mylp	11	0.22	1	0.01
codbt61.mylp	34	4.94	1	0.01
codbt70.mylp	1	0.00	1	0.00
codbt71.mylp	256,458	3600.00	1	0.00
codbt80.mylp	264	8.94	1	0.01

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Name	#Nodes	Time	#Fixed	OP-time
codbt90.mylp	75,718	3600.01	1	0.01
flosn52	1312	2.67	4	0.00
flosn60	4384	7.12	4	0.00
flosn84	17,226	30.33	4	0.00
jgt18	155	0.28	2	0.00
jgt30	14,801	13.05	2	0.00
mered	11	3.06	7	0.03
O4_35	1	0.07	1	0.00
oa25332	1	0.00	0	0.00
oa25342	1	0.00	0	0.00
oa26332	77,800	3600.00	0	0.00
oa36243	1	0.09	0	0.00
oa56243	1	0.01	0	0.00
oa57245	9715	20.84	0	0.00
oa66234	1	0.00	0	0.00
oa67233	1	0.01	0	0.00
oa68233	1	0.07	0	0.00
oa76234	4	0.05	0	0.00
oa77233	1	0.00	0	0.00
oa77247	318,856	585.94	0	0.00
of5_14_7	1	0.09	4	0.00
of7_18_9	1	0.10	9	0.02
ofsub9	15,127	7.97	4	0.00
pa36243	3815	3.44	0	0.00
pa57245	758,886	3600.00	0	0.00
pa77247	802,026	3600.00	0	0.00
sts15.mylp	11	0.04	0	0.00
sts21.mylp	11	0.08	0	0.00
sts9.mylp	1	0.00	0	0.00
AM (# 79)	61,575.5	585.22	1.2	0.00
GM (# 79)	36.5	5.74	1.3	1.00
SGM (# 79)	529.9	20.75		0.00

TABLE 89. M2003-sym testset: OP settings

Name	#Nodes	Time	#Fixed	OP-time
fast0507	919	95.71	0	0.04
glass4	5,563,967	3600.02	0	0.00
harp2	8,590,562	3600.01	0	0.00
mas74	3,692,123	853.72	0	0.00
mas76	490,320	101.88	0	0.00
misc07	27,910	25.05	21	0.02
mkc	494,747	3600.00	0	0.46
mod011	1284	61.04	0	0.02
msc98-ip	2131	3600.00	8	2.37
mzzv11	2615	778.30	0	0.08
net12	2502	1000.91	0	0.08
noswot	1,106,633	313.94	0	0.00
nsrand-ipx	704,941	3600.00	0	0.13
p2756	22	1.65	0	0.31
protfold	15,324	3600.00	1	0.40
qiu	5363	34.12	1	0.01
rout	61,617	66.97	0	0.00
seymour	76,935	3600.00	1	0.01
swath	335,243	3600.00	0	0.02
timtab1	939,220	547.09	0	0.00
timtab2	4,090,849	3600.01	0	0.00
AM (# 21)	1,247,868.0	1727.64	1.5	0.19
GM (# 21)	66,132.1	507.51	1.3	1.04
SGM (# 21)	72,801.1	579.37		0.18

TABLE 90. M2003-sym testset: OP-nod settings

Name	#Nodes	Time	#Fixed	OP-time
fast0507	919	96.15	0	0.05
glass4	5,558,356	3600.02	0	0.00
harp2	8,592,543	3600.01	0	0.01
mas74	3,692,123	854.66	0	0.00
mas76	490,320	102.07	0	0.00
misc07	27,910	25.17	21	0.00
mkc	492,695	3600.00	0	0.42
mod011	1284	61.31	0	0.02
msc98-ip	2102	3600.01	8	2.05
mzzv11	2615	780.86	0	0.08
net12	2502	1004.47	0	0.09
noswot	1,106,633	313.79	0	0.00
nsrand-ipx	704,386	3600.00	0	0.13
p2756	22	1.39	0	0.07
protfold	18,771	3600.00	0	0.30
qiu	5363	34.19	1	0.02
rout	61,617	67.10	0	0.00
seymour	76,815	3600.00	1	0.02
swath	337,784	3600.00	0	0.02
timtab1	939,220	549.40	0	0.00
timtab2	4,084,587	3600.01	0	0.00
AM (# 21)	1,247,550.8	1728.12	1.5	0.16
GM (# 21)	66,726.5	504.13	1.3	1.03
SGM (# 21)	73,454.4	579.51		0.15

TABLE 91. M2003-sym testset: OP-ISP-NST settings

Name	#Nodes	Time	#Fixed	OP-time
fast0507	919	96.03	0	0.04
glass4	5,379,361	3600.02	0	0.00
harp2	8,616,642	3600.01	0	0.00
mas74	3,602,740	851.66	0	0.00
mas76	490,320	106.09	0	0.00
misc07	4238	7.28	21	0.02
mkc	494,469	3600.00	0	0.46
mod011	1284	61.08	0	0.03
msc98-ip	2102	3599.99	8	2.37
mzzv11	2615	775.80	0	0.07
net12	2502	1002.10	0	0.08
noswot	1,106,633	314.32	0	0.00
nsrand-ipx	603,918	3600.00	0	0.12
p2756	22	1.65	0	0.32
protfold	23,229	3600.00	1	0.40
qiu	2537	22.17	1	0.00
rout	61,617	67.53	0	0.00
seymour	75,789	3600.01	1	0.01
swath	338,498	3600.00	0	0.01
timtab1	939,220	557.05	0	0.00
timtab2	3,987,082	3600.01	0	0.00
AM (# 21)	1,225,511.3	1726.80	1.5	0.19
GM (# 21)	58,786.3	470.30	1.3	1.04
SGM (# 21)	64,821.9	553.01		0.18

TABLE 92. M2003-sym testset: OP-OB-NST settings

Name	#Nodes	Time	#Fixed	OP-time
fast0507	919	95.81	0	0.04
glass4	5,559,726	3600.03	0	0.00
harp2	8,578,197	3600.01	0	0.00
mas74	3,692,123	858.30	0	0.00
mas76	490,320	102.57	0	0.01
misc07	252	1.91	21	0.01
mkc	9395	3600.04	0	0.45
mod011	1284	61.20	0	0.02
msc98-ip	2114	3600.49	8	2.37
mzzv11	2615	778.74	0	0.07
net12	2502	1005.46	0	0.09
noswot	1,106,633	313.23	0	0.00
nsrand-ipx	714,175	3600.00	0	0.13
p2756	22	1.67	0	0.33
protfold	29,323	3600.00	1	0.39
qiu	2255	17.58	1	0.01
rout	61,617	66.64	0	0.00
seymour	77,727	3600.00	1	0.02
swath	340,999	3600.00	0	0.01
timtab1	939,220	548.21	0	0.01
timtab2	4,083,584	3600.01	0	0.00
AM (# 21)	1,223,571.5	1726.28	1.5	0.19
GM (# 21)	43,368.5	435.59	1.3	1.04
SGM (# 21)	48,541.5	537.90		0.18

TABLE 93. M2003-sym testset: OP-OF-NST settings

Name	#Nodes	Time	#Fixed	OP-time
fast0507	919	96.05	0	0.04
glass4	5,432,835	3600.03	0	0.00
harp2	8,616,085	3600.01	0	0.00
mas74	3,602,740	842.12	0	0.00
mas76	490,320	106.57	0	0.00
misc07	4238	7.04	21	0.02
mkc	493,417	3600.00	0	0.48
mod011	1284	61.02	0	0.02
msc98-ip	2131	3600.01	8	2.37
mzzv11	2615	782.88	0	0.06
net12	2502	1001.73	0	0.08
noswot	1,106,633	314.37	0	0.01
nsrand-ipx	605,297	3600.00	0	0.13
p2756	22	1.64	0	0.32
protfold	23,163	3600.00	1	0.40
qiu	3113	26.70	1	0.01
rout	61,617	67.66	0	0.00
seymour	76,674	3600.00	1	0.01
swath	337,823	3600.00	0	0.02
timtab1	939,220	558.06	0	0.00
timtab2	4,008,039	3600.01	0	0.00
AM (# 21)	1,229,080.3	1726.95	1.5	0.19
GM (# 21)	59,462.8	473.70	1.3	1.04
SGM (# 21)	65,545.1	556.27		0.18

TABLE 94. M2010-sym testset: OP settings

Name	#Nodes	Time	#Fixed	OP-time
30_70_45_095_100	401	1041.86	0	0.42
acc-tight4	154	160.14	40	0.26
ash608gipa-3col	0	1.49	2	0.32
bab3	—	—	—	—
bab5	35,888	3600.03	348	333.51
berlin_5_8_0	2,049,473	3600.01	0	0.00
biella1	7869	491.30	0	1.25
circ10-3	48	3600.00	10	5.37
co-100	10,336	3600.02	0	2.83
core2536-691	300	121.11	0	2.18
core4872-1529	1042	3600.01	1	4.20
cov1075	368,459	1462.41	1	0.02
dc1c	9124	3600.01	0	8.06
dc1l	1153	3600.01	0	26.02
dolom1	2909	3600.03	0	10.62
enlight13	1	0.02	0	0.00
enlight14	1	0.02	0	0.00
enlight15	1	0.01	0	0.00
enlight16	1	0.04	0	0.00
enlight9	1	0.00	0	0.00
ex1010-pi	14,383	3600.04	0	0.02
ex10	1	992.97	704	134.18
ex9	1	263.98	222	199.39
glass4	5,546,827	3600.03	0	0.00
go19	1,195,155	3600.00	0	0.00
iis-bupa-cov	108,237	3600.01	0	0.01
lectsched-1	—	—	—	—
lectsched-1-obj	—	—	—	—
lectsched-2	283	87.54	19	36.94
lectsched-3	1544	2334.15	91	2220.96
lectsched-4-obj	1759	60.65	2	0.31
macrophage	685,847	3600.00	0	0.12
map06	830	1036.59	0	0.19
map10	1571	1180.12	0	0.18
map14	821	780.99	0	0.18
map18	213	337.09	0	0.19
map20	323	302.89	0	0.19
maxgasflow	290,912	3600.01	1	0.03
mcsched	13,011	124.97	0	0.02
methanosarcina	48,332	3600.00	0	9.95
mkc	495,576	3600.00	0	0.46
msc98-ip	2131	3600.01	8	2.37
mzzv11	2615	775.29	0	0.07
n3seq24	24,700	3600.01	0	470.61
n4-3	38,103	593.05	0	0.01
n9-3	56,931	3600.01	0	0.02
neos-1109824	14,710	170.11	0	0.20
neos-1171692	201	32.17	0	0.13
neos-1171737	66,497	3600.00	0	0.22
neos-1224597	1	2.58	0	0.10

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Name	#Nodes	Time	#Fixed	OP-time
neos-1311124	2,861,758	3600.00	0	0.07
neos-1337307	4745	140.34	68	0.51
neos-1396125	33,703	162.12	1	0.01
neos13	54,138	2625.21	0	0.63
neos-1426635	4,349,525	3600.02	0	0.01
neos-1426662	788,331	3600.01	0	0.03
neos-1429212	2486	3600.02	0	14.30
neos-1436709	1,562,652	3600.00	0	0.04
neos-1440460	2,425,937	3600.00	0	0.02
neos-1442119	1,252,431	3600.00	0	0.04
neos-1442657	1,407,529	3600.01	0	0.03
neos-1620770	302,121	3600.00	0	0.07
neos18	5708	58.71	0	0.01
neos-476283	486	398.18	10	4.92
neos-555424	491,192	3600.00	50	36.42
neos-738098	1739	3600.01	0	0.91
neos-777800	1	2.52	0	0.54
neos-785912	62	13.92	0	0.06
neos788725	157,174	287.57	0	0.02
neos808444	582	1260.50	28	2.48
neos-820146	1,647,551	3600.00	1	0.01
neos-820157	1,313,572	3600.00	16	0.07
neos-824661	1	44.42	8	17.05
neos-824695	1	20.31	7	8.00
neos-826650	191,501	3600.00	16	1.30
neos-826694	1	26.79	13	9.07
neos-826812	1	12.47	13	7.92
neos-826841	266,648	3600.00	12	0.75
neos-849702	216,214	3600.00	0	0.04
neos-859770	1	158.64	545	79.84
neos-885086	13,826	1401.83	0	1.40
neos-885524	12,851	3600.03	0	17.02
neos-911880	3,374,817	3600.01	0	0.03
neos-932816	66,971	3600.01	0	0.59
neos-933638	106	384.95	0	1.19
neos-933966	24	154.34	0	0.98
neos-934278	231	340.06	0	1.10
neos-935627	597	981.05	0	0.98
neos-935769	375	680.91	0	0.95
neos-937511	43	225.70	0	1.58
neos-937815	5387	3600.00	0	1.63
neos-941262	2982	3600.01	0	1.13
neos-941313	—	—	—	—
neos-948126	2223	3600.00	0	1.21
neos-957389	6	52.66	985	40.22
neos-984165	2240	3600.00	0	0.96
net12	1924	585.27	0	0.09
noswot	1,106,633	313.33	0	0.00
ns1111636	378	3600.01	0	20.74
ns1116954	1	1149.90	96	11.01
ns1158817	1	1101.58	0	985.75
ns1208400	2819	857.20	0	0.33
ns1456591	66,736	3600.00	880	113.51
ns1702808	207,366	397.13	0	0.03

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Name	#Nodes	Time	#Fixed	OP-time
ns1758913	2	3601.83	10	16.84
ns1853823	1	3594.59	0	1417.86
ns1854840	1	3635.01	0	549.47
ns1905797	40,773	3600.00	0	0.34
ns1905800	257,415	3600.01	6	0.24
ns1952667	13,279	2368.58	0	0.00
ns2118727	356	3599.96	0	0.12
ns2124243	2438	3600.02	0	10.59
ns2137859	103,859	3600.00	0	19.09
ns4-pr9	544,434	3600.00	0	0.00
nsr8k	73	3600.05	0	6.37
nu60-pr9	150,946	3600.00	0	0.19
p2m2p1m1p0n100	33,517,903	3600.00	0	0.00
p6b	91,898	3600.01	0	0.02
pigeon-10	5,270,186	3600.00	0	0.09
pigeon-11	4,050,603	3600.00	0	0.54
pigeon-12	3,078,693	3600.00	0	0.01
pigeon-13	2,305,147	3600.00	0	0.02
pigeon-19	1,397,695	3600.00	0	0.06
protfold	15,283	3600.01	1	0.39
pw-myciel4	412,408	3600.01	0	0.08
qiu	5363	34.05	1	0.01
queens-30	19,579	3600.02	0	0.11
rail507	949	97.76	0	0.34
ramos3	40	3600.20	1	0.07
rvb-sub	53,085	3600.00	0	8.84
sct1	8489	3600.00	0	1.39
sct32	42,645	3600.00	0	0.72
sct5	7074	3600.11	0	14.86
seymour-disj-10	42,827	3600.01	0	0.10
seymour	76,856	3600.00	1	0.02
shipsched	99,624	3600.00	0	0.20
shs1023	1	3691.16	0	1.39
siena1	2034	3600.24	0	2.02
sing161	1	3722.82	0	2847.82
sing245	10	3612.63	0	213.50
sing2	4514	3600.02	0	5.18
sts405	74,234	3600.01	1	1.00
sts729	132	3600.03	1	1.88
swath	333,894	3600.00	0	0.02
tanglegram1	37	748.92	0	23.49
tanglegram2	3	9.39	0	6.12
timtab1	939,220	549.72	0	0.00
toll-like	774,061	3600.00	0	0.48
uc-case11	1180	3600.02	0	0.87
uc-case3	1902	3600.09	0	3.96
uct-subprob	621,284	3600.00	0	0.02
unitcal_7	7918	755.71	2	2.49
usAbbrv-8-25_70	661,227	3600.00	0	0.03
vpphard2	198	3609.10	0	68.90
vpphard	459	3600.85	0	19.12
wachplan	98,801	1438.68	36	0.38
zib54-UUE	440,688	3600.00	0	0.01
AM (# 157)	578,832.6	2362.19	28.2	162.17

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Name	#Nodes	Time	#Fixed	OP-time
GM (# 157)	3170.8	982.10	2.0	3.21
SGM (# 157)	7824.0	1120.56		8.32

TABLE 95. M2010-sym testset: OP-nod settings

Name	#Nodes	Time	#Fixed	OP-time
30_70_45_095_100	401	1064.47	0	0.42
acc-tight4	514	254.49	3	0.08
ash608gipa-3col	0	1.55	2	0.32
bab3	—	—	—	—
bab5	36,344	3600.00	348	282.01
berlin_5_8_0	2,044,140	3600.01	0	0.01
biella1	7869	492.05	0	1.23
circ10-3	40	3599.93	9	5.55
co-100	10,232	3600.00	0	2.83
core2536-691	300	120.78	0	2.13
core4872-1529	931	3600.02	1	4.16
cov1075	368,459	1448.29	1	0.02
dc1c	9126	3600.00	0	7.90
dc1l	1159	3600.43	0	24.28
dolom1	2904	3600.04	0	10.36
enlight13	1	0.01	0	0.00
enlight14	1	0.01	0	0.00
enlight15	1	0.03	0	0.00
enlight16	1	0.02	0	0.00
enlight9	1	0.01	0	0.00
ex1010-pi	14,383	3600.04	0	0.02
ex10	1	335.15	2771	303.04
ex9	1	68.01	725	61.38
glass4	5,528,145	3600.02	0	0.00
go19	1,194,800	3600.00	0	0.01
iis-bupa-cov	108,177	3600.00	0	0.01
lectsched-1	—	—	—	—
lectsched-1-obj	—	—	—	—
lectsched-2	197	82.71	5	24.63
lectsched-3	2786	1331.31	49	1205.81
lectsched-4-obj	15,383	154.66	0	0.23
macrophage	683,504	3600.01	0	0.11
map06	830	1033.09	0	0.19
map10	1571	1177.68	0	0.19
map14	821	783.71	0	0.19
map18	213	336.89	0	0.19
map20	323	302.09	0	0.18
maxgasflow	161,041	3600.00	0	0.03
mcsched	13,011	125.00	0	0.02
methanosarcina	48,093	3600.00	0	9.76
mkc	491,027	3600.00	0	0.44
msc98-ip	2099	3600.00	8	2.07
mzzv11	2615	777.98	0	0.07
n3seq24	25,841	3600.03	0	394.76
n4-3	38,103	592.88	0	0.01
n9-3	56,894	3600.00	0	0.02
neos-1109824	14,710	170.30	0	0.20
neos-1171692	201	32.11	0	0.13
neos-1171737	66,325	3600.00	0	0.23
neos-1224597	1	2.58	0	0.11

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Name	#Nodes	Time	#Fixed	OP-time
neos-1311124	2,886,671	3600.00	0	0.06
neos-1337307	264,709	3600.01	0	0.50
neos-1396125	33,703	162.19	1	0.02
neos13	54,138	2653.53	0	0.60
neos-1426635	4,319,997	3600.02	0	0.01
neos-1426662	785,627	3600.02	0	0.03
neos-1429212	2467	3600.03	0	14.16
neos-1436709	1,548,753	3600.01	0	0.03
neos-1440460	2,439,819	3600.01	0	0.01
neos-1442119	1,249,406	3600.00	0	0.04
neos-1442657	1,402,277	3600.01	0	0.03
neos-1620770	301,793	3600.00	0	0.06
neos18	5708	58.62	0	0.01
neos-476283	863	589.25	0	3.89
neos-555424	488,160	3600.00	50	36.49
neos-738098	1713	3600.01	0	0.71
neos-777800	1	2.39	0	0.42
neos-785912	62	13.84	0	0.05
neos788725	157,174	284.50	0	0.04
neos808444	349	2331.73	0	1.84
neos-820146	1,649,438	3600.00	1	0.02
neos-820157	1,164,180	3600.00	1	0.02
neos-824661	1	44.35	8	16.90
neos-824695	1	20.23	7	7.96
neos-826650	136,732	3600.01	22	1.34
neos-826694	1	26.92	13	8.96
neos-826812	1	12.51	13	7.88
neos-826841	265,404	3600.01	12	0.62
neos-849702	216,464	3600.00	0	0.04
neos-859770	1	159.24	325	6.80
neos-885086	13,826	1393.92	0	1.37
neos-885524	12,721	3600.10	0	15.11
neos-911880	3,414,767	3600.01	0	0.02
neos-932816	66,790	3600.00	0	0.43
neos-933638	106	387.48	0	0.74
neos-933966	24	155.42	0	0.69
neos-934278	231	342.59	0	0.76
neos-935627	597	983.70	0	0.65
neos-935769	375	678.93	0	0.68
neos-937511	43	225.24	0	0.94
neos-937815	5439	3600.01	0	0.96
neos-941262	2982	3600.01	0	0.73
neos-941313	10	676.77	0	103.17
neos-948126	2193	3600.01	0	0.75
neos-957389	6	28.15	289	14.11
neos-984165	2249	3600.10	0	0.69
net12	1924	583.40	0	0.08
noswot	1,106,633	313.78	0	0.00
ns1111636	395	3600.01	0	6.77
ns1116954	9	3600.04	0	7.78
ns1158817	1	191.34	0	76.58
ns1208400	2819	858.00	0	0.32
ns1456591	77,434	3600.00	880	10.92
ns1702808	207,366	400.82	0	0.03

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Name	#Nodes	Time	#Fixed	OP-time
ns1758913	2	3601.04	10	16.50
ns1853823	1	3593.32	0	864.64
ns1854840	1	3599.56	0	393.54
ns1905797	40,532	3600.02	0	0.35
ns1905800	257,036	3600.00	6	0.22
ns1952667	13,279	2409.20	0	0.00
ns2118727	352	3600.00	0	0.11
ns2124243	2425	3600.02	0	10.56
ns2137859	103,579	3600.01	0	15.46
ns4-pr9	540,009	3600.00	0	0.00
nsr8k	73	3600.00	0	6.24
nu60-pr9	150,532	3600.00	0	0.17
p2m2p1m1p0n100	33,504,592	3600.00	0	0.00
p6b	92,090	3600.01	0	0.02
pigeon-10	5,274,160	3600.00	0	0.01
pigeon-11	4,092,228	3600.00	0	0.02
pigeon-12	3,095,304	3600.00	0	0.02
pigeon-13	2,277,277	3600.00	0	0.01
pigeon-19	1,394,881	3600.00	0	0.05
protfold	18,751	3600.01	0	0.31
pw-myciel4	413,447	3600.00	0	0.09
qiu	5363	34.36	1	0.02
queens-30	19,023	3600.01	0	0.12
rail507	949	98.21	0	0.35
ramos3	40	3600.13	1	0.07
rvb-sub	52,419	3600.00	0	8.85
sct1	8332	3600.06	0	0.94
sct32	41,850	3600.00	0	0.65
sct5	7241	3600.01	0	11.12
seymour-disj-10	42,726	3600.00	0	0.09
seymour	77,100	3600.00	1	0.02
shipsched	99,035	3600.00	0	0.20
shs1023	1	3693.72	0	1.41
siena1	1974	3600.01	0	1.89
sing161	1	3619.86	0	2208.12
sing245	10	3615.24	0	180.23
sing2	4493	3600.06	0	2.48
sts405	73,976	3600.00	1	1.01
sts729	132	3599.75	1	1.89
swath	337,142	3600.00	0	0.02
tanglegram1	37	747.50	0	23.27
tanglegram2	3	9.49	0	6.22
timtab1	939,220	549.97	0	0.00
toll-like	768,771	3600.00	0	0.45
uc-case11	1179	3600.02	0	0.58
uc-case3	1888	3600.04	0	1.91
uct-subprob	620,295	3600.00	0	0.02
unitcal_7	7918	760.81	2	2.00
usAbbrv-8-25_70	662,742	3600.00	0	0.02
vpphard2	198	3609.16	0	68.60
vpphard	459	3600.41	0	18.25
wachplan	89,355	3600.00	18	0.15
zib54-UUE	438,311	3600.00	0	0.02
AM (# 157)	578,476.5	2386.05	35.7	129.92

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Name	#Nodes	Time	#Fixed	OP-time
GM (# 157)	3400.1	986.03	1.7	2.94
SGM (# 157)	8157.5	1125.89		7.22

TABLE 96. M2010-sym testset: OP-ISP-NST settings

Name	#Nodes	Time	#Fixed	OP-time
30_70_45_095_100	401	1048.78	0	0.43
acc-tight4	154	160.18	40	0.26
ash608gipa-3col	0	1.44	2	0.33
bab3	—	—	—	—
bab5	10,679	3600.04	348	334.30
berlin_5_8_0	2,146,946	3600.01	0	0.01
biella1	7869	493.32	0	1.26
circ10-3	48	3599.96	10	5.42
co-100	10,327	3600.00	0	2.82
core2536-691	300	122.51	0	2.18
core4872-1529	1100	3600.00	1	4.18
cov1075	427	7.76	1	0.02
dc1c	5953	3600.00	0	8.00
dc1l	1167	3600.00	0	25.95
dolom1	2909	3600.01	0	10.55
enlight13	1	0.01	0	0.00
enlight14	1	0.02	0	0.00
enlight15	1	0.02	0	0.01
enlight16	1	0.03	0	0.00
enlight9	1	0.01	0	0.00
ex1010-pi	14,383	3600.00	0	0.02
ex10	1	990.64	704	134.43
ex9	1	263.85	222	199.53
glass4	5,439,769	3600.02	0	0.01
go19	1,121,238	3600.00	0	0.01
iis-bupa-cov	108,334	3600.00	0	0.00
lectsched-1	—	—	—	—
lectsched-1-obj	—	—	—	—
lectsched-2	283	87.67	19	37.06
lectsched-3	1544	2332.76	91	2219.73
lectsched-4-obj	1848	62.51	2	0.31
macrophage	682,546	3600.00	0	0.11
map06	830	1031.92	0	0.19
map10	1571	1178.68	0	0.18
map14	821	780.45	0	0.19
map18	213	337.26	0	0.19
map20	323	302.06	0	0.19
maxgasflow	161,616	3600.00	1	0.03
mcsched	13,890	134.62	0	0.02
methanosarcina	47,922	3600.01	0	9.73
mkc	491,654	3600.00	0	0.46
msc98-ip	2114	3600.01	8	2.38
mzzv11	2615	775.85	0	0.07
n3seq24	424	3602.45	0	472.22
n4-3	38,103	591.79	0	0.01
n9-3	56,905	3600.00	0	0.02
neos-1109824	91	18.25	0	0.20
neos-1171692	401	60.59	0	0.13
neos-1171737	7739	3600.46	0	0.21
neos-1224597	1	2.58	0	0.11

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Name	#Nodes	Time	#Fixed	OP-time
neos-1311124	2,765,995	3600.01	0	0.06
neos-1337307	4745	140.40	68	0.50
neos-1396125	40,501	165.50	1	0.02
neos13	54,138	2623.16	0	0.60
neos-1426635	159,256	3600.02	0	0.01
neos-1426662	3961	3622.36	0	0.03
neos-1429212	2408	3600.04	0	14.36
neos-1436709	50,167	3600.00	0	0.04
neos-1440460	187,107	3600.00	0	0.02
neos-1442119	31,462	3600.00	0	0.04
neos-1442657	71,431	3600.01	0	0.03
neos-1620770	367,649	1971.47	0	0.04
neos18	5653	120.98	0	0.01
neos-476283	486	398.83	10	4.92
neos-555424	4830	3600.54	50	36.47
neos-738098	1294	3600.00	0	0.91
neos-777800	1	2.56	0	0.59
neos-785912	92	15.04	0	0.06
neos788725	94,451	259.50	0	0.04
neos808444	582	1266.07	28	2.54
neos-820146	32,346	308.54	1	0.02
neos-820157	1,221,439	3600.00	16	0.07
neos-824661	1	44.55	8	17.06
neos-824695	1	20.26	7	8.00
neos-826650	12,475	3600.08	16	1.30
neos-826694	1	26.66	13	9.12
neos-826812	1	12.45	13	7.92
neos-826841	3687	3604.54	12	0.78
neos-849702	3176	102.65	0	0.04
neos-859770	1	159.35	545	80.15
neos-885086	67	4224.87	0	1.40
neos-885524	12,743	3600.06	0	16.93
neos-911880	250,366	3600.01	0	0.02
neos-932816	53,611	3600.00	0	0.67
neos-933638	92	354.30	0	1.12
neos-933966	15	158.62	0	0.95
neos-934278	344	778.50	0	1.12
neos-935627	548	1082.07	0	0.94
neos-935769	33	194.62	0	1.00
neos-937511	25	182.22	0	1.66
neos-937815	2857	3600.01	0	1.60
neos-941262	1980	3600.01	0	1.11
neos-941313	—	—	—	—
neos-948126	1732	3600.00	0	1.18
neos-957389	6	53.15	985	40.30
neos-984165	2075	3600.00	0	0.96
net12	1924	594.82	0	0.08
noswot	1,106,633	314.29	0	0.00
ns1111636	101	3600.03	0	20.70
ns1116954	1	1151.11	96	11.01
ns1158817	1	1101.28	0	985.48
ns1208400	1901	311.73	0	0.33
ns1456591	11,047	3600.02	880	112.45
ns1702808	32,979	170.39	0	0.04

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Name	#Nodes	Time	#Fixed	OP-time
ns1758913	2	3600.18	10	16.84
ns1853823	1	3594.79	0	1425.96
ns1854840	1	3628.22	0	545.60
ns1905797	40,762	3600.00	0	0.34
ns1905800	268,486	3600.01	6	0.23
ns1952667	13,279	2365.81	0	0.00
ns2118727	358	3600.00	0	0.13
ns2124243	2438	3600.02	0	10.57
ns2137859	101,446	3600.01	0	19.03
ns4-pr9	541,536	3600.00	0	0.00
nsr8k	73	3600.00	0	6.37
nu60-pr9	138,450	3600.00	0	0.19
p2m2p1m1p0n100	297,831	3600.00	0	0.01
p6b	106,811	3600.01	0	0.03
pigeon-10	203,137	148.76	0	0.09
pigeon-11	1,579,649	1415.86	0	0.54
pigeon-12	3,150,017	3600.00	0	0.02
pigeon-13	2,470,261	3600.00	0	0.02
pigeon-19	1,361,272	3600.00	0	0.05
protfold	23,206	3600.01	1	0.37
pw-myciel4	177,929	1724.86	0	0.08
qiu	2537	22.14	1	0.01
queens-30	13,490	3600.05	0	0.12
rail507	949	97.74	0	0.34
ramos3	36	3599.95	1	0.06
rvb-sub	53,763	3600.02	0	8.78
sct1	8498	3600.00	0	1.40
sct32	42,562	3600.00	0	0.70
sct5	7168	3600.04	0	14.86
seymour-disj-10	42,796	3600.00	0	0.08
seymour	76,759	3600.00	1	0.02
shipsched	99,004	3600.01	0	0.20
shs1023	1	3690.25	0	1.42
siena1	2056	3600.00	0	1.99
sing161	1	3723.54	0	2849.76
sing245	10	3618.09	0	214.38
sing2	2262	3600.00	0	5.17
sts405	69,633	3600.01	1	1.01
sts729	129	3600.03	1	1.89
swath	338,663	3600.00	0	0.01
tanglegram1	37	748.71	0	23.28
tanglegram2	3	9.44	0	6.14
timtab1	939,220	556.80	0	0.01
toll-like	755,927	3600.00	0	0.46
uc-case11	2594	3600.12	0	0.87
uc-case3	2105	3600.04	0	3.93
uct-subprob	620,578	3600.00	0	0.02
unitcal_7	6966	3462.10	2	2.52
usAbbrv-8-25_70	711,535	3600.00	0	0.02
vpphard2	198	3609.58	0	69.01
vpphard	459	3600.93	0	19.06
wachplan	61,391	1072.77	36	0.33
zib54-UUE	456,682	3600.00	0	0.01
AM (# 157)	202,425.7	2279.09	28.2	162.64

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Name	#Nodes	Time	#Fixed	OP-time
GM (# 157)	1791.2	875.78	2.0	3.21
SGM (# 157)	4502.4	1006.90		8.32

TABLE 97. M2010-sym testset: OP-OB-NST settings

Name	#Nodes	Time	#Fixed	OP-time
30_70_45_095_100	631	820.45	0	0.41
acc-tight4	154	160.04	40	0.26
ash608gipa-3col	0	1.47	2	0.33
bab3	—	—	—	—
bab5	20,898	3600.97	348	333.58
berlin_5_8_0	1,968,710	3600.01	0	0.01
biella1	1393	3604.84	0	1.26
circ10-3	48	3600.01	10	5.48
co-100	10,368	3600.02	0	2.85
core2536-691	13,473	3600.04	0	2.18
core4872-1529	1656	3600.01	1	4.18
cov1075	526	6.82	1	0.01
dc1c	13	4094.11	0	8.16
dc1l	8	5797.81	0	25.98
dolom1	10	3687.68	0	10.78
enlight13	1	0.01	0	0.01
enlight14	1	0.02	0	0.00
enlight15	1	0.03	0	0.00
enlight16	1	0.03	0	0.01
enlight9	1	0.01	0	0.00
ex1010-pi	14,383	3600.03	0	0.02
ex10	1	986.87	704	134.02
ex9	1	263.68	222	199.19
glass4	5,576,748	3600.02	0	0.00
go19	1,117,056	3600.00	0	0.00
iis-bupa-cov	108,312	3600.01	0	0.01
lectsched-1	—	—	—	—
lectsched-1-obj	—	—	—	—
lectsched-2	224	519.08	19	36.89
lectsched-3	43	3669.42	91	2222.25
lectsched-4-obj	9666	3600.74	2	0.31
macrophage	6638	3600.12	0	0.10
map06	830	1028.12	0	0.19
map10	1571	1178.12	0	0.19
map14	821	782.65	0	0.19
map18	213	336.17	0	0.20
map20	323	301.88	0	0.18
maxgasflow	179,353	3600.00	1	0.03
mcsched	243,423	3600.00	0	0.02
methanosarcina	22	4387.61	0	9.75
mkc	9404	3600.10	0	0.45
msc98-ip	2100	3599.99	8	2.38
mzzv11	2615	776.17	0	0.08
n3seq24	22	3706.93	0	473.20
n4-3	38,103	592.28	0	0.01
n9-3	56,931	3600.00	0	0.02
neos-1109824	4515	95.00	0	0.20
neos-1171692	201	2144.92	0	0.12
neos-1224597	1	2.58	0	0.11
neos-1311124	296	3604.86	0	0.07

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Name	#Nodes	Time	#Fixed	OP-time
neos-1337307	4745	140.40	68	0.48
neos-1396125	83,998	324.18	1	0.01
neos13	54,138	2656.32	0	0.61
neos-1426635	1,337,366	3600.01	0	0.01
neos-1426662	2821	3732.74	0	0.03
neos-1429212	4867	3600.04	0	14.36
neos-1436709	429,161	3600.00	0	0.03
neos-1440460	2,086,806	3600.00	0	0.02
neos-1442119	12,756	3600.85	0	0.04
neos-1442657	1,673,954	3600.01	0	0.02
neos-1620770	193,156	1236.22	0	0.07
neos18	357,019	3600.00	0	0.02
neos-476283	486	398.08	10	4.90
neos-555424	456,864	3600.01	50	36.42
neos-738098	3162	3600.00	0	0.90
neos-777800	1	2.51	0	0.55
neos-785912	3454	47.91	0	0.05
neos788725	467,320	645.04	0	0.03
neos808444	582	1266.85	28	2.57
neos-820146	1,484,255	3600.00	1	0.01
neos-820157	1,301,241	3600.00	16	0.07
neos-824661	1	45.24	8	17.13
neos-824695	1	20.57	7	8.04
neos-826650	72,674	3600.00	16	1.32
neos-826694	1	26.77	13	9.08
neos-826812	1	12.48	13	7.91
neos-826841	102,784	3600.03	12	0.75
neos-849702	3629	195.33	0	0.05
neos-859770	1	157.86	545	79.92
neos-885086	697	7745.98	0	1.40
neos-885524	12,751	3600.09	0	16.93
neos-911880	944,440	3600.01	0	0.02
neos-932816	32,435	3600.00	0	0.67
neos-933638	124	651.49	0	1.14
neos-933966	61	175.55	0	0.98
neos-934278	486	688.16	0	1.10
neos-935627	5267	3600.23	0	0.94
neos-935769	767	1193.88	0	1.06
neos-937511	975	1822.58	0	1.63
neos-937815	3211	3600.00	0	1.61
neos-941262	2431	3600.17	0	1.04
neos-941313	—	—	—	—
neos-948126	1903	3600.19	0	1.14
neos-957389	76	51.90	985	40.28
neos-984165	2322	3600.00	0	0.96
net12	1924	581.75	0	0.08
noswot	1,106,633	313.80	0	0.00
ns1111636	638	3600.76	0	20.79
ns1116954	1	1150.14	96	10.96
ns1158817	1	1102.13	0	985.76
ns1208400	1855	494.34	0	0.33
ns1456591	71,570	3600.00	880	112.88
ns1702808	36,334	67.20	0	0.04
ns1758913	110	3600.37	10	16.78

