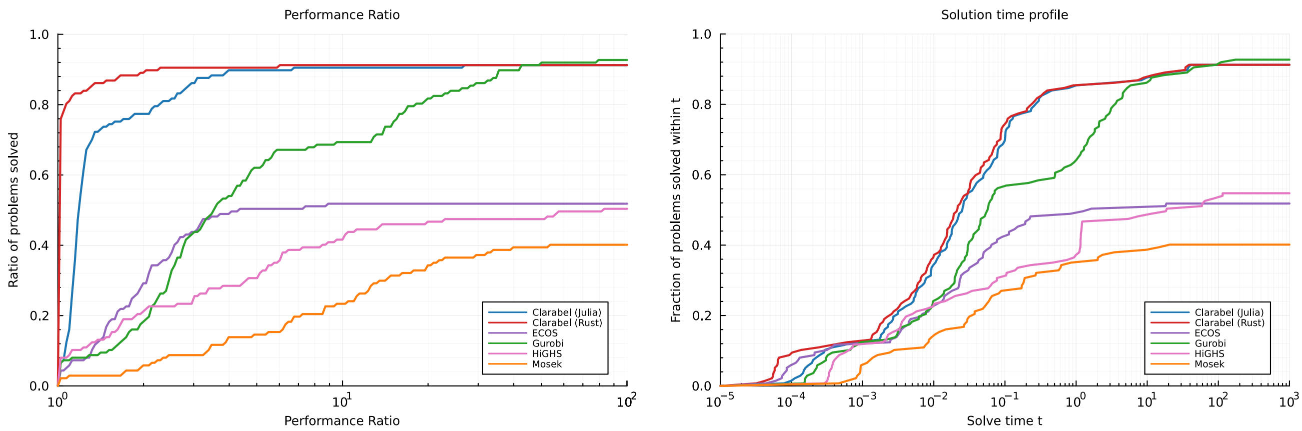
5 Numerical Experiments

5.1 Benchmark problems with quadratic objectives

5.1.1 The Maros-Meszaros test set

Figure 1: Performance profiles for the Maros-Meszaros problem set



(a) Relative performance profile

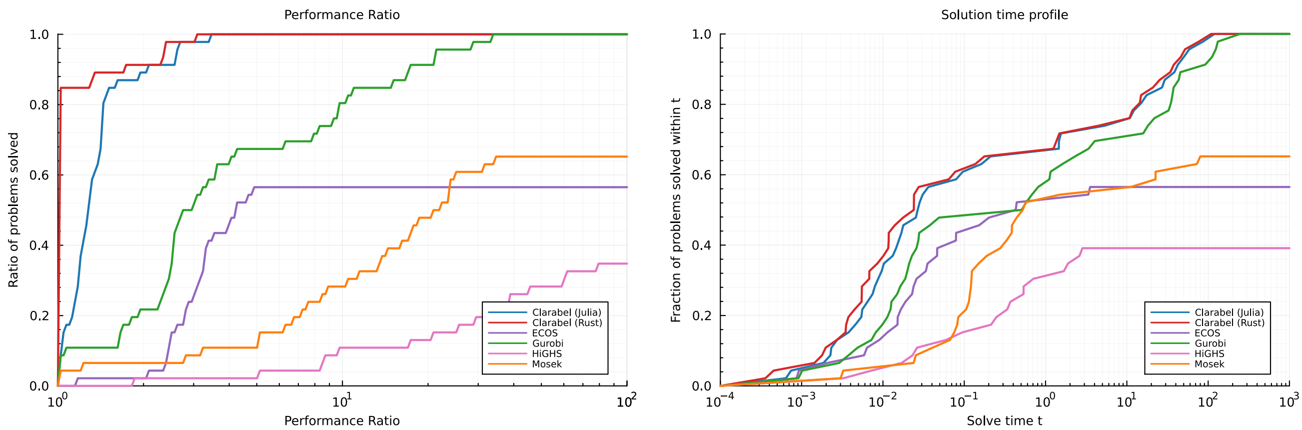
(b) Absolute performance profile

		ClarabelRs	Clarabel	ECOS	Gurobi	HiGHS	Mosek
Shifted GM	Full Acc.	1.0	1.02	15.49	1.64	17.92	32.67
	Low Acc.	1.0	1.1	19.8	2.9	39.99	4.07
Failure Rate (%)	Full Acc.	8.8	8.8	48.2	7.3	45.3	59.9
	Low Acc.	2.2	2.9	38.0	3.6	45.3	10.2

(c) Benchmark timings as shifted geometric mean and failure rates

5.1.2 Least-squares problems with SuiteSparse matrices

Figure 2: Performance profiles for the SuiteSparse least-squares problem set



(a) Relative performance profile

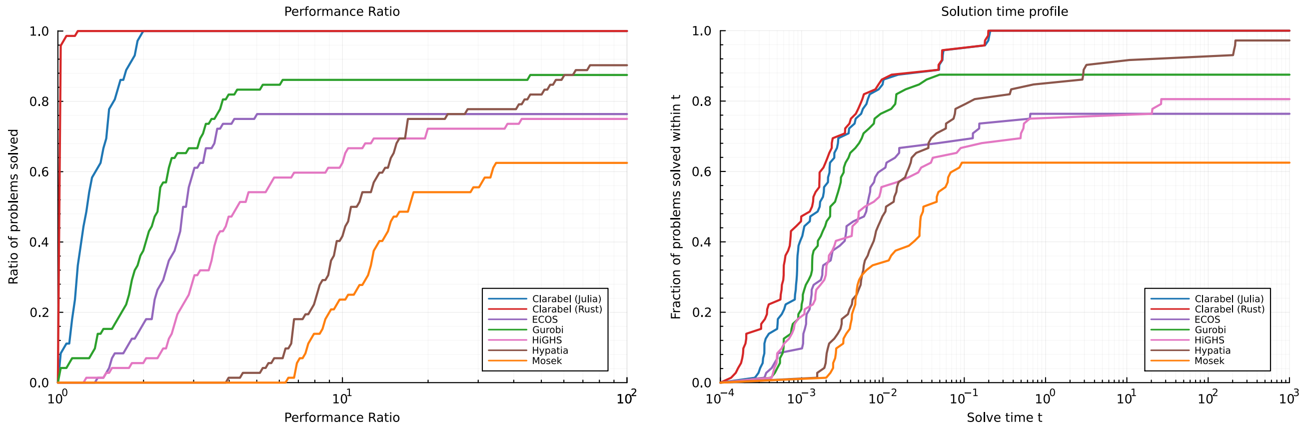
(b) Absolute performance profile

		ClarabelRs	Clarabel	ECOS	Gurobi	HiGHS	Mosek
Shifted GM	Full Acc.	1.0	1.06	7.12	1.79	21.5	6.31
	Low Acc.	1.0	1.06	5.43	1.79	21.5	1.68
Failure Rate (%)	Full Acc.	0.0	0.0	43.5	0.0	60.9	34.8
	Low Acc.	0.0	0.0	39.1	0.0	60.9	0.0

(c) Benchmark timings as shifted geometric mean and failure rates

5.1.3 Constrained optimal control

Figure 3: Performance profiles for the optimal control problem set



(a) Relative performance profile   **(b)** Absolute performance profile

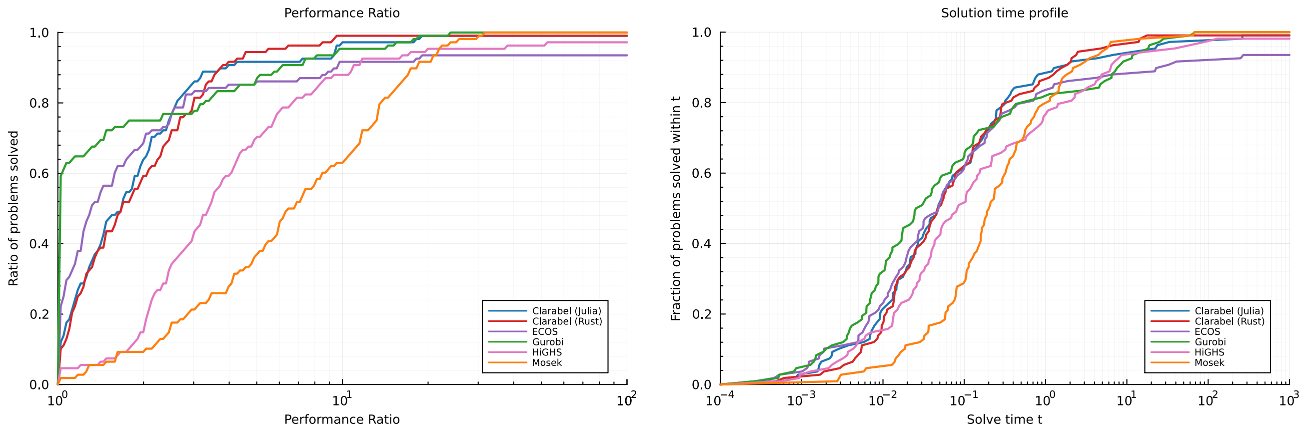
		ClarabelRs	Clarabel	ECOS	Gurobi	HiGHS	Hypatia	Mosek
Shifted GM	Full Acc.	1.0	1.06	197.57	70.48	185.45	54.95	511.01
	Low Acc.	1.0	1.06	14.97	60.07	185.45	37.36	8.26
Failure Rate (%)	Full Acc.	0.0	0.0	23.6	12.5	19.4	2.8	37.5
	Low Acc.	0.0	0.0	2.8	11.1	19.4	0.0	0.0

(c) Benchmark timings as shifted geometric mean and failure rates

5.2 Benchmark problems with linear objectives

5.2.1 NETLIB LP problems

Figure 4: Performance profiles for the NETLIB Feasible LP problem set



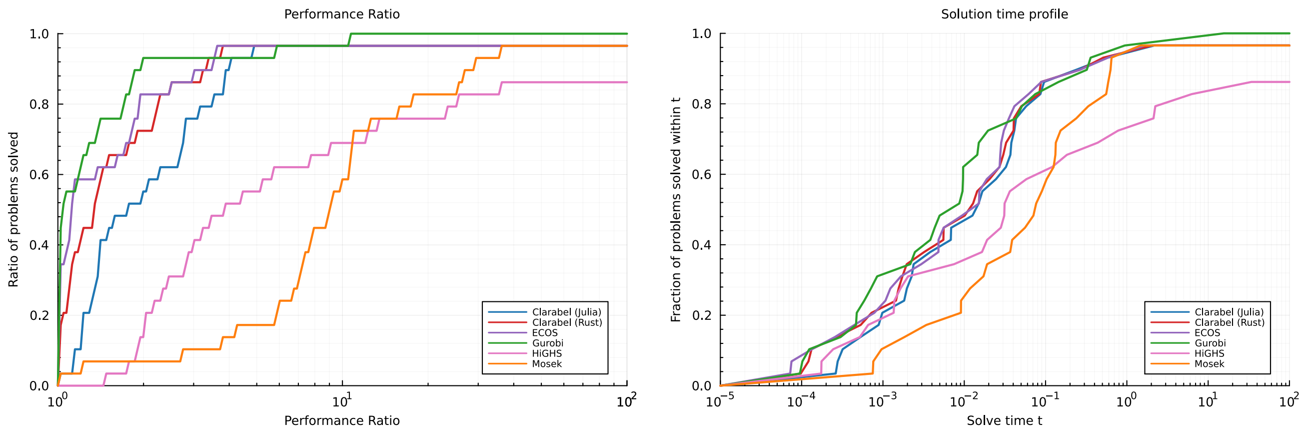
(a) Relative performance profile

(b) Absolute performance profile

		ClarabelRs	Clarabel	ECOS	Gurobi	HiGHS	Mosek
Shifted GM	Full Acc.	1.0	1.35	2.76	1.69	2.32	1.55
	Low Acc.	1.0	1.35	1.41	1.69	2.32	1.55
Failure Rate (%)	Full Acc.	0.9	0.9	6.5	0.0	1.9	0.0
	Low Acc.	0.9	0.9	0.9	0.0	1.9	0.0