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Name	#Nodes	Time	#Fixed	OP-time
ns1853823	1	3918.50	0	1423.37
ns1854840	1	3774.83	0	547.03
ns1905797	39,520	3600.02	0	0.34
ns1905800	215,907	3600.00	6	0.24
ns1952667	13,279	2362.90	0	0.00
ns2118727	350	3600.01	0	0.13
ns2124243	2436	3600.03	0	10.58
ns2137859	1369	3615.75	0	19.01
ns4-pr9	537,973	3600.00	0	0.00
nsr8k	82	3600.03	0	6.36
nu60-pr9	135,513	3600.00	0	0.18
p2m2p1m1p0n100	31,624,124	3600.00	0	0.00
p6b	87,338	3600.00	0	0.02
pigeon-10	491,299	343.77	0	0.09
pigeon-11	2,832,362	2506.79	0	0.33
pigeon-12	3,134,781	3600.00	0	0.01
pigeon-13	2,531,472	3600.00	0	0.02
pigeon-19	1,313,271	3600.00	0	0.05
protfold	29,292	3600.00	1	0.38
pw-myciel4	517,362	3600.00	0	0.08
qiu	2255	17.54	1	0.00
queens-30	17,764	3600.02	0	0.13
rail507	949	97.73	0	0.35
ramos3	162	3600.08	1	0.06
rvb-sub	52,908	3600.00	0	8.82
sct1	8467	3600.00	0	1.41
sct32	9563	3600.21	0	0.71
sct5	116	3601.57	0	14.72
seymour-disj-10	34,043	3600.01	0	0.09
seymour	77,616	3600.00	1	0.02
shipsched	98,731	3600.00	0	0.21
shs1023	1	3691.93	0	1.42
siena1	833	3600.05	0	2.01
sing161	1	5344.84	0	2851.37
sing245	15	3600.08	0	214.06
sing2	5876	3600.11	0	5.18
sts405	101,673	3600.01	1	1.01
sts729	332	3600.03	1	1.89
swath	335,323	3600.00	0	0.02
tanglegram1	37	758.99	0	23.57
tanglegram2	3	9.53	0	6.09
timtab1	939,220	550.56	0	0.00
toll-like	427	3608.19	0	0.46
uc-case11	1492	3600.02	0	0.87
uc-case3	4275	3600.00	0	3.84
uct-subprob	584,152	3600.00	0	0.02
unitcal_7	47,357	3600.01	2	2.54
usaBbrv-8-25_70	641,452	3600.01	0	0.02
vpphard2	198	3611.34	0	68.74
vpphard	459	3600.96	0	19.08
wachplan	56,781	995.44	36	0.36
zib54-UUE	439,803	3600.00	0	0.02
AM (# 156)	440,551.2	2540.47	28.3	163.81
GM (# 156)	1962.2	1106.12	2.0	3.23

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Name	#Nodes	Time	#Fixed	OP-time
SGM (# 156)	4921.3	1264.54		8.38

TABLE 98. M2010-sym testset: OP-OF-NST settings

Name	#Nodes	Time	#Fixed	OP-time
30_70_45_095_100	401	1043.89	0	0.43
acc-tight4	154	160.04	40	0.26
ash608gipa-3col	0	1.47	2	0.32
bab3	—	—	—	—
bab5	12,018	3600.01	348	339.28
berlin_5_8_0	2,202,235	3600.01	0	0.01
biella1	7869	492.96	0	1.28
circ10-3	48	3600.10	10	5.40
co-100	10,368	3600.02	0	2.85
core2536-691	300	121.91	0	2.18
core4872-1529	1103	3600.02	1	4.21
cov1075	415	7.39	1	0.02
dc1c	9136	3600.01	0	7.95
dc1l	1155	3600.02	0	26.10
dolom1	2909	3600.03	0	10.53
enlight13	1	0.01	0	0.00
enlight14	1	0.02	0	0.00
enlight15	1	0.02	0	0.00
enlight16	1	0.02	0	0.00
enlight9	1	0.01	0	0.00
ex1010-pi	14,383	3600.00	0	0.03
ex10	1	992.92	704	134.39
ex9	1	263.50	222	199.27
glass4	5,432,312	3600.03	0	0.00
go19	1,122,703	3600.00	0	0.01
iis-bupa-cov	108,396	3600.01	0	0.01
lectsched-1	—	—	—	—
lectsched-1-obj	—	—	—	—
lectsched-2	283	87.41	19	36.88
lectsched-3	1544	2334.87	91	2221.60
lectsched-4-obj	1759	61.31	2	0.31
macrophage	683,837	3600.00	0	0.11
map06	830	1034.65	0	0.18
map10	1571	1177.07	0	0.19
map14	821	783.69	0	0.17
map18	213	336.14	0	0.17
map20	323	301.90	0	0.18
maxgasflow	161,895	3600.00	1	0.03
mcsched	13,890	134.04	0	0.02
methanosarcina	48,058	3600.00	0	9.77
mkc	493,958	3600.00	0	0.45
msc98-ip	2131	3600.01	8	2.35
mzzv11	2615	782.36	0	0.08
n3seq24	642	3602.11	0	472.31
n4-3	38,103	599.40	0	0.01
n9-3	56,251	3600.00	0	0.02
neos-1109824	91	18.26	0	0.20
neos-1171692	201	28.52	0	0.13
neos-1171737	14,031	3600.09	0	0.23
neos-1224597	1	2.56	0	0.10

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Name	#Nodes	Time	#Fixed	OP-time
neos-1311124	2,789,674	3600.00	0	0.06
neos-1337307	4745	140.37	68	0.48
neos-1396125	40,501	166.58	1	0.02
neos13	54,138	2639.19	0	0.60
neos-1426635	240,762	3600.00	0	0.01
neos-1426662	62,654	3600.14	0	0.03
neos-1429212	2392	3600.02	0	14.39
neos-1436709	80,736	3600.01	0	0.03
neos-1440460	292,377	3600.00	0	0.02
neos-1442119	63,137	3600.05	0	0.03
neos-1442657	106,083	3600.01	0	0.03
neos-1620770	347,457	1885.03	0	0.07
neos18	5653	108.10	0	0.02
neos-476283	486	398.64	10	4.93
neos-555424	7189	3600.24	50	36.42
neos-738098	1606	3600.89	0	0.90
neos-777800	1	2.52	0	0.54
neos-785912	92	14.89	0	0.06
neos788725	94,451	248.56	0	0.03
neos808444	582	1259.08	28	2.48
neos-820146	107,554	713.32	1	0.01
neos-820157	1,222,494	3600.00	16	0.07
neos-824661	1	44.56	8	17.08
neos-824695	1	20.63	7	8.04
neos-826650	16,513	3600.01	16	1.32
neos-826694	1	27.04	13	9.13
neos-826812	1	12.45	13	7.89
neos-826841	13,337	3600.00	12	0.76
neos-849702	3176	102.59	0	0.04
neos-859770	1	158.51	545	79.94
neos-885086	273	3651.98	0	1.39
neos-885524	12,837	3600.06	0	17.09
neos-911880	366,819	3600.00	0	0.02
neos-932816	53,942	3600.00	0	0.61
neos-933638	92	374.52	0	1.16
neos-933966	15	178.42	0	0.99
neos-934278	344	757.26	0	1.18
neos-935627	548	1058.20	0	0.96
neos-935769	33	193.26	0	1.04
neos-937511	25	192.35	0	1.65
neos-937815	3182	3600.01	0	1.62
neos-941262	2056	3600.00	0	1.10
neos-941313	—	—	—	—
neos-948126	1684	3600.00	0	1.20
neos-957389	6	52.82	985	40.12
neos-984165	2125	3600.01	0	1.01
net12	1924	581.91	0	0.08
noswot	1,106,633	320.17	0	0.00
ns1111636	103	3600.75	0	20.74
ns1116954	1	1151.14	96	10.99
ns1158817	1	1101.28	0	985.50
ns1208400	1901	311.06	0	0.33
ns1456591	13,289	3600.08	880	113.16
ns1702808	32,979	144.81	0	0.04

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Name	#Nodes	Time	#Fixed	OP-time
ns1758913	2	3600.15	10	16.80
ns1853823	1	3594.72	0	1420.99
ns1854840	1	3629.64	0	547.18
ns1905797	40,877	3600.02	0	0.34
ns1905800	270,643	3600.00	6	0.23
ns1952667	13,279	2377.36	0	0.00
ns2118727	349	3600.00	0	0.12
ns2124243	2438	3600.02	0	10.51
ns2137859	102,725	3600.00	0	19.00
ns4-pr9	540,209	3600.01	0	0.00
nsr8k	73	3600.00	0	6.33
nu60-pr9	140,479	3600.00	0	0.19
p2m2p1m1p0n100	379,480	3600.00	0	0.00
p6b	106,704	3600.00	0	0.02
pigeon-10	313,737	224.34	0	0.10
pigeon-11	1,821,625	1653.73	0	0.54
pigeon-12	3,192,326	3600.00	0	0.02
pigeon-13	2,508,182	3600.00	0	0.02
pigeon-19	1,404,485	3600.00	0	0.05
protfold	23,206	3600.00	1	0.41
pw-myciel4	177,929	1709.56	0	0.09
qiu	3113	26.68	1	0.01
queens-30	13,889	3600.03	0	0.12
rail507	949	97.78	0	0.35
ramos3	36	3600.08	1	0.07
rvb-sub	52,863	3600.00	0	9.35
sct1	8446	3600.00	0	1.40
sct32	42,582	3600.00	0	0.70
sct5	7519	3600.00	0	14.71
seymour-disj-10	42,738	3600.00	0	0.09
seymour	76,874	3600.00	1	0.01
shipsched	94,161	3600.00	0	0.20
shs1023	1	3692.39	0	1.41
siena1	2074	3600.02	0	1.99
sing161	1	3722.07	0	2848.59
sing245	10	3620.20	0	213.76
sing2	2245	3600.03	0	5.31
sts405	69,058	3600.00	1	1.01
sts729	151	3599.98	1	1.90
swath	335,474	3600.00	0	0.02
tanglegram1	37	750.24	0	23.46
tanglegram2	3	9.34	0	6.07
timtab1	939,220	556.42	0	0.00
toll-like	762,806	3600.00	0	0.45
uc-case11	2594	3600.27	0	0.87
uc-case3	2108	3600.67	0	3.94
uct-subprob	619,754	3600.00	0	0.02
unitcal_7	6966	3217.32	2	2.55
usAbbrv-8-25_70	708,482	3600.00	0	0.02
vpphard2	198	3609.47	0	68.77
vpphard	459	3601.84	0	19.09
wachplan	58,607	1022.81	36	0.35
zib54-UUE	458,142	3600.00	0	0.02
AM (# 157)	209,922.8	2277.07	28.2	162.53

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Name	#Nodes	Time	#Fixed	OP-time
GM (# 157)	1941.9	877.49	2.0	3.21
SGM (# 157)	4869.0	1009.51		8.32

TABLE 99. M2010-bench testset: OP settings

Name	#Nodes	Time	#Fixed	OP-time
30n20b8	424	304.35	0	0.03
acc-tight5	2029	284.95	0	0.01
aflow40b	285,631	2331.55	0	0.01
air04	119	34.96	0	0.02
app1-2	16,726	3573.45	0	0.48
ash608gpia-3col	0	1.47	2	0.32
bab5	35,721	3600.10	348	340.08
beasleyC3	526,251	3600.01	0	0.01
biella1	7869	492.68	0	1.28
bienst2	138,693	178.24	0	0.00
binkar10_1	207,304	347.56	0	0.00
bley_xl1	2	311.71	0	0.75
bnatt350	1154	163.35	0	0.01
core2536-691	300	121.33	0	2.20
cov1075	368,459	1450.94	1	0.02
csched010	682,984	3600.00	0	0.01
danoind	924,316	3600.00	0	0.00
dfn-gwin-UUM	51,474	93.07	0	0.00
eil133-2	693	58.83	0	0.01
eilB101	9340	147.90	0	0.01
enlight13	1	0.02	0	0.00
enlight14	1	0.02	0	0.00
ex9	1	264.51	222	199.65
glass4	5,551,931	3600.03	0	0.00
gmu-35-40	5,562,251	3600.03	0	0.00
iis-100-0-cov	81,999	1561.57	0	0.01
iis-bupa-cov	108,390	3600.00	0	0.01
iis-pima-cov	11,775	748.15	0	0.01
lectsched-4-obj	1759	60.48	2	0.31
m100n500k4r1	4,743,476	3600.00	0	0.00
macrophage	681,165	3600.03	0	0.12
map18	213	336.50	0	0.19
map20	323	301.86	0	0.19
mcsched	13,011	124.34	0	0.01
mik-250-1-100-1	4,488,404	1596.36	0	0.00
mine-166-5	1850	41.49	0	0.01
mine-90-10	151,788	799.61	0	0.01
msc98-ip	2131	3600.00	8	2.36
mspp16	—	—	—	—
mzzv11	2615	780.84	0	0.08
n3div36	113,466	3600.00	0	0.47
n3seq24	24,430	3600.03	0	473.69
n4-3	38,103	592.47	0	0.00
neos-1109824	14,710	169.86	0	0.20
neos-1337307	4745	140.25	68	0.50
neos-1396125	33,703	161.79	1	0.02
neos13	54,138	2621.03	0	0.61
neos-1601936	10,979	2053.52	0	0.02
neos18	5708	58.60	0	0.02
neos-476283	486	398.10	10	4.93

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Name	#Nodes	Time	#Fixed	OP-time
neos-686190	7319	108.51	0	0.01
neos-849702	215,956	3600.00	0	0.04
neos-916792	310,308	3600.00	0	0.25
neos-934278	231	343.77	0	1.14
net12	1924	586.85	0	0.08
netdiversion	88	786.83	0	0.69
newdano	1,773,274	3600.00	0	0.01
noswot	1,106,633	314.70	0	0.01
ns1208400	2819	857.19	0	0.32
ns1688347	4220	212.22	0	0.03
ns1758913	2	3601.31	10	16.84
ns1766074	925,848	1234.42	0	0.01
ns1830653	46,368	651.63	0	0.01
opm2-z7-s2	2827	701.62	0	0.07
pg5_34	215,677	1267.01	0	0.01
pigeon-10	5,263,847	3600.00	0	0.10
pw-myciel4	414,364	3600.00	0	0.09
qiu	5363	34.08	1	0.01
rail507	949	98.09	0	0.35
ran16x16	328,398	297.35	0	0.00
reblock67	122,028	346.49	0	0.01
rmatr100-p10	675	111.52	0	0.03
rmatr100-p5	357	106.44	0	0.04
rmine6	686,973	3600.01	0	0.02
rocll-4-11	26,842	592.64	0	0.07
rococoC10-001000	106,798	559.66	0	0.00
roll3000	504,127	3150.12	0	0.01
satellites1-25	3350	528.46	0	0.03
sp98ic	201,582	3600.00	0	0.35
sp98ir	6084	66.38	0	0.03
tanglegram1	37	751.08	0	23.40
tanglegram2	3	9.30	0	6.05
timtab1	939,220	549.23	0	0.00
triptim1	1	46.15	0	0.25
unitcal_7	7918	757.14	2	2.51
vpphard	459	3601.02	0	19.35
zib54-UUE	439,188	3600.00	0	0.01
AM (# 87)	444,081.6	1385.97	7.8	12.65
GM (# 87)	8750.0	493.40	1.3	1.45
SGM (# 87)	14,569.8	547.89		2.05

TABLE 100. M2010-bench testset: OP-nod settings

Name	#Nodes	Time	#Fixed	OP-time
30n20b8	424	304.96	0	0.03
acc-tight5	2029	284.66	0	0.00
aflow40b	285,631	2324.22	0	0.01
air04	119	35.05	0	0.02
app1-2	16,726	3587.52	0	0.48
ash608gpia-3col	0	1.56	2	0.32
bab5	36,433	3600.31	348	271.21
beasleyC3	525,909	3600.02	0	0.00
biella1	7869	491.88	0	1.21
bienst2	138,693	178.34	0	0.00
binkar10_1	207,304	349.76	0	0.01
bley_xl1	2	310.34	0	0.77
bnatt350	1154	162.73	0	0.01
core2536-691	300	120.91	0	2.13
cov1075	368,459	1455.66	1	0.02
csched010	685,961	3600.00	0	0.00
danoind	923,677	3600.00	0	0.00
dfn-gwin-UUM	51,474	93.33	0	0.00
eil133-2	693	58.25	0	0.01
eilB101	9340	148.56	0	0.01
enlight13	1	0.02	0	0.00
enlight14	1	0.01	0	0.00
ex9	1	67.90	725	61.29
glass4	5,518,016	3600.03	0	0.01
gmu-35-40	5,571,805	3600.03	0	0.01
iis-100-0-cov	81,999	1525.14	0	0.01
iis-bupa-cov	108,122	3600.00	0	0.01
iis-pima-cov	11,775	747.77	0	0.01
lectsched-4-obj	15,383	155.25	0	0.23
m100n500k4r1	4,716,646	3600.00	0	0.00
macrophage	683,859	3600.00	0	0.11
map18	213	337.30	0	0.18
map20	323	302.30	0	0.18
mcsched	13,011	124.45	0	0.02
mik-250-1-100-1	4,488,404	1596.63	0	0.00
mine-166-5	1850	41.80	0	0.02
mine-90-10	151,788	801.70	0	0.01
msc98-ip	2060	3600.02	8	2.07
mspp16	—	—	—	—
mzzv11	2615	778.42	0	0.08
n3div36	112,960	3600.74	0	0.47
n3seq24	25,767	3600.00	0	398.02
n4-3	38,103	593.86	0	0.01
neos-1109824	14,710	170.27	0	0.20
neos-1337307	264,933	3600.01	0	0.51
neos-1396125	33,703	161.96	1	0.01
neos13	54,138	2635.89	0	0.62
neos-1601936	10,979	2061.72	0	0.03
neos18	5708	58.62	0	0.02
neos-476283	863	589.67	0	3.94

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Name	#Nodes	Time	#Fixed	OP-time
neos-686190	7319	108.34	0	0.02
neos-849702	216,760	3600.00	0	0.04
neos-916792	310,649	3600.00	0	0.25
neos-934278	231	346.70	0	0.77
net12	1924	583.17	0	0.08
netdiversion	88	787.99	0	0.72
newdano	1,768,864	3600.00	0	0.00
noswot	1,106,633	314.25	0	0.00
ns1208400	2819	858.99	0	0.32
ns1688347	4220	211.26	0	0.03
ns1758913	2	3601.08	10	16.56
ns1766074	925,848	1231.74	0	0.00
ns1830653	46,368	653.10	0	0.02
opm2-z7-s2	2827	696.14	0	0.07
pg5_34	215,677	1268.66	0	0.00
pigeon-10	5,233,846	3600.00	0	0.02
pw-myciel4	411,392	3600.01	0	0.08
qiu	5363	34.11	1	0.02
rail507	949	97.92	0	0.34
ran16x16	328,398	296.74	0	0.00
reblock67	122,028	343.25	0	0.01
rmatr100-p10	675	111.49	0	0.03
rmatr100-p5	357	106.44	0	0.04
rmine6	689,595	3600.00	0	0.01
rocll-4-11	26,842	593.17	0	0.07
rococoC10-001000	106,798	560.21	0	0.01
roll3000	504,127	3153.67	0	0.01
satellites1-25	3350	527.14	0	0.04
sp98ic	200,224	3600.00	0	0.36
sp98ir	6084	66.38	0	0.02
tanglegram1	37	752.97	0	23.55
tanglegram2	3	9.39	0	6.15
timtab1	939,220	548.33	0	0.00
triptim1	1	46.65	0	0.24
unitcal_7	7918	761.58	2	2.02
vpphard	459	3601.79	0	18.33
zib54-UUE	439,235	3600.00	0	0.01
AM (# 87)	446,311.1	1426.81	12.6	9.36
GM (# 87)	9459.2	512.42	1.2	1.41
SGM (# 87)	15,732.3	568.57		1.82

TABLE 101. M2010-bench testset: OP-ISP-NST settings

Name	#Nodes	Time	#Fixed	OP-time
30n20b8	424	305.21	0	0.03
acc-tight5	2029	284.98	0	0.01
aflow40b	285,631	2321.55	0	0.01
air04	119	34.87	0	0.03
app1-2	16,726	3596.56	0	0.48
ash608gpia-3col	0	1.47	2	0.32
bab5	10,699	3600.00	348	336.61
beasleyC3	525,728	3600.00	0	0.01
biella1	7869	494.14	0	1.27
bienst2	138,693	178.03	0	0.01
binkar10_1	207,304	347.85	0	0.00
bley_xl1	2	311.48	0	0.78
bnatt350	1154	163.70	0	0.01
core2536-691	300	122.70	0	2.18
cov1075	427	7.76	1	0.02
csched010	683,750	3600.00	0	0.00
danoind	919,013	3600.00	0	0.00
dfn-gwin-UUM	51,474	92.60	0	0.00
eil133-2	693	57.90	0	0.01
eilB101	9340	148.01	0	0.01
enlight13	1	0.02	0	0.00
enlight14	1	0.02	0	0.00
ex9	1	264.54	222	199.56
glass4	5,341,720	3600.02	0	0.00
gmu-35-40	5,596,965	3600.03	0	0.01
iis-100-0-cov	81,999	1519.09	0	0.01
iis-bupa-cov	108,137	3600.00	0	0.01
iis-pima-cov	11,775	759.01	0	0.02
lectsched-4-obj	1848	62.70	2	0.31
m100n500k4r1	4,728,522	3600.00	0	0.00
macrophage	679,545	3600.00	0	0.11
map18	213	337.18	0	0.18
map20	323	303.26	0	0.19
mcsched	13,890	134.89	0	0.02
mik-250-1-100-1	4,488,404	1611.40	0	0.00
mine-166-5	1850	41.64	0	0.01
mine-90-10	151,788	800.54	0	0.01
msc98-ip	2102	3600.00	8	2.37
mspp16	—	—	—	—
mzzv11	2615	778.99	0	0.07
n3div36	112,688	3600.00	0	0.47
n3seq24	425	3603.23	0	471.85
n4-3	38,103	593.54	0	0.01
neos-1109824	91	18.27	0	0.18
neos-1337307	4745	140.56	68	0.49
neos-1396125	40,501	167.83	1	0.01
neos13	54,138	2650.51	0	0.57
neos-1601936	10,979	2056.75	0	0.03
neos18	5653	120.69	0	0.01
neos-476283	486	398.99	10	4.93

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Name	#Nodes	Time	#Fixed	OP-time
neos-686190	7319	108.02	0	0.01
neos-849702	3176	102.59	0	0.05
neos-916792	313,880	3600.00	0	0.24
neos-934278	344	781.27	0	1.11
net12	1924	581.07	0	0.08
netdiversion	88	786.80	0	0.71
newdano	1,757,923	3600.00	0	0.00
noswot	1,106,633	313.66	0	0.00
ns1208400	1901	312.74	0	0.33
ns1688347	4220	211.69	0	0.02
ns1758913	2	3600.31	10	16.91
ns1766074	925,848	1227.40	0	0.00
ns1830653	46,368	651.83	0	0.01
opm2-z7-s2	2827	706.94	0	0.08
pg5_34	215,677	1267.40	0	0.01
pigeon-10	203,137	148.85	0	0.09
pw-myciel4	177,929	1704.63	0	0.09
qiu	2537	22.17	1	0.01
rail507	949	98.01	0	0.34
ran16x16	328,398	298.03	0	0.00
reblock67	122,028	342.56	0	0.00
rmatr100-p10	675	111.45	0	0.03
rmatr100-p5	357	106.38	0	0.03
rmine6	687,768	3600.00	0	0.01
rocll-4-11	26,842	591.89	0	0.06
rococoC10-001000	106,798	556.96	0	0.01
roll3000	504,127	3139.58	0	0.02
satellites1-25	3350	526.00	0	0.02
sp98ic	200,678	3600.00	0	0.36
sp98ir	6084	66.35	0	0.03
tanglegram1	37	750.73	0	23.54
tanglegram2	3	9.45	0	6.15
timtab1	939,220	555.35	0	0.00
triptim1	1	46.10	0	0.24
unitcal_7	6966	3470.22	2	2.53
vpphard	460	3600.03	0	19.15
zib54-UUE	455,191	3600.00	0	0.01
AM (# 87)	373,592.5	1296.88	7.8	12.59
GM (# 87)	6487.0	424.11	1.3	1.45
SGM (# 87)	10,916.7	477.14		2.05

TABLE 102. M2010-bench testset: OP-OB-NST settings

Name	#Nodes	Time	#Fixed	OP-time
30n20b8	424	303.63	0	0.04
acc-tight5	2029	284.60	0	0.01
aflow40b	285,631	2327.04	0	0.01
air04	119	34.98	0	0.02
app1-2	16,726	3569.09	0	0.48
ash608gpia-3col	0	1.54	2	0.32
bab5	21,191	3602.30	348	337.09
beasleyC3	526,652	3600.01	0	0.00
biella1	1219	3608.45	0	1.28
bienst2	138,693	178.29	0	0.00
binkar10_1	207,304	346.94	0	0.00
bley_xl1	2	309.67	0	0.77
bnatt350	1154	162.92	0	0.02
core2536-691	13,451	3600.00	0	2.18
cov1075	526	6.75	1	0.02
csched010	683,998	3600.00	0	0.01
danoind	923,782	3600.00	0	0.00
dfn-gwin-UUM	51,474	94.75	0	0.00
eil133-2	693	58.06	0	0.01
eilB101	9340	147.99	0	0.01
enlight13	1	0.02	0	0.00
enlight14	1	0.02	0	0.00
ex9	1	263.96	222	199.44
glass4	5,558,643	3600.03	0	0.00
gmu-35-40	5,556,961	3600.03	0	0.00
iis-100-0-cov	81,999	1522.19	0	0.00
iis-bupa-cov	108,338	3600.00	0	0.01
iis-pima-cov	11,775	747.57	0	0.01
lectsched-4-obj	9666	3600.30	2	0.31
m100n500k4r1	4,727,424	3600.00	0	0.00
macrophage	6626	3600.31	0	0.10
map18	213	339.49	0	0.19
map20	323	302.46	0	0.18
mcsched	246,614	3600.01	0	0.02
mik-250-1-100-1	4,488,404	1591.00	0	0.01
mine-166-5	1850	41.65	0	0.02
mine-90-10	151,788	800.57	0	0.01
msc98-ip	2114	3600.53	8	2.38
mspp16	—	—	—	—
mzzv11	2615	782.22	0	0.08
n3div36	113,985	3600.14	0	0.47
n3seq24	22	3705.67	0	472.67
n4-3	38,103	592.70	0	0.00
neos-1109824	4515	95.22	0	0.20
neos-1337307	4745	140.85	68	0.49
neos-1396125	83,998	324.18	1	0.02
neos13	54,138	2671.96	0	0.59
neos-1601936	10,979	2063.77	0	0.03
neos18	358,073	3600.00	0	0.01
neos-476283	486	398.38	10	4.92

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Name	#Nodes	Time	#Fixed	OP-time
neos-686190	7319	108.75	0	0.02
neos-849702	3629	195.37	0	0.05
neos-916792	309,370	3600.00	0	0.26
neos-934278	486	706.34	0	1.12
net12	1924	583.01	0	0.08
netdiversion	88	786.19	0	0.70
newdano	1,767,126	3600.00	0	0.00
noswot	1,106,633	314.47	0	0.00
ns1208400	1855	494.11	0	0.34
ns1688347	4220	211.77	0	0.02
ns1758913	110	3600.37	10	16.93
ns1766074	925,848	1229.59	0	0.00
ns1830653	46,368	651.52	0	0.02
opm2-z7-s2	2827	697.27	0	0.07
pg5_34	215,677	1263.68	0	0.01
pigeon-10	491,299	345.72	0	0.09
pw-myciel4	514,146	3600.00	0	0.08
qiu	2255	17.49	1	0.02
rail507	949	97.81	0	0.34
ran16x16	328,398	297.59	0	0.00
reblock67	122,028	340.97	0	0.01
rmatr100-p10	675	111.34	0	0.03
rmatr100-p5	357	106.22	0	0.02
rmine6	692,754	3600.00	0	0.02
rocll-4-11	26,842	591.02	0	0.07
rococoC10-001000	106,798	558.22	0	0.01
roll3000	504,127	3134.78	0	0.01
satellites1-25	3350	525.46	0	0.03
sp98ic	200,154	3600.00	0	0.36
sp98ir	6084	66.31	0	0.03
tanglegram1	37	759.36	0	23.54
tanglegram2	3	9.69	0	6.22
timtab1	939,220	547.26	0	0.00
triptim1	1	47.24	0	0.23
unitcal_7	47,241	3600.00	2	2.52
vpphard	459	3601.03	0	19.29
zib54-UUE	438,962	3600.01	0	0.00
AM (# 87)	383,085.4	1524.39	7.8	12.61
GM (# 87)	7866.1	538.41	1.3	1.45
SGM (# 87)	12,822.4	603.19		2.05

TABLE 103. M2010-bench testset: OP-OF-NST settings

Name	#Nodes	Time	#Fixed	OP-time
30n20b8	424	305.75	0	0.03
acc-tight5	2029	284.91	0	0.00
aflow40b	285,631	2327.40	0	0.01
air04	119	34.91	0	0.02
app1-2	16,658	3600.01	0	0.49
ash608gpia-3col	0	1.51	2	0.32
bab5	12,022	3600.00	348	338.00
beasleyC3	524,995	3600.00	0	0.00
biella1	7869	493.09	0	1.28
bienst2	138,693	177.64	0	0.00
binkar10_1	207,304	347.68	0	0.00
bley_xl1	2	313.50	0	0.78
bnatt350	1154	162.25	0	0.01
core2536-691	300	122.66	0	2.19
cov1075	415	7.37	1	0.02
csched010	682,698	3600.00	0	0.01
danoind	921,395	3600.00	0	0.00
dfn-gwin-UUM	51,474	93.62	0	0.00
eil133-2	693	58.61	0	0.01
eilB101	9340	147.43	0	0.01
enlight13	1	0.01	0	0.00
enlight14	1	0.02	0	0.00
ex9	1	264.56	222	199.47
glass4	5,462,509	3600.02	0	0.01
gmu-35-40	5,603,290	3600.03	0	0.01
iis-100-0-cov	81,999	1617.55	0	0.00
iis-bupa-cov	108,067	3600.01	0	0.01
iis-pima-cov	11,775	752.29	0	0.01
lectsched-4-obj	1759	61.31	2	0.31
m100n500k4r1	4,735,335	3600.00	0	0.00
macrophage	683,341	3600.00	0	0.14
map18	213	334.37	0	0.19
map20	323	302.63	0	0.18
mcsched	13,890	134.17	0	0.02
mik-250-1-100-1	4,488,404	1591.92	0	0.01
mine-166-5	1850	41.45	0	0.01
mine-90-10	151,788	806.42	0	0.01
msc98-ip	2131	3600.00	8	2.37
mspp16	—	—	—	—
mzzv11	2615	779.54	0	0.08
n3div36	113,360	3600.00	0	0.48
n3seq24	642	3601.01	0	471.33
n4-3	38,103	600.65	0	0.01
neos-1109824	91	18.24	0	0.21
neos-1337307	4745	140.80	68	0.48
neos-1396125	40,501	165.83	1	0.02
neos13	54,138	2730.78	0	0.60
neos-1601936	10,979	2057.63	0	0.03
neos18	5653	108.12	0	0.02
neos-476283	486	399.18	10	4.92

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Name	#Nodes	Time	#Fixed	OP-time
neos-686190	7319	108.37	0	0.02
neos-849702	3176	102.63	0	0.04
neos-916792	309,875	3600.00	0	0.26
neos-934278	344	787.63	0	1.11
net12	1924	581.60	0	0.08
netdiversion	88	788.05	0	0.70
newdano	1,765,735	3600.00	0	0.00
noswot	1,106,633	314.70	0	0.00
ns1208400	1901	311.69	0	0.34
ns1688347	4220	211.25	0	0.03
ns1758913	2	3600.15	10	16.75
ns1766074	925,848	1243.66	0	0.00
ns1830653	46,368	653.07	0	0.02
opm2-z7-s2	2827	700.92	0	0.07
pg5_34	215,677	1272.10	0	0.01
pigeon-10	313,737	224.40	0	0.10
pw-myciel4	177,929	1706.50	0	0.09
qiu	3113	26.69	1	0.02
rail507	949	97.85	0	0.35
ran16x16	328,398	297.55	0	0.00
reblock67	122,028	339.84	0	0.00
rmatr100-p10	675	112.07	0	0.03
rmatr100-p5	357	106.54	0	0.03
rmine6	693,405	3600.00	0	0.01
rocll-4-11	26,842	589.03	0	0.06
rococoC10-001000	106,798	558.12	0	0.01
roll3000	504,127	3143.47	0	0.02
satellites1-25	3350	525.76	0	0.02
sp98ic	199,792	3600.00	0	0.36
sp98ir	6084	66.61	0	0.02
tanglegram1	37	746.59	0	23.20
tanglegram2	3	9.33	0	6.07
timtab1	939,220	554.73	0	0.00
triptim1	1	46.79	0	0.25
unitcal_7	6966	3211.03	2	2.50
vpphard	459	3601.94	0	19.27
zib54-UUE	458,600	3600.00	0	0.01
AM (# 87)	376,620.8	1296.87	7.8	12.60
GM (# 87)	6572.3	426.34	1.3	1.45
SGM (# 87)	11,052.9	479.39		2.05

TABLE 104. Margot1 testset: S settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
cov954	45,008	71.75	0	0	0	0	0	0	0.01
cov1053	1,547,262	3600.00	0	0	0	0	0	0	0.04
cov1054	194,916	3600.00	0	0	0	0	0	0	0.04
cov1075	848,799	3600.00	0	0	0	0	0	0	0.03
cov1076	834,971	3600.00	0	0	0	0	0	0	0.03
cov1174	870,939	3600.00	0	0	0	0	0	0	0.11
sts27-complemented	3917	1.08	0	0	0	0	0	0	0.00
sts45-complemented	50,962	21.37	0	0	0	0	0	0	0.01
sts63-complemented	6,451,805	3600.00	0	0	0	0	0	0	0.00
sts81-complemented	4,635,157	3600.00	0	0	0	0	0	0	0.02
cod83	1,398,820	3600.00	0	0	0	0	0	0	0.04
cod83r	512,427	1054.53	0	0	0	0	0	0	0.01
cod93	146,897	3600.00	0	0	0	0	0	0	0.18
cod93r	294,907	3600.00	0	0	0	0	0	0	0.02
cod105	35,805	3600.00	0	0	0	0	0	0	0.98
cod105r	4907	352.63	0	0	0	0	0	0	0.20
AM (# 16)	1,117,343.7	2568.83	0.0	0.0	0.0	0.0	0.0	0.0	0.11
GM (# 16)	252,492.0	986.95	1.0	1.0	1.0	1.0	1.0	1.0	1.00
SGM (# 16)	253,255.2	1173.85							0.10

TABLE 105. Margot1 testset: S-fund settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
cov954	11,379	24.07	0	8	0	0	8	0	0.02
cov1053	1,360,781	3600.00	0	9	0	0	9	0	0.04
cov1054	212,192	3600.00	0	9	0	0	9	0	0.05
cov1075	761,749	3600.01	0	9	0	0	9	0	0.03
cov1076	823,568	3600.00	0	9	0	0	9	0	0.03
cov1174	837,057	3600.00	0	10	0	0	10	0	0.12
sts27-complemented	1392	0.60	0	8	0	0	8	0	0.01
sts45-complemented	18,050	10.14	0	5	0	0	5	0	0.01
sts63-complemented	517,608	539.69	0	9	0	0	9	0	0.00
sts81-complemented	2,372,750	3600.00	0	14	0	0	14	0	0.03
cod83	1,570,592	3600.00	0	9	0	0	9	0	0.05
cod83r	311,282	850.10	0	7	0	0	7	0	0.01
cod93	109,954	3600.00	0	10	0	0	10	0	0.19
cod93r	272,785	3600.01	0	8	0	0	8	0	0.03
cod105	35,781	3600.00	0	11	0	0	11	0	0.97
cod105r	4501	331.30	0	10	0	0	10	0	0.21
AM (# 16)	576,338.8	2359.74	0.0	9.1	0.0	0.0	9.1	0.0	0.11
GM (# 16)	156,212.8	764.32	1.0	8.9	1.0	1.0	8.9	1.0	1.00
SGM (# 16)	157,202.6	940.14							0.11

TABLE 106. Margot1 testset: S-fundnolp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
cov954	40,437	64.82	0	8	0	0	8	0	0.02
cov1053	1,540,248	3600.00	0	9	0	0	9	0	0.05
cov1054	194,705	3600.00	0	9	0	0	9	0	0.05
cov1075	835,493	3600.00	0	9	0	0	9	0	0.02
cov1076	841,242	3600.00	0	9	0	0	9	0	0.03
cov1174	861,445	3600.00	0	10	0	0	10	0	0.12
sts27-complemented	2908	0.89	0	8	0	0	8	0	0.00
sts45-complemented	61,676	26.09	0	5	0	0	5	0	0.00
sts63-complemented	5,641,732	3600.00	0	9	0	0	9	0	0.01
sts81-complemented	4,719,704	3600.01	0	14	0	0	14	0	0.02
cod83	1,394,555	3600.00	0	9	0	0	9	0	0.05
cod83r	610,627	1159.22	0	7	0	0	7	0	0.01
cod93	137,408	3600.00	0	10	0	0	10	0	0.19
cod93r	308,550	3600.00	0	8	0	0	8	0	0.02
cod105	37,718	3600.00	0	11	0	0	11	0	0.98
cod105r	5327	355.19	0	10	0	0	10	0	0.21
AM (# 16)	1,077,110.9	2575.39	0.0	9.1	0.0	0.0	9.1	0.0	0.11
GM (# 16)	251,386.0	994.57	1.0	8.9	1.0	1.0	8.9	1.0	1.00
SGM (# 16)	252,252.6	1183.89							0.11

TABLE 107. Margot1 testset: S-nolp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
cov954	45,008	72.02	0	0	0	0	0	0	0.02
cov1053	1,542,546	3600.00	0	0	0	0	0	0	0.04
cov1054	194,534	3600.00	0	0	0	0	0	0	0.05
cov1075	847,457	3600.00	0	0	0	0	0	0	0.02
cov1076	830,338	3600.00	0	0	0	0	0	0	0.03
cov1174	871,587	3600.00	0	0	0	0	0	0	0.11
sts27-complemented	3917	1.07	0	0	0	0	0	0	0.00
sts45-complemented	50,962	21.49	0	0	0	0	0	0	0.01
sts63-complemented	6,464,519	3600.00	0	0	0	0	0	0	0.00
sts81-complemented	4,692,967	3600.01	0	0	0	0	0	0	0.02
cod83	1,399,259	3600.00	0	0	0	0	0	0	0.04
cod83r	512,427	1050.05	0	0	0	0	0	0	0.01
cod93	146,952	3600.00	0	0	0	0	0	0	0.18
cod93r	294,605	3600.00	0	0	0	0	0	0	0.02
cod105	34,669	3600.01	0	0	0	0	0	0	0.97
cod105r	4907	353.44	0	0	0	0	0	0	0.20
AM (# 16)	1,121,040.9	2568.63	0.0	0.0	0.0	0.0	0.0	0.0	0.11
GM (# 16)	252,024.8	986.84	1.0	1.0	1.0	1.0	1.0	1.0	1.00
SGM (# 16)	252,787.9	1174.16							0.10

TABLE 108. Margot1 testset: S-prob settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
cov954	45,008	71.54	0	0	0	0	0	0	0.02
cov1053	1,549,365	3600.00	0	0	0	0	0	0	0.04
cov1054	194,934	3600.00	0	0	0	0	0	0	0.05
cov1075	843,150	3600.00	0	0	0	0	0	0	0.03
cov1076	834,579	3600.00	0	0	0	0	0	0	0.02
cov1174	864,557	3600.00	0	0	0	0	0	0	0.11
sts27-complemented	3917	1.08	0	0	0	0	0	0	0.00
sts45-complemented	50,962	21.35	0	0	0	0	0	0	0.01
sts63-complemented	6,400,499	3600.00	0	0	0	0	0	0	0.01
sts81-complemented	4,696,819	3600.00	0	0	0	0	0	0	0.02
cod83	1,386,097	3600.00	0	0	0	0	0	0	0.05
cod83r	512,427	1050.83	0	0	0	0	0	0	0.01
cod93	147,071	3600.00	0	0	0	0	0	0	0.18
cod93r	294,279	3600.00	0	0	0	0	0	0	0.03
cod105	36,465	3600.01	0	0	0	0	0	0	0.98
cod105r	4907	351.43	0	0	0	0	0	0	0.20
AM (# 16)	1,116,564.8	2568.52	0.0	0.0	0.0	0.0	0.0	0.0	0.11
GM (# 16)	252,497.7	986.29	1.0	1.0	1.0	1.0	1.0	1.0	1.00
SGM (# 16)	253,260.1	1173.11							0.11

TABLE 109. Margot1 testset: S-orbitmin settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
cov954	8605	15.67	0	0	0	1	125	0	0.06
cov1053	1,753,244	3600.00	0	0	0	1	251	0	0.12
cov1054	203,684	3600.00	0	0	0	1	251	0	0.13
cov1075	316,704	1286.59	0	0	0	1	119	0	0.08
cov1076	809,604	3600.00	0	0	0	1	119	0	0.07
cov1174	947,575	3600.00	0	0	0	1	329	0	0.20
sts27-complemented	1423	0.48	0	0	0	1	26	0	0.01
sts45-complemented	21,325	8.74	0	0	0	1	44	0	0.03
sts63-complemented	1,839,408	966.05	0	0	0	1	62	0	0.04
sts81-complemented	4,993,465	3600.00	0	0	0	1	80	0	0.04
cod83	359,329	827.21	0	0	0	1	255	0	0.13
cod83r	38,064	75.56	0	0	0	1	55	0	0.03
cod93	279,939	3600.00	0	0	0	1	511	0	0.25
cod93r	382,932	3600.00	0	0	0	1	83	0	0.04
cod105	5146	448.51	0	0	0	1	1023	0	0.60
cod105r	7	12.96	0	0	0	1	461	0	0.26
AM (# 16)	747,528.4	1802.61	0.0	0.0	0.0	1.0	237.1	0.0	0.13
GM (# 16)	87,109.2	403.03	1.0	1.0	1.0	1.0	148.9	1.0	1.00
SGM (# 16)	103,895.7	519.73							0.13

TABLE 110. Margot2 testset: S settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
bibd1032.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd1042.mylp	1	0.02	0	0	0	0	0	0	0.01
bibd1054.mylp	6	0.40	0	0	0	0	0	0	0.02
bibd1152.mylp	1	0.11	0	0	0	0	0	0	0.07
bibd1154.mylp	9	1.02	0	0	0	0	0	0	0.08
bibd1265.mylp	7	2.66	0	0	0	0	0	0	0.31
bibd1331.mylp	1	0.02	0	0	0	0	0	0	0.01
bibd1341.mylp	1	0.27	0	0	0	0	0	0	0.21
bibd1342.mylp	9	1.60	0	0	0	0	0	0	0.21
bibd1531.mylp	1	0.03	0	0	0	0	0	0	0.02
bibd6310.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd731.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd931.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd933.mylp	1	0.01	0	0	0	0	0	0	0.01
bibd943.mylp	1	0.02	0	0	0	0	0	0	0.01
ca36243	6	0.32	0	0	0	0	0	0	0.01
ca57245	641,231	2785.71	0	0	0	0	0	0	0.01
ca77247	520,339	3600.00	0	0	0	0	0	0	0.02
clique9	1	0.15	0	0	0	0	0	0	0.09
codbt03.mylp	1	0.01	0	0	0	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0	0	0	0.01
codbt05.mylp	743,484	3600.00	0	0	0	0	0	0	0.03
codbt06.mylp	14,086	3600.01	0	0	0	0	0	0	0.24
codbt15.mylp	50,511	3600.01	0	0	0	0	0	0	0.19
codbt24.mylp	239,931	3600.00	0	0	0	0	0	0	0.09
codbt33.mylp	792	18.73	0	0	0	0	0	0	0.04
codbt34.mylp	21,217	3600.00	0	0	0	0	0	0	0.51
codbt42.mylp	58,580	94.74	0	0	0	0	0	0	0.02
codbt43.mylp	92,828	3600.01	0	0	0	0	0	0	0.18
codbt52.mylp	323,039	3600.00	0	0	0	0	0	0	0.08
codbt60.mylp	776	0.78	0	0	0	0	0	0	0.00
codbt61.mylp	1393	13.47	0	0	0	0	0	0	0.03
codbt70.mylp	1	0.02	0	0	0	0	0	0	0.02
codbt71.mylp	153,025	3600.00	0	0	0	0	0	0	0.11
codbt80.mylp	49,416	328.50	0	0	0	0	0	0	0.05

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
codbt90.mylp	48,884	3600.00	0	0	0	0	0	0	0.20
flosn52	10,191	15.34	0	0	0	0	0	0	0.01
flosn60	31,090	53.35	0	0	0	0	0	0	0.01
flosn84	369,930	767.50	0	0	0	0	0	0	0.02
jgt18	5515	3.06	0	0	0	0	0	0	0.00
jgt30	451,853	769.34	0	0	0	0	0	0	0.01
mered	72	8.27	0	0	0	0	0	0	0.16
O4_35	1	0.14	0	0	0	0	0	0	0.03
oa25332	1	0.03	0	0	0	0	0	0	0.03
oa25342	1	0.03	0	0	0	0	0	0	0.03
oa26332	77,722	3600.01	0	0	0	0	0	0	0.23
oa36243	1	0.09	0	0	0	0	0	0	0.00
oa56243	1	0.01	0	0	0	0	0	0	0.00
oa57245	9715	21.27	0	0	0	0	0	0	0.02
oa66234	1	0.00	0	0	0	0	0	0	0.00
oa67233	1	0.00	0	0	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0	0	0.01
oa76234	4	0.05	0	0	0	0	0	0	0.00
oa77233	1	0.01	0	0	0	0	0	0	0.00
oa77247	318,856	582.45	0	0	0	0	0	0	0.02
of5_14_7	2309	2.30	0	0	0	0	0	0	0.01
of7_18_9	1	0.13	0	0	0	0	0	0	0.07
ofsub9	2,522,670	3600.00	0	0	0	0	0	0	0.01
pa36243	3815	3.37	0	0	0	0	0	0	0.00
pa57245	758,021	3600.00	0	0	0	0	0	0	0.02
pa77247	801,471	3600.00	0	0	0	0	0	0	0.02
sts15.mylp	71	0.05	0	0	0	0	0	0	0.00
sts21.mylp	371	0.18	0	0	0	0	0	0	0.00
sts9.mylp	1	0.00	0	0	0	0	0	0	0.00
AM (# 79)	105,357.9	707.29	0.0	0.0	0.0	0.0	0.0	0.0	0.05
GM (# 79)	76.6	9.12	1.0	1.0	1.0	1.0	1.0	1.0	1.00
SGM (# 79)	970.0	32.71							0.05

TABLE 111. Margot2 testset: S-fund settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
bibd1032.mylp	1	0.02	0	9	0	0	9	0	0.01
bibd1042.mylp	1	0.02	0	8	0	0	8	0	0.01
bibd1054.mylp	7	0.48	0	8	0	0	8	0	0.02
bibd1152.mylp	1	0.15	0	9	0	0	9	0	0.08
bibd1154.mylp	9	0.90	0	9	0	0	9	0	0.07
bibd1265.mylp	6	2.99	0	10	0	0	10	0	0.31
bibd1331.mylp	1	0.04	0	11	0	0	11	0	0.01
bibd1341.mylp	1	0.29	0	11	0	0	11	0	0.21
bibd1342.mylp	8	0.99	0	11	0	0	11	0	0.21
bibd1531.mylp	1	0.08	0	13	0	0	13	0	0.02
bibd6310.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	5	0	0	5	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd731.mylp	1	0.01	0	5	0	0	5	0	0.00
bibd732.mylp	1	0.00	0	5	0	0	5	0	0.00
bibd733.mylp	1	0.00	0	5	0	0	5	0	0.00
bibd734.mylp	1	0.00	0	5	0	0	5	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	6	0	0	6	0	0.00
bibd846.mylp	1	0.00	0	6	0	0	6	0	0.00
bibd931.mylp	1	0.01	0	7	0	0	7	0	0.00
bibd932.mylp	1	0.01	0	7	0	0	7	0	0.01
bibd933.mylp	1	0.01	0	7	0	0	7	0	0.01
bibd943.mylp	1	0.14	0	7	0	0	7	0	0.01
ca36243	28	0.42	0	6	0	0	6	0	0.01
ca57245	150,515	772.48	0	7	0	0	7	0	0.02
ca77247	460,687	3600.00	0	7	0	0	7	0	0.03
clique9	1	0.16	0	15	0	0	15	0	0.11
codbt03.mylp	1	0.03	0	4	0	0	4	0	0.00
codbt04.mylp	1	0.02	0	6	0	0	6	0	0.01
codbt05.mylp	280,835	1477.37	0	7	0	0	7	0	0.03
codbt06.mylp	12,498	3600.01	0	8	0	0	8	0	0.25
codbt15.mylp	60,252	3600.00	0	7	0	0	7	0	0.19
codbt24.mylp	329,716	3600.00	0	7	0	0	7	0	0.10
codbt33.mylp	546	16.69	0	7	0	0	7	0	0.04
codbt34.mylp	21,761	3600.01	0	8	0	0	8	0	0.51
codbt42.mylp	36,660	56.64	0	7	0	0	7	0	0.01
codbt43.mylp	118,735	3600.00	0	8	0	0	8	0	0.18
codbt52.mylp	329,707	3600.00	0	8	0	0	8	0	0.07
codbt60.mylp	148	0.48	0	7	0	0	7	0	0.01
codbt61.mylp	1266	13.97	0	10	0	0	10	0	0.03
codbt70.mylp	1	0.02	0	8	0	0	8	0	0.02
codbt71.mylp	137,680	3600.00	0	11	0	0	11	0	0.12
codbt80.mylp	26,739	237.16	0	9	0	0	9	0	0.06

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
codbt90.mylp	45,604	3600.00	0	10	0	0	10	0	0.20
flosn52	12,147	26.04	0	4	0	0	4	0	0.00
flosn60	30,005	66.88	0	4	0	0	4	0	0.01
flosn84	161,631	549.69	0	4	0	0	4	0	0.01
jgt18	5075	3.58	0	4	0	0	4	0	0.00
jgt30	325,283	617.57	0	5	0	0	5	0	0.01
mered	1102	18.74	0	31	0	0	31	0	0.19
O4_35	1	0.13	0	7	0	0	7	0	0.03
oa25332	6	0.94	0	7	0	0	7	0	0.03
oa25342	1	0.04	0	7	0	0	7	0	0.03
oa26332	48,055	3600.00	0	8	0	0	8	0	0.24
oa36243	1	0.08	0	6	0	0	6	0	0.00
oa56243	1	0.03	0	6	0	0	6	0	0.01
oa57245	5964	12.57	0	7	0	0	7	0	0.03
oa66234	1	0.01	0	3	0	0	3	0	0.00
oa67233	1	0.02	0	4	0	0	4	0	0.01
oa68233	1	0.10	0	5	0	0	5	0	0.02
oa76234	1	0.01	0	3	0	0	3	0	0.00
oa77233	1	0.01	0	4	0	0	4	0	0.00
oa77247	498,656	1480.77	0	7	0	0	7	0	0.03
of5_14_7	792	2.12	0	9	0	0	9	0	0.00
of7_18_9	1	0.22	0	16	0	0	16	0	0.09
ofsub9	5786	5.54	0	9	0	0	9	0	0.02
pa36243	1305	1.55	0	6	0	0	6	0	0.00
pa57245	812,876	3600.00	0	7	0	0	7	0	0.02
pa77247	774,460	3600.00	0	7	0	0	7	0	0.02
sts15.mylp	35	0.05	0	3	0	0	3	0	0.00
sts21.mylp	257	0.18	0	6	0	0	6	0	0.00
sts9.mylp	1	0.01	0	4	0	0	4	0	0.01
AM (# 79)	59,454.1	614.79	0.0	6.6	0.0	0.0	6.6	0.0	0.05
GM (# 79)	66.2	8.11	1.0	5.5	1.0	1.0	5.5	1.0	1.00
SGM (# 79)	809.5	28.89							0.05

TABLE 112. Margot2 testset: S-fundnlp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
bibd1032.mylp	1	0.02	0	9	0	0	9	0	0.01
bibd1042.mylp	1	0.02	0	8	0	0	8	0	0.01
bibd1054.mylp	6	0.41	0	8	0	0	8	0	0.02
bibd1152.mylp	1	0.11	0	9	0	0	9	0	0.07
bibd1154.mylp	9	1.02	0	9	0	0	9	0	0.08
bibd1265.mylp	7	2.71	0	10	0	0	10	0	0.32
bibd1331.mylp	1	0.04	0	11	0	0	11	0	0.02
bibd1341.mylp	1	0.28	0	11	0	0	11	0	0.21
bibd1342.mylp	9	1.70	0	11	0	0	11	0	0.21
bibd1531.mylp	1	0.05	0	13	0	0	13	0	0.02
bibd6310.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd632.mylp	1	0.01	0	5	0	0	5	0	0.01
bibd634.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd731.mylp	1	0.01	0	5	0	0	5	0	0.00
bibd732.mylp	1	0.01	0	5	0	0	5	0	0.00
bibd733.mylp	1	0.01	0	5	0	0	5	0	0.01
bibd734.mylp	1	0.01	0	5	0	0	5	0	0.01
bibd735.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	6	0	0	6	0	0.01
bibd846.mylp	1	0.01	0	6	0	0	6	0	0.01
bibd931.mylp	1	0.01	0	7	0	0	7	0	0.00
bibd932.mylp	1	0.01	0	7	0	0	7	0	0.01
bibd933.mylp	1	0.01	0	7	0	0	7	0	0.01
bibd943.mylp	1	0.03	0	7	0	0	7	0	0.01
ca36243	6	0.34	0	6	0	0	6	0	0.01
ca57245	641,231	2797.77	0	7	0	0	7	0	0.02
ca77247	518,507	3600.00	0	7	0	0	7	0	0.03
clique9	1	0.16	0	15	0	0	15	0	0.10
codbt03.mylp	1	0.01	0	4	0	0	4	0	0.00
codbt04.mylp	1	0.02	0	6	0	0	6	0	0.01
codbt05.mylp	727,258	3600.00	0	7	0	0	7	0	0.03
codbt06.mylp	12,359	3600.02	0	8	0	0	8	0	0.25
codbt15.mylp	52,125	3600.01	0	7	0	0	7	0	0.20
codbt24.mylp	239,175	3600.01	0	7	0	0	7	0	0.11
codbt33.mylp	645	17.79	0	7	0	0	7	0	0.05
codbt34.mylp	24,178	3600.01	0	8	0	0	8	0	0.51
codbt42.mylp	63,435	100.73	0	7	0	0	7	0	0.02
codbt43.mylp	128,538	3600.01	0	8	0	0	8	0	0.18
codbt52.mylp	327,805	3600.00	0	8	0	0	8	0	0.09
codbt60.mylp	695	0.76	0	7	0	0	7	0	0.01
codbt61.mylp	1944	17.60	0	10	0	0	10	0	0.04
codbt70.mylp	1	0.02	0	8	0	0	8	0	0.01
codbt71.mylp	168,107	3600.00	0	11	0	0	11	0	0.12
codbt80.mylp	46,019	310.65	0	9	0	0	9	0	0.06

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
codbt90.mylp	48,742	3600.01	0	10	0	0	10	0	0.21
flosn52	13,104	23.20	0	4	0	0	4	0	0.01
flosn60	34,318	69.56	0	4	0	0	4	0	0.01
flosn84	241,807	601.38	0	4	0	0	4	0	0.01
jgt18	5870	3.54	0	4	0	0	4	0	0.00
jgt30	349,322	581.82	0	5	0	0	5	0	0.01
mered	91	8.69	0	31	0	0	31	0	0.19
O4_35	1	0.16	0	7	0	0	7	0	0.03
oa25332	1	0.03	0	7	0	0	7	0	0.03
oa25342	1	0.04	0	7	0	0	7	0	0.02
oa26332	79,768	3600.00	0	8	0	0	8	0	0.24
oa36243	1	0.10	0	6	0	0	6	0	0.01
oa56243	1	0.02	0	6	0	0	6	0	0.01
oa57245	8841	19.61	0	7	0	0	7	0	0.02
oa66234	1	0.01	0	3	0	0	3	0	0.01
oa67233	1	0.01	0	4	0	0	4	0	0.00
oa68233	1	0.08	0	5	0	0	5	0	0.01
oa76234	5	0.05	0	3	0	0	3	0	0.00
oa77233	1	0.01	0	4	0	0	4	0	0.00
oa77247	792,170	1721.39	0	7	0	0	7	0	0.03
of5_14_7	2448	2.62	0	9	0	0	9	0	0.01
of7_18_9	1	0.16	0	16	0	0	16	0	0.09
ofsub9	3,007,751	3600.00	0	9	0	0	9	0	0.01
pa36243	3853	3.29	0	6	0	0	6	0	0.01
pa57245	759,051	3600.00	0	7	0	0	7	0	0.03
pa77247	801,208	3600.00	0	7	0	0	7	0	0.02
sts15.mylp	77	0.06	0	3	0	0	3	0	0.00
sts21.mylp	311	0.17	0	6	0	0	6	0	0.00
sts9.mylp	1	0.00	0	4	0	0	4	0	0.00
AM (# 79)	115,200.3	717.57	0.0	6.6	0.0	0.0	6.6	0.0	0.05
GM (# 79)	78.2	9.32	1.0	5.5	1.0	1.0	5.5	1.0	1.00
SGM (# 79)	987.8	33.40							0.05

TABLE 113. Margot2 testset: S-nolp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
bibd1032.mylp	1	0.01	0	0	0	0	0	0	0.01
bibd1042.mylp	1	0.01	0	0	0	0	0	0	0.01
bibd1054.mylp	6	0.40	0	0	0	0	0	0	0.02
bibd1152.mylp	1	0.11	0	0	0	0	0	0	0.07
bibd1154.mylp	9	1.01	0	0	0	0	0	0	0.07
bibd1265.mylp	7	2.67	0	0	0	0	0	0	0.31
bibd1331.mylp	1	0.02	0	0	0	0	0	0	0.01
bibd1341.mylp	1	0.26	0	0	0	0	0	0	0.20
bibd1342.mylp	9	1.58	0	0	0	0	0	0	0.21
bibd1531.mylp	1	0.02	0	0	0	0	0	0	0.02
bibd6310.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd731.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd732.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd734.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd846.mylp	1	0.01	0	0	0	0	0	0	0.01
bibd931.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd933.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd943.mylp	1	0.01	0	0	0	0	0	0	0.00
ca36243	6	0.32	0	0	0	0	0	0	0.00
ca57245	641,231	2793.82	0	0	0	0	0	0	0.02
ca77247	519,940	3600.00	0	0	0	0	0	0	0.02
clique9	1	0.15	0	0	0	0	0	0	0.10
codbt03.mylp	1	0.00	0	0	0	0	0	0	0.00
codbt04.mylp	1	0.00	0	0	0	0	0	0	0.00
codbt05.mylp	745,052	3600.00	0	0	0	0	0	0	0.02
codbt06.mylp	14,067	3600.02	0	0	0	0	0	0	0.24
codbt15.mylp	50,388	3600.00	0	0	0	0	0	0	0.19
codbt24.mylp	240,099	3600.00	0	0	0	0	0	0	0.10
codbt33.mylp	792	18.72	0	0	0	0	0	0	0.04
codbt34.mylp	21,226	3600.00	0	0	0	0	0	0	0.52
codbt42.mylp	58,580	94.75	0	0	0	0	0	0	0.01
codbt43.mylp	92,798	3600.01	0	0	0	0	0	0	0.17
codbt52.mylp	323,249	3600.00	0	0	0	0	0	0	0.08
codbt60.mylp	776	0.82	0	0	0	0	0	0	0.01
codbt61.mylp	1393	13.45	0	0	0	0	0	0	0.03
codbt70.mylp	1	0.02	0	0	0	0	0	0	0.01
codbt71.mylp	153,052	3600.00	0	0	0	0	0	0	0.11
codbt80.mylp	49,416	329.06	0	0	0	0	0	0	0.05

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
codbt90.mylp	48,928	3600.00	0	0	0	0	0	0	0.20
flosn52	10,191	15.46	0	0	0	0	0	0	0.01
flosn60	31,090	53.33	0	0	0	0	0	0	0.01
flosn84	369,930	773.00	0	0	0	0	0	0	0.01
jgt18	5515	3.02	0	0	0	0	0	0	0.01
jgt30	451,853	774.00	0	0	0	0	0	0	0.00
mered	72	8.26	0	0	0	0	0	0	0.17
O4_35	1	0.13	0	0	0	0	0	0	0.03
oa25332	1	0.03	0	0	0	0	0	0	0.03
oa25342	1	0.03	0	0	0	0	0	0	0.03
oa26332	77,600	3600.00	0	0	0	0	0	0	0.22
oa36243	1	0.09	0	0	0	0	0	0	0.00
oa56243	1	0.01	0	0	0	0	0	0	0.00
oa57245	9715	20.77	0	0	0	0	0	0	0.02
oa66234	1	0.01	0	0	0	0	0	0	0.00
oa67233	1	0.01	0	0	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0	0	0.02
oa76234	4	0.05	0	0	0	0	0	0	0.01
oa77233	1	0.00	0	0	0	0	0	0	0.00
oa77247	318,856	583.61	0	0	0	0	0	0	0.02
of5_14_7	2309	2.32	0	0	0	0	0	0	0.01
of7_18_9	1	0.13	0	0	0	0	0	0	0.08
ofsub9	2,523,019	3600.00	0	0	0	0	0	0	0.02
pa36243	3815	3.41	0	0	0	0	0	0	0.01
pa57245	757,817	3600.00	0	0	0	0	0	0	0.01
pa77247	802,182	3600.00	0	0	0	0	0	0	0.02
sts15.mylp	71	0.05	0	0	0	0	0	0	0.01
sts21.mylp	371	0.18	0	0	0	0	0	0	0.00
sts9.mylp	1	0.00	0	0	0	0	0	0	0.00
AM (# 79)	105,385.6	707.53	0.0	0.0	0.0	0.0	0.0	0.0	0.05
GM (# 79)	76.6	9.12	1.0	1.0	1.0	1.0	1.0	1.0	1.00
SGM (# 79)	970.0	32.72							0.05

TABLE 114. Margot2 testset: S-prob settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
bibd1032.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd1042.mylp	1	0.02	0	0	0	0	0	0	0.01
bibd1054.mylp	6	0.40	0	0	0	0	0	0	0.02
bibd1152.mylp	1	0.10	0	0	0	0	0	0	0.08
bibd1154.mylp	9	1.02	0	0	0	0	0	0	0.07
bibd1265.mylp	7	2.65	0	0	0	0	0	0	0.32
bibd1331.mylp	1	0.02	0	0	0	0	0	0	0.01
bibd1341.mylp	1	0.27	0	0	0	0	0	0	0.20
bibd1342.mylp	9	1.58	0	0	0	0	0	0	0.21
bibd1531.mylp	1	0.02	0	0	0	0	0	0	0.02
bibd6310.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd632.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd731.mylp	1	0.01	0	0	0	0	0	0	0.01
bibd732.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd733.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd734.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd843.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd846.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd931.mylp	1	0.01	0	0	0	0	0	0	0.00
bibd932.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd933.mylp	1	0.00	0	0	0	0	0	0	0.00
bibd943.mylp	1	0.01	0	0	0	0	0	0	0.00
ca36243	6	0.31	0	0	0	0	0	0	0.01
ca57245	641,231	2779.39	0	0	0	0	0	0	0.02
ca77247	522,292	3600.00	0	0	0	0	0	0	0.02
clique9	1	0.15	0	0	0	0	0	0	0.10
codbt03.mylp	1	0.02	0	0	0	0	0	0	0.00
codbt04.mylp	1	0.01	0	0	0	0	0	0	0.01
codbt05.mylp	743,985	3600.00	0	0	0	0	0	0	0.03
codbt06.mylp	14,040	3600.03	0	0	0	0	0	0	0.24
codbt15.mylp	50,415	3600.00	0	0	0	0	0	0	0.20
codbt24.mylp	240,053	3600.00	0	0	0	0	0	0	0.10
codbt33.mylp	792	18.71	0	0	0	0	0	0	0.03
codbt34.mylp	21,243	3600.01	0	0	0	0	0	0	0.50
codbt42.mylp	58,580	94.31	0	0	0	0	0	0	0.02
codbt43.mylp	92,884	3600.01	0	0	0	0	0	0	0.17
codbt52.mylp	323,012	3600.00	0	0	0	0	0	0	0.08
codbt60.mylp	776	0.78	0	0	0	0	0	0	0.00
codbt61.mylp	1393	13.52	0	0	0	0	0	0	0.03
codbt70.mylp	1	0.02	0	0	0	0	0	0	0.02
codbt71.mylp	153,057	3600.00	0	0	0	0	0	0	0.11
codbt80.mylp	49,416	328.66	0	0	0	0	0	0	0.05

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
codbt90.mylp	48,861	3600.00	0	0	0	0	0	0	0.21
flosn52	10,191	15.28	0	0	0	0	0	0	0.00
flosn60	31,090	53.11	0	0	0	0	0	0	0.00
flosn84	369,930	768.17	0	0	0	0	0	0	0.01
jgt18	5515	3.00	0	0	0	0	0	0	0.00
jgt30	451,853	774.23	0	0	0	0	0	0	0.00
mered	72	8.24	0	0	0	0	0	0	0.17
O4_35	1	0.14	0	0	0	0	0	0	0.03
oa25332	1	0.03	0	0	0	0	0	0	0.03
oa25342	1	0.04	0	0	0	0	0	0	0.02
oa26332	77,687	3599.99	0	0	0	0	0	0	0.22
oa36243	1	0.10	0	0	0	0	0	0	0.01
oa56243	1	0.01	0	0	0	0	0	0	0.00
oa57245	9715	21.17	0	0	0	0	0	0	0.02
oa66234	1	0.01	0	0	0	0	0	0	0.00
oa67233	1	0.01	0	0	0	0	0	0	0.00
oa68233	1	0.08	0	0	0	0	0	0	0.01
oa76234	4	0.04	0	0	0	0	0	0	0.00
oa77233	1	0.01	0	0	0	0	0	0	0.00
oa77247	318,856	582.46	0	0	0	0	0	0	0.02
of5_14_7	2309	2.33	0	0	0	0	0	0	0.01
of7_18_9	1	0.14	0	0	0	0	0	0	0.08
ofsub9	2,522,302	3600.00	0	0	0	0	0	0	0.01
pa36243	3815	3.42	0	0	0	0	0	0	0.00
pa57245	761,036	3600.00	0	0	0	0	0	0	0.02
pa77247	802,007	3600.00	0	0	0	0	0	0	0.01
sts15.mylp	71	0.05	0	0	0	0	0	0	0.00
sts21.mylp	371	0.18	0	0	0	0	0	0	0.01
sts9.mylp	1	0.00	0	0	0	0	0	0	0.00
AM (# 79)	105,429.4	707.27	0.0	0.0	0.0	0.0	0.0	0.0	0.05
GM (# 79)	76.6	9.12	1.0	1.0	1.0	1.0	1.0	1.0	1.00
SGM (# 79)	970.0	32.71							0.04

TABLE 115. Margot2 testset: S-orbitmin settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
bibd1032.mylp	1	0.02	0	0	0	1	39	0	0.02
bibd1042.mylp	1	0.05	0	0	0	1	69	0	0.03
bibd1054.mylp	5	0.46	0	0	0	1	55	0	0.02
bibd1152.mylp	2	1.34	0	0	0	1	125	0	0.07
bibd1154.mylp	9	1.24	0	0	0	1	125	0	0.07
bibd1265.mylp	6	2.38	0	0	0	1	209	0	0.12
bibd1331.mylp	1	0.01	0	0	0	1	5	0	0.00
bibd1341.mylp	2	2.76	0	0	0	1	329	0	0.16
bibd1342.mylp	6	1.69	0	0	0	1	329	0	0.16
bibd1531.mylp	1	0.03	0	0	0	1	6	0	0.01
bibd6310.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd632.mylp	1	0.01	0	0	0	1	11	0	0.00
bibd634.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd636.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd638.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd731.mylp	1	0.01	0	0	0	1	2	0	0.00
bibd732.mylp	1	0.01	0	0	0	1	2	0	0.00
bibd733.mylp	1	0.00	0	0	0	1	2	0	0.00
bibd734.mylp	1	0.00	0	0	0	1	2	0	0.00
bibd735.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd736.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd737.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd738.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd739.mylp	0	0.00	0	0	0	0	0	0	0.00
bibd843.mylp	1	0.02	0	0	0	1	14	0	0.01
bibd846.mylp	1	0.02	0	0	0	1	14	0	0.01
bibd931.mylp	1	0.00	0	0	0	1	3	0	0.00
bibd932.mylp	1	0.01	0	0	0	1	3	0	0.00
bibd933.mylp	1	0.01	0	0	0	1	3	0	0.00
bibd943.mylp	1	0.08	0	0	0	1	34	0	0.02
ca36243	2	0.16	0	0	0	1	63	0	0.03
ca57245	27,467	155.89	0	0	0	1	127	0	0.06
c77247	139,948	1008.55	0	0	0	1	127	0	0.06
clique9	1	0.26	0	0	0	1	287	0	0.14
codbt03.mylp	1	0.02	0	0	0	1	26	0	0.01
codbt04.mylp	1	0.04	0	0	0	1	80	0	0.04
codbt05.mylp	169,357	880.03	0	0	0	1	242	0	0.12
codbt06.mylp	13,881	3600.01	0	0	0	1	728	0	0.36
codbt15.mylp	62,276	3600.00	0	0	0	1	485	0	0.23
codbt24.mylp	352,931	3600.00	0	0	0	1	323	0	0.15
codbt33.mylp	13	4.94	0	0	0	1	215	0	0.11
codbt34.mylp	27,732	3600.01	0	0	0	1	647	0	0.31
codbt42.mylp	7747	16.53	0	0	0	1	143	0	0.07
codbt43.mylp	101,548	3600.00	0	0	0	1	431	0	0.21
codbt52.mylp	381,368	3600.00	0	0	0	1	287	0	0.13
codbt60.mylp	92	0.35	0	0	0	1	63	0	0.03
codbt61.mylp	384	6.66	0	0	0	1	191	0	0.09
codbt70.mylp	1	0.07	0	0	0	1	127	0	0.06
codbt71.mylp	245,315	3600.00	0	0	0	1	383	0	0.18
codbt80.mylp	4823	43.96	0	0	0	1	255	0	0.12