(c) Benchmark timings as shifted geometric mean and failure rates

Figure 5: Performance profiles for the NETLIB Infeasible LP problem set



(a) Relative performance profile

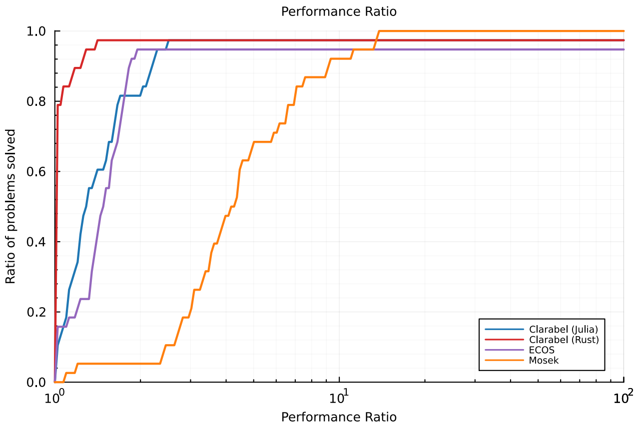
(b) Absolute performance profile

		ClarabelRs	Clarabel	ECOS	Gurobi	HiGHS	Mosek
Shifted GM	Full Acc.	1.89	1.92	1.85	1.0	12.19	2.49
	Low Acc.	1.89	1.92	1.85	1.0	12.19	2.49
Failure Rate (%)	Full Acc.	3.4	3.4	3.4	0.0	13.8	3.4
	Low Acc.	3.4	3.4	3.4	0.0	13.8	3.4

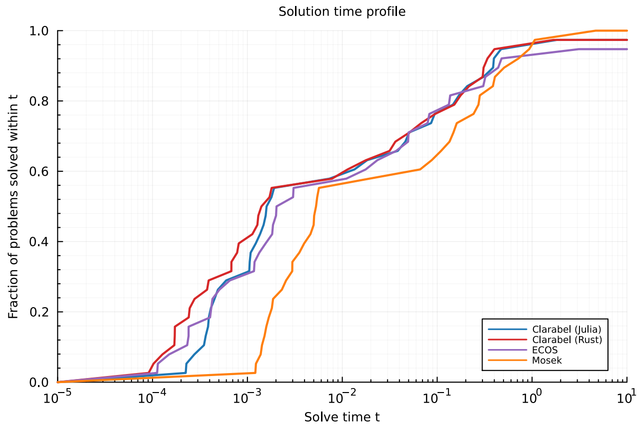
(c) Benchmark timings as shifted geometric mean and failure rates

5.2.2 CBLIB exponential cone problems

Figure 6: Performance profiles for the CBLIB Exponential Cone problem set



(a) Relative performance profile



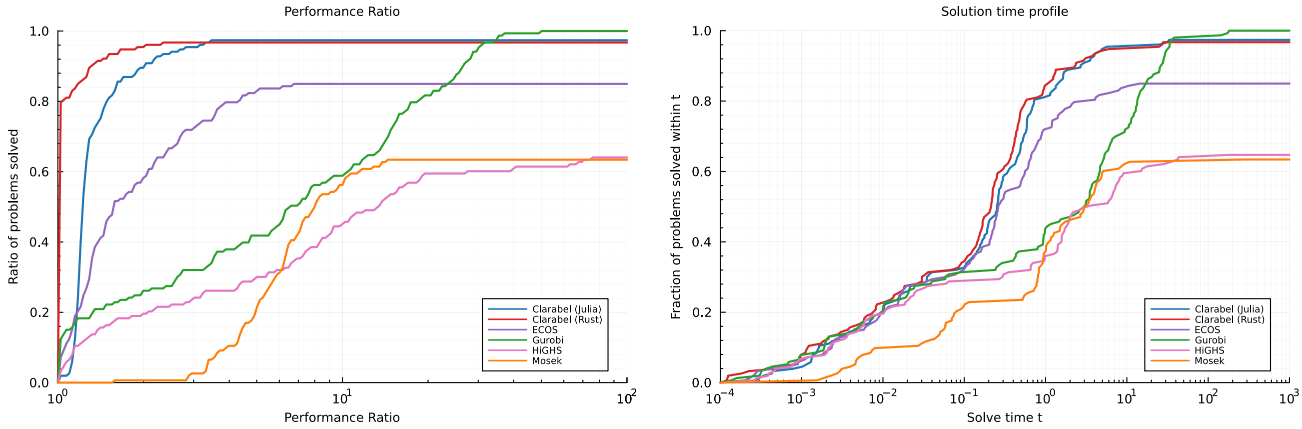
(b) Absolute performance profile

		ClarabelRs	**Clarabel**	**ECOS**	**Mosek**
Shifted GM	Full Acc.	1.45	1.49	2.68	1.0
	Low Acc.	1.0	1.08	3.28	2.14
Failure Rate (%)	Full Acc.	2.6	2.6	5.3	0.0
	Low Acc.	0.0	0.0	2.6	0.0

(c) Benchmark timings as shifted geometric mean and failure rates

5.2.3 Optimal power flow

Figure 7: Performance profiles for the LP Optimal Power Flow problem set

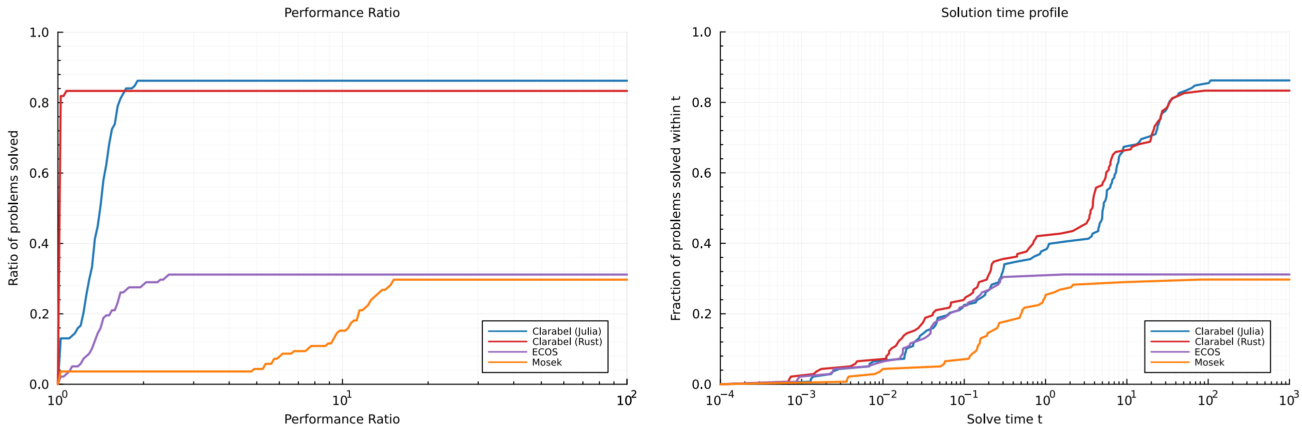


(a) Relative performance profile **(b)** Absolute performance profile

		ClarabelRs	Clarabel	ECOS	Gurobi	HiGHS	Mosek
Shifted GM	Full Acc.	1.0	1.04	3.27	4.48	17.73	17.58
	Low Acc.	1.0	1.07	2.89	5.57	22.04	21.85
Failure Rate (%)	Full Acc.	3.3	2.6	15.0	0.0	35.3	36.6
	Low Acc.	1.3	0.7	9.8	0.0	35.3	36.6

(c) Benchmark timings as shifted geometric mean and failure rates

Figure 8: Performance profiles for the SOCP Optimal Power Flow problem set



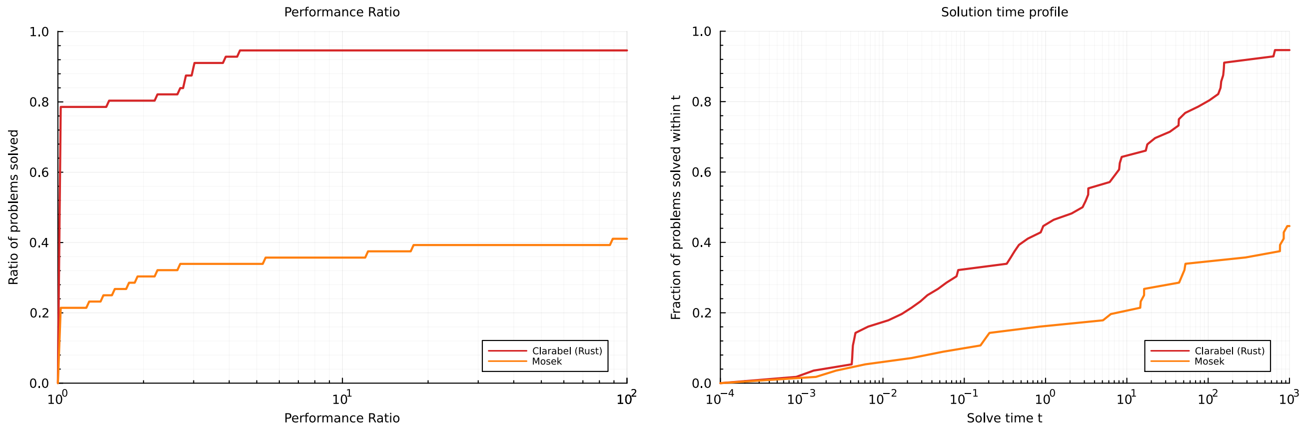
(a) Relative performance profile **(b)** Absolute performance profile

		ClarabelRs	Clarabel	ECOS	Mosek
Shifted GM	Full Acc.	1.0	1.07	8.25	10.02
	Low Acc.	1.0	1.33	8.62	20.48
Failure Rate (%)	Full Acc.	16.7	13.8	68.8	70.3
	Low Acc.	0.7	2.2	55.8	70.3

(c) Benchmark timings as shifted geometric mean and failure rates

5.3 Semidefinite program benchmarks

Figure 9: Performance profiles for the SDPLIB Semidefinite Programming problem set



(a) Relative performance profile

(b) Absolute performance profile

		ClarabelRs	Mosek
Shifted GM	Full Acc.	1.0	11.47
	Low Acc.	1.0	1.27
Failure Rate (%)	Full Acc.	5.4	55.4
	Low Acc.	1.8	1.8

(c) Benchmark timings as shifted geometric mean and failure rates

A Detailed benchmark results

Table 1: Solve times and iteration counts for the Maros-Meszaros problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
TAME	3	2	4	3	5	6	3	1.16e-05	7.36e-06	0.000154	5.81e-05	4.41e-05	0.000461
HS21	5	2	6	2	9	11	11	6.19e-06	6.63e-06	0.000105	5.57e-05	7.29e-05	0.00115
HS35	4	3	6	5	7	9	9	7.64e-06	9.51e-06	0.000105	5.35e-05	8.56e-05	0.000944
HS35MOD	4	3	6	5	12	15	14	5.37e-06	7.67e-06	9.91e-05	6.45e-05	0.000115	0.00139
QPTEST	5	2	7	3	8	9	8	8.01e-06	9.51e-06	0.000158	6.41e-05	8.56e-05	0.00126
HS51	3	5	7	7	0	9	9	0	8.83e-06	0.000104	3.2e-05	7.95e-05	0.000934
HS52	3	5	7	7	0	7	5	0	1.06e-05	0.000121	5.51e-05	7.43e-05	0.000607
ZECEVIC2	6	2	8	1	8	8	7	8.3e-06	7.49e-06	0.000115	6.64e-05	6e-05	0.000806
HS268	5	5	25	15	12	17	-	7.78e-06	1.24e-05	-	9.33e-05	0.000211	-
S268	5	5	25	15	12	17	-	8.49e-06	1.23e-05	-	0.000102	0.00021	-
HS76	7	4	14	6	6	9	8	1.05e-05	1.08e-05	0.000115	6.31e-05	9.69e-05	0.000919
GENHS28	8	10	24	19	0	10	6	0	1.3e-05	0.00014	4.27e-05	0.00013	0.000842
HS53	13	5	17	7	6	15	7	9.67e-06	8.26e-06	0.000133	5.8e-05	0.000124	0.00093
LOTSCHD	19	12	66	6	9	19	19	1.52e-05	1.9e-05	0.000382	0.000137	0.000361	0.00727
HS118	59	15	93	15	11	10	12	2.19e-05	3.16e-05	0.000134	0.000241	0.000316	0.00161
QAFIRO	59	32	115	6	14	14	13	2.68e-05	2.9e-05	0.000185	0.000376	0.000407	0.00241
DPKLO1	77	133	1575	77	0	14	6	0	0.000317	0.00143	0.000602	0.00443	0.00856
DUAL4	151	75	225	2799	12	12	14	0.000287	0.000391	0.000601	0.00345	0.0047	0.00842
QPCBLEND	157	83	574	83	17	18	15	0.0001	0.000137	0.000983	0.00171	0.00246	0.0148
DUALC1	233	9	1953	45	12	24	-	0.000147	0.00014	-	0.00176	0.00336	-
DUALC2	243	7	1617	28	11	-	-	0.000122	-	-	0.00134	-	-
QADLITTL	153	97	480	87	14	27	-	9.36e-05	9.02e-05	-	0.00131	0.00244	-
QSHARE2B	175	79	773	55	16	27	-	0.000125	0.000144	-	0.002	0.00389	-
DUAL1	171	85	255	3558	12	15	11	0.000374	0.00044	0.0007	0.00448	0.0066	0.0077
DUAL2	193	96	288	4508	11	15	13	0.000489	0.000576	0.000796	0.00538	0.00864	0.0104
DUALC5	294	8	2240	36	10	17	15	0.000165	0.000206	0.000185	0.00165	0.00351	0.00278
CVXQP2_S	225	100	274	386	10	-	-	0.000138	-	-	0.00138	-	-
DUAL3	223	111	333	6108	12	19	12	0.000673	0.000836	0.00224	0.00808	0.0159	0.0269
CVXQP1_S	250	100	348	386	9	-	-	0.000175	-	-	0.00157	-	-
CVXQP3_S	275	100	422	386	11	-	-	0.000204	-	-	0.00224	-	-
QSCAGR7	269	140	560	25	16	-	-	0.000121	-	-	0.00194	-	-
PRIMAL1	86	325	5816	324	10	20	10	0.000912	0.000898	0.00297	0.00912	0.018	0.0297
QRECIPE	340	180	912	50	17	21	23	0.00015	0.000151	0.00137	0.00256	0.00318	0.0316
QPCBOEI2	382	143	1480	143	20	-	-	0.000328	-	-	0.00657	-	-
DUALC8	519	8	4040	36	9	-	-	0.000304	-	-	0.00273	-	-
QSHARE1B	342	225	1376	39	32	-	32	0.000203	-	0.00174	0.0065	-	0.0557
PRIMALC5	286	287	2574	286	14	14	14	0.000234	0.000319	0.00268	0.00328	0.00446	0.0376
VALUES	405	202	606	3822	13	-	-	0.000376	-	-	0.00489	-	-
QSC205	408	203	754	21	19	18	18	0.000161	0.000166	0.000662	0.00307	0.00299	0.0119
QBEACONF	435	262	3637	27	28	28	21	0.000496	0.000505	0.00179	0.0139	0.0141	0.0375
QBRANDY	469	249	2397	65	19	32	-	0.000466	0.000412	-	0.00884	0.0132	-
PRIMAL2	97	649	8043	648	8	16	8	0.00146	0.00148	0.00332	0.0117	0.0237	0.0265
QE226	505	282	2860	964	24	26	22	0.000645	0.000874	0.00271	0.0155	0.0227	0.0596
PRIMAL3	112	745	21548	744	9	18	10	0.004	0.00308	0.00622	0.036	0.0554	0.0622
QBORE3D	559	315	1755	78	27	25	21	0.000372	0.000388	0.00249	0.01	0.00969	0.0523
KSIP	1001	20	19898	20	14	20	12	0.00135	0.00121	0.000778	0.0189	0.0242	0.00934

Table 1: **Solve times and iteration counts for the Maros-Meszaros problem set**

Problem	vars.	cons.	nnz(A)	nnz(P)	iterations			time per iteration(s)			total time (s)		
					ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
QGROW7	721	301	3193	357	22	22	-	0.000566	0.00063	-	0.0125	0.0139	-
QFORPLAN	604	421	5006	582	21	-	-	0.000817	-	-	0.0172	-	-
PRIMALC8	511	520	4663	519	12	-	-	0.000574	-	-	0.00689	-	-
QCAPRI	741	353	2237	894	32	-	-	0.000672	-	-	0.0215	-	-
QSCORPIO	746	358	1784	40	11	15	16	0.000353	0.00046	0.00305	0.00388	0.0069	0.0487
QSCFXM1	787	457	3046	733	26	-	-	0.00072	-	-	0.0187	-	-
QBANDM	777	472	2966	41	21	37	-	0.000602	0.000618	-	0.0126	0.0229	-
QSCTAP1	780	480	2172	153	19	24	24	0.000405	0.000469	0.00274	0.0077	0.0113	0.0659
QPCSTAIR	823	467	4323	467	22	-	-	0.000988	-	-	0.0217	-	-
QSTAIR	823	467	4323	1018	31	-	-	0.00124	-	-	0.0386	-	-
QPCBOEI1	980	384	4359	384	17	42	-	0.000906	0.00102	-	0.0154	0.0429	-
QSCAGR25	971	500	2054	128	20	-	-	0.000395	-	-	0.0079	-	-
PRIMAL4	76	1489	16032	1488	10	21	13	0.00304	0.00309	0.0063	0.0304	0.065	0.0819
QSCSD1	837	760	3148	745	10	12	12	0.0006	0.000702	0.00244	0.006	0.00843	0.0293
QETAMACR	1223	688	3232	4447	20	33	-	0.00467	0.00458	-	0.0934	0.151	-
QGROW15	1545	645	6865	500	22	22	-	0.00115	0.00121	-	0.0253	0.0266	-
QFFFFF80	1378	854	7081	1916	27	52	-	0.00247	0.00263	-	0.0668	0.137	-
MOSARQP2	1500	900	3830	945	10	22	18	0.00143	0.00189	0.0101	0.0143	0.0416	0.181
GOULDQP2	1747	699	2445	697	14	-	-	0.000596	-	-	0.00835	-	-
GOULDQP3	1747	699	2445	1395	7	-	-	0.00067	-	-	0.00469	-	-
QSCFXM2	1574	914	6097	1131	32	-	-	0.00143	-	-	0.0458	-	-
QSTANDAT	1538	1075	4210	804	18	28	20	0.000859	0.000826	0.00856	0.0155	0.0231	0.171
QSCRS8	1659	1169	4351	121	33	30	31	0.000978	0.00102	0.0061	0.0323	0.0305	0.189
QSCSD6	1497	1350	5666	1404	13	17	19	0.00102	0.00129	0.00465	0.0133	0.0219	0.0884
LASER	2000	1002	6000	3231	11	28	-	0.000896	0.0013	-	0.00985	0.0363	-
QGFRDXPN	1966	1092	3727	162	22	-	-	0.000811	-	-	0.0178	-	-
QSEBA	2057	1028	5902	646	30	-	-	0.00107	-	-	0.032	-	-
QGROW22	2266	946	10078	852	27	30	-	0.00167	0.00168	-	0.0451	0.0503	-
CVXQP2_M	2250	1000	2749	3984	10	-	-	0.00502	-	-	0.0502	-	-
QSHIP04S	1860	1458	5810	56	15	35	-	0.00101	0.000906	-	0.0151	0.0317	-
CVXQP1_M	2500	1000	3498	3984	10	-	-	0.0077	-	-	0.077	-	-
QSCFXM3	2361	1371	9148	1221	34	-	-	0.00202	-	-	0.0688	-	-
CVXQP3_M	2750	1000	4247	3984	12	-	-	0.00892	-	-	0.107	-	-
Q25FV47	2391	1571	11971	59499	26	-	-	0.0135	-	-	0.351	-	-
QSHELL	2428	1775	5448	34790	35	-	-	0.00698	-	-	0.244	-	-
QSHIP04L	2520	2118	8450	56	15	39	-	0.0014	0.00126	-	0.021	0.049	-
QSCTAP2	2970	1880	8594	777	12	20	15	0.00202	0.00247	0.0115	0.0242	0.0495	0.172
AUG3D	1000	3873	6546	2673	0	-	10	0	-	0.0186	0.00577	-	0.186
AUG3DC	1000	3873	6546	3873	0	-	-	0	-	-	0.00582	-	-
QSHIP08S	3165	2387	9501	11677	15	36	-	0.00398	0.00535	-	0.0598	0.193	-
QPILOTNO	3487	2172	15569	485	31	-	-	0.00652	-	-	0.202	-	-
MOSARQP1	3200	2500	5922	2545	10	23	19	0.00192	0.00334	0.0325	0.0192	0.0769	0.618
QSCSD8	3147	2750	11334	2510	11	18	17	0.00213	0.00348	0.0158	0.0235	0.0627	0.269
QSCTAP3	3960	2480	11354	1047	12	22	-	0.00255	0.00355	-	0.0306	0.078	-
QSHIP12S	3914	2763	10941	17403	15	39	-	0.00434	0.0057	-	0.0652	0.222	-
QSIERRA	5279	2036	11354	183	35	51	-	0.00203	0.00224	-	0.0709	0.114	-

Table 1: Solve times and iteration counts for the Maros-Meszaros problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
STADAT1	5999	2001	13997	2000	15	-	-	0.00176	-	-	0.0265	-	-
STADAT2	5999	2001	13997	2000	45	22	23	0.00193	0.0052	0.0119	0.0867	0.114	0.275
AUG3DCQP	4873	3873	10419	3873	11	29	-	0.00407	0.00668	-	0.0448	0.194	-
AUG3DQP	4873	3873	10419	2673	13	-	-	0.0039	-	-	0.0507	-	-
QSHIP08L	5061	4283	17085	34965	16	36	-	0.0165	0.0229	-	0.264	0.826	-
CONT-050	7595	2597	17199	2597	9	21	20	0.00992	0.0109	0.0425	0.0893	0.229	0.85
EXDATA	7501	3000	12000	1125750	22	21	16	0.548	0.859	0.127	12	18	2.03
QSHIP12L	6578	5427	21597	62228	16	36	-	0.0246	0.0348	-	0.394	1.25	-
STCQP1	10246	4097	21532	26603	7	-	-	0.0127	-	-	0.0892	-	-
STCQP2	10246	4097	21532	26603	9	-	-	0.0248	-	-	0.223	-	-
STADAT3	11999	4001	27997	4000	54	18	24	0.00379	0.00507	0.0237	0.205	0.0912	0.569
HUES-MOD	10002	10000	30000	10000	13	-	-	0.00595	-	-	0.0774	-	-
HUESTIS	10002	10000	30000	10000	9	-	-	0.0111	-	-	0.1	-	-
LISWET2	10000	10002	30000	10002	18	-	-	0.00483	-	-	0.0869	-	-
LISWET3	10000	10002	30000	10002	23	-	-	0.00474	-	-	0.109	-	-
LISWET4	10000	10002	30000	10002	27	-	-	0.00452	-	-	0.122	-	-
LISWET5	10000	10002	30000	10002	11	-	-	0.0055	-	-	0.0605	-	-
LISWET6	10000	10002	30000	10002	18	-	-	0.00485	-	-	0.0873	-	-
DTOC3	10000	14999	34995	14997	0	-	9	0	-	0.067	0.0168	-	0.603
AUG2D	10000	20200	40000	19800	0	-	-	0	-	-	0.0327	-	-
AUG2DC	10000	20200	40000	20200	0	-	-	0	-	-	0.0334	-	-
CVXQP2_L	22500	10000	27499	39984	10	-	-	1.77	-	-	17.7	-	-
CVXQP1_L	25000	10000	34998	39984	11	-	-	3.14	-	-	34.5	-	-
CVXQP3_L	27500	10000	42497	39984	11	-	-	3.52	-	-	38.8	-	-
CONT-100	30195	10197	69399	10197	9	19	14	0.076	0.0866	0.167	0.684	1.64	2.34
CONT-101	30492	10197	69993	2700	12	-	14	0.0761	-	0.143	0.913	-	2.01
UBH1	24018	18009	60018	6003	16	-	35	0.00949	-	0.0979	0.152	-	3.43
AUG2DCQP	30200	20200	60200	20200	12	-	-	0.0236	-	-	0.283	-	-
AUG2DQP	30200	20200	60200	19800	14	-	-	0.0231	-	-	0.324	-	-
CONT-200	120395	40397	278799	40397	13	25	16	0.572	0.744	0.918	7.43	18.6	14.7
CONT-201	120992	40397	279993	10400	12	-	16	0.743	-	0.608	8.92	-	9.73
BOYD1	93279	93261	652246	93261	35	-	-	0.0996	-	-	3.49	-	-
CONT-300	271492	90597	629993	23100	12	-	13	2.86	-	1.6	34.4	-	20.8