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
codbt90.mylp	65,968	3600.00	0	0	0	1	511	0	0.25
flosn52	3660	6.79	0	0	0	1	77	0	0.04
flosn60	5293	8.96	0	0	0	1	89	0	0.04
flosn84	48,872	99.14	0	0	0	1	125	0	0.07
jgt18	1208	1.32	0	0	0	1	7	0	0.00
jgt30	86,641	178.43	0	0	0	1	7	0	0.01
mered	51	7.07	0	0	0	1	239	0	0.12
O4_35	1	0.40	0	0	0	1	279	0	0.13
oa25332	1	0.14	0	0	0	1	242	0	0.12
oa25342	1	0.12	0	0	0	1	242	0	0.12
oa26332	59,796	3600.01	0	0	0	1	728	0	0.37
oa36243	1	0.08	0	0	0	1	63	0	0.03
oa56243	1	0.04	0	0	0	1	63	0	0.03
oa57245	17	1.56	0	0	0	1	127	0	0.06
oa66234	1	0.00	0	0	0	1	1	0	0.00
oa67233	1	0.01	0	0	0	1	1	0	0.01
oa68233	1	0.02	0	0	0	1	1	0	0.00
oa76234	2	0.02	0	0	0	1	1	0	0.00
oa77233	1	0.01	0	0	0	1	1	0	0.01
oa77247	84,327	156.16	0	0	0	1	127	0	0.07
of5_14_7	1	0.20	0	0	0	1	9	0	0.00
of7_18_9	1	0.21	0	0	0	1	167	0	0.08
ofsub9	2,183,017	3600.00	0	0	0	1	41	0	0.02
pa36243	328	0.80	0	0	0	1	63	0	0.03
pa57245	513,425	1979.14	0	0	0	1	127	0	0.07
pa77247	826,070	3600.00	0	0	0	1	127	0	0.07
sts15.mylp	13	0.04	0	0	0	1	14	0	0.00
sts21.mylp	119	0.09	0	0	0	1	20	0	0.01
sts9.mylp	1	0.02	0	0	0	1	8	0	0.01
AM (# 79)	68,528.5	559.09	0.0	0.0	0.0	0.9	128.1	0.0	0.06
GM (# 79)	42.3	6.76	1.0	1.0	1.0	1.0	29.6	1.0	1.00
SGM (# 79)	593.2	24.09							0.06

TABLE 116. M2003-sym testset: S settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
fast0507	919	95.86	0	0	0	0	0	0	0.04
glass4	4,998,145	3600.02	1	0	0	0	1	0	0.01
harp2	8,593,639	3600.01	0	0	0	0	0	0	0.00
mas74	4,252,374	991.62	2	0	0	0	2	0	0.01
mas76	480,312	99.62	2	0	0	0	2	0	0.00
misc07	23,358	20.76	1	0	0	0	2	0	0.00
mkc	462,836	3600.00	61	0	0	0	109	0	2.03
mod011	1544	67.19	6	0	0	0	6	0	0.02
msc98-ip	4625	3600.01	4	0	0	0	4	0	0.14
mzzv11	2709	645.56	1	0	0	0	1	0	0.05
net12	2096	733.67	4	0	0	0	4	0	0.10
noswot	370,706	110.58	1	0	0	0	3	0	0.00
nsrand-ipx	598,681	3600.00	1	0	0	0	1	0	0.04
p2756	26	1.53	25	0	0	0	25	0	0.07
protfold	30,586	3600.00	0	0	0	0	0	0	0.05
qiu	11,561	68.22	0	0	0	0	0	0	0.02
rout	68,959	92.74	1	0	0	0	4	0	0.01
seymour	85,811	3600.01	2	0	0	0	2	0	0.01
swath	341,948	3600.00	0	0	0	0	0	0	0.01
timtab1	580,501	327.96	1	0	0	0	1	0	0.00
timtab2	3,608,542	3600.00	1	0	0	0	1	0	0.00
AM (# 21)	1,167,613.2	1697.87	5.4	0.0	0.0	0.0	8.0	0.0	0.12
GM (# 21)	68,018.9	482.23	1.9	1.0	1.0	1.0	2.3	1.0	1.03
SGM (# 21)	74,248.9	550.71							0.12

TABLE 117. M2003-sym testset: S-fund settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
fast0507	919	95.89	0	0	0	0	0	0	0.04
glass4	5,000,930	3600.02	1	0	0	0	1	0	0.00
harp2	8,598,240	3600.01	0	0	0	0	0	0	0.01
mas74	4,252,374	991.71	2	0	0	0	2	0	0.00
mas76	480,312	98.96	2	0	0	0	2	0	0.00
misc07	23,358	20.82	1	0	0	0	2	0	0.01
mkc	437,764	3600.00	61	85	0	0	194	0	2.03
mod011	1544	67.27	6	0	0	0	6	0	0.03
msc98-ip	4624	3600.00	4	0	0	0	4	0	0.14
mzzv11	2709	647.49	1	0	0	0	1	0	0.04
net12	2096	730.24	4	0	0	0	4	0	0.10
noswot	370,706	110.33	1	0	0	0	3	0	0.00
nsrand-ipx	595,745	3600.00	1	0	0	0	1	0	0.03
p2756	26	1.51	25	0	0	0	25	0	0.07
protfold	28,453	3600.00	0	2	0	0	2	0	0.04
qiu	4768	38.44	0	4	0	0	4	0	0.02
rout	68,959	92.92	1	0	0	0	4	0	0.02
seymour	86,755	3600.00	2	0	0	0	2	0	0.01
swath	342,509	3600.00	0	0	0	0	0	0	0.02
timtab1	580,501	329.06	1	0	0	0	1	0	0.00
timtab2	3,594,401	3600.01	1	0	0	0	1	0	0.00
AM (# 21)	1,165,604.4	1696.41	5.4	4.3	0.0	0.0	12.3	0.0	0.12
GM (# 21)	64,827.8	468.93	1.9	1.4	1.0	1.0	2.6	1.0	1.03
SGM (# 21)	70,802.7	537.97							0.12

TABLE 118. M2003-sym testset: S-fundnlp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
fast0507	919	96.11	0	0	0	0	0	0	0.04
glass4	5,057,291	3600.02	1	0	0	0	1	0	0.00
harp2	8,608,362	3600.01	0	0	0	0	0	0	0.00
mas74	3,392,516	777.16	2	0	0	0	2	0	0.00
mas76	490,320	101.58	2	0	0	0	2	0	0.01
misc07	36,528	32.95	1	0	0	0	2	0	0.01
mkc	443,913	3600.00	61	85	0	0	194	0	2.04
mod011	1629	68.18	6	0	0	0	6	0	0.02
msc98-ip	6971	1190.09	4	0	0	0	4	0	0.14
mzzv11	1827	482.26	1	0	0	0	1	0	0.04
net12	2562	1054.12	4	0	0	0	4	0	0.08
noswot	348,670	97.25	1	0	0	0	3	0	0.00
nsrand-ipx	619,427	3600.00	1	0	0	0	1	0	0.04
p2756	26	1.53	25	0	0	0	25	0	0.06
protfold	25,642	3600.00	0	2	0	0	2	0	0.04
qiu	11,703	69.33	0	4	0	0	4	0	0.02
rout	68,959	92.88	1	0	0	0	4	0	0.02
seymour	86,761	3600.00	2	0	0	0	2	0	0.01
swath	339,382	3600.00	0	0	0	0	0	0	0.02
timtab1	868,502	513.55	1	0	0	0	1	0	0.00
timtab2	3,841,218	3600.01	1	0	0	0	1	0	0.00
AM (# 21)	1,154,910.9	1589.38	5.4	4.3	0.0	0.0	12.3	0.0	0.12
GM (# 21)	70,531.8	472.16	1.9	1.4	1.0	1.0	2.6	1.0	1.03
SGM (# 21)	76,985.9	535.75							0.12

TABLE 119. M2003-sym testset: S-nolp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
fast0507	919	95.86	0	0	0	0	0	0	0.04
glass4	5,045,121	3600.03	1	0	0	0	1	0	0.01
harp2	8,621,423	3600.01	0	0	0	0	0	0	0.00
mas74	3,392,516	774.95	2	0	0	0	2	0	0.01
mas76	490,320	101.78	2	0	0	0	2	0	0.00
misc07	36,528	33.06	1	0	0	0	2	0	0.00
mkc	416,518	3600.00	61	0	0	0	109	0	2.02
mod011	1629	68.07	6	0	0	0	6	0	0.03
msc98-ip	6971	1193.09	4	0	0	0	4	0	0.14
mzzv11	1827	482.04	1	0	0	0	1	0	0.05
net12	2562	1055.58	4	0	0	0	4	0	0.10
noswot	348,670	97.28	1	0	0	0	3	0	0.01
nsrand-ipx	618,149	3600.00	1	0	0	0	1	0	0.04
p2756	26	1.55	25	0	0	0	25	0	0.07
protfold	30,572	3600.00	0	0	0	0	0	0	0.05
qiu	11,561	68.11	0	0	0	0	0	0	0.02
rout	68,959	93.95	1	0	0	0	4	0	0.01
seymour	86,785	3600.00	2	0	0	0	2	0	0.01
swath	336,968	3600.00	0	0	0	0	0	0	0.02
timtab1	868,502	514.10	1	0	0	0	1	0	0.01
timtab2	3,834,387	3600.01	1	0	0	0	1	0	0.00
AM (# 21)	1,153,376.8	1589.50	5.4	0.0	0.0	0.0	8.0	0.0	0.13
GM (# 21)	70,829.1	472.37	1.9	1.0	1.0	1.0	2.3	1.0	1.03
SGM (# 21)	77,309.0	535.73							0.12

TABLE 120. M2003-sym testset: S-prob settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
fast0507	919	95.85	0	0	0	0	0	0	0.04
glass4	4,841,689	3600.03	1	0	0	0	1	1	0.01
harp2	8,563,850	3600.01	0	0	0	0	0	0	0.00
mas74	4,252,374	991.50	2	0	0	0	2	0	0.00
mas76	480,312	98.87	2	0	0	0	2	0	0.01
misc07	26,861	24.35	1	0	0	0	2	2	0.01
mkc	542,533	3600.00	61	0	0	0	109	57	2.03
mod011	1544	67.33	6	0	0	0	6	0	0.03
msc98-ip	4624	3599.99	4	0	0	0	4	0	0.14
mzzv11	3903	789.41	1	0	0	0	1	1	0.05
net12	2096	734.13	4	0	0	0	4	0	0.09
noswot	385,022	115.09	1	0	0	0	3	0	0.00
nsrand-ipx	591,451	3600.00	1	0	0	0	1	0	0.04
p2756	24	1.42	25	0	0	0	25	0	0.07
protfold	30,576	3600.00	0	0	0	0	0	0	0.05
qiu	11,561	68.21	0	0	0	0	0	0	0.02
rout	53,942	73.85	1	0	0	0	4	4	0.01
seymour	86,535	3600.00	2	0	0	0	2	0	0.01
swath	339,387	3600.00	0	0	0	0	0	0	0.02
timtab1	580,501	327.40	1	0	0	0	1	0	0.00
timtab2	3,585,490	3600.00	1	0	0	0	1	0	0.00
AM (# 21)	1,161,199.7	1704.16	5.4	0.0	0.0	0.0	8.0	3.1	0.13
GM (# 21)	69,071.7	484.33	1.9	1.0	1.0	1.0	2.3	1.3	1.03
SGM (# 21)	75,590.0	554.09							0.12

TABLE 121. M2003-sym testset: S-orbitmin settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
fast0507	919	95.83	0	0	0	0	0	0	0.04
glass4	4,993,167	3600.02	0	0	0	1	1	0	0.00
harp2	8,595,882	3600.01	0	0	0	0	0	0	0.00
mas74	4,252,374	992.52	0	0	0	2	2	0	0.00
mas76	480,312	98.71	0	0	0	2	2	0	0.01
misc07	18,402	16.88	0	0	0	1	2	0	0.01
mkc	437,848	3600.00	0	0	0	66	122	0	0.21
mod011	1544	67.14	0	0	0	6	6	0	0.03
msc98-ip	4624	3600.00	0	0	0	4	4	0	0.12
mzzv11	2709	645.77	0	0	0	1	1	0	0.05
net12	2096	730.80	0	0	0	4	4	0	0.09
noswot	497,738	144.81	0	0	0	1	3	0	0.01
nsrand-ipx	587,893	3600.00	0	0	0	1	1	0	0.04
p2756	26	1.49	0	0	0	25	25	0	0.03
protfold	21,750	3600.00	0	0	0	1	1	0	0.02
qiu	3680	32.46	0	0	0	1	3	0	0.01
rout	68,959	92.43	0	0	0	1	4	0	0.01
seymour	86,707	3600.00	0	0	0	2	2	0	0.01
swath	339,051	3600.00	0	0	0	0	0	0	0.02
timtab1	580,501	327.89	0	0	0	1	1	0	0.01
timtab2	3,577,996	3600.01	0	0	0	1	1	0	0.00
AM (# 21)	1,169,246.6	1697.47	0.0	0.0	0.0	5.8	8.8	0.0	0.03
GM (# 21)	63,297.5	465.91	1.0	1.0	1.0	2.0	2.5	1.0	1.00
SGM (# 21)	69,156.1	537.14							0.03

TABLE 122. M2010-sym testset: S settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30_70_45_095_100	331	261.77	1	0	0	0	1	0	0.08
acc-tight4	913	458.36	0	0	0	0	0	0	0.03
ash608gpia-3col	1	6.26	0	0	1	0	1	3	0.27
bab3	1	3607.26	3	0	0	0	3	0	46.44
bab5	31,962	3600.03	5	0	0	0	5	0	0.41
berlin_5_8_0	1,853,714	3600.01	1	0	0	0	1	0	0.01
biella1	5821	390.22	334	0	0	0	586	0	1.20
circ10-3	45	3599.99	0	0	0	0	0	0	0.40
co-100	10,642	3600.24	2	0	0	0	2	0	1.40
core2536-691	121	72.23	8	0	0	0	8	0	1.64
core4872-1529	1277	3601.04	7	0	0	0	7	0	2.24
cov1075	847,609	3600.00	0	0	0	0	0	0	0.02
dc1c	8046	3600.01	915	0	0	0	1624	0	8.22
dc1l	1899	3600.00	1187	0	0	0	1476	0	14.33
dolom1	5643	3600.00	1008	0	0	0	1506	0	9.90
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.01	1	0	0	0	1	0	0.00
enlight15	1	0.03	1	0	0	0	1	0	0.01
enlight16	1	0.04	1	0	0	0	1	0	0.01
enlight9	1	0.01	1	0	0	0	1	0	0.00
ex1010-pi	14,383	3600.02	0	0	0	0	0	0	0.02
ex10	1	1020.14	0	0	0	0	0	0	0.00
ex9	1	92.14	0	0	0	0	0	0	0.00
glass4	4,997,237	3600.02	1	0	0	0	1	0	0.00
go19	1,191,069	3600.00	0	0	0	0	0	0	0.00
iis-bupa-cov	107,330	3600.00	0	0	0	0	0	0	0.02
lectsched-1	1352	126.76	129	0	0	0	188	0	0.28
lectsched-1-obj	81,874	3600.13	516	0	0	0	673	0	505.26
lectsched-2	433	54.13	78	0	0	0	111	0	0.13
lectsched-3	5769	182.50	120	0	0	0	189	0	0.27
lectsched-4-obj	2618	69.90	87	0	0	0	112	0	0.88
macrophage	737,999	3600.00	167	0	0	0	173	0	0.98
map06	603	750.35	39	0	0	0	40	0	0.30
map10	1844	840.72	39	0	0	0	40	0	0.29
map14	824	785.95	39	0	0	0	40	0	0.29
map18	305	252.09	39	0	0	0	40	0	0.28
map20	385	252.15	39	0	0	0	40	0	0.29
maxgasflow	173,335	3600.00	3	0	0	0	4	0	0.03
mcsched	15,929	150.23	15	0	0	0	15	0	0.02
methanosarcina	42,052	3600.00	1500	0	0	0	1500	0	10.46
mkc	464,118	3600.00	61	0	0	0	109	0	1.99
msc98-ip	4622	3600.01	4	0	0	0	4	0	0.14
mzzv11	2709	648.83	1	0	0	0	1	0	0.05
n3seq24	30	3599.95	29	0	0	0	31	0	28.04
n4-3	42,518	626.42	2	0	0	0	2	0	0.01
n9-3	53,650	3600.00	4	0	0	0	5	0	0.03
neos-1109824	11,639	141.74	0	0	0	0	0	0	0.07
neos-1171692	201	31.57	1	0	0	0	20	0	1.15
neos-1171737	87,016	3600.00	1	0	0	0	29	0	4.67
neos-1224597	1	3.53	20	0	0	0	180	0	0.69

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-1311124	4,189,531	3600.03	1	0	0	0	20	0	0.45
neos-1337307	182,608	2768.29	1	0	0	0	6	0	0.15
neos-1396125	57,279	210.28	1	0	0	0	2	0	0.02
neos13	68,157	3600.02	1	0	0	0	1	0	0.59
neos-1426635	4,912,811	3600.03	1	0	0	0	9	0	0.03
neos-1426662	1,105,928	3600.02	1	0	0	0	15	0	0.16
neos-1429212	6367	3600.03	1	0	0	0	1	0	2.23
neos-1436709	1,588,354	3600.01	1	0	0	0	12	0	0.08
neos-1440460	2,247,068	3600.00	1	0	0	0	8	0	0.03
neos-1442119	1,467,695	3600.01	1	0	0	0	13	0	0.10
neos-1442657	1,476,953	3600.01	1	0	0	0	11	0	0.05
neos-1620770	323,074	3600.00	0	0	0	0	0	0	0.04
neos18	5310	46.60	19	0	0	0	55	0	0.04
neos-476283	1001	429.86	12	0	0	0	12	0	3.86
neos-555424	531,537	3600.00	0	0	0	0	0	0	9.54
neos-738098	3647	3600.01	0	0	0	0	0	0	0.55
neos-777800	1	2.06	0	0	0	0	0	0	0.06
neos-785912	88	14.85	0	0	0	0	0	0	0.07
neos788725	136,996	265.44	0	0	0	0	0	0	0.01
neos808444	411	2155.30	1	0	0	0	1	0	0.14
neos-820146	1,629,609	3600.00	0	0	0	0	0	0	0.06
neos-820157	1,170,713	3600.00	0	0	0	0	0	0	0.08
neos-824661	1	52.31	0	0	1	0	1	3780	23.77
neos-824695	4	22.70	0	0	1	0	1	2275	11.86
neos-826650	117,538	3600.01	0	0	0	0	0	0	30.21
neos-826694	1	15.18	1	0	0	0	89	0	4.30
neos-826812	1	9.13	1	0	0	0	89	0	4.23
neos-826841	312,436	3600.00	0	0	0	0	0	0	28.32
neos-849702	216,765	3600.00	0	0	0	0	0	0	0.03
neos-859770	1	197.51	14	0	0	0	14	0	0.26
neos-885086	7902	764.78	1	0	0	0	44	0	45.95
neos-885524	34,525	3600.05	1236	0	0	0	1500	0	9.93
neos-911880	4,063,613	3600.01	7	0	0	0	17	0	0.03
neos-932816	5787	3600.01	1	0	0	0	3	0	0.15
neos-933638	31	232.39	1	0	0	0	1	0	0.43
neos-933966	45	152.60	2	0	0	0	3	0	0.54
neos-934278	104	202.79	3	0	0	0	3	0	0.32
neos-935627	25	215.90	1	0	0	0	1	0	0.24
neos-935769	755	1070.78	4	0	0	0	8	0	0.29
neos-937511	32	200.49	4	0	0	0	8	0	0.37
neos-937815	5007	3600.01	3	0	0	0	3	0	0.32
neos-941262	3152	3600.01	9	0	0	0	9	0	0.25
neos-941313	6	636.99	1	0	0	0	29	0	241.90
neos-948126	2002	3600.01	6	0	0	0	6	0	0.26
neos-957389	4	32.33	3	0	0	0	9	0	1.30
neos-984165	1906	3600.00	8	0	0	0	8	0	0.23
net12	2704	946.97	4	0	0	0	4	0	0.11
noswot	370,706	110.59	1	0	0	0	3	0	0.01
ns1111636	81	3600.03	1	0	0	0	39	0	489.60
ns1116954	15	3600.05	0	0	0	0	0	0	4.30
ns1158817	1	238.97	0	0	0	0	0	0	123.93
ns1208400	3309	568.74	0	0	0	0	0	0	0.11
ns1456591	53,401	3600.15	4	0	0	0	8	0	0.45
ns1702808	197,750	381.45	1	0	0	0	5	0	0.02

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
ns1758913	1	3600.34	1	0	0	0	1	0	1.09
ns1853823	1	3591.23	0	0	0	0	0	0	18.94
ns1854840	1	3598.54	0	0	0	0	0	0	5.71
ns1905797	44,259	3600.00	1	0	0	0	2	0	1.05
ns1905800	257,247	3600.00	0	0	0	0	0	0	0.12
ns1952667	1486	635.55	16	0	0	0	32	0	1.20
ns2118727	219	3599.99	13	0	0	0	13	0	0.12
ns2124243	4890	3600.02	288	0	0	0	1410	0	25.93
ns2137859	104,141	3600.01	0	0	0	0	0	0	5.92
ns4-pr9	477,927	3600.00	2	0	0	0	2	0	0.03
nsr8k	72	3599.91	207	0	0	0	364	0	1.35
nu60-pr9	150,346	3600.01	2	0	0	0	2	0	0.02
p2m2p1m1p0n100	23,655,739	3600.00	25	0	0	0	67	0	0.04
p6b	89,848	3600.01	0	0	0	0	0	0	0.02
pigeon-10	5,299,471	3600.00	0	0	0	0	0	0	0.02
pigeon-11	4,043,776	3600.00	0	0	0	0	0	0	0.03
pigeon-12	3,087,824	3600.00	0	0	0	0	0	0	0.04
pigeon-13	2,308,674	3600.00	0	0	0	0	0	0	0.03
pigeon-19	1,408,295	3600.00	0	0	0	0	0	0	0.22
protfold	30,475	3600.00	0	0	0	0	0	0	0.05
pw-myciel4	413,813	3600.00	0	0	0	0	0	0	0.01
qiu	11,561	68.27	0	0	0	0	0	0	0.02
queens-30	19,472	3600.01	0	0	0	0	0	0	0.08
rail507	949	97.99	0	0	0	0	0	0	0.34
ramos3	17	3600.09	0	0	0	0	0	0	1.64
rvb-sub	43,510	3600.00	8	0	0	0	8	0	4.09
sct1	17,842	3600.01	1	0	0	0	1	0	1.23
sct32	126,335	3600.00	78	0	0	0	178	0	6.67
sct5	2591	3600.00	2	0	0	0	3	0	17.70
seymour-disj-10	36,058	3600.00	37	0	0	0	45	0	0.11
seymour	84,959	3600.00	2	0	0	0	2	0	0.01
shipsched	153,323	3600.00	50	0	0	0	164	0	0.22
shs1023	1	3748.76	1	0	0	0	1	0	19.98
siena1	1416	3600.11	290	0	0	0	407	0	1.26
sing161	2	3714.17	2	0	0	0	2	0	8.28
sing245	18	3604.38	1	0	0	0	1	0	1.34
sing2	4714	3600.00	1	0	0	0	1	0	0.28
sts405	76,691	3600.00	0	0	0	0	0	0	1.12
sts729	343	3600.04	0	0	0	0	0	0	3.15
swath	341,642	3600.00	0	0	0	0	0	0	0.01
tanglegram1	51	636.92	23	0	0	0	1500	0	13.74
tanglegram2	3	12.26	25	0	0	0	1500	0	7.58
timtab1	580,501	328.66	1	0	0	0	1	0	0.00
toll-like	708,321	3600.00	246	0	0	0	249	0	5.36
uc-case11	1030	3600.02	1	0	0	0	1	0	0.25
uc-case3	1756	3600.01	2	0	0	0	2	0	0.49
uct-subprob	673,595	3600.00	65	0	0	0	73	0	0.28
unitcal_7	42,368	3288.22	4	0	0	0	4	0	0.44
usAbbrv-8-25_70	602,953	3600.00	1	0	0	0	1	0	0.01
vpphard2	426	3606.72	56	0	0	0	805	0	8.07
vpphard	809	3600.00	609	0	0	0	1500	0	12.27
wachplan	84,447	3600.00	0	0	0	0	0	0	0.03
zib54-UUE	453,230	3600.01	1	0	0	0	1	0	0.01
AM (# 157)	527,159.6	2357.36	62.6	0.0	0.0	0.0	122.2	38.6	11.87

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
GM (# 157)	3690.0	929.19	3.8	1.0	1.0	1.0	6.5	1.1	1.97
SGM (# 157)	8481.9	1055.29							3.19

TABLE 123. M2010-sym testset: S-fund settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30_70_45_095_100	331	264.32	1	0	0	0	1	0	0.06
acc-tight4	1514	498.57	0	6	0	0	6	0	0.04
ash608gpia-3col	1	6.25	0	0	1	0	1	3	0.27
bab3	1	3600.26	3	0	0	0	3	0	46.43
bab5	31,970	3600.00	5	0	0	0	5	0	0.42
berlin_5_8_0	1,879,754	3600.01	1	0	0	0	1	0	0.01
biella1	5821	389.49	334	0	0	0	586	0	1.19
circ10-3	34	3600.01	0	2	0	0	2	0	0.40
co-100	10,571	3600.02	2	0	0	0	2	0	1.39
core2536-691	396	158.65	8	3	0	0	11	0	1.65
core4872-1529	1459	3600.29	7	0	0	0	7	0	2.24
cov1075	742,394	3600.00	0	9	0	0	9	0	0.03
dc1c	8068	3600.00	915	0	0	0	1624	0	8.25
dc1l	1910	3600.01	1187	0	0	0	1476	0	14.35
dolom1	5648	3600.00	1008	0	0	0	1506	0	9.93
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.02	1	0	0	0	1	0	0.00
enlight15	1	0.03	1	0	0	0	1	0	0.00
enlight16	1	0.04	1	0	0	0	1	0	0.00
enlight9	1	0.01	1	0	0	0	1	0	0.00
ex1010-pi	14,383	3600.01	0	0	0	0	0	0	0.02
ex10	1	1032.91	0	7	0	0	7	0	0.00
ex9	1	92.04	0	7	0	0	7	0	0.00
glass4	5,031,606	3600.02	1	0	0	0	1	0	0.00
go19	1,168,883	3600.00	0	3	0	0	3	0	0.01
iis-bupa-cov	107,143	3600.00	0	0	0	0	0	0	0.00
lectsched-1	1352	128.88	129	0	0	0	188	0	0.27
lectsched-1-obj	82,021	3600.01	516	0	0	0	673	0	506.09
lectsched-2	433	54.00	78	0	0	0	111	0	0.13
lectsched-3	5769	182.79	120	0	0	0	189	0	0.26
lectsched-4-obj	2618	69.85	87	0	0	0	112	0	0.88
macrophage	716,255	3600.00	167	15	0	0	188	0	0.95
map06	603	748.87	39	0	0	0	40	0	0.29
map10	1844	847.31	39	0	0	0	40	0	0.29
map14	824	787.98	39	0	0	0	40	0	0.28
map18	305	252.94	39	0	0	0	40	0	0.29
map20	385	250.80	39	0	0	0	40	0	0.30
maxgasflow	174,571	3600.01	3	0	0	0	4	0	0.02
mcsched	15,929	150.19	15	0	0	0	15	0	0.02
methanosarcina	42,177	3600.01	1500	0	0	0	1500	0	10.42
mkc	431,253	3600.00	61	85	0	0	194	0	2.08
msc98-ip	4589	3600.00	4	0	0	0	4	0	0.13
mzzv11	2709	649.50	1	0	0	0	1	0	0.05
n3seq24	30	3599.93	29	0	0	0	31	0	27.95
n4-3	42,518	625.22	2	0	0	0	2	0	0.01
n9-3	53,654	3600.00	4	0	0	0	5	0	0.03
neos-1109824	19,470	205.61	0	4	0	0	4	0	0.08
neos-1171692	201	31.52	1	0	0	0	20	0	1.17
neos-1171737	87,731	3600.01	1	0	0	0	29	0	4.65
neos-1224597	1	3.88	20	52	0	0	232	0	0.73

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-1311124	4,178,927	3600.03	1	0	0	0	20	0	0.46
neos-1337307	182,608	2759.57	1	0	0	0	6	0	0.15
neos-1396125	57,279	209.94	1	0	0	0	2	0	0.02
neos13	69,581	3600.06	1	0	0	0	1	0	0.60
neos-1426635	4,911,505	3600.03	1	0	0	0	9	0	0.04
neos-1426662	1,109,909	3600.02	1	0	0	0	15	0	0.16
neos-1429212	6412	3600.02	1	0	0	0	1	0	2.24
neos-1436709	1,587,145	3600.01	1	0	0	0	12	0	0.07
neos-1440460	2,246,542	3600.01	1	0	0	0	8	0	0.02
neos-1442119	1,471,035	3600.01	1	0	0	0	13	0	0.10
neos-1442657	1,479,553	3600.01	1	0	0	0	11	0	0.06
neos-1620770	421,934	3600.00	0	7	0	0	7	0	0.05
neos18	5310	46.37	19	0	0	0	55	0	0.04
neos-476283	1001	428.92	12	0	0	0	12	0	3.84
neos-555424	383,738	3600.00	0	117	0	0	117	0	9.64
neos-738098	1182	3600.02	0	44	0	0	44	0	0.58
neos-777800	109	27.33	0	2	0	0	2	0	0.08
neos-785912	166	17.16	0	26	0	0	26	0	0.09
neos788725	51,499	121.70	0	2	0	0	2	0	0.01
neos808444	411	2157.81	1	0	0	0	1	0	0.14
neos-820146	1,176,742	3600.00	0	23	0	0	23	0	0.08
neos-820157	861,860	3600.00	0	22	0	0	22	0	0.09
neos-824661	1	52.40	0	0	1	0	1	3780	23.80
neos-824695	4	22.88	0	0	1	0	1	2275	11.89
neos-826650	45,354	3600.03	0	32	0	0	32	0	30.12
neos-826694	1	15.21	1	0	0	0	89	0	4.31
neos-826812	1	9.13	1	0	0	0	89	0	4.24
neos-826841	120,163	3600.01	0	32	0	0	32	0	28.53
neos-849702	6163	238.75	0	7	0	0	7	0	0.04
neos-859770	1	326.39	14	73	0	0	87	0	0.28
neos-885086	7902	747.20	1	0	0	0	44	0	46.99
neos-885524	34,511	3600.03	1236	0	0	0	1500	0	10.02
neos-911880	4,066,858	3600.01	7	0	0	0	17	0	0.03
neos-932816	5790	3600.00	1	0	0	0	3	0	0.15
neos-933638	80	466.50	1	30	0	0	31	0	0.46
neos-933966	441	703.06	2	31	0	0	34	0	0.57
neos-934278	692	738.83	3	25	0	0	28	0	0.33
neos-935627	85	226.59	1	25	0	0	26	0	0.27
neos-935769	216	510.64	4	19	0	0	27	0	0.30
neos-937511	44	233.88	4	19	0	0	27	0	0.39
neos-937815	2956	3600.00	3	21	0	0	24	0	0.33
neos-941262	2219	3600.01	9	12	0	0	21	0	0.26
neos-941313	6	638.24	1	0	0	0	29	0	244.29
neos-948126	1327	3600.01	6	17	0	0	23	0	0.27
neos-957389	4	34.75	3	61	0	0	70	0	1.33
neos-984165	2051	3600.00	8	14	0	0	22	0	0.24
net12	2704	944.24	4	0	0	0	4	0	0.10
noswot	370,706	110.58	1	0	0	0	3	0	0.00
ns1111636	81	3600.03	1	0	0	0	39	0	487.02
ns1116954	5	3600.07	0	24	0	0	24	0	4.36
ns1158817	1	238.59	0	0	0	0	0	0	123.39
ns1208400	6637	1231.46	0	7	0	0	7	0	0.13
ns1456591	53,806	3600.01	4	0	0	0	8	0	0.44
ns1702808	197,750	383.81	1	0	0	0	5	0	0.02

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
ns1758913	1	3600.32	1	0	0	0	1	0	1.07
ns1853823	1	3591.37	0	2	0	0	2	0	19.35
ns1854840	1	3598.23	0	5	0	0	5	0	6.08
ns1905797	44,392	3600.02	1	0	0	0	2	0	1.05
ns1905800	277,402	3600.00	0	3	0	0	3	0	0.12
ns1952667	1486	632.89	16	0	0	0	32	0	1.20
ns2118727	221	3599.98	13	0	0	0	13	0	0.12
ns2124243	4941	3600.01	288	0	0	0	1410	0	26.13
ns2137859	72,361	3600.88	0	133	0	0	133	0	5.98
ns4-pr9	477,064	3600.00	2	0	0	0	2	0	0.02
nsr8k	72	3599.92	207	0	0	0	364	0	1.35
nu60-pr9	149,955	3600.00	2	0	0	0	2	0	0.02
p2m2p1m1p0n100	23,738,540	3600.00	25	0	0	0	67	0	0.04
p6b	73,178	3600.00	0	2	0	0	2	0	0.02
pigeon-10	1,259,489	1005.09	0	7	0	0	7	0	0.02
pigeon-11	3,095,394	3600.00	0	8	0	0	8	0	0.03
pigeon-12	3,285,125	3600.00	0	9	0	0	9	0	0.04
pigeon-13	2,226,699	3600.00	0	10	0	0	10	0	0.04
pigeon-19	694,673	3600.00	0	16	0	0	16	0	0.24
protfold	28,457	3600.01	0	2	0	0	2	0	0.05
pw-myciel4	343,665	3600.00	0	2	0	0	2	0	0.02
qiu	4768	38.46	0	4	0	0	4	0	0.02
queens-30	17,421	3600.16	0	2	0	0	2	0	0.09
rail507	949	98.08	0	0	0	0	0	0	0.35
ramos3	33	3600.15	0	8	0	0	8	0	1.66
rvb-sub	43,992	3600.19	8	0	0	0	8	0	4.10
sct1	14,982	3600.00	1	216	0	0	217	0	1.47
sct32	126,530	3600.00	78	0	0	0	178	0	6.66
sct5	10,439	3600.02	2	602	0	0	605	0	18.73
seymour-disj-10	35,733	3600.00	37	0	0	0	45	0	0.11
seymour	86,869	3600.00	2	0	0	0	2	0	0.01
shipsched	127,389	3600.00	50	0	0	0	164	0	0.22
shs1023	1	3749.03	1	0	0	0	1	0	19.74
siena1	1449	3600.01	290	0	0	0	407	0	1.25
sing161	2	3713.46	2	0	0	0	2	0	8.38
sing245	18	3604.65	1	0	0	0	1	0	1.34
sing2	4702	3600.02	1	0	0	0	1	0	0.29
sts405	18,731	3600.01	0	8	0	0	8	0	1.13
sts729	51	3600.02	0	22	0	0	22	0	3.16
swath	339,095	3600.00	0	0	0	0	0	0	0.02
tanglegram1	51	636.04	23	0	0	0	1500	0	13.94
tanglegram2	3	12.22	25	0	0	0	1500	0	7.57
timtab1	580,501	327.93	1	0	0	0	1	0	0.00
toll-like	611,341	3600.00	246	203	0	0	452	0	5.40
uc-case11	1059	3600.02	1	0	0	0	1	0	0.25
uc-case3	1761	3600.02	2	0	0	0	2	0	0.51
uct-subprob	675,695	3600.00	65	0	0	0	73	0	0.28
unitcal_7	42,368	3301.71	4	0	0	0	4	0	0.44
usAbbrv-8-25_70	599,089	3600.00	1	0	0	0	1	0	0.01
vpphard2	426	3611.14	56	0	0	0	805	0	8.22
vpphard	808	3600.63	609	0	0	0	1500	0	12.61
wachplan	65,059	3600.00	0	5	0	0	5	0	0.04
zib54-UUE	454,688	3600.00	1	0	0	0	1	0	0.02
AM (# 157)	480,708.7	2329.92	62.6	13.7	0.0	0.0	135.9	38.6	11.90