Table 2: Solve times and iteration counts for the Optimal Control problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
pendulum_3	28	23	83	23	5	11	11	2.71e-05	3.17e-05	0.000182	0.000136	0.000349	0.002
fiordosExample_1	32	27	67	18	8	12	12	1.93e-05	3.05e-05	0.000188	0.000155	0.000367	0.00226
fiordosExample_3	32	27	67	18	8	-	-	2.07e-05	-	-	0.000166	-	-
forcesExample_1	38	29	83	28	9	14	11	2.07e-05	3.59e-05	0.000235	0.000186	0.000502	0.00258
forcesExample_2	38	29	83	27	8	13	10	2.38e-05	3.57e-05	0.000244	0.00019	0.000464	0.00244
forcesExample_3	42	32	92	31	9	12	11	2.32e-05	4.21e-05	0.00024	0.000209	0.000506	0.00264
toyExample_1	42	32	102	31	7	-	16	2.57e-05	-	0.000318	0.00018	-	0.00509
toyExample_3	42	32	102	31	9	-	-	2.31e-05	-	-	0.000208	-	-
helicopter_1	48	30	96	39	6	-	21	3.39e-05	-	0.000298	0.000204	-	0.00626
fiordosExample_2	52	27	87	18	7	13	13	2.74e-05	3.3e-05	0.000188	0.000192	0.000428	0.00244
nonlinearCstr_3	64	54	204	30	10	-	12	3.94e-05	-	0.000294	0.000394	-	0.00353
robotArm_1	84	54	174	34	6	-	27	6.23e-05	-	0.000468	0.000374	-	0.0126
pendulum_1	78	63	243	63	6	12	6	5.89e-05	8.41e-05	0.000444	0.000353	0.00101	0.00266
pendulum_2	78	63	243	60	7	14	8	5.38e-05	7.82e-05	0.000406	0.000377	0.0011	0.00325
forcesExample_4	82	62	182	61	7	15	7	4.53e-05	6.95e-05	0.000468	0.000317	0.00104	0.00327
toyExample_2	82	62	202	61	7	18	10	4.54e-05	6.3e-05	0.000476	0.000318	0.00113	0.00476
aircraft_3	104	84	364	20	8	16	12	7.14e-05	0.000113	0.000326	0.000571	0.0018	0.00391
doubleInvertedPendulum_1	104	84	364	50	7	14	9	8.58e-05	0.0001	0.00051	0.000601	0.0014	0.00459
doubleInvertedPendulum_2	104	84	364	50	8	15	10	8.92e-05	8.65e-05	0.000457	0.000714	0.0013	0.00457
helicopter_3	118	86	278	80	7	22	-	8.09e-05	8.37e-05	-	0.000567	0.00184	-
aircraft_1	144	84	404	20	9	10	9	6.6e-05	0.000115	0.000462	0.000594	0.00115	0.00416
aircraft_2	144	84	404	40	9	10	9	6.68e-05	0.000133	0.000525	0.000601	0.00133	0.00472
aircraft_4	144	84	404	20	9	10	9	6.7e-05	0.000114	0.000459	0.000603	0.00114	0.00413
doubleInvertedPendulum_3	144	84	404	50	6	18	8	0.000105	9.56e-05	0.000544	0.000632	0.00172	0.00435
ballOnPlate_1	152	77	257	47	8	15	10	7.75e-05	8.85e-05	0.000745	0.00062	0.00133	0.00745
ballOnPlate_2	152	77	257	47	7	14	7	7.83e-05	8.94e-05	0.000571	0.000548	0.00125	0.004
ballOnPlate_3	152	77	257	47	7	17	9	7.9e-05	0.000106	0.000541	0.000553	0.00179	0.00487
dcMotor_1	144	94	424	32	9	-	-	8.2e-05	-	-	0.000738	-	-
aircraft_10	164	104	444	20	9	10	10	8.14e-05	0.000127	0.00055	0.000733	0.00127	0.0055
aircraft_11	164	104	444	64	9	12	-	8.04e-05	8.75e-05	-	0.000724	0.00105	-
aircraft_12	164	104	444	64	9	12	-	7.58e-05	8.7e-05	-	0.000682	0.00104	-
toyExample_4	202	152	502	151	9	-	-	9.52e-05	-	-	0.000856	-	-
ballOnPlate_4	252	127	427	77	9	19	11	0.00011	0.000155	0.0013	0.000989	0.00294	0.0143
helicopter_2	218	166	538	175	6	21	-	0.000164	0.000165	-	0.000983	0.00347	-
shell_1	249	159	559	60	7	15	8	0.00018	0.000226	0.00147	0.00126	0.00339	0.0118
shell_3	249	159	559	60	11	20	15	0.000151	0.000216	0.00139	0.00166	0.00433	0.0208
nonlinearCstr_1	244	204	804	120	10	-	22	0.000138	-	0.00209	0.00138	-	0.0459
nonlinearCstr_2	244	204	804	120	10	-	22	0.000134	-	0.00208	0.00134	-	0.0459
dcMotor_2	284	184	844	62	10	16	21	0.000166	0.000142	0.00139	0.00166	0.00227	0.0292
dcMotor_5	284	184	844	62	10	16	-	0.000148	0.000146	-	0.00148	0.00234	-
dcMotor_6	284	184	844	62	9	16	-	0.000155	0.00015	-	0.0014	0.0024	-
robotArm_2	324	204	684	124	8	-	-	0.000246	-	-	0.00197	-	-
spacecraft_1	367	187	807	110	10	18	14	0.000165	0.000198	0.00201	0.00165	0.00356	0.0282
spacecraft_2	367	187	807	110	10	18	14	0.000165	0.000197	0.00201	0.00165	0.00354	0.0281
binaryDistillationColumn_1	311	266	2666	90	9	18	13	0.000381	0.000386	0.00221	0.00343	0.00694	0.0287
binaryDistillationColumn_2	311	266	2666	90	9	18	13	0.000379	0.000431	0.0022	0.00341	0.00776	0.0286

Table 2: Solve times and iteration counts for the Optimal Control problem set

Problem	vars.	cons.	nnz(A)	nnz(P)	iterations			time per iteration(s)			total time (s)		
					ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
quadcopter_1	382	292	1162	110	8	16	10	0.00026	0.000389	0.00245	0.00208	0.00623	0.0245
quadcopter_6	382	292	1162	172	8	16	12	0.000293	0.000366	0.00259	0.00235	0.00585	0.031
toyExample_5	402	302	1002	301	10	27	-	0.000185	0.000259	-	0.00185	0.007	-
shell_2	489	309	1109	120	7	15	9	0.000344	0.000435	0.0035	0.00241	0.00653	0.0315
tripleInvertedPendulum_1	456	366	2166	201	8	-	16	0.000579	-	0.00391	0.00463	-	0.0625
springMass_2	566	286	1646	181	7	18	18	0.000312	0.000353	0.00377	0.00219	0.00635	0.0679
springMass_3	566	286	1646	166	8	21	-	0.000293	0.00032	-	0.00234	0.00672	-
tripleInvertedPendulum_2	636	366	2346	201	8	21	13	0.000658	0.000381	0.00452	0.00527	0.00801	0.0588
tripleInvertedPendulum_3	636	366	2346	201	9	24	-	0.000648	0.000363	-	0.00583	0.00872	-
quadcopter_5	572	572	2212	220	27	-	-	0.000473	-	-	0.0128	-	-
aircraft_13	804	504	2204	304	11	23	-	0.000367	0.00048	-	0.00403	0.011	-
quadcopter_2	752	572	2312	220	8	18	11	0.000484	0.000879	0.00437	0.00387	0.0158	0.0481
quadcopter_4	752	572	2312	220	12	19	16	0.000465	0.000739	0.00396	0.00558	0.0141	0.0634
springMass_4	1126	566	3286	341	8	17	15	0.00062	0.000631	0.0058	0.00496	0.0107	0.087
dcMotor_3	1404	904	4204	302	11	-	-	0.000801	-	-	0.00881	-	-
dcMotor_4	1404	904	4204	302	11	25	-	0.000734	0.000634	-	0.00807	0.0159	-
quadcopter_3	1862	1412	5762	550	8	20	10	0.00121	0.00238	0.00935	0.00968	0.0476	0.0935
nonlinearChain_13	2457	2397	30857	660	9	22	-	0.00537	0.00579	-	0.0483	0.127	-
nonlinearChain_3	2457	2397	30857	660	9	22	-	0.00536	0.0058	-	0.0483	0.128	-
nonlinearChain_14	2637	2397	31037	660	10	23	-	0.00532	0.00663	-	0.0532	0.153	-
nonlinearChain_4	2637	2397	31037	660	10	23	-	0.00535	0.00666	-	0.0535	0.153	-
springMass_1	5606	2806	16406	1621	12	-	-	0.00444	-	-	0.0532	-	-
nonlinearChain_1	9657	9417	123257	2640	8	28	-	0.0225	0.0232	-	0.18	0.649	-
nonlinearChain_11	9657	9417	123257	2640	8	28	-	0.0223	0.0229	-	0.178	0.642	-
nonlinearChain_12	10377	9417	123977	2640	9	-	-	0.0219	-	-	0.197	-	-
nonlinearChain_2	10377	9417	123977	2640	9	-	-	0.022	-	-	0.198	-	-

Table 3: Solve times and iteration counts for the SuiteSparse least-squares problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
NYPA_Maragal_1_lasso	60	60	322	32	9	15	10	5.02e-05	6.17e-05	0.000325	0.000452	0.000925	0.00325
NYPA_Maragal_1_huber	96	110	394	32	6	10	5	5.97e-05	8.64e-05	0.000603	0.000358	0.000864	0.00301
HB_ash85_lasso	255	255	948	85	8	18	15	0.00018	0.000325	0.00169	0.00144	0.00585	0.0253
HB_ash85_huber	255	340	948	85	6	6	12	0.000297	0.000344	0.00199	0.00178	0.00206	0.0238
HB_ash219_lasso	389	389	997	219	8	18	16	0.000247	0.000354	0.00255	0.00198	0.00637	0.0408
HB_ash331_lasso	539	539	1409	331	7	18	21	0.000503	0.0005	0.00402	0.00352	0.009	0.0845
HB_abb313_lasso	665	665	2574	313	9	22	-	0.000607	0.000686	-	0.00546	0.0151	-
HB_ash219_huber	657	742	1533	219	9	16	16	0.0003	0.000711	0.00417	0.0027	0.0114	0.0667
HB_ash292_lasso	876	876	3668	292	8	24	19	0.000848	0.000992	0.00617	0.00678	0.0238	0.117
HB_ash608_lasso	984	984	2576	608	8	-	-	0.00047	-	-	0.00376	-	-
HB_ash292_huber	876	1168	3668	292	6	11	15	0.000914	0.00138	0.00502	0.00549	0.0152	0.0753
HB_abb313_huber	939	1115	3122	313	9	19	17	0.000498	0.000995	0.0062	0.00448	0.0189	0.105
HB_ash331_huber	993	1097	2317	331	8	16	15	0.000434	0.00104	0.00546	0.00347	0.0166	0.082
NYPA_Maragal_2_lasso	1255	1255	6312	555	7	14	11	0.00122	0.00185	0.011	0.00854	0.0259	0.121
HB_ash958_lasso	1542	1542	4042	958	7	-	21	0.000786	-	0.00901	0.00551	-	0.189
HB_illc1033_lasso	1673	1673	7032	1033	19	-	-	0.000932	-	-	0.0177	-	-
HB_well1033_lasso	1673	1673	7045	1033	13	-	-	0.000894	-	-	0.0116	-	-
NYPA_Maragal_2_huber	1665	2015	7132	555	8	16	12	0.00127	0.0029	0.00951	0.0101	0.0463	0.114
HB_ash608_huber	1824	2012	4256	608	9	18	16	0.000756	0.00127	0.00938	0.00681	0.0228	0.15
HB_ash958_huber	2874	3166	6706	958	9	17	18	0.00131	0.00208	0.0154	0.0118	0.0354	0.277
HB_illc1033_huber	3099	3419	9884	1033	7	11	7	0.002	0.00306	0.0177	0.014	0.0337	0.124
HB_well1033_huber	3099	3419	9897	1033	7	12	7	0.00168	0.00387	0.0175	0.0118	0.0465	0.123
HB_illc1850_lasso	3274	3274	13334	1850	13	-	-	0.00212	-	-	0.0275	-	-
HB_well1850_lasso	3274	3274	13453	1850	12	-	-	0.00201	-	-	0.0241	-	-
NYPA_Maragal_3_lasso	3410	3410	23521	1690	7	15	9	0.00921	0.0102	0.0367	0.0645	0.153	0.33
NYPA_Maragal_4_lasso	4032	4032	32819	1964	6	17	9	0.0228	0.0253	0.0427	0.137	0.429	0.384
NYPA_Maragal_3_huber	5070	5930	26841	1690	8	18	11	0.00971	0.0112	0.0477	0.0777	0.202	0.524
HB_illc1850_huber	5550	6262	17886	1850	7	11	13	0.00343	0.00722	0.0297	0.024	0.0795	0.386
HB_well1850_huber	5550	6262	18005	1850	7	11	13	0.00342	0.00718	0.034	0.024	0.079	0.441
NYPA_Maragal_4_huber	5892	6926	36539	1964	7	18	13	0.0252	0.0245	0.0437	0.177	0.441	0.568
NYPA_Maragal_5_lasso	11294	11294	111025	4654	8	21	9	0.156	0.168	0.168	1.25	3.53	1.51
NYPA_Maragal_5_huber	13962	17282	116361	4654	8	20	-	0.17	0.168	-	1.36	3.36	-
NYPA_Maragal_6_lasso	41559	41559	599557	21255	7	-	8	4.88	-	1.4	34.1	-	11.2
NYPA_Maragal_6_huber	63765	73917	643969	21255	7	-	-	5.41	-	-	37.9	-	-
Pereyra_landmark_lasso	77360	77360	1229616	71952	8	-	-	0.185	-	-	1.48	-	-
NYPA_Maragal_7_lasso	99973	99973	1353638	46845	7	-	-	11	-	-	76.7	-	-
NYPA_Maragal_8_huber	99636	174713	1474475	33212	8	-	16	6.5	-	1.41	52	-	22.5
NYPA_Maragal_7_huber	140535	167099	1434762	46845	10	-	-	10.9	-	-	109	-	-
NYPA_Maragal_8_lasso	183366	183366	1641935	33212	7	-	-	6.59	-	-	46.1	-	-
Pereyra_landmark_huber	215856	218560	1506608	71952	82	-	-	0.176	-	-	14.4	-	-
ANSYS_Delor64K_huber	194157	1979502	975735	64719	7	-	14	0.636	-	1.61	4.45	-	22.5
ANSYS_Delor338K_huber	1029708	1916766	5927779	343236	8	-	4	1.46	-	18.1	11.7	-	72.5
ANSYS_Delor295K_huber	887202	2711130	3879993	295734	8	-	4	1.35	-	20	10.8	-	80.2
ANSYS_Delor338K_lasso	2117352	2117352	8103067	343236	7	-	-	2.14	-	-	15	-	-
ANSYS_Delor64K_lasso	3635409	3635409	7858239	64719	8	-	-	2.61	-	-	20.9	-	-
ANSYS_Delor295K_lasso	3943590	3943590	9992769	295734	8	-	-	3.17	-	-	25.4	-	-

Table 4: Solve times and iteration counts for the NETLIB Feasible LP problem set

Problem	vars.	cons.	nnz(A)	nnz(P)	iterations			time per iteration(s)			total time (s)		
					ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
AFIRO	78	51	153	0	8	9	11	6.06e-05	3.05e-05	0.000263	0.000485	0.000275	0.00289
KB2	120	68	390	0	16	16	28	0.000105	6.32e-05	0.000208	0.00168	0.00101	0.00583
SC50A	128	78	238	0	9	11	11	0.000209	4.84e-05	0.000276	0.00188	0.000532	0.00304
SC50B	128	78	226	0	8	10	9	7.59e-05	4.58e-05	0.000305	0.000607	0.000458	0.00274
BLEND	188	114	636	0	11	12	14	0.000387	0.000102	0.00102	0.00426	0.00122	0.0143
ADLITTLE	194	138	562	0	12	12	16	0.000411	9.69e-05	0.000976	0.00494	0.00116	0.0156
SHARE2B	258	162	939	0	11	13	13	0.0005	0.000143	0.00128	0.00551	0.00186	0.0166
SC105	268	163	503	0	10	12	12	0.00033	0.000103	0.000518	0.0033	0.00123	0.00622
STOCFOR1	282	165	666	0	16	15	26	0.000184	0.000126	0.00124	0.00294	0.00189	0.0323
SCAGR7	314	185	650	0	15	15	15	0.000302	0.00011	0.00125	0.00452	0.00165	0.0187
RECIPE	364	204	960	0	10	11	7	0.000543	0.000149	0.00184	0.00543	0.00164	0.0129
SHARE1B	370	253	1432	0	22	27	45	0.000471	0.000228	0.00177	0.0104	0.00616	0.0798
NUG05	435	225	1275	0	7	7	7	0.00144	0.000839	0.00199	0.0101	0.00587	0.014
BEACONFD	468	295	3703	0	9	10	14	0.00107	0.000561	0.0026	0.0096	0.00561	0.0365
ISRAEL	490	316	2759	0	19	23	33	0.000508	0.000398	0.0024	0.00965	0.00915	0.0793
BRANDY	523	303	2505	0	15	18	24	0.000737	0.000448	0.00245	0.0111	0.00806	0.0587
SC205	522	317	982	0	13	13	13	0.000412	0.000247	0.00145	0.00536	0.00321	0.0189
LOTFI	519	366	1502	0	19	20	17	0.000543	0.000247	0.00212	0.0103	0.00495	0.036
BORE3D	578	334	1793	0	19	20	40	0.000596	0.000339	0.00244	0.0113	0.00679	0.0977
VTP_BASE	608	346	1461	0	31	33	19	0.000442	0.000269	0.00267	0.0137	0.00888	0.0507
GROW7	721	301	3193	0	13	12	12	0.00067	0.000547	0.00483	0.00871	0.00657	0.058
E226	695	472	3240	0	22	24	40	0.000643	0.000525	0.00284	0.0141	0.0126	0.114
BANDM	777	472	2966	0	18	21	24	0.000763	0.000656	0.00339	0.0137	0.0138	0.0813
SCORPION	854	466	2000	0	12	12	12	0.000793	0.000416	0.00238	0.00952	0.00499	0.0286
NUG06	858	486	2718	0	7	7	7	0.00303	0.00287	0.00456	0.0212	0.0201	0.032
CAPRI	870	482	2495	0	21	22	16	0.000669	0.000522	0.00397	0.014	0.0115	0.0635
SCFXM1	930	600	3332	0	19	22	18	0.000853	0.000702	0.00401	0.0162	0.0154	0.0722
STAIR	970	614	4617	0	22	23	15	0.00112	0.000898	0.00704	0.0246	0.0206	0.106
SCSD1	837	760	3148	0	10	11	13	0.000773	0.000453	0.0028	0.00773	0.00499	0.0364
TUFF	985	628	5213	0	21	-	22	0.00124	-	0.00488	0.0261	-	0.107
SCTAP1	960	660	2532	0	26	25	16	0.000569	0.000402	0.00365	0.0148	0.0101	0.0584
AGG	1103	615	3477	0	45	43	43	0.000992	0.000554	0.00246	0.0446	0.0238	0.106
SCAGR25	1142	671	2396	0	17	18	19	0.000502	0.000376	0.00411	0.00853	0.00676	0.0781
DEGEN2	1201	757	4958	0	11	12	11	0.00176	0.0016	0.00936	0.0194	0.0192	0.103
AGG2	1274	758	5498	0	26	28	26	0.00205	0.00188	0.00569	0.0533	0.0526	0.148
AGG3	1274	758	5514	0	25	29	27	0.00207	0.00182	0.00609	0.0518	0.0529	0.165
ETAMACRO	1351	816	3488	0	25	33	33	0.00185	0.00142	0.00608	0.0464	0.047	0.201
GROW15	1545	645	6865	0	13	13	14	0.00142	0.00111	0.00946	0.0185	0.0145	0.132
NUG07	1533	931	5145	0	11	11	9	0.00652	0.00919	0.0178	0.0717	0.101	0.16
FFFFF800	1552	1028	7429	0	36	49	25	0.00248	0.00202	0.0076	0.0891	0.0992	0.19
FINNIS	1597	1064	3860	0	36	44	26	0.00106	0.000707	0.00631	0.0381	0.0311	0.164
PILOT4	1692	1123	6546	0	38	72	37	0.00201	0.00114	0.00793	0.0765	0.0821	0.294
SCSD6	1497	1350	5666	0	13	13	13	0.00103	0.000806	0.00487	0.0134	0.0105	0.0633
STANDATA	1737	1274	4608	0	12	15	20	0.0011	0.000763	0.00566	0.0132	0.0115	0.113
SCRS8	1765	1275	4563	0	28	29	37	0.00131	0.000916	0.00643	0.0367	0.0266	0.238
SCFXM2	1860	1200	6669	0	22	23	20	0.00169	0.00144	0.00768	0.0371	0.0331	0.154