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
GM (# 157)	3612.6	947.49	3.8	2.5	1.0	1.0	13.4	1.1	1.97
SGM (# 157)	7985.2	1064.99							3.21

TABLE 124. M2010-sym testset: S-fundnlp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30_70_45_095_100	958	1385.17	1	0	0	0	1	0	0.07
acc-tight4	494	290.47	0	6	0	0	6	0	0.04
ash608gpia-3col	1	6.24	0	0	1	0	1	3	0.27
bab3	4	3600.06	3	0	0	0	3	0	46.43
bab5	40,390	3600.00	5	0	0	0	5	0	0.42
berlin_5_8_0	1,785,468	3600.00	1	0	0	0	1	0	0.01
biella1	9491	587.93	334	0	0	0	586	0	1.22
circ10-3	44	3599.95	0	2	0	0	2	0	0.41
co-100	7883	3600.00	2	0	0	0	2	0	1.40
core2536-691	342	112.14	8	3	0	0	11	0	1.64
core4872-1529	1241	3600.00	7	0	0	0	7	0	2.25
cov1075	843,277	3600.00	0	9	0	0	9	0	0.04
dc1c	15,540	3600.00	915	0	0	0	1624	0	8.30
dc1l	1008	3600.02	1187	0	0	0	1476	0	14.32
dolom1	1998	3600.00	1008	0	0	0	1506	0	9.97
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.02	1	0	0	0	1	0	0.01
enlight15	1	0.03	1	0	0	0	1	0	0.00
enlight16	1	0.03	1	0	0	0	1	0	0.01
enlight9	1	0.01	1	0	0	0	1	0	0.01
ex1010-pi	14,383	3600.05	0	0	0	0	0	0	0.02
ex10	1	1009.65	0	7	0	0	7	0	0.00
ex9	1	91.70	0	7	0	0	7	0	0.01
glass4	5,054,912	3600.03	1	0	0	0	1	0	0.00
go19	1,156,978	3600.00	0	3	0	0	3	0	0.01
iis-bupa-cov	107,071	3600.01	0	0	0	0	0	0	0.02
lectsched-1	2580	165.42	129	0	0	0	188	0	0.28
lectsched-1-obj	58,101	3600.00	516	0	0	0	673	0	507.28
lectsched-2	135	53.78	78	0	0	0	111	0	0.13
lectsched-3	5262	169.95	120	0	0	0	189	0	0.27
lectsched-4-obj	3819	77.08	87	0	0	0	112	0	0.88
macrophage	680,613	3600.00	167	15	0	0	188	0	0.96
map06	584	785.67	39	0	0	0	40	0	0.29
map10	1673	953.88	39	0	0	0	40	0	0.29
map14	1373	831.02	39	0	0	0	40	0	0.30
map18	273	272.91	39	0	0	0	40	0	0.29
map20	295	253.15	39	0	0	0	40	0	0.29
maxgasflow	178,857	3600.00	3	0	0	0	4	0	0.02
mcsched	11,576	115.01	15	0	0	0	15	0	0.03
methanosarcina	62,801	3600.00	1500	0	0	0	1500	0	10.16
mkc	446,412	3600.00	61	85	0	0	194	0	2.06
msc98-ip	6971	1192.29	4	0	0	0	4	0	0.14
mzzv11	1827	483.19	1	0	0	0	1	0	0.03
n3seq24	19,834	3600.02	29	0	0	0	31	0	27.98
n4-3	39,752	562.31	2	0	0	0	2	0	0.01
n9-3	59,257	3600.00	4	0	0	0	5	0	0.04
neos-1109824	24,809	234.45	0	4	0	0	4	0	0.08
neos-1171692	1192	47.69	1	0	0	0	20	0	1.15
neos-1171737	76,372	3600.00	1	0	0	0	29	0	4.67
neos-1224597	28	12.96	20	52	0	0	232	0	0.74

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-1311124	3,708,106	3600.02	1	0	0	0	20	0	0.46
neos-1337307	199,941	3063.62	1	0	0	0	6	0	0.14
neos-1396125	72,528	289.75	1	0	0	0	2	0	0.01
neos13	54,138	2685.06	1	0	0	0	1	0	0.59
neos-1426635	4,857,371	3600.05	1	0	0	0	9	0	0.03
neos-1426662	890,140	3600.01	1	0	0	0	15	0	0.15
neos-1429212	3241	3600.02	1	0	0	0	1	0	2.23
neos-1436709	1,691,350	3600.01	1	0	0	0	12	0	0.08
neos-1440460	2,631,899	3600.01	1	0	0	0	8	0	0.02
neos-1442119	1,471,555	3600.01	1	0	0	0	13	0	0.10
neos-1442657	1,765,846	3600.01	1	0	0	0	11	0	0.06
neos-1620770	514,691	3600.00	0	7	0	0	7	0	0.06
neos18	8926	68.40	19	0	0	0	55	0	0.05
neos-476283	582	287.18	12	0	0	0	12	0	3.83
neos-555424	526,117	3600.00	0	117	0	0	117	0	9.88
neos-738098	6367	3600.00	0	44	0	0	44	0	0.58
neos-777800	1	2.92	0	2	0	0	2	0	0.08
neos-785912	207	16.33	0	26	0	0	26	0	0.09
neos788725	73,789	172.48	0	2	0	0	2	0	0.01
neos808444	316	1807.82	1	0	0	0	1	0	0.15
neos-820146	1,616,838	3600.00	0	23	0	0	23	0	0.08
neos-820157	1,077,632	3600.00	0	22	0	0	22	0	0.09
neos-824661	1	51.99	0	0	1	0	1	3780	23.77
neos-824695	4	22.72	0	0	1	0	1	2275	11.90
neos-826650	105,701	3600.00	0	32	0	0	32	0	31.15
neos-826694	1	12.09	1	0	0	0	89	0	4.31
neos-826812	1	9.58	1	0	0	0	89	0	4.25
neos-826841	300,375	3600.01	0	32	0	0	32	0	28.52
neos-849702	5111	141.64	0	7	0	0	7	0	0.04
neos-859770	1	341.36	14	73	0	0	87	0	0.28
neos-885086	2882	443.87	1	0	0	0	44	0	46.47
neos-885524	85,944	3600.00	1236	0	0	0	1500	0	10.10
neos-911880	4,130,398	3600.01	7	0	0	0	17	0	0.03
neos-932816	95,444	3600.00	1	0	0	0	3	0	0.15
neos-933638	35	253.26	1	30	0	0	31	0	0.46
neos-933966	69	178.59	2	31	0	0	34	0	0.56
neos-934278	61	192.14	3	25	0	0	28	0	0.34
neos-935627	69	184.54	1	25	0	0	26	0	0.26
neos-935769	93	295.26	4	19	0	0	27	0	0.29
neos-937511	31	205.94	4	19	0	0	27	0	0.39
neos-937815	5708	3600.00	3	21	0	0	24	0	0.33
neos-941262	2835	3600.01	9	12	0	0	21	0	0.27
neos-941313	20	864.10	1	0	0	0	29	0	246.53
neos-948126	2356	3600.00	6	17	0	0	23	0	0.28
neos-957389	8	32.66	3	61	0	0	70	0	1.31
neos-984165	2260	3600.01	8	14	0	0	22	0	0.25
net12	1924	581.64	4	0	0	0	4	0	0.09
noswot	348,670	96.93	1	0	0	0	3	0	0.01
ns1111636	194	3600.06	1	0	0	0	39	0	483.82
ns1116954	15	3599.85	0	24	0	0	24	0	4.36
ns1158817	1	238.53	0	0	0	0	0	0	123.39
ns1208400	1403	381.37	0	7	0	0	7	0	0.14
ns1456591	51,195	3600.00	4	0	0	0	8	0	0.43
ns1702808	197,292	388.85	1	0	0	0	5	0	0.02

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
ns1758913	3	3600.36	1	0	0	0	1	0	1.07
ns1853823	1	3591.25	0	2	0	0	2	0	19.52
ns1854840	1	3598.60	0	5	0	0	5	0	6.11
ns1905797	35,270	3600.01	1	0	0	0	2	0	1.07
ns1905800	266,664	3600.00	0	3	0	0	3	0	0.12
ns1952667	18,767	3600.40	16	0	0	0	32	0	1.19
ns2118727	588	3599.99	13	0	0	0	13	0	0.11
ns2124243	2983	3600.01	288	0	0	0	1410	0	26.09
ns2137859	108,238	3600.00	0	133	0	0	133	0	6.01
ns4-pr9	553,015	3600.00	2	0	0	0	2	0	0.02
nsr8k	62	3600.04	207	0	0	0	364	0	1.36
nu60-pr9	156,241	3600.00	2	0	0	0	2	0	0.03
p2m2p1m1p0n100	32,210,545	3600.00	25	0	0	0	67	0	0.03
p6b	81,893	3600.00	0	2	0	0	2	0	0.02
pigeon-10	5,342,687	3600.00	0	7	0	0	7	0	0.03
pigeon-11	4,252,316	3600.00	0	8	0	0	8	0	0.02
pigeon-12	3,118,238	3600.00	0	9	0	0	9	0	0.05
pigeon-13	2,432,654	3600.00	0	10	0	0	10	0	0.03
pigeon-19	1,313,140	3600.00	0	16	0	0	16	0	0.24
protfold	25,619	3600.00	0	2	0	0	2	0	0.05
pw-myciel4	508,136	3600.00	0	2	0	0	2	0	0.02
qiu	11,703	69.53	0	4	0	0	4	0	0.02
queens-30	16,634	3600.13	0	2	0	0	2	0	0.08
rail507	949	98.09	0	0	0	0	0	0	0.34
ramos3	17	3600.16	0	8	0	0	8	0	1.66
rvb-sub	41,758	3600.00	8	0	0	0	8	0	4.09
sct1	24,685	3600.00	1	216	0	0	217	0	1.43
sct32	23,021	3600.00	78	0	0	0	178	0	6.64
sct5	4492	3600.01	2	602	0	0	605	0	18.57
seymour-disj-10	37,101	3600.01	37	0	0	0	45	0	0.10
seymour	86,563	3600.00	2	0	0	0	2	0	0.01
shipsched	109,991	3600.00	50	0	0	0	164	0	0.22
shs1023	1	3746.71	1	0	0	0	1	0	19.75
siena1	2022	3600.01	290	0	0	0	407	0	1.23
sing161	2	3600.21	2	0	0	0	2	0	8.36
sing245	10	3609.99	1	0	0	0	1	0	1.37
sing2	5104	3600.02	1	0	0	0	1	0	0.28
sts405	68,282	3600.01	0	8	0	0	8	0	1.12
sts729	286	3600.04	0	22	0	0	22	0	3.12
swath	336,433	3600.00	0	0	0	0	0	0	0.02
tanglegram1	55	657.46	23	0	0	0	1500	0	14.00
tanglegram2	3	10.97	25	0	0	0	1500	0	7.58
timtab1	868,502	511.57	1	0	0	0	1	0	0.00
toll-like	691,479	3600.00	246	203	0	0	452	0	5.74
uc-case11	1435	3600.03	1	0	0	0	1	0	0.26
uc-case3	1199	3600.03	2	0	0	0	2	0	0.52
uct-subprob	637,696	3600.00	65	0	0	0	73	0	0.27
unitcal_7	56,941	3600.00	4	0	0	0	4	0	0.43
usAbbrv-8-25_70	635,384	3600.00	1	0	0	0	1	0	0.02
vpphard2	426	3604.95	56	0	0	0	805	0	8.20
vpphard	513	3600.01	609	0	0	0	1500	0	12.50
wachplan	82,442	3600.00	0	5	0	0	5	0	0.04
zib54-UUE	401,171	3600.00	1	0	0	0	1	0	0.01
AM (# 157)	584,783.0	2334.43	62.6	13.7	0.0	0.0	135.9	38.6	11.91

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
GM (# 157)	4096.8	928.41	3.8	2.5	1.0	1.0	13.4	1.1	1.97
SGM (# 157)	8874.3	1046.87							3.22

TABLE 125. M2010-sym testset: S-nolp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30_70_45_095_100	958	1362.01	1	0	0	0	1	0	0.07
acc-tight4	913	458.57	0	0	0	0	0	0	0.04
ash608gpia-3col	1	6.23	0	0	1	0	1	3	0.27
bab3	4	3600.07	3	0	0	0	3	0	46.48
bab5	40,059	3600.03	5	0	0	0	5	0	0.42
berlin_5_8_0	1,785,048	3600.00	1	0	0	0	1	0	0.00
biella1	9491	587.97	334	0	0	0	586	0	1.22
circ10-3	45	3599.98	0	0	0	0	0	0	0.40
co-100	7853	3600.02	2	0	0	0	2	0	1.39
core2536-691	337	120.41	8	0	0	0	8	0	1.65
core4872-1529	1301	3600.08	7	0	0	0	7	0	2.24
cov1075	852,787	3600.01	0	0	0	0	0	0	0.03
dc1c	15,445	3600.00	915	0	0	0	1624	0	8.19
dc1l	994	3600.70	1187	0	0	0	1476	0	14.37
dolom1	1988	3600.28	1008	0	0	0	1506	0	10.31
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.02	1	0	0	0	1	0	0.01
enlight15	1	0.03	1	0	0	0	1	0	0.00
enlight16	1	0.03	1	0	0	0	1	0	0.00
enlight9	1	0.01	1	0	0	0	1	0	0.00
ex1010-pi	14,092	3600.01	0	0	0	0	0	0	0.03
ex10	1	1016.17	0	0	0	0	0	0	0.00
ex9	1	91.71	0	0	0	0	0	0	0.00
glass4	5,066,694	3600.02	1	0	0	0	1	0	0.00
go19	1,191,305	3600.00	0	0	0	0	0	0	0.01
iis-bupa-cov	105,497	3600.00	0	0	0	0	0	0	0.00
lectsched-1	2580	165.39	129	0	0	0	188	0	0.28
lectsched-1-obj	58,633	3600.01	516	0	0	0	673	0	505.41
lectsched-2	135	53.56	78	0	0	0	111	0	0.13
lectsched-3	5262	168.68	120	0	0	0	189	0	0.26
lectsched-4-obj	3819	77.35	87	0	0	0	112	0	0.86
macrophage	796,436	3600.00	167	0	0	0	173	0	1.00
map06	584	799.37	39	0	0	0	40	0	0.28
map10	1673	951.16	39	0	0	0	40	0	0.29
map14	1373	826.05	39	0	0	0	40	0	0.29
map18	273	275.17	39	0	0	0	40	0	0.30
map20	295	254.47	39	0	0	0	40	0	0.29
maxgasflow	173,370	3600.00	3	0	0	0	4	0	0.03
mcsched	11,576	115.05	15	0	0	0	15	0	0.03
methanosarcina	63,122	3600.01	1500	0	0	0	1500	0	10.04
mkc	416,606	3600.00	61	0	0	0	109	0	2.00
msc98-ip	6971	1213.73	4	0	0	0	4	0	0.15
mzzv11	1827	482.21	1	0	0	0	1	0	0.04
n3seq24	19,952	3600.02	29	0	0	0	31	0	27.93
n4-3	39,752	563.44	2	0	0	0	2	0	0.01
n9-3	59,623	3600.01	4	0	0	0	5	0	0.03
neos-1109824	11,639	141.94	0	0	0	0	0	0	0.07
neos-1171692	1192	47.62	1	0	0	0	20	0	1.16
neos-1171737	77,041	3600.00	1	0	0	0	29	0	4.68
neos-1224597	1	4.13	20	0	0	0	180	0	0.71

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
neos-1311124	3,703,140	3600.02	1	0	0	0	20	0	0.45
neos-1337307	199,941	3080.78	1	0	0	0	6	0	0.14
neos-1396125	72,528	289.32	1	0	0	0	2	0	0.02
neos13	54,138	2627.88	1	0	0	0	1	0	0.60
neos-1426635	4,848,055	3600.05	1	0	0	0	9	0	0.03
neos-1426662	884,259	3600.01	1	0	0	0	15	0	0.16
neos-1429212	3241	3600.06	1	0	0	0	1	0	2.21
neos-1436709	1,678,981	3600.01	1	0	0	0	12	0	0.08
neos-1440460	2,634,707	3600.01	1	0	0	0	8	0	0.02
neos-1442119	1,471,525	3600.01	1	0	0	0	13	0	0.10
neos-1442657	1,766,814	3600.01	1	0	0	0	11	0	0.06
neos-1620770	321,418	3600.01	0	0	0	0	0	0	0.05
neos18	8926	67.99	19	0	0	0	55	0	0.04
neos-476283	582	287.87	12	0	0	0	12	0	3.86
neos-555424	531,676	3600.00	0	0	0	0	0	0	9.70
neos-738098	3572	3600.02	0	0	0	0	0	0	0.56
neos-777800	1	2.05	0	0	0	0	0	0	0.07
neos-785912	88	14.84	0	0	0	0	0	0	0.08
neos788725	136,996	264.59	0	0	0	0	0	0	0.01
neos808444	316	1823.49	1	0	0	0	1	0	0.15
neos-820146	1,630,620	3600.00	0	0	0	0	0	0	0.07
neos-820157	1,170,464	3600.00	0	0	0	0	0	0	0.08
neos-824661	1	52.00	0	0	1	0	1	3780	23.69
neos-824695	4	22.71	0	0	1	0	1	2275	11.85
neos-826650	117,607	3600.01	0	0	0	0	0	0	30.12
neos-826694	1	12.13	1	0	0	0	89	0	4.31
neos-826812	1	9.61	1	0	0	0	89	0	4.22
neos-826841	311,852	3600.00	0	0	0	0	0	0	28.25
neos-849702	216,748	3600.00	0	0	0	0	0	0	0.03
neos-859770	1	192.50	14	0	0	0	14	0	0.26
neos-885086	2882	430.27	1	0	0	0	44	0	47.53
neos-885524	86,541	3600.01	1236	0	0	0	1500	0	9.97
neos-911880	4,116,636	3600.01	7	0	0	0	17	0	0.03
neos-932816	95,168	3600.00	1	0	0	0	3	0	0.15
neos-933638	39	231.83	1	0	0	0	1	0	0.42
neos-933966	53	190.51	2	0	0	0	3	0	0.54
neos-934278	91	219.20	3	0	0	0	3	0	0.32
neos-935627	790	1345.69	1	0	0	0	1	0	0.24
neos-935769	43	168.99	4	0	0	0	8	0	0.30
neos-937511	43	258.78	4	0	0	0	8	0	0.37
neos-937815	5965	3600.01	3	0	0	0	3	0	0.32
neos-941262	1623	3600.00	9	0	0	0	9	0	0.26
neos-941313	20	860.81	1	0	0	0	29	0	242.14
neos-948126	2607	3600.01	6	0	0	0	6	0	0.26
neos-957389	4	32.28	3	0	0	0	9	0	1.29
neos-984165	1689	3600.01	8	0	0	0	8	0	0.23
net12	1924	578.62	4	0	0	0	4	0	0.10
noswot	348,670	96.97	1	0	0	0	3	0	0.01
ns1111636	194	3600.06	1	0	0	0	39	0	486.91
ns1116954	15	3600.06	0	0	0	0	0	0	4.28
ns1158817	1	238.44	0	0	0	0	0	0	123.34
ns1208400	3309	568.96	0	0	0	0	0	0	0.13
ns1456591	51,195	3600.00	4	0	0	0	8	0	0.44
ns1702808	197,292	388.84	1	0	0	0	5	0	0.02

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
ns1758913	3	3600.37	1	0	0	0	1	0	1.07
ns1853823	1	3591.26	0	0	0	0	0	0	19.15
ns1854840	1	3598.51	0	0	0	0	0	0	5.76
ns1905797	35,723	3600.00	1	0	0	0	2	0	1.05
ns1905800	258,267	3600.01	0	0	0	0	0	0	0.12
ns1952667	18,577	3600.02	16	0	0	0	32	0	1.19
ns2118727	566	3599.95	13	0	0	0	13	0	0.12
ns2124243	3020	3600.01	288	0	0	0	1410	0	25.95
ns2137859	103,850	3600.01	0	0	0	0	0	0	5.91
ns4-pr9	556,765	3600.00	2	0	0	0	2	0	0.02
nsr8k	62	3600.03	207	0	0	0	364	0	1.33
nu60-pr9	155,974	3600.00	2	0	0	0	2	0	0.02
p2m2p1m1p0n100	32,164,886	3600.00	25	0	0	0	67	0	0.04
p6b	91,775	3600.00	0	0	0	0	0	0	0.01
pigeon-10	5,325,222	3600.00	0	0	0	0	0	0	0.02
pigeon-11	4,025,854	3600.00	0	0	0	0	0	0	0.03
pigeon-12	3,084,195	3600.00	0	0	0	0	0	0	0.04
pigeon-13	2,290,263	3600.00	0	0	0	0	0	0	0.03
pigeon-19	1,403,054	3600.00	0	0	0	0	0	0	0.22
protfold	30,470	3600.00	0	0	0	0	0	0	0.05
pw-myciel4	414,075	3600.00	0	0	0	0	0	0	0.01
qiu	11,561	68.38	0	0	0	0	0	0	0.03
queens-30	19,334	3600.05	0	0	0	0	0	0	0.09
rail507	949	97.95	0	0	0	0	0	0	0.34
ramos3	17	3600.24	0	0	0	0	0	0	1.65
rvb-sub	41,960	3600.00	8	0	0	0	8	0	4.09
sct1	10,683	3600.09	1	0	0	0	1	0	1.23
sct32	23,327	3600.00	78	0	0	0	178	0	6.62
sct5	7514	3600.01	2	0	0	0	3	0	17.60
seymour-disj-10	36,269	3600.00	37	0	0	0	45	0	0.11
seymour	86,785	3600.01	2	0	0	0	2	0	0.01
shipsched	109,586	3600.00	50	0	0	0	164	0	0.23
shs1023	1	3744.07	1	0	0	0	1	0	19.69
siena1	1899	3600.01	290	0	0	0	407	0	1.24
sing161	2	3600.19	2	0	0	0	2	0	8.37
sing2	5097	3600.01	1	0	0	0	1	0	0.29
sts405	78,385	3600.01	0	0	0	0	0	0	1.12
sts729	331	3600.04	0	0	0	0	0	0	3.11
swath	342,796	3600.00	0	0	0	0	0	0	0.01
tanglegram1	55	655.20	23	0	0	0	1500	0	13.67
tanglegram2	3	10.95	25	0	0	0	1500	0	7.55
timtab1	868,502	511.61	1	0	0	0	1	0	0.00
toll-like	680,170	3600.00	246	0	0	0	249	0	5.45
uc-case11	1435	3600.01	1	0	0	0	1	0	0.25
uc-case3	1197	3600.01	2	0	0	0	2	0	0.49
uct-subprob	634,348	3600.00	65	0	0	0	73	0	0.29
unitcal_7	56,998	3600.00	4	0	0	0	4	0	0.44
usaBbrv-8-25_70	636,721	3600.00	1	0	0	0	1	0	0.01
vpphard2	426	3606.55	56	0	0	0	805	0	8.19
vpphard	529	3600.01	609	0	0	0	1500	0	12.32
wachplan	84,354	3600.00	0	0	0	0	0	0	0.03
zib54-UUE	402,873	3600.00	1	0	0	0	1	0	0.02
AM (# 156)	587,437.6	2356.59	63.0	0.0	0.0	0.0	123.0	38.8	11.93
GM (# 156)	4286.5	942.01	3.9	1.0	1.0	1.0	6.6	1.1	1.97

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
SGM (# 156)	9391.2	1069.33							3.21

TABLE 126. M2010-sym testset: S-prob settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30_70_45_095_100	331	258.08	1	0	0	0	1	0	0.05
acc-tight4	913	457.04	0	0	0	0	0	0	0.04
ash608gpia-3col	1	6.26	0	0	1	0	1	4	0.28
bab3	1	3612.16	3	0	0	0	3	0	46.78
bab5	36,446	3600.02	5	0	0	0	5	0	0.48
berlin_5_8_0	1,889,843	3600.01	1	0	0	0	1	0	0.01
biella1	4847	324.04	334	0	0	0	586	0	1.48
circ10-3	45	3599.97	0	0	0	0	0	0	0.39
co-100	10,557	3600.00	2	0	0	0	2	0	1.40
core2536-691	121	72.28	8	0	0	0	8	0	1.66
core4872-1529	1462	3600.00	7	0	0	0	7	0	2.26
cov1075	849,420	3600.00	0	0	0	0	0	0	0.03
dc1c	9523	3600.01	915	0	0	0	1624	0	8.87
dc1l	1303	3600.01	1187	0	0	0	1476	0	20.21
dolom1	3237	3600.00	1008	0	0	0	1506	0	11.33
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.02	1	0	0	0	1	0	0.00
enlight15	1	0.03	1	0	0	0	1	0	0.00
enlight16	1	0.05	1	0	0	0	1	0	0.00
enlight9	1	0.02	1	0	0	0	1	0	0.00
ex1010-pi	14,383	3600.06	0	0	0	0	0	0	0.02
ex10	1	1024.11	0	0	0	0	0	0	0.00
ex9	1	91.67	0	0	0	0	0	0	0.00
glass4	4,848,104	3600.03	1	0	0	0	1	1	0.00
go19	1,194,956	3600.00	0	0	0	0	0	0	0.00
iis-bupa-cov	107,322	3600.00	0	0	0	0	0	0	0.01
lectsched-1	2514	165.58	129	0	0	0	188	0	0.62
lectsched-1-obj	67,882	3600.00	516	0	0	0	673	19	508.69
lectsched-2	433	53.90	78	0	0	0	111	0	0.22
lectsched-3	4380	143.84	120	0	0	0	189	0	0.52
lectsched-4-obj	1827	61.03	87	0	0	0	112	0	0.93
macrophage	671,688	3600.00	167	0	0	0	173	0	0.96
map06	603	750.97	39	0	0	0	40	0	0.28
map10	1844	855.98	39	0	0	0	40	0	0.29
map14	824	785.77	39	0	0	0	40	0	0.29
map18	305	251.74	39	0	0	0	40	0	0.30
map20	385	253.24	39	0	0	0	40	0	0.29
maxgasflow	240,171	3600.00	3	0	0	0	4	1	0.02
mcsched	20,506	184.56	15	0	0	0	15	0	0.03
methanosarcina	42,278	3600.00	1500	0	0	0	1500	0	11.18
mkc	541,242	3600.00	61	0	0	0	109	57	2.04
msc98-ip	4625	3600.01	4	0	0	0	4	0	0.15
mzzv11	3903	790.26	1	0	0	0	1	1	0.05
n3seq24	30	3599.94	29	0	0	0	31	0	28.50
n4-3	42,518	628.91	2	0	0	0	2	0	0.01
n9-3	53,701	3600.01	4	0	0	0	5	0	0.03
neos-1109824	11,639	141.93	0	0	0	0	0	0	0.08
neos-1171692	921	45.47	1	0	0	0	20	0	1.16
neos-1171737	87,714	3600.00	1	0	0	0	29	0	4.68
neos-1224597	1	3.58	20	0	0	0	180	0	0.73

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-1311124	4,189,974	3600.03	1	0	0	0	20	0	0.46
neos-1337307	183,114	2864.53	1	0	0	0	6	6	0.15
neos-1396125	56,073	231.44	1	0	0	0	2	1	0.02
neos13	68,512	3600.01	1	0	0	0	1	0	0.60
neos-1426635	4,931,587	3600.03	1	0	0	0	9	0	0.03
neos-1426662	1,101,660	3600.02	1	0	0	0	15	0	0.16
neos-1429212	2837	3600.03	1	0	0	0	1	1	2.30
neos-1436709	1,590,037	3600.01	1	0	0	0	12	0	0.08
neos-1440460	2,254,651	3600.01	1	0	0	0	8	0	0.03
neos-1442119	1,458,708	3600.00	1	0	0	0	13	0	0.09
neos-1442657	1,485,978	3600.01	1	0	0	0	11	0	0.05
neos-1620770	321,037	3600.00	0	0	0	0	0	0	0.05
neos18	11,966	86.31	19	0	0	0	55	0	0.04
neos-476283	988	578.23	12	0	0	0	12	20	3.95
neos-555424	525,588	3600.00	0	0	0	0	0	0	9.64
neos-738098	3514	3600.02	0	0	0	0	0	0	0.54
neos-777800	1	2.04	0	0	0	0	0	0	0.07
neos-785912	88	14.82	0	0	0	0	0	0	0.07
neos788725	136,996	265.55	0	0	0	0	0	0	0.00
neos808444	307	716.46	1	0	0	0	1	1	0.15
neos-820146	1,627,983	3600.00	0	0	0	0	0	0	0.07
neos-820157	1,171,347	3600.00	0	0	0	0	0	0	0.08
neos-824661	1	35.91	0	0	1	0	1	3780	23.81
neos-824695	4	22.67	0	0	1	0	1	2275	11.89
neos-826650	118,029	3600.00	0	0	0	0	0	0	29.98
neos-826694	1	15.38	1	0	0	0	89	0	4.33
neos-826812	1	9.24	1	0	0	0	89	0	4.27
neos-826841	309,977	3600.00	0	0	0	0	0	0	28.73
neos-849702	216,874	3600.00	0	0	0	0	0	0	0.03
neos-859770	1	212.72	14	0	0	0	14	10	0.61
neos-885086	17,830	1692.12	1	0	0	0	44	0	46.85
neos-885524	34,472	3600.00	1236	0	0	0	1500	0	15.69
neos-911880	4,626,721	3600.01	7	0	0	0	17	17	0.03
neos-932816	5773	3600.01	1	0	0	0	3	0	0.15
neos-933638	31	235.74	1	0	0	0	1	0	0.43
neos-933966	45	153.70	2	0	0	0	3	0	0.53
neos-934278	104	201.47	3	0	0	0	3	0	0.33
neos-935627	25	215.76	1	0	0	0	1	0	0.24
neos-935769	755	1078.03	4	0	0	0	8	0	0.28
neos-937511	32	195.15	4	0	0	0	8	0	0.39
neos-937815	5248	3600.00	3	0	0	0	3	0	0.31
neos-941262	3128	3600.01	9	0	0	0	9	0	0.25
neos-941313	6	631.08	1	0	0	0	29	0	235.95
neos-948126	1969	3600.01	6	0	0	0	6	0	0.25
neos-957389	4	32.33	3	0	0	0	9	0	1.30
neos-984165	1906	3600.00	8	0	0	0	8	0	0.24
net12	2704	947.00	4	0	0	0	4	0	0.09
noswot	385,022	115.72	1	0	0	0	3	0	0.01
ns1111636	77	3600.03	1	0	0	0	39	1	527.51
ns1116954	15	3599.82	0	0	0	0	0	0	4.33
ns1158817	1	238.26	0	0	0	0	0	0	123.39
ns1208400	3309	568.68	0	0	0	0	0	0	0.13
ns1456591	72,483	3600.03	4	0	0	0	8	8	0.48
ns1702808	115,451	211.56	1	0	0	0	5	5	0.02

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
ns1758913	1	3600.34	1	0	0	0	1	0	1.12
ns1853823	1	3591.19	0	0	0	0	0	0	18.99
ns1854840	1	3598.53	0	0	0	0	0	0	5.72
ns1905797	44,190	3600.05	1	0	0	0	2	0	1.08
ns1905800	257,966	3600.00	0	0	0	0	0	0	0.12
ns1952667	1486	615.83	16	0	0	0	32	0	1.20
ns2118727	222	3599.96	13	0	0	0	13	0	0.15
ns2124243	4928	3600.02	288	0	0	0	1410	0	26.00
ns2137859	104,015	3600.00	0	0	0	0	0	0	5.90
ns4-pr9	479,073	3600.00	2	0	0	0	2	0	0.02
nsr8k	72	3599.88	207	0	0	0	364	0	1.94
nu60-pr9	149,622	3600.00	2	0	0	0	2	0	0.02
p2m2p1m1p0n100	25,093,666	3600.00	25	0	0	0	67	0	0.03
p6b	92,054	3600.00	0	0	0	0	0	0	0.01
pigeon-10	5,309,831	3600.00	0	0	0	0	0	0	0.02
pigeon-11	3,980,811	3600.00	0	0	0	0	0	0	0.02
pigeon-12	3,073,105	3600.00	0	0	0	0	0	0	0.04
pigeon-13	2,301,179	3600.00	0	0	0	0	0	0	0.03
pigeon-19	1,383,690	3600.00	0	0	0	0	0	0	0.22
protfold	30,571	3600.00	0	0	0	0	0	0	0.05
pw-myciel4	413,984	3600.00	0	0	0	0	0	0	0.02
qiu	11,561	68.25	0	0	0	0	0	0	0.03
queens-30	19,004	3600.07	0	0	0	0	0	0	0.09
rail507	949	98.32	0	0	0	0	0	0	0.34
ramos3	17	3599.92	0	0	0	0	0	0	1.64
rvb-sub	44,106	3600.00	8	0	0	0	8	8	4.66
sct1	17,806	3600.04	1	0	0	0	1	0	1.25
sct32	127,236	3600.00	78	0	0	0	178	0	6.69
sct5	2597	3600.01	2	0	0	0	3	0	17.64
seymour-disj-10	37,497	3600.00	37	0	0	0	45	0	0.12
seymour	86,488	3600.00	2	0	0	0	2	0	0.01
shipsched	151,309	3600.01	50	0	0	0	164	0	0.24
shs1023	1	3694.50	1	0	0	0	1	150	19.83
siena1	1460	3600.01	290	0	0	0	407	0	1.81
sing161	2	3707.47	2	0	0	0	2	0	8.52
sing245	18	3616.17	1	0	0	0	1	0	1.36
sing2	4696	3600.01	1	0	0	0	1	0	0.30
sts405	77,913	3600.02	0	0	0	0	0	0	1.12
sts729	343	3600.04	0	0	0	0	0	0	3.11
swath	340,732	3600.01	0	0	0	0	0	0	0.01
tanglegram1	49	626.94	23	0	0	0	1500	0	13.97
tanglegram2	3	12.28	25	0	0	0	1500	0	7.61
timtab1	580,501	328.14	1	0	0	0	1	0	0.00
toll-like	698,964	3600.00	246	0	0	0	249	0	5.27
uc-case11	1043	3600.01	1	0	0	0	1	0	0.26
uc-case3	1190	3600.03	2	0	0	0	2	0	0.51
uct-subprob	576,050	3600.00	65	0	0	0	73	1	0.27
unitcal_7	42,501	3328.31	4	0	0	0	4	0	0.47
usAbbrv-8-25_70	613,163	3600.00	1	0	0	0	1	0	0.02
vpphard2	426	3607.01	56	0	0	0	805	0	10.29
vpphard	809	3600.03	609	0	0	0	1500	0	16.72
wachplan	84,347	3600.00	0	0	0	0	0	0	0.03
zib54-UUE	411,544	3600.00	1	0	0	0	1	0	0.01
AM (# 157)	538,054.1	2355.59	62.6	0.0	0.0	0.0	122.2	40.6	12.27

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
GM (# 157)	3724.8	931.17	3.8	1.0	1.0	1.0	6.5	1.3	2.00
SGM (# 157)	8554.3	1056.96							3.31

TABLE 127. M2010-sym testset: S-orbitmin settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30_70_45_095_100	331	256.44	0	0	0	1	1	0	0.06
acc-tight4	1813	377.65	0	0	0	1	19	0	0.03
ash608gpia-3col	10	12.20	0	0	0	1	2	0	0.23
bab3	1	3615.48	0	0	0	3	3	0	44.86
bab5	32,286	3600.00	0	0	0	5	5	0	0.35
berlin_5_8_0	1,863,387	3600.01	0	0	0	1	1	0	0.01
biella1	13,894	799.88	0	0	0	334	515	0	1.16
circ10-3	36	3599.97	0	0	0	1	9	0	0.39
co-100	10,664	3600.79	0	0	0	2	2	0	1.39
core2536-691	116	65.07	0	0	0	9	11	0	1.59
core4872-1529	1447	3600.01	0	0	0	7	7	0	2.21
cov1075	326,107	1310.04	0	0	0	1	119	0	0.08
dc1c	8591	3600.00	0	0	0	915	1059	0	8.03
dc1l	822	3600.73	0	0	0	1187	1476	0	14.32
dolom1	2816	3600.00	0	0	0	1008	1150	0	9.76
enlight13	1	0.02	0	0	0	1	1	0	0.00
enlight14	1	0.01	0	0	0	1	1	0	0.00
enlight15	1	0.03	0	0	0	1	1	0	0.01
enlight16	1	0.04	0	0	0	1	1	0	0.00
enlight9	1	0.00	0	0	0	1	1	0	0.00
ex1010-pi	14,292	3600.01	0	0	0	0	0	0	0.02
ex10	1	1023.76	0	0	0	1	7	0	0.01
ex9	1	92.72	0	0	0	1	7	0	0.00
glass4	5,028,150	3600.02	0	0	0	1	1	0	0.00
go19	1,155,688	3600.00	0	0	0	1	3	0	0.00
iis-bupa-cov	107,437	3600.01	0	0	0	0	0	0	0.01
lectsched-1	3288	169.37	0	0	0	129	188	0	0.29
lectsched-1-obj	86,409	3600.00	0	0	0	516	673	0	2.32
lectsched-2	362	52.05	0	0	0	78	111	0	0.13
lectsched-3	1983	111.60	0	0	0	120	189	0	0.26
lectsched-4-obj	4100	86.01	0	0	0	87	112	0	0.10
macrophage	881,416	3600.00	0	0	0	170	186	0	0.16
map06	603	753.32	0	0	0	39	40	0	0.28
map10	1844	842.12	0	0	0	39	40	0	0.28
map14	824	787.71	0	0	0	39	40	0	0.29
map18	305	251.61	0	0	0	39	40	0	0.28
map20	385	252.66	0	0	0	39	40	0	0.30
maxgasflow	144,787	3600.01	0	0	0	3	4	0	0.02
mcsched	15,929	151.11	0	0	0	15	15	0	0.01
methanosarcina	42,260	3600.00	0	0	0	1500	1500	0	10.19
mkc	436,844	3600.00	0	0	0	66	122	0	0.20
msc98-ip	4623	3600.01	0	0	0	4	4	0	0.13
mzzv11	2709	646.48	0	0	0	1	1	0	0.04
n3seq24	43,064	3600.01	0	0	0	29	31	0	21.86
n4-3	42,518	625.81	0	0	0	2	2	0	0.01
n9-3	71,202	3600.00	0	0	0	4	5	0	0.02
neos-1109824	17,152	254.57	0	0	0	1	3	0	0.05
neos-1171692	1149	51.16	0	0	0	1	20	0	0.12
neos-1171737	80,890	3600.00	0	0	0	1	29	0	0.20
neos-1224597	13	5.65	0	0	0	21	181	0	0.63

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-1311124	3,902,605	3600.03	0	0	0	1	20	0	0.03
neos-1337307	188,832	2832.13	0	0	0	1	6	0	0.07
neos-1396125	46,858	191.83	0	0	0	1	2	0	0.01
neos13	68,975	3600.00	0	0	0	1	1	0	0.58
neos-1426635	4,813,472	3600.04	0	0	0	1	9	0	0.01
neos-1426662	1,012,899	3600.02	0	0	0	1	15	0	0.02
neos-1429212	6475	3600.26	0	0	0	1	1	0	2.23
neos-1436709	1,706,537	3600.01	0	0	0	1	12	0	0.01
neos-1440460	2,668,063	3600.01	0	0	0	1	8	0	0.01
neos-1442119	1,417,793	3600.01	0	0	0	1	13	0	0.02
neos-1442657	1,789,318	3600.01	0	0	0	1	11	0	0.01
neos-1620770	533,481	3600.00	0	0	0	1	69	0	0.07
neos18	9365	73.87	0	0	0	19	55	0	0.03
neos-476283	1001	430.32	0	0	0	12	12	0	3.80
neos-555424	478,899	3600.00	0	0	0	2	68	0	0.19
neos-738098	3138	3600.01	0	0	0	1	35	0	0.36
neos-777800	43	22.55	0	0	0	1	7	0	0.03
neos-785912	190	17.24	0	0	0	1	14	0	0.03
neos788725	124,938	249.73	0	0	0	1	1	0	0.00
neos808444	411	2154.15	0	0	0	1	1	0	0.12
neos-820146	1,669,257	3600.00	0	0	0	1	224	0	0.12
neos-820157	1,059,855	3600.00	0	0	0	1	139	0	0.08
neos-824661	1	45.68	0	0	0	1	169	0	5.03
neos-824695	1	20.30	0	0	0	1	169	0	2.15
neos-826650	191,272	3600.00	0	0	0	1	31	0	0.10
neos-826694	1	12.30	0	0	0	1	89	0	0.85
neos-826812	1	7.54	0	0	0	1	89	0	0.81
neos-826841	383,452	3600.00	0	0	0	1	63	0	0.11
neos-849702	11,683	303.58	0	0	0	1	5	0	0.02
neos-859770	1	187.61	0	0	0	15	16	0	0.23
neos-885086	21,579	1134.88	0	0	0	1	44	0	1.17
neos-885524	17,876	3600.01	0	0	0	1236	1500	0	10.01
neos-911880	4,180,546	3600.01	0	0	0	7	17	0	0.02
neos-932816	4639	3600.00	0	0	0	1	3	0	0.06
neos-933638	6	142.07	0	0	0	5	17	0	0.29
neos-933966	56	165.35	0	0	0	5	16	0	0.34
neos-934278	86	256.12	0	0	0	8	16	0	0.24
neos-935627	8	128.63	0	0	0	6	14	0	0.19
neos-935769	22	191.67	0	0	0	9	18	0	0.18
neos-937511	59	193.00	0	0	0	9	17	0	0.23
neos-937815	5138	3600.01	0	0	0	8	13	0	0.22
neos-941262	4806	3600.01	0	0	0	13	15	0	0.15
neos-941313	9	710.77	0	0	0	1	29	0	2.66
neos-948126	2927	3600.00	0	0	0	11	14	0	0.17
neos-957389	4	30.90	0	0	0	4	208	0	0.86
neos-984165	2154	3600.00	0	0	0	12	16	0	0.14
net12	2704	946.65	0	0	0	4	4	0	0.09
noswot	497,738	145.68	0	0	0	1	3	0	0.01
ns1111636	377	3600.01	0	0	0	1	39	0	3.03
ns1116954	9	3600.03	0	0	0	1	5	0	3.66
ns1158817	1	177.71	0	0	0	1	166	0	60.93
ns1208400	3927	1252.03	0	0	0	1	2	0	0.12
ns1456591	64,127	3600.00	0	0	0	4	8	0	0.38
ns1702808	179,646	338.96	0	0	0	1	5	0	0.01

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
ns1758913	1	3600.32	0	0	0	1	1	0	1.07
ns1853823	1	3591.20	0	0	0	1	1	0	4.18
ns1854840	1	3598.75	0	0	0	1	1	0	3.81
ns1905797	37,343	3600.00	0	0	0	1	2	0	0.61
ns1905800	249,935	3600.00	0	0	0	1	2	0	0.08
ns1952667	6222	1433.62	0	0	0	16	16	0	1.18
ns2118727	220	3599.89	0	0	0	13	13	0	0.05
ns2124243	5918	3600.00	0	0	0	288	1410	0	15.49
ns2137859	105,580	3600.00	0	0	0	1	3	0	4.82
ns4-pr9	480,138	3600.00	0	0	0	2	2	0	0.02
nsr8k	80	3600.01	0	0	0	207	214	0	1.26
nu60-pr9	149,824	3600.00	0	0	0	2	2	0	0.02
p2m2p1m1p0n100	30,118,927	3600.00	0	0	0	25	67	0	0.03
p6b	117,656	3600.01	0	0	0	1	21	0	0.02
pigeon-10	3,909,261	3600.00	0	0	0	1	7	0	0.01
pigeon-11	3,414,899	3600.00	0	0	0	1	8	0	0.01
pigeon-12	3,586,448	3600.00	0	0	0	1	9	0	0.02
pigeon-13	2,367,355	3600.00	0	0	0	1	109	0	0.07
pigeon-19	1,178,481	3600.00	0	0	0	1	271	0	0.16
protfold	21,750	3600.00	0	0	0	1	1	0	0.03
pw-myciel4	391,922	2565.32	0	0	0	1	4	0	0.02
qiu	3680	32.24	0	0	0	1	3	0	0.01
queens-30	14,578	3600.13	0	0	0	1	7	0	0.09
rail507	949	97.69	0	0	0	0	0	0	0.35
ramos3	22	3599.91	0	0	0	1	2186	0	1.09
rvb-sub	43,632	3600.01	0	0	0	8	8	0	4.10
sct1	9193	3600.00	0	0	0	2	3	0	0.56
sct32	89,416	3600.00	0	0	0	78	178	0	0.46
sct5	6891	3600.02	0	0	0	3	8	0	7.83
seymour-disj-10	48,893	3600.01	0	0	0	37	45	0	0.10
seymour	86,696	3600.00	0	0	0	2	2	0	0.01
shipsched	110,683	3600.00	0	0	0	50	164	0	0.23
shs1023	1	3728.63	0	0	0	1	1	0	1.55
siena1	1896	3600.23	0	0	0	290	307	0	1.19
sing161	2	3703.31	0	0	0	2	2	0	4.13
sing245	18	3617.79	0	0	0	1	1	0	1.08
sing2	4713	3600.02	0	0	0	1	1	0	0.22
sts405	72,462	3600.01	0	0	0	1	404	0	1.23
sts729	132	3599.91	0	0	0	1	728	0	2.27
swath	341,651	3600.00	0	0	0	0	0	0	0.02
tanglegram1	43	561.71	0	0	0	23	1500	0	12.74
tanglegram2	3	11.93	0	0	0	25	1500	0	6.71
timtab1	580,501	328.13	0	0	0	1	1	0	0.00
toll-like	672,433	3600.00	0	0	0	255	282	0	0.53
uc-case11	1050	3600.01	0	0	0	1	1	0	0.24
uc-case3	1763	3600.02	0	0	0	2	2	0	0.43
uct-subprob	590,884	3600.00	0	0	0	65	73	0	0.06
unitcal_7	42,368	3293.64	0	0	0	4	4	0	0.34
usAbbrv-8-25_70	602,676	3600.00	0	0	0	1	1	0	0.01
vpphard2	413	3605.28	0	0	0	56	805	0	7.63
vpphard	1423	3601.00	0	0	0	609	1500	0	12.34
wachplan	90,866	3600.00	0	0	0	1	2	0	0.02
zib54-UUE	453,675	3600.00	0	0	0	1	1	0	0.02
AM (# 157)	557,613.9	2323.13	0.0	0.0	0.0	63.3	149.1	0.0	2.07

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
GM (# 157)	3986.8	926.24	1.0	1.0	1.0	4.1	15.3	1.0	1.43
SGM (# 157)	8847.6	1039.67							1.36

TABLE 128. M2010-bench testset: S settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30n20b8	424	304.05	0	0	0	0	0	0	0.03
acc-tight5	2029	284.92	0	0	0	0	0	0	0.01
aflow40b	285,631	2322.40	0	0	0	0	0	0	0.00
air04	119	34.90	0	0	0	0	0	0	0.02
app1-2	16,726	3593.82	0	0	0	0	0	0	0.48
ash608gpia-3col	1	6.26	0	0	1	0	1	3	0.26
bab5	32,364	3600.00	5	0	0	0	5	0	0.41
beasleyC3	528,238	3600.00	0	0	0	0	0	0	0.00
biella1	5821	391.05	334	0	0	0	586	0	1.21
bienst2	138,693	179.20	0	0	0	0	0	0	0.00
binkar10_1	207,304	349.65	0	0	0	0	0	0	0.00
bley_xl1	2	312.60	0	0	0	0	0	0	0.08
bnatt350	1154	162.67	0	0	0	0	0	0	0.02
core2536-691	121	72.61	8	0	0	0	8	0	1.64
cov1075	848,658	3600.00	0	0	0	0	0	0	0.03
csched010	675,410	3600.00	0	0	0	0	0	0	0.00
danoind	921,976	3600.00	0	0	0	0	0	0	0.01
dfn-gwin-UUM	51,474	93.17	0	0	0	0	0	0	0.00
eil33-2	693	58.94	0	0	0	0	0	0	0.02
eilB101	9340	148.31	0	0	0	0	0	0	0.01
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.01	1	0	0	0	1	0	0.00
ex9	1	92.38	0	0	0	0	0	0	0.00
glass4	4,985,718	3600.02	1	0	0	0	1	0	0.00
gmu-35-40	5,577,169	3600.03	0	0	0	0	0	0	0.00
iis-100-0-cov	81,999	1525.45	0	0	0	0	0	0	0.00
iis-bupa-cov	106,592	3600.00	0	0	0	0	0	0	0.01
iis-pima-cov	11,775	753.18	0	0	0	0	0	0	0.01
lectsched-4-obj	2618	69.71	87	0	0	0	112	0	0.89
m100n500k4r1	4,736,933	3600.00	0	0	0	0	0	0	0.00
macrophage	737,605	3600.00	167	0	0	0	173	0	0.95
map18	305	252.12	39	0	0	0	40	0	0.29
map20	385	252.50	39	0	0	0	40	0	0.29
mcsched	15,929	150.52	15	0	0	0	15	0	0.03
mik-250-1-100-1	4,488,404	1593.53	0	0	0	0	0	0	0.00
mine-166-5	1850	41.45	0	0	0	0	0	0	0.02
mine-90-10	151,788	802.27	0	0	0	0	0	0	0.01
msc98-ip	4601	3600.00	4	0	0	0	4	0	0.14
mspp16	—	—	—	—	—	—	—	—	—
mzzv11	2709	650.29	1	0	0	0	1	0	0.04
n3div36	113,939	3600.69	0	0	0	0	0	0	0.47
n3seq24	30	3599.92	29	0	0	0	31	0	27.98
n4-3	42,518	628.19	2	0	0	0	2	0	0.01
neos-1109824	11,639	141.46	0	0	0	0	0	0	0.07
neos-1337307	182,608	2761.71	1	0	0	0	6	0	0.14
neos-1396125	57,279	209.59	1	0	0	0	2	0	0.01
neos13	67,768	3600.02	1	0	0	0	1	0	0.57
neos-1601936	10,979	2059.76	0	0	0	0	0	0	0.03
neos18	5310	46.45	19	0	0	0	55	0	0.04
neos-476283	1001	429.63	12	0	0	0	12	0	3.87

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-686190	7319	107.87	0	0	0	0	0	0	0.02
neos-849702	216,717	3600.00	0	0	0	0	0	0	0.04
neos-916792	314,071	3600.00	0	0	0	0	0	0	0.26
neos-934278	104	203.04	3	0	0	0	3	0	0.33
net12	2704	949.73	4	0	0	0	4	0	0.11
netdiversion	88	786.80	0	0	0	0	0	0	0.69
newdano	1,772,087	3600.00	0	0	0	0	0	0	0.01
noswot	370,706	110.58	1	0	0	0	3	0	0.00
ns1208400	3309	569.41	0	0	0	0	0	0	0.13
ns1688347	4220	212.32	0	0	0	0	0	0	0.02
ns1758913	1	3600.34	1	0	0	0	1	0	1.08
ns1766074	925,848	1235.45	0	0	0	0	0	0	0.00
ns1830653	46,368	654.07	0	0	0	0	0	0	0.01
opm2-z7-s2	2827	713.17	0	0	0	0	0	0	0.06
pg5_34	215,677	1270.63	0	0	0	0	0	0	0.01
pigeon-10	5,304,038	3600.00	0	0	0	0	0	0	0.02
pw-myciel4	411,095	3600.00	0	0	0	0	0	0	0.02
qiu	11,561	68.20	0	0	0	0	0	0	0.02
rail507	949	98.20	0	0	0	0	0	0	0.34
ran16x16	328,398	297.34	0	0	0	0	0	0	0.00
reblock67	122,028	347.71	0	0	0	0	0	0	0.00
rmatr100-p10	675	112.24	0	0	0	0	0	0	0.03
rmatr100-p5	357	106.69	0	0	0	0	0	0	0.04
rmine6	695,038	3600.00	0	0	0	0	0	0	0.01
rocll-4-11	26,842	593.16	0	0	0	0	0	0	0.03
rococoC10-001000	106,798	556.32	0	0	0	0	0	0	0.01
roll3000	504,127	3127.18	0	0	0	0	0	0	0.01
satellites1-25	3350	527.32	0	0	0	0	0	0	0.03
sp98ic	200,190	3600.00	0	0	0	0	0	0	0.35
sp98ir	6084	66.50	0	0	0	0	0	0	0.03
tanglegram1	51	641.54	23	0	0	0	1500	0	13.81
tanglegram2	3	12.29	25	0	0	0	1500	0	7.65
timtab1	580,501	329.66	1	0	0	0	1	0	0.00
triptim1	1	47.47	0	0	0	0	0	0	0.24
unitcal_7	42,368	3294.32	4	0	0	0	4	0	0.43
vpphard	809	3600.03	609	0	0	0	1500	0	12.49
zib54-UUE	452,797	3599.99	1	0	0	0	1	0	0.02
AM (# 87)	434,548.7	1469.14	16.5	0.0	0.0	0.0	64.5	0.0	0.90
GM (# 87)	8796.6	515.69	1.9	1.0	1.0	1.0	2.3	1.0	1.16
SGM (# 87)	15,016.9	565.00							0.61

TABLE 129. M2010-bench testset: S-fund settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30n20b8	424	304.67	0	0	0	0	0	0	0.03
acc-tight5	2029	284.69	0	0	0	0	0	0	0.01
aflow40b	285,631	2326.93	0	0	0	0	0	0	0.01
air04	119	35.10	0	0	0	0	0	0	0.03
app1-2	16,723	3600.04	0	0	0	0	0	0	0.47
ash608gpia-3col	1	6.26	0	0	1	0	1	3	0.27
bab5	32,255	3600.03	5	0	0	0	5	0	0.41
beasleyC3	525,949	3600.01	0	0	0	0	0	0	0.01
biella1	5821	391.38	334	0	0	0	586	0	1.23
bienst2	138,693	179.27	0	0	0	0	0	0	0.00
binkar10_1	207,304	349.05	0	0	0	0	0	0	0.00
bley_xl1	2	311.29	0	0	0	0	0	0	0.09
bnatt350	1154	163.18	0	0	0	0	0	0	0.02
core2536-691	396	158.76	8	3	0	0	11	0	1.63
cov1075	736,002	3600.00	0	9	0	0	9	0	0.03
csched010	684,477	3600.00	0	0	0	0	0	0	0.00
danoind	918,959	3600.00	0	0	0	0	0	0	0.00
dfn-gwin-UUM	51,474	93.37	0	0	0	0	0	0	0.00
eil33-2	693	59.11	0	0	0	0	0	0	0.01
eilB101	9340	148.23	0	0	0	0	0	0	0.01
enlight13	1	0.02	1	0	0	0	1	0	0.01
enlight14	1	0.02	1	0	0	0	1	0	0.00
ex9	1	92.82	0	7	0	0	7	0	0.00
glass4	4,994,033	3600.02	1	0	0	0	1	0	0.01
gmu-35-40	5,560,840	3600.02	0	0	0	0	0	0	0.00
iis-100-0-cov	81,999	1526.31	0	0	0	0	0	0	0.00
iis-bupa-cov	107,096	3600.00	0	0	0	0	0	0	0.01
iis-pima-cov	11,775	750.02	0	0	0	0	0	0	0.01
lectsched-4-obj	2618	70.01	87	0	0	0	112	0	0.89
m100n500k4r1	4,745,696	3600.00	0	0	0	0	0	0	0.00
macrophage	711,489	3600.00	167	15	0	0	188	0	0.98
map18	305	252.94	39	0	0	0	40	0	0.29
map20	385	250.55	39	0	0	0	40	0	0.28
mcsched	15,929	150.09	15	0	0	0	15	0	0.02
mik-250-1-100-1	4,488,404	1593.99	0	0	0	0	0	0	0.01
mine-166-5	1850	41.66	0	0	0	0	0	0	0.01
mine-90-10	151,788	800.11	0	0	0	0	0	0	0.01
msc98-ip	4601	3600.01	4	0	0	0	4	0	0.14
mspp16	—	—	—	—	—	—	—	—	—
mzzv11	2709	646.10	1	0	0	0	1	0	0.05
n3div36	113,374	3600.16	0	0	0	0	0	0	0.47
n3seq24	30	3599.92	29	0	0	0	31	0	27.95
n4-3	42,518	628.70	2	0	0	0	2	0	0.01
neos-1109824	19,470	205.83	0	4	0	0	4	0	0.08
neos-1337307	182,608	2754.17	1	0	0	0	6	0	0.14
neos-1396125	57,279	210.84	1	0	0	0	2	0	0.02
neos13	69,469	3600.01	1	0	0	0	1	0	0.60
neos-1601936	10,979	2059.17	0	0	0	0	0	0	0.03
neos18	5310	46.78	19	0	0	0	55	0	0.04
neos-476283	1001	427.34	12	0	0	0	12	0	3.83

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-686190	7319	108.37	0	0	0	0	0	0	0.01
neos-849702	6163	239.16	0	7	0	0	7	0	0.04
neos-916792	308,687	3600.00	0	0	0	0	0	0	0.25
neos-934278	692	796.48	3	25	0	0	28	0	0.33
net12	2704	946.27	4	0	0	0	4	0	0.09
netdiversion	88	787.57	0	0	0	0	0	0	0.71
newdano	1,754,394	3600.00	0	0	0	0	0	0	0.01
noswot	370,706	110.35	1	0	0	0	3	0	0.00
ns1208400	6637	1229.85	0	7	0	0	7	0	0.14
ns1688347	4220	212.12	0	0	0	0	0	0	0.01
ns1758913	1	3600.32	1	0	0	0	1	0	1.09
ns1766074	925,848	1238.82	0	0	0	0	0	0	0.00
ns1830653	46,368	652.69	0	0	0	0	0	0	0.02
opm2-z7-s2	2827	709.16	0	0	0	0	0	0	0.07
pg5_34	215,677	1270.68	0	0	0	0	0	0	0.01
pigeon-10	1,259,489	1009.95	0	7	0	0	7	0	0.02
pw-myciel4	341,670	3600.00	0	2	0	0	2	0	0.02
qiu	4768	38.42	0	4	0	0	4	0	0.03
rail507	949	98.22	0	0	0	0	0	0	0.35
ran16x16	328,398	297.46	0	0	0	0	0	0	0.00
reblock67	122,028	345.98	0	0	0	0	0	0	0.01
rmatr100-p10	675	111.30	0	0	0	0	0	0	0.02
rmatr100-p5	357	106.32	0	0	0	0	0	0	0.03
rmine6	691,734	3600.00	0	0	0	0	0	0	0.02
rocll-4-11	26,842	592.51	0	0	0	0	0	0	0.02
rococoC10-001000	106,798	559.90	0	0	0	0	0	0	0.00
roll3000	504,127	3137.73	0	0	0	0	0	0	0.02
satellites1-25	3350	527.90	0	0	0	0	0	0	0.03
sp98ic	200,653	3600.00	0	0	0	0	0	0	0.36
sp98ir	6084	66.60	0	0	0	0	0	0	0.03
tanglegram1	51	636.10	23	0	0	0	1500	0	13.86
tanglegram2	3	12.30	25	0	0	0	1500	0	7.64
timtab1	580,501	330.52	1	0	0	0	1	0	0.01
triptim1	1	46.63	0	0	0	0	0	0	0.24
unitcal_7	42,368	3290.35	4	0	0	0	4	0	0.43
vpphard	808	3601.36	609	0	0	0	1500	0	12.71
zib54-UUE	454,224	3600.00	1	0	0	0	1	0	0.01
AM (# 87)	383,094.4	1416.44	16.5	1.0	0.0	0.0	65.6	0.0	0.91
GM (# 87)	8601.0	508.13	1.9	1.3	1.0	1.0	2.7	1.0	1.16
SGM (# 87)	14,527.6	556.62							0.61

TABLE 130. M2010-bench testset: S-fundnlp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30n20b8	424	305.30	0	0	0	0	0	0	0.02
acc-tight5	2029	285.27	0	0	0	0	0	0	0.01
aflow40b	285,631	2325.46	0	0	0	0	0	0	0.00
air04	119	35.07	0	0	0	0	0	0	0.02
app1-2	16,648	3600.00	0	0	0	0	0	0	0.46
ash608gpia-3col	1	6.31	0	0	1	0	1	3	0.28
bab5	40,135	3600.05	5	0	0	0	5	0	0.42
beasleyC3	528,081	3600.01	0	0	0	0	0	0	0.00
biella1	9491	590.32	334	0	0	0	586	0	1.22
bienst2	138,693	178.95	0	0	0	0	0	0	0.00
binkar10_1	207,304	352.26	0	0	0	0	0	0	0.00
bley_xl1	2	312.92	0	0	0	0	0	0	0.08
bnatt350	1154	162.47	0	0	0	0	0	0	0.02
core2536-691	342	112.22	8	3	0	0	11	0	1.63
cov1075	840,496	3600.00	0	9	0	0	9	0	0.04
csched010	683,102	3600.00	0	0	0	0	0	0	0.01
danoind	920,736	3600.00	0	0	0	0	0	0	0.00
dfn-gwin-UUM	51,474	93.20	0	0	0	0	0	0	0.00
eil33-2	693	58.83	0	0	0	0	0	0	0.02
eilB101	9340	148.10	0	0	0	0	0	0	0.01
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.02	1	0	0	0	1	0	0.00
ex9	1	92.52	0	7	0	0	7	0	0.01
glass4	5,050,335	3600.02	1	0	0	0	1	0	0.00
gmu-35-40	5,581,825	3600.02	0	0	0	0	0	0	0.01
iis-100-0-cov	81,999	1521.90	0	0	0	0	0	0	0.01
iis-bupa-cov	107,123	3600.01	0	0	0	0	0	0	0.01
iis-pima-cov	11,775	750.52	0	0	0	0	0	0	0.02
lectsched-4-obj	3819	77.10	87	0	0	0	112	0	0.84
m100n500k4r1	4,732,848	3600.00	0	0	0	0	0	0	0.00
macrophage	679,206	3600.00	167	15	0	0	188	0	0.98
map18	273	272.90	39	0	0	0	40	0	0.30
map20	295	252.83	39	0	0	0	40	0	0.29
mcsched	11,576	115.73	15	0	0	0	15	0	0.02
mik-250-1-100-1	4,488,404	1595.47	0	0	0	0	0	0	0.01
mine-166-5	1850	41.73	0	0	0	0	0	0	0.01
mine-90-10	151,788	800.92	0	0	0	0	0	0	0.02
msc98-ip	6971	1191.50	4	0	0	0	4	0	0.14
mspp16	—	—	—	—	—	—	—	—	—
mzzv11	1827	481.28	1	0	0	0	1	0	0.04
n3div36	113,236	3600.02	0	0	0	0	0	0	0.47
n3seq24	19,717	3600.01	29	0	0	0	31	0	27.96
n4-3	39,752	565.19	2	0	0	0	2	0	0.01
neos-1109824	24,809	234.12	0	4	0	0	4	0	0.08
neos-1337307	199,941	3105.55	1	0	0	0	6	0	0.15
neos-1396125	72,528	291.94	1	0	0	0	2	0	0.01
neos13	54,138	2709.35	1	0	0	0	1	0	0.60
neos-1601936	10,979	2066.47	0	0	0	0	0	0	0.03
neos18	8926	68.20	19	0	0	0	55	0	0.04
neos-476283	582	286.40	12	0	0	0	12	0	3.88

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-686190	7319	109.98	0	0	0	0	0	0	0.01
neos-849702	5111	141.61	0	7	0	0	7	0	0.04
neos-916792	309,449	3600.00	0	0	0	0	0	0	0.25
neos-934278	61	194.46	3	25	0	0	28	0	0.34
net12	1924	587.39	4	0	0	0	4	0	0.09
netdiversion	88	784.76	0	0	0	0	0	0	0.69
newdano	1,779,559	3600.00	0	0	0	0	0	0	0.00
noswot	348,670	96.87	1	0	0	0	3	0	0.00
ns1208400	1403	382.01	0	7	0	0	7	0	0.13
ns1688347	4220	212.09	0	0	0	0	0	0	0.02
ns1758913	3	3600.37	1	0	0	0	1	0	1.06
ns1766074	925,848	1236.92	0	0	0	0	0	0	0.00
ns1830653	46,368	651.96	0	0	0	0	0	0	0.02
opm2-z7-s2	2827	708.54	0	0	0	0	0	0	0.07
pg5_34	215,677	1270.61	0	0	0	0	0	0	0.01
pigeon-10	5,268,414	3600.00	0	7	0	0	7	0	0.02
pw-myciel4	507,585	3600.00	0	2	0	0	2	0	0.02
qiu	11,703	69.15	0	4	0	0	4	0	0.02
rail507	949	97.87	0	0	0	0	0	0	0.34
ran16x16	328,398	296.84	0	0	0	0	0	0	0.01
reblock67	122,028	344.81	0	0	0	0	0	0	0.00
rmatr100-p10	675	111.46	0	0	0	0	0	0	0.03
rmatr100-p5	357	106.43	0	0	0	0	0	0	0.02
rmine6	689,419	3600.00	0	0	0	0	0	0	0.02
rocll-4-11	26,842	588.74	0	0	0	0	0	0	0.02
rococoC10-001000	106,798	561.20	0	0	0	0	0	0	0.01
roll3000	504,127	3161.15	0	0	0	0	0	0	0.02
satellites1-25	3350	528.36	0	0	0	0	0	0	0.03
sp98ic	201,284	3600.00	0	0	0	0	0	0	0.35
sp98ir	6084	66.44	0	0	0	0	0	0	0.03
tanglegram1	55	660.76	23	0	0	0	1500	0	14.00
tanglegram2	3	11.00	25	0	0	0	1500	0	7.59
timtab1	868,502	514.76	1	0	0	0	1	0	0.00
triptim1	1	46.79	0	0	0	0	0	0	0.23
unitcal_7	57,062	3600.00	4	0	0	0	4	0	0.43
vpphard	513	3600.01	609	0	0	0	1500	0	12.68
zib54-UUE	400,967	3600.00	1	0	0	0	1	0	0.02
AM (# 87)	436,161.6	1395.77	16.5	1.0	0.0	0.0	65.6	0.0	0.91
GM (# 87)	9272.9	493.01	1.9	1.3	1.0	1.0	2.7	1.0	1.16
SGM (# 87)	15,406.9	539.76							0.61

TABLE 131. M2010-bench testset: S-nolp settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30n20b8	424	304.92	0	0	0	0	0	0	0.02
acc-tight5	2029	284.40	0	0	0	0	0	0	0.01
aflow40b	285,631	2328.93	0	0	0	0	0	0	0.01
air04	119	35.04	0	0	0	0	0	0	0.02
app1-2	16,726	3574.03	0	0	0	0	0	0	0.47
ash608gpia-3col	1	6.27	0	0	1	0	1	3	0.27
bab5	40,171	3600.12	5	0	0	0	5	0	0.43
beasleyC3	527,540	3600.01	0	0	0	0	0	0	0.01
biella1	9491	587.80	334	0	0	0	586	0	1.21
bienst2	138,693	180.02	0	0	0	0	0	0	0.00
binkar10_1	207,304	348.65	0	0	0	0	0	0	0.01
bley_xl1	2	311.25	0	0	0	0	0	0	0.08
bnatt350	1154	162.76	0	0	0	0	0	0	0.02
core2536-691	337	120.71	8	0	0	0	8	0	1.64
cov1075	849,018	3600.00	0	0	0	0	0	0	0.03
csched010	683,900	3600.00	0	0	0	0	0	0	0.01
danoind	922,382	3600.00	0	0	0	0	0	0	0.00
dfn-gwin-UUM	51,474	93.16	0	0	0	0	0	0	0.00
eil33-2	693	59.24	0	0	0	0	0	0	0.01
eilB101	9340	148.71	0	0	0	0	0	0	0.01
enlight13	1	0.02	1	0	0	0	1	0	0.00
enlight14	1	0.02	1	0	0	0	1	0	0.00
ex9	1	93.17	0	0	0	0	0	0	0.00
glass4	5,011,895	3600.03	1	0	0	0	1	0	0.00
gmu-35-40	5,575,573	3600.03	0	0	0	0	0	0	0.01
iis-100-0-cov	81,999	1523.57	0	0	0	0	0	0	0.01
iis-bupa-cov	107,178	3600.00	0	0	0	0	0	0	0.01
iis-pima-cov	11,775	748.80	0	0	0	0	0	0	0.01
lectsched-4-obj	3819	78.14	87	0	0	0	112	0	0.87
m100n500k4r1	4,749,358	3600.00	0	0	0	0	0	0	0.00
macrophage	794,849	3600.00	167	0	0	0	173	0	0.98
map18	273	274.38	39	0	0	0	40	0	0.29
map20	295	254.78	39	0	0	0	40	0	0.29
mcsched	11,576	114.79	15	0	0	0	15	0	0.02
mik-250-1-100-1	4,488,404	1593.58	0	0	0	0	0	0	0.00
mine-166-5	1850	41.74	0	0	0	0	0	0	0.01
mine-90-10	151,788	802.11	0	0	0	0	0	0	0.01
msc98-ip	6971	1195.92	4	0	0	0	4	0	0.14
mspp16	—	—	—	—	—	—	—	—	—
mzzv11	1827	482.67	1	0	0	0	1	0	0.05
n3div36	113,898	3600.00	0	0	0	0	0	0	0.47
n3seq24	19,952	3600.02	29	0	0	0	31	0	27.94
n4-3	39,752	565.63	2	0	0	0	2	0	0.01
neos-1109824	11,639	141.42	0	0	0	0	0	0	0.07
neos-1337307	199,941	3077.39	1	0	0	0	6	0	0.13
neos-1396125	72,528	290.54	1	0	0	0	2	0	0.02
neos13	54,138	2608.38	1	0	0	0	1	0	0.61
neos-1601936	10,979	2059.69	0	0	0	0	0	0	0.03
neos18	8926	68.44	19	0	0	0	55	0	0.04
neos-476283	582	288.47	12	0	0	0	12	0	3.85

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-686190	7319	108.46	0	0	0	0	0	0	0.02
neos-849702	216,057	3600.00	0	0	0	0	0	0	0.04
neos-916792	309,508	3600.00	0	0	0	0	0	0	0.26
neos-934278	91	225.29	3	0	0	0	3	0	0.32
net12	1924	581.33	4	0	0	0	4	0	0.08
netdiversion	88	786.39	0	0	0	0	0	0	0.70
newdano	1,775,954	3600.00	0	0	0	0	0	0	0.00
noswot	348,670	97.06	1	0	0	0	3	0	0.00
ns1208400	3309	570.32	0	0	0	0	0	0	0.12
ns1688347	4220	212.65	0	0	0	0	0	0	0.02
ns1758913	3	3600.37	1	0	0	0	1	0	1.08
ns1766074	925,848	1235.34	0	0	0	0	0	0	0.00
ns1830653	46,368	652.26	0	0	0	0	0	0	0.01
opm2-z7-s2	2827	701.93	0	0	0	0	0	0	0.08
pg5_34	215,677	1275.95	0	0	0	0	0	0	0.02
pigeon-10	5,314,830	3600.00	0	0	0	0	0	0	0.02
pw-myciel4	412,792	3600.00	0	0	0	0	0	0	0.02
qiu	11,561	68.40	0	0	0	0	0	0	0.02
rail507	949	98.07	0	0	0	0	0	0	0.35
ran16x16	328,398	297.35	0	0	0	0	0	0	0.00
reblock67	122,028	342.47	0	0	0	0	0	0	0.01
rmatr100-p10	675	111.62	0	0	0	0	0	0	0.02
rmatr100-p5	357	106.41	0	0	0	0	0	0	0.03
rmine6	687,956	3600.00	0	0	0	0	0	0	0.01
roccl-4-11	26,842	591.60	0	0	0	0	0	0	0.02
rococoC10-001000	106,798	558.91	0	0	0	0	0	0	0.01
roll3000	504,127	3153.97	0	0	0	0	0	0	0.01
satellites1-25	3350	527.99	0	0	0	0	0	0	0.03
sp98ic	201,680	3600.00	0	0	0	0	0	0	0.35
sp98ir	6084	66.40	0	0	0	0	0	0	0.04
tanglegram1	55	659.66	23	0	0	0	1500	0	13.61
tanglegram2	3	11.06	25	0	0	0	1500	0	7.63
timtab1	868,502	513.68	1	0	0	0	1	0	0.00
triptim1	1	47.72	0	0	0	0	0	0	0.23
unitcal_7	56,674	3600.01	4	0	0	0	4	0	0.44
vpphard	485	3600.01	609	0	0	0	1500	0	12.54
zib54-UUE	400,736	3600.00	1	0	0	0	1	0	0.00
AM (# 87)	438,976.4	1435.09	16.5	0.0	0.0	0.0	64.5	0.0	0.90
GM (# 87)	9725.2	512.09	1.9	1.0	1.0	1.0	2.3	1.0	1.16
SGM (# 87)	16,112.8	560.63							0.61