Table 4: Solve times and iteration counts for the NETLIB Feasible LP problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
STANDMPS	1845	1274	5256	0	17	18	29	0.00128	0.000879	0.00609	0.0218	0.0158	0.176
FIT1D	2099	1049	15502	0	28	30	26	0.00198	0.00163	0.00294	0.0555	0.0489	0.0763
GFRD_PNC	2034	1160	3863	0	14	17	24	0.00108	0.000767	0.00664	0.0151	0.013	0.159
GROW22	2266	946	10078	0	14	14	14	0.00209	0.00155	0.0136	0.0293	0.0217	0.19
STANDGUB	1848	1383	4825	0	12	15	21	0.00116	0.000816	0.00573	0.0139	0.0122	0.12
SHIP04S	1908	1506	5906	0	17	16	28	0.00143	0.00111	0.00571	0.0243	0.0177	0.16
BNL1	2229	1586	7118	0	57	58	36	0.00222	0.00182	0.00851	0.127	0.105	0.306
PEROLD	2309	1506	7832	0	48	-	44	0.00336	-	0.00978	0.161	-	0.43
MODSZK1	2305	1620	4786	0	27	31	27	0.00158	0.000878	0.00783	0.0425	0.0272	0.211
NUG08	2544	1632	8928	0	9	9	7	0.0134	0.0307	0.0389	0.121	0.277	0.272
QAP8	2544	1632	8928	0	9	9	7	0.0128	0.032	0.0333	0.115	0.288	0.233
SHELL	2430	1777	5452	0	17	18	16	0.00141	0.00108	0.00895	0.0239	0.0195	0.143
FIT1P	2703	1677	11944	0	18	23	21	0.00186	0.00137	0.00862	0.0335	0.0315	0.181
25FV47	2697	1876	12581	0	27	28	29	0.00466	0.00442	0.0122	0.126	0.124	0.355
SCFXM3	2790	1800	10006	0	22	24	20	0.00256	0.00214	0.0117	0.0563	0.0514	0.234
SHIP04L	2568	2166	8546	0	17	19	23	0.00187	0.00141	0.00764	0.0318	0.0268	0.176
MAROS	2812	1966	12103	0	28	34	36	0.00464	0.00325	0.0111	0.13	0.11	0.398
GANGES	3412	1706	9040	0	32	37	16	0.00238	0.00181	0.0148	0.0762	0.0668	0.236
WOOD1P	2839	2595	72811	0	16	18	14	0.00981	0.0085	0.0257	0.157	0.153	0.36
SHIP08S	3245	2467	9661	0	16	17	20	0.00245	0.00185	0.0104	0.0392	0.0315	0.207
PILOT_JA	3458	2267	17495	0	61	-	35	0.012	-	0.0169	0.733	-	0.593
SCSD8	3147	2750	11334	0	11	12	12	0.00205	0.00155	0.0106	0.0225	0.0186	0.128
SCTAP2	3590	2500	9834	0	16	16	28	0.00213	0.00174	0.0115	0.0341	0.0278	0.322
PILOTNOV	3761	2446	16117	0	21	22	22	0.0133	0.0063	0.0188	0.279	0.139	0.413
DEGEN3	4107	2604	28036	0	14	15	11	0.0166	0.0139	0.0468	0.233	0.209	0.515
PILOT_WE	3864	2928	12407	0	66	73	59	0.0036	0.00259	0.0133	0.237	0.189	0.785
SHIP12S	4020	2869	11153	0	21	23	25	0.00284	0.00209	0.0117	0.0597	0.0482	0.294
CZPROB	4491	3562	14270	0	43	43	25	0.00292	0.00213	0.0135	0.125	0.0916	0.338
SCTAP3	4820	3340	13074	0	16	16	35	0.00293	0.00239	0.0155	0.0468	0.0382	0.542
STOCFOR2	5202	3045	12402	0	28	27	32	0.00357	0.00283	0.0136	0.1	0.0765	0.436
SIERRA	5978	2735	12752	0	18	21	35	0.00327	0.00283	0.0212	0.0588	0.0595	0.742
CYCLE	5344	3371	24675	0	38	-	47	0.00741	-	0.0241	0.282	-	1.13
SHIP08L	5141	4363	17245	0	18	19	21	0.00444	0.00319	0.0157	0.0799	0.0607	0.329
BNL2	6810	4486	19482	0	34	38	33	0.0206	0.0094	0.0284	0.701	0.357	0.939
PILOT	7341	4860	50275	0	65	-	59	0.0284	-	0.0368	1.85	-	2.17
SHIP12L	6684	5533	21809	0	29	28	22	0.00526	0.00401	0.0201	0.152	0.112	0.441
D6CUBE	6599	6184	43888	0	18	-	12	0.0265	-	0.0469	0.476	-	0.562
KEN_07	9630	3602	15608	0	17	16	20	0.00431	0.00346	0.0327	0.0734	0.0553	0.654
D2Q06C	8002	5831	38912	0	32	48	48	0.0341	0.0192	0.0338	1.09	0.92	1.62
GREENBEB	8277	5598	36955	0	66	69	47	0.0315	0.0178	0.0331	2.08	1.23	1.56
GREENBEA	8280	5598	36958	0	42	44	55	0.0298	0.0174	0.0329	1.25	0.767	1.81
CRE_C	9479	6411	22388	0	27	32	23	0.00695	0.00595	0.0356	0.188	0.19	0.819
PILOT87	10288	6680	83207	0	101	-	94	0.0476	-	0.0648	4.8	-	6.09
WOODW	9516	8418	45905	0	26	32	19	0.0106	0.00846	0.0351	0.275	0.271	0.667
CRE_A	10764	7248	25416	0	22	26	40	0.00802	0.00682	0.0363	0.177	0.177	1.45
TRUSS	9806	8806	36642	0	20	20	20	0.0103	0.00893	0.036	0.205	0.179	0.72

Table 4: Solve times and iteration counts for the NETLIB Feasible LP problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
PDS_02	12803	7716	26421	0	34	32	24	0.00839	0.00721	0.0474	0.285	0.231	1.14
NUG12	12048	8856	47160	0	20	20	16	0.125	1.1	0.192	2.49	22.1	3.07
QAP12	12048	8856	47160	0	20	20	16	0.119	1.14	0.217	2.38	22.9	3.47
MAROS_R7	12544	9408	154256	0	14	15	13	0.111	0.281	0.116	1.55	4.21	1.51
80BAU3B	17309	12061	38311	0	37	41	25	0.0108	0.011	0.0579	0.401	0.45	1.45
DFL001	18314	12230	47875	0	-	47	35	-	0.871	0.127	-	40.9	4.46
FIT2D	21049	10524	150066	0	24	27	27	0.0158	0.0154	0.0205	0.38	0.417	0.553
FIT2P	24025	13525	71309	0	21	23	21	0.014	0.0107	0.0624	0.295	0.247	1.31
NUG15	28605	22275	117225	0	24	24	15	0.581	10.4	4.49	13.9	251	67.4
QAP15	28605	22275	117225	0	24	24	17	0.604	11.3	3.82	14.5	270	65
OSA_07	26185	25067	169879	0	23	24	27	0.0366	0.0295	0.0988	0.841	0.708	2.67
STOCFOR3	40216	23541	96262	0	42	47	61	0.0325	0.027	0.0805	1.37	1.27	4.91
PDS_06	48472	29351	101811	0	46	45	31	0.147	0.144	0.204	6.75	6.46	6.33
KEN_11	57392	21349	91756	0	25	25	21	0.0328	0.03	0.101	0.821	0.75	2.12
PDS_10	82638	49932	173685	0	61	64	38	0.291	0.509	0.39	17.8	32.6	14.8
KEN_13	113950	42659	182564	0	27	27	29	0.0764	0.0691	0.196	2.06	1.86	5.68

Table 5: Solve times and iteration counts for the NETLIB Infeasible LP problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
LPI_ITEST2	22	13	39	0	6	6	4	1.63e-05	1.2e-05	0.00019	9.75e-05	7.23e-05	0.00076
LPI_GALENET	30	14	44	0	6	5	4	2.2e-05	1.5e-05	0.000187	0.000132	7.5e-05	0.000749
LPI_ITEST6	28	17	46	0	5	8	4	2.42e-05	1.67e-05	0.00024	0.000121	0.000134	0.000961
LPI_BGPRTR	60	40	110	0	8	9	7	3.33e-05	2.84e-05	0.000262	0.000266	0.000256	0.00183
LPI_WOODINFE	138	89	243	0	7	8	6	7.6e-05	5.56e-05	0.000569	0.000532	0.000445	0.00342
LPI_KLEIN1	162	108	858	0	18	18	21	0.000178	0.000164	0.000433	0.00321	0.00296	0.00909
LPI_FOREST6	202	131	382	0	8	9	10	9.06e-05	8.71e-05	0.000913	0.000725	0.000784	0.00913
LPI_EX73A	404	211	668	0	7	6	15	0.000207	0.000179	0.00115	0.00145	0.00107	0.0172
LPI_EX72A	412	215	682	0	7	6	17	0.000223	0.000205	0.00112	0.00156	0.00123	0.0191
LPI_BOX1	492	261	912	0	8	7	4	0.000217	0.000238	0.00294	0.00174	0.00166	0.0118
LPI_QUAL	1032	464	2355	0	61	55	51	0.000537	0.000495	0.00259	0.0327	0.0272	0.132
LPI_REFINERY	1032	464	2335	0	19	20	23	0.000533	0.000469	0.00243	0.0101	0.00938	0.0558
LPI_VOL1	1032	464	2355	0	56	57	43	0.000539	0.000499	0.0024	0.0302	0.0285	0.103
LPI_KLEIN2	1008	531	5593	0	14	16	41	0.000917	0.000958	0.00219	0.0128	0.0153	0.09
LPI_BGDBG1	1022	629	2336	0	9	8	9	0.00062	0.000602	0.00432	0.00558	0.00481	0.0388
LPI_PANG	1117	741	3689	0	24	24	27	0.000852	0.000788	0.00465	0.0205	0.0189	0.126
LPI_CHEMCOM	1176	744	2478	0	7	8	7	0.000791	0.000697	0.00525	0.00554	0.00557	0.0367
LPI_MONDOU2	1393	604	2289	0	1	12	22	0.00196	0.000402	0.00322	0.00196	0.00482	0.0709
LPI_BGETAM	1351	816	3488	0	7	8	8	0.00206	0.00189	0.00958	0.0144	0.0152	0.0766
LPI_REACTOR	1674	808	3947	0	29	29	22	0.000933	0.000956	0.00695	0.0271	0.0277	0.153
LPI_PILOT4I	1692	1123	6546	0	27	30	23	0.00186	0.00138	0.0104	0.0503	0.0413	0.238
LPI_KLEIN3	2076	1082	14183	0	18	17	28	0.00224	0.00208	0.00477	0.0404	0.0354	0.134
LPI_GRAN	5707	2525	23160	0	10	13	46	0.00835	0.00683	0.0128	0.0835	0.0887	0.591
LPI_CERIA3D	7152	4400	24754	0	15	11	10	0.00586	0.00561	0.0557	0.0879	0.0618	0.557
LPI_CPLEX1	8447	5224	16389	0	6	11	22	0.00679	0.00279	0.0152	0.0407	0.0307	0.335
LPI_GREENBEA	8290	5596	36971	0	29	32	17	0.0177	0.0183	0.0371	0.513	0.587	0.63
LPI_BGINDY	13551	10880	77146	0	7	9	9	0.0377	0.0294	0.072	0.264	0.265	0.648
LPI_GOSH	17005	13455	113166	0	41	36	24	0.0498	0.0459	0.0612	2.04	1.65	1.47

Table 6: Solve times and iteration counts for the LP Optimal Power Flow problem set

Problem	vars.	cons.	nnz(A)	nnz(P)	iterations			time per iteration(s)			total time (s)		
					ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
case3_lmbd	25	9	43	2	8	18	-	1.55e-05	1.27e-05	-	0.000124	0.000229	-
case3_lmbd__api	25	9	43	2	8	16	-	1.53e-05	1.58e-05	-	0.000122	0.000254	-
case3_lmbd__sad	25	9	43	2	8	18	-	1.51e-05	1.59e-05	-	0.000121	0.000286	-
case5_pjm	46	16	82	0	7	8	8	2.61e-05	2.52e-05	0.000194	0.000183	0.000202	0.00155
case5_pjm__api	46	16	82	0	9	9	10	2.49e-05	3.01e-05	0.000186	0.000224	0.000271	0.00186
case14_ieee	125	39	236	0	7	7	7	6.64e-05	5.97e-05	0.000326	0.000465	0.000418	0.00228
case14_ieee__api	125	39	236	0	11	11	11	5.6e-05	6.03e-05	0.000248	0.000616	0.000663	0.00273
case30_as	248	77	470	6	8	16	15	9.86e-05	0.000131	0.000305	0.000789	0.0021	0.00457
case30_as__api	248	77	470	6	9	20	24	0.000103	0.000118	0.000305	0.000924	0.00236	0.00733
case30_ieee	248	77	470	0	8	8	8	0.000121	0.000114	0.00037	0.000966	0.000911	0.00296
case30_ieee__api	248	77	470	0	7	8	9	0.000127	0.000112	0.000346	0.000887	0.000894	0.00311
case24_ieee_rts	273	95	502	22	9	22	-	0.000108	0.00012	-	0.000969	0.00263	-
case24_ieee_rts__api	273	95	502	22	11	23	-	0.000101	0.000108	-	0.00111	0.00247	-
case24_ieee_rts__sad	273	95	502	22	12	27	-	0.000102	0.00012	-	0.00122	0.00325	-
case39_epri	290	95	537	0	9	9	13	0.000126	0.00012	0.000365	0.00113	0.00108	0.00474
case39_epri__api	290	95	537	0	9	10	10	0.000131	0.000118	0.000401	0.00118	0.00118	0.00401
case39_epri__sad	290	95	537	0	18	20	13	0.000119	0.000122	0.000356	0.00215	0.00243	0.00463
case57_ieee	468	144	894	0	8	9	10	0.000217	0.000196	0.000506	0.00174	0.00177	0.00506
case57_ieee__api	468	144	894	0	10	12	11	0.000213	0.000194	0.000507	0.00213	0.00233	0.00558
case60_c	515	171	974	0	8	8	9	0.00023	0.000237	0.000782	0.00184	0.00189	0.00704
case60_c__api	515	171	974	0	14	19	13	0.000201	0.000198	0.000606	0.00282	0.00377	0.00788
case73_ieee_rts	848	292	1570	66	9	25	-	0.000337	0.000391	-	0.00303	0.00977	-
case73_ieee_rts__api	848	292	1570	66	12	25	-	0.000307	0.000349	-	0.00368	0.00871	-
case73_ieee_rts__sad	848	292	1570	66	13	47	-	0.000301	0.000366	-	0.00392	0.0172	-
case89_pegase	1156	311	2331	0	9	8	29	0.000526	0.000513	0.00201	0.00474	0.0041	0.0582
case89_pegase__api	1156	311	2331	0	14	14	35	0.000601	0.000529	0.002	0.00841	0.00741	0.0701
case118_ieee	1143	358	2181	0	12	12	12	0.000492	0.000485	0.00226	0.00591	0.00583	0.0271
case118_ieee__api	1143	358	2181	0	14	14	16	0.000554	0.00059	0.00214	0.00776	0.00826	0.0342
case179_goc	1471	471	2817	0	13	12	18	0.000559	0.000546	0.0026	0.00727	0.00656	0.0468
case179_goc__api	1471	471	2817	0	13	13	23	0.000632	0.000714	0.00255	0.00822	0.00928	0.0586
case200_activ	1502	483	2810	31	10	21	16	0.000567	0.000735	0.00371	0.00567	0.0154	0.0593
case200_activ__api	1502	483	2810	31	11	19	26	0.000571	0.000807	0.00308	0.00628	0.0153	0.0801
case162_ieee_dtc	1599	458	3145	0	14	14	18	0.000739	0.000782	0.00309	0.0104	0.0109	0.0557
case162_ieee_dtc__api	1599	458	3145	0	16	14	16	0.000769	0.000835	0.00312	0.0123	0.0117	0.0499
case162_ieee_dtc__sad	1599	458	3145	0	18	19	16	0.000746	0.000851	0.00316	0.0134	0.0162	0.0506
case197_snem	1572	518	3000	0	9	10	9	0.000645	0.000604	0.00332	0.0058	0.00604	0.0299
case197_snem__api	1572	518	3000	0	12	13	16	0.000684	0.0007	0.00268	0.00821	0.0091	0.0428
case300_ieee	2490	780	4721	0	12	13	18	0.00114	0.0012	0.00416	0.0136	0.0156	0.075
case300_ieee__api	2490	780	4721	0	14	13	16	0.00124	0.00127	0.0044	0.0173	0.0165	0.0704
case300_ieee__sad	2490	780	4721	0	14	16	19	0.0013	0.00121	0.00481	0.0182	0.0193	0.0914
case240_pserc	2567	831	4958	0	13	14	23	0.00142	0.00133	0.00496	0.0184	0.0186	0.114
case240_pserc__api	2567	831	4958	0	12	12	14	0.00129	0.00146	0.00527	0.0155	0.0175	0.0738
case588_sdet	4191	1369	7796	0	14	13	14	0.00216	0.00264	0.00722	0.0302	0.0343	0.101
case588_sdet__api	4191	1369	7796	0	13	12	13	0.00232	0.00244	0.00753	0.0302	0.0292	0.0979
case500_goc	4327	1399	8210	60	15	22	-	0.00174	0.00185	-	0.0261	0.0407	-
case500_goc__api	4327	1399	8210	60	18	33	-	0.00167	0.00184	-	0.0301	0.0608	-

Table 6: Solve times and iteration counts for the LP Optimal Power Flow problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
case793_goc	5535	1803	10299	48	16	28	-	0.00224	0.00277	-	0.0358	0.0776	-
case793_goc__api	5535	1803	10299	48	15	35	-	0.0022	0.0028	-	0.0331	0.0981	-
case1354_pegase	11268	3605	21558	0	13	13	28	0.00533	0.00671	0.0197	0.0693	0.0872	0.551
case1354_pegase__api	11268	3605	21558	0	14	14	27	0.00603	0.00734	0.0198	0.0844	0.103	0.534
case1888_rte	14678	4709	27820	0	12	13	36	0.00737	0.00827	0.023	0.0884	0.108	0.83
case1888_rte__api	14678	4709	27820	0	16	16	32	0.00755	0.00804	0.0242	0.121	0.129	0.773
case1888_rte__sad	14678	4709	27820	0	13	13	25	0.00708	0.00901	0.0242	0.0921	0.117	0.606
case1803_snem	15041	4828	29036	0	17	18	32	0.00734	0.00927	0.0241	0.125	0.167	0.771
case1803_snem__api	15041	4828	29036	0	20	30	39	0.00818	0.00713	0.024	0.164	0.214	0.935
case1951_rte	15222	4913	28771	0	14	14	33	0.00724	0.0097	0.0246	0.101	0.136	0.811
case1951_rte__api	15222	4913	28771	0	17	17	36	0.00882	0.00788	0.0257	0.15	0.134	0.926
case2312_goc	17464	5551	33090	42	22	27	-	0.0076	0.00911	-	0.167	0.246	-
case2312_goc__api	17464	5551	33090	42	18	62	-	0.00764	0.00818	-	0.138	0.507	-
case2383wp_k	17498	5606	32798	0	21	23	25	0.0104	0.0102	0.0294	0.219	0.235	0.734
case2383wp_k__api	17498	5606	32798	0	12	10	13	0.0088	0.0119	0.0401	0.106	0.119	0.522
case2000_goc	18988	5871	37370	122	14	36	-	0.00782	0.00847	-	0.109	0.305	-
case2000_goc__api	18988	5871	37370	122	18	37	-	0.00797	0.00844	-	0.143	0.312	-
case2737sop_k	19509	6225	36593	0	16	18	20	0.0105	0.0137	0.036	0.168	0.247	0.719
case2737sop_k__api	19509	6225	36593	0	15	17	25	0.0107	0.0139	0.0332	0.161	0.236	0.83
case2736sp_k	19610	6275	36746	0	13	13	23	0.01	0.0125	0.0351	0.13	0.163	0.807
case2736sp_k__api	19610	6275	36746	0	19	23	23	0.0117	0.0124	0.0345	0.222	0.285	0.793
case2746wp_k	20042	6481	37414	0	15	17	27	0.0103	0.013	0.0351	0.154	0.221	0.947
case2746wp_k__api	20042	6481	37414	0	25	20	26	0.00833	0.0108	0.0358	0.208	0.215	0.93
case2746wop_k	20128	6484	37639	0	14	15	23	0.0106	0.0138	0.0362	0.149	0.207	0.833
case2746wop_k__api	20128	6484	37639	0	18	20	22	0.0122	0.0111	0.0361	0.22	0.222	0.794
case3012wp_k	21631	6969	40424	0	16	20	25	0.0135	0.0131	0.0378	0.215	0.262	0.945
case3012wp_k__api	21631	6969	40424	0	24	37	27	0.013	0.0101	0.0381	0.312	0.375	1.03
case2848_rte	22083	7135	41734	0	13	13	32	0.0109	0.0123	0.0362	0.142	0.16	1.16
case2848_rte__api	22083	7135	41734	0	15	16	26	0.0112	0.0127	0.0384	0.168	0.204	0.999
case3120sp_k	22164	7111	41482	0	17	18	27	0.0132	0.0128	0.0376	0.225	0.231	1.02
case3120sp_k__api	22164	7111	41482	0	17	26	26	0.0138	0.0117	0.0391	0.235	0.304	1.02
case2868_rte	22357	7237	42224	0	14	15	29	0.0112	0.0157	0.0373	0.156	0.235	1.08
case2868_rte__api	22357	7237	42224	0	17	16	34	0.012	0.0128	0.0373	0.204	0.204	1.27
case2853_sdet	23525	7593	44445	0	19	20	24	0.0117	0.0127	0.0368	0.223	0.255	0.884
case2853_sdet__api	23525	7593	44445	0	41	-	49	0.00887	-	0.0359	0.364	-	1.76
case3022_goc	23816	7484	45395	110	22	40	-	0.0114	0.013	-	0.251	0.521	-
case3022_goc__api	23816	7484	45395	110	23	73	55	0.00994	0.0111	0.0486	0.229	0.809	2.67
case3022_goc__sad	23816	7484	45395	110	22	43	-	0.0115	0.0126	-	0.253	0.542	-
case2742_goc	25136	7597	49278	48	15	56	-	0.0114	0.0119	-	0.171	0.665	-
case2742_goc__api	25136	7597	49278	48	19	74	-	0.0117	0.0129	-	0.223	0.952	-
case2742_goc__sad	25136	7597	49278	48	15	62	-	0.0117	0.0107	-	0.176	0.666	-
case3375wp_k	24952	8014	46837	0	16	15	27	0.0132	0.0184	0.0432	0.212	0.276	1.17
case3375wp_k__api	24952	8014	46837	0	18	19	38	0.0142	0.0133	0.0426	0.256	0.252	1.62
case3375wp_k__sad	24952	8014	46837	0	17	16	30	0.0139	0.0164	0.0416	0.236	0.263	1.25
case2869_pegase	25572	7961	49477	0	16	15	38	0.0119	0.0173	0.0394	0.19	0.26	1.5
case2869_pegase__api	25572	7961	49477	0	16	16	37	0.0134	0.02	0.0404	0.215	0.32	1.5

Table 6: Solve times and iteration counts for the LP Optimal Power Flow problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
case4661_sdet	35603	11382	67156	0	17	20	27	0.0269	0.0245	0.0566	0.457	0.49	1.53
case4661_sdet__api	35603	11382	67156	0	17	31	35	0.0246	0.0199	0.06	0.419	0.618	2.1
case3970_goc	36084	10994	70485	65	15	67	-	0.0163	0.0244	-	0.244	1.64	-
case3970_goc__api	36084	10994	70485	65	18	-	-	0.0169	-	-	0.304	-	-
case4020_goc	37867	11360	74329	23	26	36	40	0.0179	0.0244	0.0669	0.466	0.879	2.67
case4020_goc__api	37867	11360	74329	23	20	-	-	0.0195	-	-	0.389	-	-
case4917_goc	38604	12210	73532	193	21	69	-	0.0215	0.0174	-	0.451	1.2	-
case4917_goc__api	38604	12210	73532	193	22	-	-	0.017	-	-	0.375	-	-
case4917_goc__sad	38604	12210	73532	193	22	68	-	0.018	0.0178	-	0.396	1.21	-
case4601_goc	39625	12208	76838	62	16	75	-	0.0176	0.0231	-	0.282	1.73	-
case4601_goc__api	39625	12208	76838	62	19	-	-	0.0186	-	-	0.354	-	-
case4601_goc__sad	39625	12208	76838	62	21	-	-	0.0204	-	-	0.429	-	-
case4837_goc	42041	12934	81840	50	17	51	-	0.0199	0.0236	-	0.339	1.2	-
case4837_goc__api	42041	12934	81840	50	21	67	-	0.0188	0.0211	-	0.395	1.42	-
case4619_goc	44438	13116	87440	29	18	53	-	0.0209	0.0222	-	0.375	1.18	-
case4619_goc__api	44438	13116	87440	29	20	-	-	0.0243	-	-	0.486	-	-
case5658_epigrids	49549	15204	96379	0	17	16	39	0.0265	0.0376	0.0732	0.451	0.602	2.85
case5658_epigrids__api	49549	15204	96379	0	14	16	40	0.0297	0.0384	0.074	0.416	0.615	2.96
case6468_rte	50397	15867	96458	0	15	16	61	0.0275	0.0347	0.0686	0.412	0.556	4.18
case6468_rte__api	50397	15867	96458	0	18	18	55	0.0274	0.0359	0.0659	0.494	0.646	3.62
case6468_rte__sad	50397	15867	96458	0	15	17	61	0.0272	0.0368	0.0673	0.408	0.626	4.1
case6495_rte	51081	16194	97510	0	18	19	70	0.0271	0.0474	0.0731	0.487	0.9	5.11
case6495_rte__api	51081	16194	97510	0	17	18	58	0.03	0.0311	0.0734	0.509	0.56	4.26
case6495_rte__sad	51081	16194	97510	0	18	19	65	0.0264	0.0393	0.0745	0.475	0.747	4.84
case6470_rte	51140	16236	97583	0	16	16	48	0.0272	0.0479	0.0702	0.435	0.767	3.37
case6470_rte__api	51140	16236	97583	0	16	16	40	0.0298	0.0309	0.0736	0.477	0.495	2.94
case6470_rte__sad	51140	16236	97583	0	16	16	45	0.0271	0.0495	0.0704	0.434	0.792	3.17
case6515_rte	51203	16236	97728	0	18	20	58	0.0305	0.0362	0.0673	0.549	0.723	3.9
case6515_rte__api	51203	16236	97728	0	18	18	49	0.0314	0.0263	0.0696	0.565	0.474	3.41
case6515_rte__sad	51203	16236	97728	0	18	19	58	0.0294	0.0359	0.0697	0.53	0.683	4.04
case7336_epigrids	63100	19539	122362	0	16	18	37	0.0365	0.0507	0.0962	0.585	0.913	3.56
case7336_epigrids__api	63100	19539	122362	0	17	19	40	0.0465	0.0457	0.0996	0.791	0.868	3.99
case10000_goc	79096	25209	149368	511	25	44	-	0.0369	0.0513	-	0.923	2.26	-
case10000_goc__api	79096	25209	149368	511	25	-	-	0.0385	-	-	0.963	-	-
case8387_pegase	81791	24813	159503	0	23	27	31	0.0561	0.0751	0.159	1.29	2.03	4.93
case8387_pegase__api	81791	24813	159503	0	23	26	35	0.0579	0.0575	0.14	1.33	1.49	4.9
case8387_pegase__sad	81791	24813	159503	0	23	31	32	0.0575	0.0675	0.145	1.32	2.09	4.64
case9591_goc	86151	25871	168669	55	20	-	-	0.0486	-	-	0.972	-	-
case9591_goc__api	86151	25871	168669	55	24	-	-	0.0519	-	-	1.25	-	-
case9241_pegase	88693	26735	173507	0	108	-	71	0.0347	-	0.152	3.75	-	10.8
case9241_pegase__api	88693	26735	173507	0	19	19	57	0.0557	0.0742	0.15	1.06	1.41	8.54
case10192_epigrids	92051	27914	180020	697	18	63	-	0.052	0.0656	-	0.935	4.14	-
case10192_epigrids__api	92051	27914	180020	697	18	80	-	0.0502	0.057	-	0.904	4.56	-
case10480_goc	99926	29816	196673	276	21	82	-	0.0591	0.0755	-	1.24	6.19	-
case10480_goc__api	99926	29816	196673	276	19	-	-	0.0605	-	-	1.15	-	-
case13659_pegase	120495	38218	230046	0	126	-	43	0.0473	-	0.216	5.96	-	9.3