TABLE 132. M2010-bench testset: S-prob settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30n20b8	424	304.89	0	0	0	0	0	0	0.03
acc-tight5	2029	284.41	0	0	0	0	0	0	0.00
aflow40b	285,631	2316.34	0	0	0	0	0	0	0.01
air04	119	35.11	0	0	0	0	0	0	0.03
app1-2	16,726	3589.20	0	0	0	0	0	0	0.47
ash608gpia-3col	1	6.25	0	0	1	0	1	4	0.27
bab5	36,480	3600.33	5	0	0	0	5	0	0.47
beasleyC3	524,251	3600.01	0	0	0	0	0	0	0.00
biella1	4847	323.67	334	0	0	0	586	0	1.49
bienst2	138,693	179.74	0	0	0	0	0	0	0.00
binkar10_1	207,304	350.89	0	0	0	0	0	0	0.01
bley_xl1	2	311.14	0	0	0	0	0	0	0.08
bnatt350	1154	162.04	0	0	0	0	0	0	0.01
core2536-691	121	72.58	8	0	0	0	8	0	1.66
cov1075	845,934	3600.00	0	0	0	0	0	0	0.02
csched010	682,984	3600.00	0	0	0	0	0	0	0.00
danoind	923,546	3600.00	0	0	0	0	0	0	0.00
dfn-gwin-UUM	51,474	92.50	0	0	0	0	0	0	0.00
eil33-2	693	58.86	0	0	0	0	0	0	0.01
eilB101	9340	147.83	0	0	0	0	0	0	0.01
enlight13	1	0.02	1	0	0	0	1	0	0.01
enlight14	1	0.01	1	0	0	0	1	0	0.00
ex9	1	92.07	0	0	0	0	0	0	0.00
glass4	4,878,937	3600.02	1	0	0	0	1	1	0.00
gmu-35-40	5,579,210	3600.03	0	0	0	0	0	0	0.00
iis-100-0-cov	81,999	1526.28	0	0	0	0	0	0	0.00
iis-bupa-cov	106,821	3600.00	0	0	0	0	0	0	0.01
iis-pima-cov	11,775	748.57	0	0	0	0	0	0	0.02
lectsched-4-obj	1827	60.66	87	0	0	0	112	0	0.90
m100n500k4r1	4,750,602	3600.00	0	0	0	0	0	0	0.00
macrophage	673,704	3600.00	167	0	0	0	173	0	0.98
map18	305	252.27	39	0	0	0	40	0	0.29
map20	385	253.39	39	0	0	0	40	0	0.29
mcsched	20,506	184.32	15	0	0	0	15	0	0.03
mik-250-1-100-1	4,488,404	1589.15	0	0	0	0	0	0	0.01
mine-166-5	1850	41.66	0	0	0	0	0	0	0.01
mine-90-10	151,788	800.89	0	0	0	0	0	0	0.00
msc98-ip	4377	3600.01	4	0	0	0	4	0	0.14
mspp16	—	—	—	—	—	—	—	—	—
mzzv11	3903	794.99	1	0	0	0	1	1	0.06
n3div36	113,724	3601.16	0	0	0	0	0	0	0.47
n3seq24	30	3599.94	29	0	0	0	31	0	28.49
n4-3	42,518	627.65	2	0	0	0	2	0	0.01
neos-1109824	11,639	141.52	0	0	0	0	0	0	0.08
neos-1337307	183,114	2846.40	1	0	0	0	6	6	0.15
neos-1396125	56,073	232.51	1	0	0	0	2	1	0.01
neos13	68,710	3600.00	1	0	0	0	1	0	0.58
neos-1601936	10,979	2059.85	0	0	0	0	0	0	0.03
neos18	11,966	86.35	19	0	0	0	55	0	0.05
neos-476283	988	576.36	12	0	0	0	12	20	3.96

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-686190	7319	108.67	0	0	0	0	0	0	0.02
neos-849702	217,151	3600.00	0	0	0	0	0	0	0.03
neos-916792	304,768	3600.00	0	0	0	0	0	0	0.26
neos-934278	104	211.57	3	0	0	0	3	0	0.33
net12	2704	950.84	4	0	0	0	4	0	0.10
netdiversion	88	788.86	0	0	0	0	0	0	0.70
newdano	1,753,965	3600.00	0	0	0	0	0	0	0.00
noswot	385,022	116.22	1	0	0	0	3	0	0.00
ns1208400	3309	569.92	0	0	0	0	0	0	0.12
ns1688347	4220	211.95	0	0	0	0	0	0	0.02
ns1758913	1	3600.34	1	0	0	0	1	0	1.11
ns1766074	925,848	1226.80	0	0	0	0	0	0	0.00
ns1830653	46,368	651.90	0	0	0	0	0	0	0.02
opm2-z7-s2	2827	697.22	0	0	0	0	0	0	0.07
pg5_34	215,677	1269.12	0	0	0	0	0	0	0.02
pigeon-10	5,275,942	3600.00	0	0	0	0	0	0	0.01
pw-myciel4	412,272	3600.00	0	0	0	0	0	0	0.01
qiu	11,561	68.98	0	0	0	0	0	0	0.02
rail507	949	98.07	0	0	0	0	0	0	0.35
ran16x16	328,398	296.55	0	0	0	0	0	0	0.00
reblock67	122,028	344.20	0	0	0	0	0	0	0.01
rmatr100-p10	675	111.17	0	0	0	0	0	0	0.02
rmatr100-p5	357	106.26	0	0	0	0	0	0	0.03
rmine6	688,117	3600.00	0	0	0	0	0	0	0.01
rocll-4-11	26,842	587.51	0	0	0	0	0	0	0.02
rococoC10-001000	106,798	559.29	0	0	0	0	0	0	0.00
roll3000	504,127	3146.19	0	0	0	0	0	0	0.01
satellites1-25	3350	528.94	0	0	0	0	0	0	0.03
sp98ic	201,574	3600.00	0	0	0	0	0	0	0.35
sp98ir	6084	66.48	0	0	0	0	0	0	0.03
tanglegram1	49	628.93	23	0	0	0	1500	0	13.87
tanglegram2	3	12.28	25	0	0	0	1500	0	7.61
timtab1	580,501	329.49	1	0	0	0	1	0	0.00
triptim1	1	45.81	0	0	0	0	0	0	0.23
unitcal_7	42,501	3345.87	4	0	0	0	4	0	0.47
vpphard	809	3600.02	609	0	0	0	1500	0	16.87
zib54-UUE	411,973	3600.00	1	0	0	0	1	0	0.02
AM (# 87)	431,979.0	1473.92	16.5	0.0	0.0	0.0	64.5	0.4	0.96
GM (# 87)	8867.2	522.37	1.9	1.0	1.0	1.0	2.3	1.1	1.16
SGM (# 87)	15,142.6	571.88							0.64

TABLE 133. M2010-bench testset: S-orbitmin settings

Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	symtime
30n20b8	424	305.44	0	0	0	0	0	0	0.03
acc-tight5	2029	285.13	0	0	0	0	0	0	0.01
aflow40b	285,631	2329.89	0	0	0	0	0	0	0.00
air04	119	34.93	0	0	0	0	0	0	0.02
app1-2	16,726	3583.68	0	0	0	0	0	0	0.47
ash608gpia-3col	10	12.24	0	0	0	1	2	0	0.22
bab5	32,066	3600.00	0	0	0	5	5	0	0.36
beasleyC3	527,200	3600.00	0	0	0	0	0	0	0.01
biella1	13,894	802.70	0	0	0	334	515	0	1.18
bienst2	138,693	178.98	0	0	0	0	0	0	0.00
binkar10_1	207,304	348.01	0	0	0	0	0	0	0.00
bley_xl1	2	312.20	0	0	0	0	0	0	0.08
bnatt350	1154	162.52	0	0	0	0	0	0	0.02
core2536-691	116	65.07	0	0	0	9	11	0	1.59
cov1075	326,107	1307.36	0	0	0	1	119	0	0.08
csched010	684,382	3600.00	0	0	0	0	0	0	0.01
danoind	923,836	3600.00	0	0	0	0	0	0	0.00
dfn-gwin-UUM	51,474	94.01	0	0	0	0	0	0	0.00
eil33-2	693	58.90	0	0	0	0	0	0	0.02
eilB101	9340	147.61	0	0	0	0	0	0	0.00
enlight13	1	0.02	0	0	0	1	1	0	0.00
enlight14	1	0.01	0	0	0	1	1	0	0.01
ex9	1	93.27	0	0	0	1	7	0	0.01
glass4	4,986,196	3600.02	0	0	0	1	1	0	0.01
gmu-35-40	5,527,614	3600.03	0	0	0	0	0	0	0.01
iis-100-0-cov	81,999	1520.37	0	0	0	0	0	0	0.01
iis-bupa-cov	107,308	3600.01	0	0	0	0	0	0	0.01
iis-pima-cov	11,775	752.37	0	0	0	0	0	0	0.02
lectsched-4-obj	4100	86.44	0	0	0	87	112	0	0.10
m100n500k4r1	4,733,576	3600.00	0	0	0	0	0	0	0.00
macrophage	882,261	3600.00	0	0	0	170	186	0	0.16
map18	305	253.13	0	0	0	39	40	0	0.28
map20	385	252.68	0	0	0	39	40	0	0.29
mcsched	15,929	150.85	0	0	0	15	15	0	0.02
mik-250-1-100-1	4,488,404	1593.16	0	0	0	0	0	0	0.01
mine-166-5	1850	41.77	0	0	0	0	0	0	0.01
mine-90-10	151,788	799.92	0	0	0	0	0	0	0.01
msc98-ip	4623	3600.00	0	0	0	4	4	0	0.12
mspp16	—	—	—	—	—	—	—	—	—
mzzv11	2709	645.34	0	0	0	1	1	0	0.05
n3div36	113,952	3600.24	0	0	0	0	0	0	0.48
n3seq24	42,882	3600.00	0	0	0	29	31	0	21.84
n4-3	42,518	625.75	0	0	0	2	2	0	0.01
neos-1109824	17,152	254.33	0	0	0	1	3	0	0.05
neos-1337307	188,832	2845.56	0	0	0	1	6	0	0.07
neos-1396125	46,858	192.35	0	0	0	1	2	0	0.01
neos13	69,223	3600.00	0	0	0	1	1	0	0.60
neos-1601936	10,979	2056.89	0	0	0	0	0	0	0.03
neos18	9365	73.76	0	0	0	19	55	0	0.04
neos-476283	1001	429.78	0	0	0	12	12	0	3.78

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Name	#Nodes	Time	#full	#fund	#orb	#cyc	#tot	#fixed	syntime
neos-686190	7319	109.28	0	0	0	0	0	0	0.02
neos-849702	11,683	303.40	0	0	0	1	5	0	0.03
neos-916792	312,925	3600.00	0	0	0	0	0	0	0.26
neos-934278	86	259.47	0	0	0	8	16	0	0.24
net12	2704	946.40	0	0	0	4	4	0	0.09
netdiversion	88	787.20	0	0	0	0	0	0	0.69
newdano	1,772,034	3600.00	0	0	0	0	0	0	0.00
noswot	497,738	144.68	0	0	0	1	3	0	0.00
ns1208400	3927	1253.96	0	0	0	1	2	0	0.09
ns1688347	4220	212.30	0	0	0	0	0	0	0.01
ns1758913	1	3600.36	0	0	0	1	1	0	1.07
ns1766074	925,848	1238.94	0	0	0	0	0	0	0.00
ns1830653	46,368	651.68	0	0	0	0	0	0	0.01
opm2-z7-s2	2827	709.42	0	0	0	0	0	0	0.07
pg5_34	215,677	1267.74	0	0	0	0	0	0	0.00
pigeon-10	3,907,957	3600.00	0	0	0	1	7	0	0.01
pw-myciel4	391,922	2573.56	0	0	0	1	4	0	0.02
qiu	3680	32.26	0	0	0	1	3	0	0.00
rail507	949	98.33	0	0	0	0	0	0	0.35
ran16x16	328,398	298.21	0	0	0	0	0	0	0.00
reblock67	122,028	344.62	0	0	0	0	0	0	0.00
rmatr100-p10	675	111.59	0	0	0	0	0	0	0.03
rmatr100-p5	357	106.52	0	0	0	0	0	0	0.03
rmine6	690,417	3600.00	0	0	0	0	0	0	0.01
rocll-4-11	26,842	593.67	0	0	0	0	0	0	0.03
rococoC10-001000	106,798	558.39	0	0	0	0	0	0	0.01
roll3000	504,127	3153.88	0	0	0	0	0	0	0.01
satellites1-25	3350	529.68	0	0	0	0	0	0	0.04
sp98ic	200,590	3600.00	0	0	0	0	0	0	0.35
sp98ir	6084	66.74	0	0	0	0	0	0	0.03
tanglegram1	43	565.25	0	0	0	23	1500	0	12.69
tanglegram2	3	12.00	0	0	0	25	1500	0	6.78
timtab1	580,501	326.82	0	0	0	1	1	0	0.00
triptim1	1	46.24	0	0	0	0	0	0	0.24
unitcal_7	42,368	3304.23	0	0	0	4	4	0	0.34
vpphard	1423	3600.01	0	0	0	609	1500	0	12.41
zib54-UUE	453,366	3600.00	0	0	0	1	1	0	0.01
AM (# 87)	413,104.7	1408.09	0.0	0.0	0.0	16.7	65.8	0.0	0.78
GM (# 87)	9547.5	510.12	1.0	1.0	1.0	1.9	2.8	1.0	1.15
SGM (# 87)	15,658.7	556.63							0.55

TABLE 134. M2003-sym testset: lpfixed settings

Name	#Nodes	Time	#Fixed	lpfixtime
fast0507	919	95.76	0	0.00
glass4	5,586,343	3600.02	0	0.00
harp2	8,588,721	3600.01	0	0.00
mas74	3,583,981	820.09	0	0.01
mas76	490,320	101.51	0	0.00
misc07	33,980	29.28	0	0.00
mkc	492,761	3600.00	0	0.01
mod011	1487	69.91	10	0.13
msc98-ip	7410	1273.39	0	0.12
mzzv11	2615	776.71	0	0.05
net12	4576	1356.34	76	0.45
noswot	1,106,633	313.94	0	0.00
nsrand-ipx	596,241	3600.00	0	0.00
p2756	8	1.36	0	0.00
protfold	30,571	3600.00	0	0.00
qiu	11,561	68.66	0	0.01
rout	61,617	67.38	0	0.00
seymour	73,966	3600.00	0	0.00
swath	339,677	3600.00	0	0.01
timtab1	1,113,071	620.29	1	0.00
timtab2	3,990,570	3600.01	1	0.01
AM (# 21)	1,243,668.0	1637.84	4.2	0.04
GM (# 21)	74,713.2	511.12	1.4	1.00
SGM (# 21)	85,524.2	583.19		0.04

TABLE 135. M2003-sym testset: lpfixed-OP settings

Name	#Nodes	Time	#Fixed	lpfixtime
fast0507	919	95.80	0	0.00
glass4	5,568,515	3600.02	0	0.00
harp2	8,592,510	3600.01	0	0.00
mas74	3,583,981	824.07	0	0.00
mas76	490,320	101.89	0	0.00
misc07	33,980	29.18	0	0.00
mkc	492,618	3600.00	0	0.00
mod011	1487	69.99	10	0.12
msc98-ip	7410	1268.67	0	0.00
mzzv11	2615	779.33	0	0.00
net12	2502	1004.33	0	0.00
noswot	1,106,633	314.65	0	0.00
nsrand-ipx	595,738	3600.00	0	0.00
p2756	8	1.38	0	0.00
protfold	30,579	3600.00	0	0.00
qiu	11,561	68.07	0	0.00
rout	61,617	66.82	0	0.00
seymour	73,795	3600.00	0	0.00
swath	339,987	3600.00	0	0.00
timtab1	1,113,071	618.84	1	0.00
timtab2	3,975,938	3600.01	1	0.00
AM (# 21)	1,242,180.2	1621.10	0.6	0.01
GM (# 21)	72,565.7	503.95	1.1	1.00
SGM (# 21)	83,132.7	574.66		0.01

TABLE 136. M2003-sym testset: lpfixed-fundnlp settings

Name	#Nodes	Time	#Fixed	lpfixtime
fast0507	919	96.11	0	0.05
glass4	5,543,688	3600.02	0	0.00
harp2	8,620,134	3600.01	0	0.00
mas74	3,583,981	821.03	0	0.00
mas76	490,320	102.40	0	0.01
misc07	33,980	29.38	0	0.00
mkc	496,801	3600.00	0	0.01
mod011	1487	69.89	10	0.14
msc98-ip	7410	1272.29	0	0.12
mzzv11	2615	777.28	0	0.04
net12	4576	1360.51	76	0.45
noswot	1,106,633	313.31	0	0.00
nsrand-ipx	596,299	3600.00	0	0.04
p2756	8	1.36	0	0.01
protfold	30,601	3600.00	0	0.01
qiu	11,561	67.99	0	0.01
rout	61,617	67.27	0	0.01
seymour	74,957	3600.01	0	0.01
swath	338,578	3600.00	0	0.01
timtab1	1,113,071	621.21	1	0.00
timtab2	3,975,264	3600.01	1	0.00
AM (# 21)	1,242,595.2	1638.10	4.2	0.04
GM (# 21)	74,753.9	511.30	1.4	1.00
SGM (# 21)	85,570.8	583.39		0.04

TABLE 137. M2003-sym testset: lpfix-orbitmin settings

Name	#Nodes	Time	#Fixed	lpfixtime
fast0507	919	96.04	0	0.05
glass4	5,546,015	3600.03	0	0.00
harp2	8,567,830	3600.01	0	0.01
mas74	3,583,981	819.36	0	0.01
mas76	490,320	101.35	0	0.00
misc07	33,980	29.32	0	0.00
mkc	495,720	3600.00	0	0.01
mod011	1487	69.89	10	0.14
msc98-ip	7410	1273.31	0	0.12
mzzv11	2615	778.85	0	0.04
net12	4576	1352.53	76	0.45
noswot	1,106,633	313.14	0	0.00
nsrand-ipx	595,199	3600.00	0	0.04
p2756	8	1.40	0	0.01
protfold	30,588	3600.00	0	0.01
qiu	11,561	69.03	0	0.00
rout	61,617	67.12	0	0.00
seymour	75,072	3600.00	0	0.01
swath	338,636	3600.00	0	0.01
timtab1	1,113,071	617.89	1	0.00
timtab2	3,986,618	3600.01	1	0.01
AM (# 21)	1,240,659.8	1637.58	4.2	0.04
GM (# 21)	74,734.1	511.74	1.4	1.00
SGM (# 21)	85,548.1	583.18		0.04

TABLE 138. M2010-sym testset: lpfixed settings

Name	#Nodes	Time	#Fixed	lpfixtime
30_70_45_095_100	401	1061.02	0	0.00
acc-tight4	913	456.88	0	0.00
ash608gipa-3col	14	35.26	0	0.00
bab3	1	3600.28	0	0.00
bab5	40,565	3600.05	0	0.00
berlin_5_8_0	2,050,529	3600.01	0	0.00
biella1	5146	324.67	74	0.10
circ10-3	45	3599.95	0	0.00
co-100	10,321	3600.29	0	0.00
core2536-691	300	118.92	0	0.00
core4872-1529	927	3600.01	0	0.00
cov1075	843,328	3600.00	0	0.00
dc1c	4361	3600.07	662	2.38
dc1l	1159	3600.77	0	0.98
dolom1	2323	3600.06	454	1.56
enlight13	1	0.01	0	0.00
enlight14	1	0.02	0	0.00
enlight15	1	0.03	0	0.00
enlight16	1	0.03	0	0.00
enlight9	1	0.01	0	0.00
ex1010-pi	14,383	3600.00	0	0.00
ex10	1	1021.70	0	0.00
ex9	1	92.05	0	0.00
glass4	5,555,163	3600.02	0	0.00
go19	1,195,956	3600.00	0	0.00
iis-bupa-cov	108,354	3600.00	0	0.00
lectsched-1	1812	155.38	0	0.00
lectsched-1-obj	78,744	3600.00	0	0.00
lectsched-2	299	50.23	0	0.00
lectsched-3	1034	98.45	0	0.00
lectsched-4-obj	1362	54.26	0	0.00
macrophage	735,124	3600.00	0	0.00
map06	652	759.85	40	0.91
map10	924	720.19	40	0.93
map14	2058	919.60	40	0.91
map18	255	259.00	40	0.92
map20	317	266.34	40	0.92
maxgasflow	160,826	3600.00	0	0.02
mcsched	13,011	124.12	0	0.00
methanosarcina	39,505	3600.01	0	0.00
mkc	499,022	3600.00	0	0.01
msc98-ip	7410	1272.08	0	0.11
mzzv11	2615	778.06	0	0.04
n3seq24	32,602	3600.01	0	0.00
n4-3	2026	51.44	100	0.03
n9-3	61,189	3600.00	390	0.16
neos-1109824	11,639	141.29	0	0.00
neos-1171692	201	31.96	0	0.02
neos-1171737	66,482	3600.00	0	0.03
neos-1224597	1	2.49	0	0.00

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-1311124	4,101,300	3600.02	0	0.01
neos-1337307	251,993	3600.00	0	0.00
neos-1396125	56,634	249.14	0	0.01
neos13	47,566	2802.62	1	0.57
neos-1426635	4,451,732	3600.05	0	0.01
neos-1426662	988,022	3600.01	0	0.00
neos-1429212	2028	3600.29	0	2.20
neos-1436709	1,625,100	3600.01	0	0.00
neos-1440460	2,635,441	3600.00	0	0.01
neos-1442119	1,415,499	3600.00	0	0.00
neos-1442657	1,704,061	3600.01	0	0.00
neos-1620770	320,875	3600.00	0	0.00
neos18	5323	55.57	0	0.00
neos-476283	863	591.60	0	3.80
neos-555424	528,157	3600.00	0	0.00
neos-738098	3489	3600.02	0	0.00
neos-777800	1	1.98	0	0.00
neos-785912	88	14.75	0	0.00
neos788725	136,996	264.68	0	0.00
neos808444	278	1974.34	0	0.00
neos-820146	1,631,239	3600.00	0	0.00
neos-820157	1,171,266	3600.00	0	0.00
neos-824661	1	22.21	0	0.16
neos-824695	4	15.10	0	0.06
neos-826650	118,993	3600.01	0	0.01
neos-826694	1	6.07	0	0.04
neos-826812	1	3.43	0	0.05
neos-826841	314,173	3600.00	0	0.01
neos-849702	216,120	3600.00	0	0.00
neos-859770	1	156.53	0	0.00
neos-885086	13,826	1429.23	0	0.12
neos-885524	12,678	3600.09	0	0.00
neos-911880	3,423,334	3600.01	0	0.00
neos-932816	66,753	3600.00	0	0.02
neos-933638	106	388.83	0	0.05
neos-933966	24	155.74	0	0.03
neos-934278	231	340.40	0	0.03
neos-935627	597	985.26	0	0.03
neos-935769	375	684.22	0	0.03
neos-937511	43	239.45	0	0.03
neos-937815	5708	3600.01	0	0.04
neos-941262	2971	3600.01	0	0.03
neos-941313	20	616.97	0	0.00
neos-948126	2185	3600.00	0	0.03
neos-957389	5	19.76	0	0.00
neos-984165	2261	3600.00	0	0.03
net12	2728	982.98	76	0.46
noswot	1,106,633	313.57	0	0.00
ns1111636	394	3600.02	0	0.40
ns1116954	15	3600.01	0	0.30
ns1158817	1	120.46	0	5.32
ns1208400	3309	569.05	0	0.00
ns1456591	60,972	3600.01	0	0.17
ns1702808	207,366	398.20	0	0.01

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Name	#Nodes	Time	#Fixed	lpfixtime
ns1758913	3	3600.38	0	1.00
ns1853823	1	3590.90	0	0.00
ns1854840	1	3598.54	0	0.00
ns1905797	40,658	3600.01	0	0.32
ns1905800	256,963	3600.00	0	0.03
ns1952667	13,279	2360.88	0	0.00
ns2118727	626	3600.00	0	0.04
ns2124243	5384	3600.03	1424	13.51
ns2137859	103,870	3600.02	0	0.18
ns4-pr9	449,290	3600.00	156	0.14
nsr8k	53	3600.03	156	1.07
nu60-pr9	150,475	3600.00	0	0.00
p2m2p1m1p0n100	33,588,368	3600.00	0	0.00
p6b	92,048	3600.00	0	0.00
pigeon-10	5,308,831	3600.00	0	0.01
pigeon-11	4,030,695	3600.00	0	0.01
pigeon-12	3,078,754	3600.00	0	0.00
pigeon-13	2,322,391	3600.00	0	0.00
pigeon-19	1,389,999	3600.00	0	0.01
protfold	30,475	3600.00	0	0.00
pw-myciel4	412,329	3600.00	0	0.00
qiu	11,561	68.06	0	0.00
queens-30	19,464	3600.05	0	0.00
rail507	949	97.98	0	0.00
ramos3	17	3599.91	0	0.00
rvb-sub	52,314	3600.00	0	0.00
sct1	9905	3600.01	2479	0.25
sct32	46,223	3600.01	29	0.09
sct5	7802	3600.00	3579	0.39
seymour-disj-10	42,827	3600.05	0	0.00
seymour	74,147	3600.00	0	0.00
shipsched	112,442	3600.00	164	0.14
shs1023	1	3684.98	0	1.43
siena1	2062	3600.01	106	0.52
sing161	2	3600.19	0	3.79
sing245	10	3601.28	0	1.01
sing2	4521	3600.03	0	0.19
sts405	77,112	3600.00	0	0.00
sts729	342	3599.92	0	0.00
swath	333,904	3600.00	0	0.01
tanglegram1	55	646.27	0	0.00
tanglegram2	3	3.09	0	0.00
timtab1	1,113,071	620.84	1	0.01
toll-like	827,638	3600.00	0	0.00
uc-case11	1180	3600.02	0	0.25
uc-case3	2244	3600.04	0	0.40
uct-subprob	675,439	3600.00	121	0.02
unitcal_7	51,146	3468.90	504	1.14
usAbbrv-8-25_70	648,075	3600.00	0	0.01
vpphard2	198	3608.27	0	0.00
vpphard	459	3600.20	0	0.00
wachplan	84,336	3600.00	0	0.00
zib54-UUE	440,551	3600.00	0	0.01
AM (# 157)	599,411.3	2366.56	68.0	0.32

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Name	#Nodes	Time	#Fixed	lpfixtime
GM (# 157)	4077.9	926.11	2.0	1.06
SGM (# 157)	8890.0	1065.66		0.27

TABLE 139. M2010-sym testset: lpfixed-OP settings

Name	#Nodes	Time	#Fixed	lpfixtime
30_70_45_095_100	401	1057.53	0	0.00
acc-tight4	913	457.98	0	0.00
ash608gipa-3col	14	35.31	0	0.00
bab3	1	3608.72	0	0.00
bab5	40,172	3600.00	0	0.00
berlin_5_8_0	2,060,751	3600.01	0	0.00
biella1	5146	324.44	74	0.00
circ10-3	44	3599.96	0	0.00
co-100	10,302	3600.00	0	0.00
core2536-691	300	120.11	0	0.00
core4872-1529	914	3600.01	0	0.00
cov1075	847,665	3600.00	0	0.00
dc1c	4403	3600.01	662	0.02
dc1l	1163	3600.41	0	0.00
dolom1	2318	3600.03	454	0.03
enlight13	1	0.02	0	0.00
enlight14	1	0.02	0	0.00
enlight15	1	0.02	0	0.00
enlight16	1	0.02	0	0.00
enlight9	1	0.00	0	0.00
ex1010-pi	14,383	3600.04	0	0.00
ex10	1	1014.83	0	0.00
ex9	1	93.31	0	0.00
glass4	5,564,514	3600.03	0	0.00
go19	1,199,012	3600.00	0	0.00
iis-bupa-cov	107,848	3600.00	0	0.00
lectsched-1	1812	152.36	0	0.00
lectsched-1-obj	78,546	3600.18	0	0.00
lectsched-2	299	50.26	0	0.00
lectsched-3	1034	97.41	0	0.00
lectsched-4-obj	1362	54.27	0	0.00
macrophage	740,563	3600.00	0	0.00
map06	652	764.32	40	0.73
map10	924	727.24	40	0.74
map14	2058	912.01	40	0.74
map18	255	259.06	40	0.74
map20	317	264.00	40	0.74
maxgasflow	160,789	3600.00	0	0.00
mcsched	13,011	124.95	0	0.00
methanosarcina	39,533	3600.01	0	0.00
mkc	497,298	3600.00	0	0.00
msc98-ip	7410	1293.83	0	0.00
mzzv11	2615	776.52	0	0.00
n3seq24	32,281	3600.02	0	0.00
n4-3	3521	83.52	100	0.03
n9-3	53,914	3600.00	390	0.13
neos-1109824	11,639	141.65	0	0.00
neos-1171692	201	32.00	0	0.00
neos-1171737	66,482	3600.00	0	0.00
neos-1224597	1	2.50	0	0.00

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-1311124	4,095,602	3600.02	0	0.00
neos-1337307	252,315	3600.00	0	0.00
neos-1396125	56,634	248.39	0	0.00
neos13	47,566	2777.69	1	0.01
neos-1426635	4,457,079	3600.05	0	0.00
neos-1426662	986,311	3600.01	0	0.00
neos-1429212	2028	3600.50	0	0.00
neos-1436709	1,610,634	3600.01	0	0.00
neos-1440460	2,622,040	3600.01	0	0.00
neos-1442119	1,418,113	3600.00	0	0.00
neos-1442657	1,708,923	3600.01	0	0.00
neos-1620770	321,663	3600.00	0	0.00
neos18	5323	55.48	0	0.00
neos-476283	863	588.53	0	0.00
neos-555424	529,135	3600.00	0	0.00
neos-738098	3611	3600.01	0	0.00
neos-777800	1	1.99	0	0.00
neos-785912	88	14.73	0	0.00
neos788725	136,996	265.84	0	0.00
neos808444	278	1973.70	0	0.00
neos-820146	1,629,882	3600.00	0	0.00
neos-820157	1,162,404	3600.00	0	0.00
neos-824661	1	22.57	0	0.00
neos-824695	4	15.11	0	0.00
neos-826650	119,216	3600.00	0	0.00
neos-826694	1	6.12	0	0.00
neos-826812	1	3.44	0	0.00
neos-826841	313,064	3600.00	0	0.00
neos-849702	215,827	3600.00	0	0.00
neos-859770	1	156.21	0	0.00
neos-885086	13,826	1391.14	0	0.00
neos-885524	13,208	3600.02	0	0.00
neos-911880	3,419,190	3600.01	0	0.00
neos-932816	66,726	3600.01	0	0.00
neos-933638	106	386.43	0	0.00
neos-933966	24	156.28	0	0.00
neos-934278	231	340.17	0	0.00
neos-935627	597	976.47	0	0.00
neos-935769	375	684.10	0	0.00
neos-937511	43	224.08	0	0.00
neos-937815	5194	3600.01	0	0.00
neos-941262	2995	3600.01	0	0.00
neos-941313	20	618.11	0	0.00
neos-948126	2223	3600.00	0	0.00
neos-957389	5	20.07	0	0.00
neos-984165	2261	3600.01	0	0.00
net12	1924	577.97	0	0.00
noswot	1,106,633	314.62	0	0.00
ns1111636	396	3600.03	0	0.00
ns1116954	15	3599.84	0	0.00
ns1158817	1	120.47	0	0.00
ns1208400	3309	569.54	0	0.00
ns1456591	60,913	3600.01	0	0.00
ns1702808	207,366	396.35	0	0.00

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Name	#Nodes	Time	#Fixed	lpfixtime
ns1758913	3	3600.33	0	0.00
ns1853823	1	3591.15	0	0.00
ns1854840	1	3598.53	0	0.00
ns1905797	40,826	3600.01	0	0.00
ns1905800	255,783	3600.00	0	0.00
ns1952667	13,279	2376.62	0	0.00
ns2118727	629	3600.00	0	0.00
ns2124243	5383	3600.02	1424	5.02
ns2137859	103,618	3600.00	0	0.00
ns4-pr9	446,118	3600.00	156	0.13
nsr8k	53	3600.03	156	0.14
nu60-pr9	150,286	3600.00	0	0.00
p2m2p1m1p0n100	33,557,436	3600.00	0	0.00
p6b	92,289	3600.00	0	0.00
pigeon-10	5,327,042	3600.00	0	0.00
pigeon-11	4,020,797	3600.00	0	0.00
pigeon-12	3,084,716	3600.00	0	0.00
pigeon-13	2,324,213	3600.00	0	0.00
pigeon-19	1,385,108	3600.00	0	0.00
protfold	30,601	3600.00	0	0.00
pw-myciel4	414,106	3600.01	0	0.00
qiu	11,561	68.12	0	0.00
queens-30	19,534	3600.14	0	0.00
rail507	949	98.02	0	0.00
ramos3	17	3600.20	0	0.00
rvb-sub	52,693	3600.00	0	0.00
sct1	9917	3600.01	2479	0.10
sct32	46,191	3600.01	29	0.00
sct5	7892	3600.00	3579	0.17
seymour-disj-10	42,474	3600.00	0	0.00
seymour	75,017	3600.00	0	0.00
shipsched	110,793	3600.00	164	0.01
shs1023	1	3691.07	0	0.00
siena1	2062	3600.02	106	0.01
sing161	2	3600.22	0	0.00
sing245	10	3612.90	0	0.00
sing2	4516	3600.02	0	0.00
sts405	78,265	3600.00	0	0.00
sts729	343	3600.04	0	0.00
swath	338,964	3600.00	0	0.00
tanglegram1	55	646.26	0	0.00
tanglegram2	3	3.16	0	0.00
timtab1	1,113,071	622.68	1	0.00
toll-like	826,225	3600.00	0	0.00
uc-case11	1180	3600.02	0	0.00
uc-case3	2253	3600.17	0	0.00
uct-subprob	675,972	3600.00	121	0.01
unitcal_7	33,568	2445.47	523	1.02
usAbbrv-8-25_70	652,002	3600.01	0	0.00
vpphard2	198	3611.16	0	0.00
vpphard	459	3600.38	0	0.00
wachplan	84,449	3600.00	0	0.00
zib54-UUE	438,518	3600.00	0	0.00
AM (# 157)	599,117.3	2357.46	67.6	0.07

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Name	#Nodes	Time	#Fixed	lpfixtime
GM (# 157)	4069.2	923.68	1.9	1.01
SGM (# 157)	8871.3	1062.16		0.06

TABLE 140. M2010-sym testset: lpfixed-fundnlp settings

Name	#Nodes	Time	#Fixed	lpfixtime
30_70_45_095_100	401	1066.64	0	0.07
acc-tight4	913	456.43	0	0.02
ash608gipa-3col	14	35.49	0	0.16
bab3	1	3607.50	0	44.72
bab5	40,565	3600.01	0	0.33
berlin_5_8_0	2,066,355	3600.01	0	0.01
biella1	5146	323.02	74	0.10
circ10-3	45	3599.97	0	0.18
co-100	10,396	3600.19	0	1.37
core2536-691	300	121.09	0	1.58
core4872-1529	914	3600.29	0	2.21
cov1075	851,343	3600.00	0	0.00
dc1c	4363	3600.00	662	2.39
dc1l	1163	3600.78	0	0.96
dolom1	2323	3600.12	454	1.58
enlight13	1	0.01	0	0.00
enlight14	1	0.01	0	0.00
enlight15	1	0.02	0	0.00
enlight16	1	0.04	0	0.00
enlight9	1	0.01	0	0.00
ex1010-pi	14,383	3600.02	0	0.03
ex10	1	1016.87	0	0.00
ex9	1	91.81	0	0.00
glass4	5,583,795	3600.03	0	0.00
go19	1,193,721	3600.00	0	0.00
iis-bupa-cov	108,359	3600.00	0	0.01
lectsched-1	1812	152.82	0	0.08
lectsched-1-obj	79,245	3600.01	0	0.11
lectsched-2	299	49.81	0	0.03
lectsched-3	1034	97.51	0	0.07
lectsched-4-obj	1362	54.11	0	0.02
macrophage	744,393	3600.00	0	0.01
map06	875	878.25	40	0.92
map10	1610	1003.41	40	0.92
map14	791	767.45	40	0.92
map18	271	265.75	40	0.92
map20	633	305.77	40	0.91
maxgasflow	161,285	3600.00	0	0.02
mcsched	13,011	124.44	0	0.00
methanosarcina	39,421	3600.00	0	0.04
mkc	494,983	3600.00	0	0.01
msc98-ip	7410	1277.46	0	0.13
mzzv11	2615	777.57	0	0.04
n3seq24	32,495	3600.00	0	18.42
n4-3	2026	51.39	100	0.03
n9-3	61,272	3600.00	390	0.16
neos-1109824	11,639	141.84	0	0.02
neos-1171692	201	31.98	0	0.01
neos-1171737	66,375	3600.00	0	0.03
neos-1224597	1	2.51	0	0.01

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-1311124	4,111,796	3600.02	0	0.00
neos-1337307	252,269	3600.00	0	0.03
neos-1396125	56,634	250.07	0	0.01
neos13	47,566	2777.10	1	0.61
neos-1426635	4,446,045	3600.05	0	0.00
neos-1426662	984,102	3600.00	0	0.00
neos-1429212	2028	3600.15	0	2.20
neos-1436709	1,619,261	3600.01	0	0.00
neos-1440460	2,635,903	3600.01	0	0.01
neos-1442119	1,405,736	3600.01	0	0.00
neos-1442657	1,697,831	3600.01	0	0.01
neos-1620770	322,502	3600.00	0	0.01
neos18	5323	55.26	0	0.00
neos-476283	863	590.02	0	3.80
neos-555424	533,263	3600.00	0	0.02
neos-738098	3735	3600.02	0	0.07
neos-777800	1	1.99	0	0.00
neos-785912	88	14.74	0	0.01
neos788725	136,996	262.61	0	0.00
neos808444	278	1983.84	0	0.12
neos-820146	1,632,186	3600.00	0	0.01
neos-820157	1,173,991	3600.00	0	0.00
neos-824661	1	22.17	0	0.15
neos-824695	4	15.18	0	0.07
neos-826650	118,879	3600.01	0	0.01
neos-826694	1	6.05	0	0.05
neos-826812	1	3.41	0	0.05
neos-826841	314,338	3600.01	0	0.02
neos-849702	215,790	3600.00	0	0.01
neos-859770	1	156.53	0	0.06
neos-885086	13,826	1422.21	0	0.12
neos-885524	12,789	3600.09	0	0.16
neos-911880	3,410,186	3600.01	0	0.00
neos-932816	66,688	3600.01	0	0.03
neos-933638	106	393.82	0	0.05
neos-933966	24	154.42	0	0.04
neos-934278	231	358.94	0	0.04
neos-935627	597	1011.46	0	0.04
neos-935769	375	683.15	0	0.02
neos-937511	43	222.63	0	0.03
neos-937815	5811	3600.00	0	0.04
neos-941262	2998	3600.01	0	0.03
neos-941313	20	621.33	0	0.40
neos-948126	2211	3600.01	0	0.02
neos-957389	5	19.93	0	0.19
neos-984165	2249	3600.00	0	0.03
net12	2728	979.60	76	0.47
noswot	1,106,633	312.73	0	0.00
ns1111636	395	3600.03	0	0.41
ns1116954	15	3600.02	0	0.30
ns1158817	1	120.35	0	5.36
ns1208400	3309	569.80	0	0.02
ns1456591	61,391	3600.08	0	0.18
ns1702808	207,366	397.25	0	0.00

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Name	#Nodes	Time	#Fixed	lpfixtime
ns1758913	3	3600.37	0	1.01
ns1853823	1	3591.08	0	2.09
ns1854840	1	3598.55	0	1.36
ns1905797	40,794	3600.00	0	0.33
ns1905800	256,796	3600.01	0	0.04
ns1952667	13,279	2370.96	0	1.15
ns2118727	627	3600.00	0	0.04
ns2124243	5339	3600.01	1424	13.54
ns2137859	103,826	3600.01	0	0.18
ns4-pr9	449,403	3600.00	156	0.15
nsr8k	53	3600.03	156	1.06
nu60-pr9	150,957	3600.00	0	0.02
p2m2p1m1p0n100	33,610,506	3600.00	0	0.00
p6b	91,970	3600.00	0	0.00
pigeon-10	5,285,083	3600.00	0	0.00
pigeon-11	4,050,872	3600.00	0	0.00
pigeon-12	3,078,787	3600.00	0	0.01
pigeon-13	2,343,262	3600.00	0	0.00
pigeon-19	1,377,303	3600.00	0	0.01
protfold	30,568	3600.00	0	0.02
pw-myciel4	414,425	3600.00	0	0.01
qiu	11,561	68.10	0	0.00
queens-30	19,334	3600.05	0	0.03
rail507	949	97.96	0	0.35
ramos3	17	3600.22	0	0.00
rvb-sub	52,572	3600.00	0	4.06
sct1	9974	3600.01	2479	0.26
sct32	45,254	3600.05	29	0.08
sct5	7907	3600.01	3579	0.38
seymour-disj-10	42,606	3600.01	0	0.07
seymour	74,802	3600.01	0	0.01
shipsched	111,237	3600.00	164	0.15
shs1023	1	3682.94	0	1.41
siena1	1843	3600.01	106	0.52
sing161	2	3600.18	0	3.84
sing245	10	3613.71	0	1.03
sing2	4521	3600.02	0	0.20
sts405	77,392	3600.01	0	0.03
sts729	343	3600.04	0	0.11
swath	340,708	3600.00	0	0.01
tanglegram1	55	643.91	0	0.58
tanglegram2	3	3.15	0	0.04
timtab1	1,113,071	619.64	1	0.00
toll-like	825,956	3600.00	0	0.01
uc-case11	1180	3600.02	0	0.25
uc-case3	2253	3600.08	0	0.40
uct-subprob	662,928	3600.00	121	0.02
unitcal_7	51,146	3467.68	504	1.15
usAbbrv-8-25_70	654,942	3600.00	0	0.01
vpphard2	198	3601.88	0	0.51
vpphard	459	3600.87	0	0.20
wachplan	84,416	3600.01	0	0.01
zib54-UUE	439,579	3600.00	0	0.01
AM (# 157)	599,796.5	2368.61	68.0	0.84

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Name	#Nodes	Time	#Fixed	lpfixtime
GM (# 157)	4095.9	928.89	2.0	1.14
SGM (# 157)	8921.1	1068.69		0.56

TABLE 141. M2010-sym testset: lpfixed-orbitmin settings

Name	#Nodes	Time	#Fixed	lpfixtime
30_70_45_095_100	401	1038.42	0	0.07
acc-tight4	913	457.52	0	0.01
ash608gipa-3col	14	35.62	0	0.17
bab3	1	3610.30	0	44.69
bab5	40,404	3600.01	0	0.33
berlin_5_8_0	2,035,569	3600.01	0	0.00
biella1	5146	323.23	74	0.10
circ10-3	45	3599.97	0	0.18
co-100	10,381	3600.00	0	1.38
core2536-691	300	120.83	0	1.59
core4872-1529	934	3600.00	0	2.20
cov1075	850,652	3600.00	0	0.00
dc1c	4367	3600.04	662	2.47
dc1l	1163	3600.87	0	0.98
dolom1	2328	3600.05	454	1.57
enlight13	1	0.02	0	0.00
enlight14	1	0.02	0	0.00
enlight15	1	0.03	0	0.00
enlight16	1	0.03	0	0.01
enlight9	1	0.00	0	0.00
ex1010-pi	14,383	3600.03	0	0.02
ex10	1	1019.11	0	0.00
ex9	1	92.14	0	0.00
glass4	5,550,484	3600.03	0	0.00
go19	1,194,489	3600.00	0	0.00
iis-bupa-cov	107,940	3600.00	0	0.01
lectsched-1	1812	152.65	0	0.09
lectsched-1-obj	78,315	3600.03	0	0.11
lectsched-2	299	49.74	0	0.04
lectsched-3	1034	97.90	0	0.07
lectsched-4-obj	1362	54.01	0	0.02
macrophage	743,513	3600.01	0	0.01
map06	875	877.40	40	0.93
map10	1610	990.45	40	0.91
map14	791	762.14	40	0.92
map18	271	264.72	40	0.90
map20	633	306.59	40	0.92
maxgasflow	160,835	3600.00	0	0.02
mcsched	13,011	124.96	0	0.00
methanosarcina	39,501	3600.01	0	0.04
mkc	495,855	3600.00	0	0.01
msc98-ip	7410	1271.22	0	0.13
mzzv11	2615	779.09	0	0.04
n3seq24	32,390	3600.03	0	18.42
n4-3	2026	51.34	100	0.03
n9-3	61,037	3600.00	390	0.15
neos-1109824	11,639	140.47	0	0.01
neos-1171692	201	31.90	0	0.02
neos-1171737	66,473	3600.00	0	0.03
neos-1224597	1	2.50	0	0.02

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-1311124	4,110,952	3600.02	0	0.00
neos-1337307	252,753	3600.00	0	0.02
neos-1396125	56,634	249.34	0	0.01
neos13	47,566	2759.79	1	0.59
neos-1426635	4,476,308	3600.04	0	0.00
neos-1426662	986,423	3600.01	0	0.01
neos-1429212	2028	3600.68	0	2.22
neos-1436709	1,617,313	3600.01	0	0.00
neos-1440460	2,628,997	3600.01	0	0.00
neos-1442119	1,419,550	3600.01	0	0.01
neos-1442657	1,696,767	3600.01	0	0.00
neos-1620770	319,458	3600.00	0	0.01
neos18	5323	55.30	0	0.01
neos-476283	863	590.46	0	3.77
neos-555424	533,354	3600.00	0	0.01
neos-738098	3575	3600.00	0	0.08
neos-777800	1	1.99	0	0.01
neos-785912	88	14.73	0	0.01
neos788725	136,996	263.43	0	0.00
neos808444	278	2000.35	0	0.13
neos-820146	1,625,022	3600.00	0	0.00
neos-820157	1,177,143	3600.00	0	0.00
neos-824661	1	22.17	0	0.15
neos-824695	4	15.12	0	0.07
neos-826650	118,862	3600.00	0	0.01
neos-826694	1	6.07	0	0.05
neos-826812	1	3.41	0	0.05
neos-826841	313,930	3600.01	0	0.01
neos-849702	216,154	3600.00	0	0.00
neos-859770	1	156.69	0	0.06
neos-885086	13,826	1405.31	0	0.13
neos-885524	12,767	3600.24	0	0.16
neos-911880	3,407,058	3600.01	0	0.00
neos-932816	66,661	3600.00	0	0.02
neos-933638	106	387.07	0	0.05
neos-933966	24	153.75	0	0.03
neos-934278	231	339.99	0	0.03
neos-935627	597	1036.52	0	0.03
neos-935769	375	680.34	0	0.03
neos-937511	43	228.28	0	0.04
neos-937815	5823	3600.00	0	0.05
neos-941262	2995	3600.00	0	0.04
neos-941313	20	619.69	0	0.41
neos-948126	2144	3600.01	0	0.03
neos-957389	5	19.93	0	0.18
neos-984165	2251	3600.00	0	0.03
net12	2728	983.97	76	0.48
noswot	1,106,633	313.30	0	0.00
ns1111636	393	3600.07	0	0.42
ns1116954	15	3600.01	0	0.31
ns1158817	1	120.39	0	5.32
ns1208400	3309	568.90	0	0.03
ns1456591	61,352	3600.00	0	0.18
ns1702808	207,366	400.12	0	0.00

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Name	#Nodes	Time	#Fixed	lpfixtime
ns1758913	3	3600.36	0	1.01
ns1853823	1	3591.10	0	2.09
ns1854840	1	3598.53	0	1.36
ns1905797	39,801	3600.01	0	0.34
ns1905800	256,849	3600.01	0	0.04
ns1952667	13,279	2383.44	0	1.16
ns2118727	589	3600.01	0	0.04
ns2124243	5350	3600.04	1424	13.50
ns2137859	104,052	3600.00	0	0.19
ns4-pr9	446,116	3600.00	156	0.15
nsr8k	53	3600.04	156	1.05
nu60-pr9	150,945	3600.00	0	0.02
p2m2p1m1p0n100	33,637,799	3600.00	0	0.00
p6b	92,039	3600.00	0	0.00
pigeon-10	5,248,543	3600.00	0	0.00
pigeon-11	4,059,495	3600.00	0	0.00
pigeon-12	3,064,568	3600.00	0	0.00
pigeon-13	2,337,818	3600.00	0	0.00
pigeon-19	1,363,492	3600.00	0	0.00
protfold	30,598	3600.00	0	0.02
pw-myciel4	412,405	3600.00	0	0.01
qiu	11,561	68.66	0	0.00
queens-30	19,116	3600.05	0	0.02
rail507	949	98.29	0	0.36
ramos3	17	3599.90	0	0.01
rvb-sub	52,942	3600.00	0	4.06
sct1	9855	3600.00	2479	0.26
sct32	46,192	3600.00	29	0.10
sct5	7918	3600.01	3579	0.37
seymour-disj-10	42,757	3600.01	0	0.07
seymour	74,807	3600.00	0	0.01
shipsched	112,196	3600.00	164	0.15
shs1023	1	3683.42	0	1.47
siena1	2066	3600.01	106	0.53
sing161	2	3600.18	0	3.80
sing245	10	3602.58	0	1.05
sing2	4504	3600.01	0	0.19
sts405	78,333	3600.01	0	0.03
sts729	343	3600.04	0	0.12
swath	338,677	3600.00	0	0.01
tanglegram1	55	644.62	0	0.58
tanglegram2	3	3.14	0	0.02
timtab1	1,113,071	619.53	1	0.00
toll-like	827,396	3600.00	0	0.01
uc-case11	1180	3600.02	0	0.24
uc-case3	2249	3600.00	0	0.39
uct-subprob	665,525	3600.00	121	0.03
unitcal_7	51,146	3500.25	504	1.13
usAbbrv-8-25_70	651,383	3600.00	0	0.00
vpphard2	198	3610.96	0	0.55
vpphard	459	3600.99	0	0.20
wachplan	84,097	3600.00	0	0.01
zib54-UUE	439,526	3600.00	0	0.01
AM (# 157)	599,291.9	2368.53	68.0	0.84

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Name	#Nodes	Time	#Fixed	lpfixtime
GM (# 157)	4093.6	928.54	2.0	1.14
SGM (# 157)	8916.5	1068.32		0.56

TABLE 142. M2010-bench testset: lpfixed settings

Name	#Nodes	Time	#Fixed	lpfixtime
30n20b8	424	305.11	0	0.03
acc-tight5	2029	284.70	0	0.00
aflow40b	285,631	2325.77	0	0.01
air04	119	35.18	0	0.00
app1-2	16,711	3600.01	0	0.49
ash608gpia-3col	14	36.23	0	0.00
bab5	40,361	3601.16	0	0.00
beasleyC3	526,891	3600.00	0	0.01
biella1	5146	324.34	74	0.11
bienst2	138,693	178.62	0	0.00
binkar10_1	207,304	348.56	0	0.00
bley_xl1	2	310.61	0	0.00
bnatt350	1154	162.06	0	0.00
core2536-691	300	118.77	0	0.00
cov1075	849,062	3600.00	0	0.00
csched010	686,010	3600.00	0	0.01
danoind	921,756	3600.00	0	0.00
dfn-gwin-UUM	51,474	92.72	0	0.01
eil133-2	693	58.26	0	0.00
eilB101	9340	147.73	0	0.00
enlight13	1	0.02	0	0.00
enlight14	1	0.01	0	0.00
ex9	1	92.34	0	0.00
glass4	5,586,430	3600.03	0	0.00
gmu-35-40	5,613,816	3600.03	0	0.00
iis-100-0-cov	81,999	1613.04	0	0.00
iis-bupa-cov	108,161	3600.00	0	0.00
iis-pima-cov	11,775	753.04	0	0.00
lectsched-4-obj	1362	54.14	0	0.00
m100n500k4r1	4,737,824	3600.00	0	0.00
macrophage	740,553	3600.00	0	0.00
map18	255	260.98	40	0.92
map20	317	264.93	40	0.93
mcsched	13,011	124.46	0	0.00
mik-250-1-100-1	4,488,404	1590.72	0	0.01
mine-166-5	1850	41.66	0	0.00
mine-90-10	151,788	799.77	0	0.00
msc98-ip	7410	1298.94	0	0.13
mspp16	—	—	—	—
mzzv11	2615	779.48	0	0.04
n3div36	112,724	3600.00	0	0.00
n3seq24	32,505	3600.02	0	0.00
n4-3	2026	51.51	100	0.03
neos-1109824	11,639	141.52	0	0.00
neos-1337307	251,211	3600.00	0	0.00
neos-1396125	56,634	249.30	0	0.01
neos13	47,566	2763.32	1	0.59
neos-1601936	10,979	2062.25	0	0.04
neos18	5323	55.47	0	0.00
neos-476283	863	592.28	0	3.79

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-686190	7319	108.54	0	0.00
neos-849702	215,564	3600.00	0	0.00
neos-916792	311,642	3600.01	0	0.26
neos-934278	231	348.61	0	0.04
net12	2728	984.19	76	0.46
netdiversion	88	786.19	0	0.00
newdano	1,762,106	3600.00	0	0.00
noswot	1,106,633	314.23	0	0.00
ns1208400	3309	569.94	0	0.00
ns1688347	4220	212.14	0	0.00
ns1758913	3	3600.34	0	1.01
ns1766074	925,848	1227.76	0	0.00
ns1830653	46,368	651.16	0	0.02
opm2-z7-s2	2827	687.25	0	0.00
pg5_34	215,677	1272.17	0	0.01
pigeon-10	5,287,277	3600.00	0	0.01
pw-myciel4	411,290	3600.00	0	0.00
qiu	11,561	68.14	0	0.00
rail507	949	97.64	0	0.00
ran16x16	328,398	297.36	0	0.01
reblock67	122,028	345.95	0	0.00
rmatr100-p10	675	111.15	0	0.03
rmatr100-p5	357	106.23	0	0.03
rmine6	690,670	3600.00	0	0.00
rocll-4-11	26,842	588.16	0	0.02
rococoC10-001000	106,798	558.43	0	0.00
roll3000	504,127	3153.70	0	0.01
satellites1-25	3350	528.88	0	0.03
sp98ic	200,956	3600.00	0	0.00
sp98ir	6084	66.12	0	0.00
tanglegram1	55	643.40	0	0.00
tanglegram2	3	3.12	0	0.00
timtab1	1,113,071	622.91	1	0.00
triptim1	1	46.90	0	0.00
unitcal_7	51,146	3463.20	504	1.14
vpphard	459	3601.92	0	0.00
zib54-UUE	438,231	3600.00	0	0.02
AM (# 87)	456,678.7	1450.40	9.6	0.12
GM (# 87)	9872.7	515.27	1.4	1.02
SGM (# 87)	15,830.7	565.65		0.11

TABLE 143. M2010-bench testset: lpfixed-OP settings

Name	#Nodes	Time	#Fixed	lpfixtime
30n20b8	424	305.12	0	0.00
acc-tight5	2029	284.83	0	0.00
aflow40b	285,631	2327.88	0	0.00
air04	119	34.98	0	0.00
app1-2	16,726	3590.02	0	0.00
ash608gpia-3col	14	35.74	0	0.00
bab5	40,119	3600.00	0	0.00
beasleyC3	527,070	3600.01	0	0.00
biella1	5146	322.99	74	0.00
bienst2	138,693	178.14	0	0.00
binkar10_1	207,304	348.69	0	0.00
bley_xl1	2	311.61	0	0.00
bnatt350	1154	162.32	0	0.00
core2536-691	300	120.27	0	0.00
cov1075	847,417	3600.00	0	0.00
csched010	679,698	3600.00	0	0.00
danoind	925,419	3600.00	0	0.00
dfn-gwin-UUM	51,474	94.56	0	0.00
eil133-2	693	58.88	0	0.00
eilB101	9340	148.22	0	0.00
enlight13	1	0.02	0	0.00
enlight14	1	0.02	0	0.00
ex9	1	93.66	0	0.00
glass4	5,534,789	3600.02	0	0.00
gmu-35-40	5,504,109	3600.03	0	0.00
iis-100-0-cov	81,999	1521.81	0	0.00
iis-bupa-cov	107,944	3600.00	0	0.00
iis-pima-cov	11,775	752.21	0	0.00
lectsched-4-obj	1362	54.28	0	0.00
m100n500k4r1	4,701,885	3600.00	0	0.00
macrophage	741,603	3600.00	0	0.00
map18	255	259.07	40	0.74
map20	317	266.66	40	0.73
mcsched	13,011	125.29	0	0.00
mik-250-1-100-1	4,488,404	1596.61	0	0.00
mine-166-5	1850	41.69	0	0.00
mine-90-10	151,788	796.91	0	0.00
msc98-ip	7410	1280.14	0	0.00
mspp16	—	—	—	—
mzzv11	2615	782.34	0	0.00
n3div36	112,551	3600.00	0	0.00
n3seq24	32,384	3600.02	0	0.00
n4-3	3521	83.27	100	0.02
neos-1109824	11,639	141.04	0	0.00
neos-1337307	252,997	3600.00	0	0.00
neos-1396125	56,634	249.12	0	0.00
neos13	47,566	2804.54	1	0.00
neos-1601936	10,979	2059.83	0	0.00
neos18	5323	55.51	0	0.00
neos-476283	863	588.22	0	0.00

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-686190	7319	108.46	0	0.00
neos-849702	215,326	3600.00	0	0.00
neos-916792	308,055	3600.00	0	0.00
neos-934278	231	348.07	0	0.00
net12	1924	579.61	0	0.00
netdiversion	88	787.49	0	0.00
newdano	1,765,567	3600.00	0	0.00
noswot	1,106,633	313.43	0	0.00
ns1208400	3309	569.26	0	0.00
ns1688347	4220	212.08	0	0.00
ns1758913	3	3600.38	0	0.00
ns1766074	925,848	1234.87	0	0.00
ns1830653	46,368	652.56	0	0.00
opm2-z7-s2	2827	699.88	0	0.00
pg5_34	215,677	1270.43	0	0.00
pigeon-10	5,321,535	3600.00	0	0.00
pw-myciel4	411,318	3600.00	0	0.00
qiu	11,561	67.91	0	0.00
rail507	949	97.85	0	0.00
ran16x16	328,398	297.39	0	0.00
reblock67	122,028	343.36	0	0.00
rmatr100-p10	675	111.55	0	0.00
rmatr100-p5	357	106.14	0	0.00
rmine6	690,352	3600.00	0	0.00
rocll-4-11	26,842	592.96	0	0.00
rococoC10-001000	106,798	554.04	0	0.00
roll3000	504,127	3142.23	0	0.00
satellites1-25	3350	529.60	0	0.00
sp98ic	202,897	3600.00	0	0.00
sp98ir	6084	66.57	0	0.00
tanglegram1	55	647.52	0	0.00
tanglegram2	3	3.15	0	0.00
timtab1	1,113,071	620.29	1	0.00
triptim1	1	46.19	0	0.00
unitcal_7	33,568	2423.88	523	1.02
vpphard	459	3600.06	0	0.00
zib54-UUE	437,549	3600.00	0	0.00
AM (# 87)	454,594.5	1433.38	9.0	0.03
GM (# 87)	9843.0	512.84	1.3	1.00
SGM (# 87)	15,782.0	562.53		0.03

TABLE 144. M2010-bench testset: lpfixed-fundnlp settings

Name	#Nodes	Time	#Fixed	lpfixtime
30n20b8	424	305.62	0	0.03
acc-tight5	2029	284.74	0	0.00
aflow40b	285,631	2329.59	0	0.01
air04	119	35.00	0	0.03
app1-2	16,726	3590.04	0	0.49
ash608gpia-3col	14	35.42	0	0.17
bab5	40,560	3600.03	0	0.34
beasleyC3	525,234	3600.00	0	0.01
biella1	5146	323.27	74	0.10
bienst2	138,693	178.20	0	0.00
binkar10_1	207,304	346.63	0	0.00
bley_xl1	2	312.11	0	0.08
bnatt350	1154	162.53	0	0.02
core2536-691	300	120.77	0	1.59
cov1075	846,733	3600.00	0	0.00
csched010	683,970	3600.00	0	0.01
danoind	926,330	3600.00	0	0.00
dfn-gwin-UUM	51,474	93.43	0	0.00
eil133-2	693	58.93	0	0.01
eilB101	9340	148.40	0	0.00
enlight13	1	0.02	0	0.00
enlight14	1	0.01	0	0.00
ex9	1	92.87	0	0.00
glass4	5,553,389	3600.02	0	0.01
gmu-35-40	5,575,823	3600.03	0	0.00
iis-100-0-cov	81,999	1521.83	0	0.00
iis-bupa-cov	108,161	3600.01	0	0.01
iis-pima-cov	11,775	756.42	0	0.02
lectsched-4-obj	1362	54.42	0	0.02
m100n500k4r1	4,757,286	3600.00	0	0.00
macrophage	740,310	3600.01	0	0.01
map18	271	265.94	40	0.92
map20	633	306.90	40	0.93
mcsched	13,011	124.65	0	0.01
mik-250-1-100-1	4,488,404	1592.25	0	0.00
mine-166-5	1850	41.72	0	0.01
mine-90-10	151,788	804.34	0	0.01
msc98-ip	7410	1271.67	0	0.12
mspp16	—	—	—	—
mzzv11	2615	778.42	0	0.04
n3div36	113,234	3600.47	0	0.48
n3seq24	32,217	3600.00	0	18.42
n4-3	2026	51.51	100	0.03
neos-1109824	11,639	141.54	0	0.03
neos-1337307	251,618	3600.00	0	0.03
neos-1396125	56,634	249.55	0	0.00
neos13	47,566	2780.04	1	0.58
neos-1601936	10,979	2054.65	0	0.03
neos18	5323	55.52	0	0.01
neos-476283	863	591.70	0	3.77

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-686190	7319	108.73	0	0.02
neos-849702	216,168	3600.00	0	0.01
neos-916792	312,443	3600.00	0	0.27
neos-934278	231	343.44	0	0.04
net12	2728	985.35	76	0.47
netdiversion	88	786.45	0	0.72
newdano	1,778,834	3600.00	0	0.00
noswot	1,106,633	313.40	0	0.00
ns1208400	3309	569.83	0	0.03
ns1688347	4220	211.44	0	0.01
ns1758913	3	3600.36	0	1.00
ns1766074	925,848	1232.72	0	0.00
ns1830653	46,368	652.80	0	0.02
opm2-z7-s2	2827	697.16	0	0.07
pg5_34	215,677	1267.13	0	0.01
pigeon-10	5,288,796	3600.00	0	0.01
pw-myciel4	411,972	3600.00	0	0.01
qiu	11,561	68.62	0	0.00
rail507	949	98.24	0	0.36
ran16x16	328,398	297.22	0	0.00
reblock67	122,028	344.42	0	0.01
rmatr100-p10	675	111.56	0	0.03
rmatr100-p5	357	106.31	0	0.03
rmine6	689,931	3600.00	0	0.01
rocll-4-11	26,842	592.24	0	0.02
rococoC10-001000	106,798	559.96	0	0.00
roll3000	504,127	3138.29	0	0.01
satellites1-25	3350	529.45	0	0.04
sp98ic	201,081	3600.00	0	0.35
sp98ir	6084	66.36	0	0.03
tanglegram1	55	647.04	0	0.58
tanglegram2	3	3.15	0	0.03
timtab1	1,113,071	620.87	1	0.01
triptim1	1	46.20	0	0.23
unitcal_7	51,146	3463.31	504	1.13
vpphard	459	3600.72	0	0.21
zib54-UUE	439,533	3600.00	0	0.01
AM (# 87)	456,321.6	1449.70	9.6	0.39
GM (# 87)	9959.5	516.10	1.4	1.06
SGM (# 87)	15,944.2	566.51		0.29

TABLE 145. M2010-bench testset: lpfixed-orbitmin settings

Name	#Nodes	Time	#Fixed	lpfixtime
30n20b8	424	305.94	0	0.02
acc-tight5	2029	285.58	0	0.01
aflow40b	285,631	2331.33	0	0.00
air04	119	35.06	0	0.03
app1-2	16,725	3600.02	0	0.49
ash608gpia-3col	14	35.81	0	0.17
bab5	40,288	3600.00	0	0.33
beasleyC3	526,268	3600.00	0	0.01
biella1	5146	324.49	74	0.10
bienst2	138,693	179.26	0	0.00
binkar10_1	207,304	350.19	0	0.00
bley_xl1	2	311.69	0	0.09
bnatt350	1154	162.88	0	0.01
core2536-691	300	122.02	0	1.58
cov1075	847,088	3600.00	0	0.00
csched010	681,303	3600.00	0	0.00
danoind	920,574	3600.00	0	0.00
dfn-gwin-UUM	51,474	94.09	0	0.00
eil133-2	693	58.87	0	0.01
eilB101	9340	148.03	0	0.01
enlight13	1	0.03	0	0.00
enlight14	1	0.02	0	0.00
ex9	1	92.51	0	0.00
glass4	5,492,670	3600.02	0	0.01
gmu-35-40	5,570,002	3600.03	0	0.01
iis-100-0-cov	81,999	1520.20	0	0.01
iis-bupa-cov	107,994	3600.00	0	0.01
iis-pima-cov	11,775	752.35	0	0.02
lectsched-4-obj	1362	54.35	0	0.02
m100n500k4r1	4,749,579	3600.00	0	0.00
macrophage	739,104	3600.00	0	0.01
map18	271	266.74	40	0.91
map20	633	308.88	40	0.91
mcsched	13,011	125.17	0	0.00
mik-250-1-100-1	4,488,404	1595.04	0	0.01
mine-166-5	1850	41.68	0	0.02
mine-90-10	151,788	799.81	0	0.01
msc98-ip	7410	1285.46	0	0.13
mspp16	—	—	—	—
mzzv11	2615	777.16	0	0.04
n3div36	112,106	3600.00	0	0.47
n3seq24	32,318	3600.03	0	18.41
n4-3	2026	51.51	100	0.03
neos-1109824	11,639	141.19	0	0.01
neos-1337307	251,782	3600.06	0	0.03
neos-1396125	56,634	249.25	0	0.01
neos13	47,566	2790.70	1	0.58
neos-1601936	10,979	2056.19	0	0.03
neos18	5323	55.21	0	0.01
neos-476283	863	594.41	0	3.77

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Name	#Nodes	Time	#Fixed	lpfixtime
neos-686190	7319	108.20	0	0.02
neos-849702	216,579	3600.00	0	0.01
neos-916792	315,598	3600.00	0	0.25
neos-934278	231	352.82	0	0.04
net12	2728	984.16	76	0.46
netdiversion	88	789.97	0	0.72
newdano	1,766,841	3600.00	0	0.01
noswot	1,106,633	314.41	0	0.00
ns1208400	3309	570.30	0	0.02
ns1688347	4220	212.06	0	0.02
ns1758913	3	3600.31	0	1.03
ns1766074	925,848	1235.13	0	0.00
ns1830653	46,368	652.70	0	0.01
opm2-z7-s2	2827	700.29	0	0.06
pg5_34	215,677	1273.10	0	0.00
pigeon-10	5,302,442	3600.00	0	0.00
pw-myciel4	413,546	3600.00	0	0.01
qiu	11,561	68.31	0	0.01
rail507	949	98.29	0	0.35
ran16x16	328,398	297.82	0	0.00
reblock67	122,028	341.36	0	0.01
rmatr100-p10	675	111.47	0	0.02
rmatr100-p5	357	106.81	0	0.03
rmine6	684,290	3600.00	0	0.01
rocll-4-11	26,842	591.86	0	0.02
rococoC10-001000	106,798	560.07	0	0.00
roll3000	504,127	3136.65	0	0.01
satellites1-25	3350	527.48	0	0.03
sp98ic	200,609	3600.00	0	0.35
sp98ir	6084	66.31	0	0.03
tanglegram1	55	644.83	0	0.59
tanglegram2	3	3.15	0	0.03
timtab1	1,113,071	621.92	1	0.00
triptim1	1	47.09	0	0.24
unitcal_7	51,146	3516.87	504	1.14
vpphard	459	3601.99	0	0.20
zib54-UUE	437,783	3600.00	0	0.01
AM (# 87)	455,346.2	1451.02	9.6	0.39
GM (# 87)	9954.9	516.84	1.4	1.06
SGM (# 87)	15,936.7	567.30		0.29

TABLE 146. doubles tennis problem testset: default settings

Name	#Nodes	Time
644	184,691	97.07
645	4456	4.21
646	1,707,356	857.49
647	8,995,777	3600.01
744	53,433	32.69
745	416,183	811.85
746	663,393	1654.90
885	2,257,839	3600.00
886	1,741,842	3600.00
887	2	2.44
AM (# 10)	1,602,497.2	1426.07
GM (# 10)	130,808.2	265.68
SGM (# 10)	194,205.5	357.65

TABLE 147. doubles tennis problem testset: default settings

Name	#Nodes	Time
644-s	35	0.41
645-s	4	0.72
646-s	141	1.34
647-s	26,775	16.54
744-s	6	0.99
745-s	534	3.81
746-s	33	4.18
885-s	24,809	87.42
886-s	44,959	200.35
887-s	3	8.36
AM (# 10)	9729.9	32.41
GM (# 10)	212.4	5.91
SGM (# 10)	689.4	12.05

TABLE 148. doubles tennis problem testset: ISP-NST settings

Name	#Nodes	Time
644	21	0.33
645	3	0.41
646	15	0.50
647	655	2.69
744	7	0.67
745	11	1.06
746	7	1.33
885	48	6.67
886	143	11.87
887	2	2.22
AM (# 10)	91.2	2.77
GM (# 10)	18.5	1.92
SGM (# 10)	48.0	2.39

TABLE 149. doubles tennis problem testset: OB-NST settings

Name	#Nodes	Time
644	31	0.29
645	9	0.36
646	53	0.44
647	2342	3.01
744	57	0.67
745	47	0.82
746	17	0.90
885	454	5.03
886	1073	11.83
887	5	1.44
AM (# 10)	408.8	2.48
GM (# 10)	72.2	1.74
SGM (# 10)	150.8	2.12

TABLE 150. doubles tennis problem testset: OF-NST settings

Name	#Nodes	Time
644	21	0.33
645	3	0.43
646	15	0.49
647	786	2.70
744	7	0.67
745	11	1.03
746	7	1.31
885	88	7.32
886	143	11.54
887	2	2.23
AM (# 10)	108.3	2.81
GM (# 10)	20.0	1.92
SGM (# 10)	54.0	2.42