Table 6: **Solve times and iteration counts for the LP Optimal Power Flow problem set**

Problem	vars.	cons.	nnz(A)	nnz(P)	iterations ClarabelRs	iterations ECOS	iterations Mosek	time per iteration(s) ClarabelRs	time per iteration(s) ECOS	time per iteration(s) Mosek	total time (s) ClarabelRs	total time (s) ECOS	total time (s) Mosek
case13659_pegase__api	120495	38218	230046	0	45	54	37	0.0526	0.0754	0.214	2.37	4.07	7.91
case20758_epigrids	182928	56275	355508	1881	19	53	-	0.123	0.16	-	2.34	8.46	-
case20758_epigrids__api	182928	56275	355508	1881	19	70	-	0.118	0.149	-	2.24	10.4	-
case19402_goc__sad	184959	55077	364846	249	23	-	-	0.127	-	-	2.93	-	-
case30000_goc	213698	68919	399262	372	39	51	-	0.118	0.154	-	4.59	7.87	-
case30000_goc__api	213698	68919	399262	372	31	95	-	0.13	0.152	-	4.02	14.5	-
case30000_goc__sad	213698	68919	399262	372	26	-	-	0.119	-	-	3.1	-	-
case78484_epigrids	685984	211266	1334253	0	30	-	-	0.906	-	-	27.2	-	-
case78484_epigrids__api	685984	211266	1334253	0	27	-	122	0.919	-	2.29	24.8	-	280
case78484_epigrids__sad	685984	211266	1334253	0	31	-	-	0.9	-	-	27.9	-	-

Table 7: Solve times and iteration counts for the SOCP Optimal Power Flow problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
case3_lmbd	124	29	190	0	13	15	15	5.42e-05	5.95e-05	0.000252	0.000705	0.000893	0.00378
case3_lmbd__api	124	29	190	0	13	14	14	5.68e-05	6.21e-05	0.000255	0.000739	0.00087	0.00357
case3_lmbd__sad	124	29	190	0	13	16	14	5.3e-05	5.95e-05	0.00026	0.000688	0.000952	0.00364
case5_pjm	220	51	352	0	16	19	27	9.52e-05	0.000116	0.000342	0.00152	0.0022	0.00924
case5_pjm__api	220	51	352	0	17	20	29	0.000103	0.000123	0.000343	0.00175	0.00247	0.00996
case5_pjm__sad	220	51	352	0	14	18	22	0.0001	0.000135	0.00036	0.0014	0.00243	0.00793
case14_ieee	676	144	1069	0	14	18	28	0.000283	0.000359	0.00183	0.00396	0.00647	0.0512
case14_ieee__api	676	144	1069	0	16	26	31	0.000285	0.000395	0.00187	0.00456	0.0103	0.0578
case14_ieee__sad	676	144	1069	0	17	22	31	0.000283	0.000363	0.00183	0.00482	0.00798	0.0566
case30_ieee	1374	288	2188	0	25	28	35	0.000629	0.000628	0.00335	0.0157	0.0176	0.117
case30_ieee__api	1374	288	2188	0	22	29	37	0.000653	0.000604	0.0034	0.0144	0.0175	0.126
case30_ieee__sad	1374	288	2188	0	-	-	45	-	-	0.00345	-	-	0.155
case30_as	1404	294	2218	0	21	25	32	0.000567	0.000843	0.00355	0.0119	0.0211	0.114
case30_as__api	1404	294	2218	0	25	31	40	0.000602	0.0007	0.00349	0.0151	0.0217	0.14
case30_as__sad	1404	294	2218	0	19	28	46	0.000579	0.000954	0.00346	0.011	0.0267	0.159
case24_ieee_rts	1430	332	2253	0	18	23	40	0.000661	0.000699	0.00367	0.0119	0.0161	0.147
case24_ieee_rts__api	1430	332	2253	0	19	23	40	0.00067	0.000723	0.00361	0.0127	0.0166	0.145
case24_ieee_rts__sad	1430	332	2253	0	17	22	43	0.000648	0.000802	0.00363	0.011	0.0176	0.156
case39_epri	1576	335	2506	0	24	36	53	0.000712	0.00112	0.00365	0.0171	0.0405	0.193
case39_epri__api	1576	335	2506	0	25	40	53	0.000718	0.000899	0.00359	0.0179	0.0359	0.19
case39_epri__sad	1576	335	2506	0	28	42	61	0.000706	0.000771	0.00365	0.0198	0.0324	0.222
case57_ieee	2632	547	4171	0	23	30	43	0.00126	0.00129	0.00625	0.0289	0.0387	0.269
case57_ieee__api	2632	547	4171	0	22	29	41	0.00124	0.00133	0.00641	0.0273	0.0385	0.263
case57_ieee__sad	2632	547	4171	0	26	37	58	0.00127	0.00115	0.00618	0.033	0.0426	0.358
case60_c	2780	602	4310	0	21	27	38	0.00115	0.00143	0.00668	0.0242	0.0385	0.254
case60_c__api	2780	602	4310	0	26	40	-	0.00123	0.00158	-	0.032	0.063	-
case60_c__sad	2780	602	4310	0	24	31	-	0.00128	0.00153	-	0.0308	0.0474	-
case73_ieee_rts	4474	1033	7067	0	22	26	45	0.00203	0.00264	0.0113	0.0448	0.0685	0.51
case73_ieee_rts__api	4474	1033	7067	0	20	-	43	0.00203	-	0.0114	0.0407	-	0.491
case73_ieee_rts__sad	4474	1033	7067	0	19	25	47	0.00219	0.00229	0.011	0.0416	0.0573	0.516
case118_ieee	6184	1328	10052	0	24	29	63	0.00284	0.00384	0.0149	0.0683	0.111	0.939
case118_ieee__api	6184	1328	10052	0	23	28	62	0.00298	0.00303	0.0148	0.0686	0.0848	0.919
case118_ieee__sad	6184	1328	10052	0	21	27	66	0.00312	0.00325	0.015	0.0655	0.0876	0.987
case89_pegase	6656	1365	11100	0	38	-	-	0.0034	-	-	0.129	-	-
case89_pegase__api	6656	1365	11100	0	35	40	-	0.00336	0.00275	-	0.118	0.11	-
case89_pegase__sad	6656	1365	11100	0	50	-	-	0.00296	-	-	0.148	-	-
case179_goc	8230	1733	12996	0	25	26	-	0.00413	0.00553	-	0.103	0.144	-
case179_goc__api	8230	1733	12996	0	54	-	-	0.00426	-	-	0.23	-	-
case179_goc__sad	8230	1733	12996	0	25	27	77	0.00393	0.00583	0.0193	0.0983	0.158	1.49
case200_activ	8457	1777	13527	0	38	34	42	0.00381	0.00404	0.0194	0.145	0.137	0.815
case200_activ__api	8457	1777	13527	0	48	-	67	0.00394	-	0.0191	0.189	-	1.28
case200_activ__sad	8457	1777	13527	0	40	42	-	0.00379	0.00395	-	0.152	0.166	-
case197_snem	8752	1857	14224	0	-	-	25	-	-	0.0221	-	-	0.551
case197_snem__api	8752	1857	14224	0	32	-	49	0.00403	-	0.0204	0.129	-	0.998
case197_snem__sad	8752	1857	14224	0	-	-	24	-	-	0.02	-	-	0.48
case162_ieee_dtc	9168	1882	14920	0	48	54	-	0.00449	0.00481	-	0.215	0.26	-

Table 7: Solve times and iteration counts for the SOCP Optimal Power Flow problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
case162_ieee_dtc__api	9168	1882	14920	0	47	68	90	0.00464	0.00441	0.023	0.218	0.3	2.07
case162_ieee_dtc__sad	9168	1882	14920	0	46	59	95	0.00453	0.00472	0.0229	0.208	0.278	2.18
case300_ieee__api	13782	2900	21993	0	51	-	-	0.00576	-	-	0.294	-	-
case300_ieee__sad	13782	2900	21993	0	85	-	-	0.00528	-	-	0.449	-	-
case240_pserc	13772	3014	22076	0	28	35	-	0.00717	0.00575	-	0.201	0.201	-
case240_pserc__api	13772	3014	22076	0	26	39	-	0.00745	0.00706	-	0.194	0.275	-
case240_pserc__sad	13772	3014	22076	0	29	39	-	0.00735	0.00583	-	0.213	0.227	-
case588_sdet	23204	4876	37012	0	77	-	-	0.0093	-	-	0.716	-	-
case588_sdet__api	23204	4876	37012	0	68	-	-	0.0103	-	-	0.699	-	-
case588_sdet__sad	23204	4876	37012	0	78	-	-	0.00965	-	-	0.753	-	-
case500_goc	23888	5114	38653	0	45	-	-	0.0137	-	-	0.616	-	-
case500_goc__api	23888	5114	38653	0	37	-	-	0.012	-	-	0.445	-	-
case500_goc__sad	23888	5114	38653	0	43	-	-	0.0136	-	-	0.584	-	-
case793_goc	31082	6495	49764	0	48	-	-	0.0136	-	-	0.654	-	-
case793_goc__api	31082	6495	49764	0	56	-	-	0.014	-	-	0.782	-	-
case1354_pegase	62814	13258	103260	0	99	-	-	0.0281	-	-	2.78	-	-
case1354_pegase__api	62814	13258	103260	0	66	-	-	0.0327	-	-	2.16	-	-
case1354_pegase__sad	62814	13258	103260	0	85	-	-	0.0289	-	-	2.45	-	-
case1888_rte__api	81966	17208	131225	0	90	-	-	0.0384	-	-	3.46	-	-
case1888_rte__sad	81966	17208	131225	0	65	-	-	0.049	-	-	3.19	-	-
case1951_rte	84496	17817	134660	0	79	-	-	0.0486	-	-	3.84	-	-
case1951_rte__api	84496	17817	134660	0	72	-	-	0.053	-	-	3.82	-	-
case1951_rte__sad	84496	17817	134660	0	80	-	-	0.0478	-	-	3.83	-	-
case1803_snem	84794	17835	138430	0	85	-	-	0.0389	-	-	3.3	-	-
case2383wp_k__api	97600	20393	155950	0	22	32	-	0.0692	0.0529	-	1.52	1.69	-
case2383wp_k__sad	97600	20393	155950	0	104	-	-	0.0479	-	-	4.98	-	-
case2000_goc	108628	22742	178538	0	53	-	-	0.0774	-	-	4.1	-	-
case2000_goc__api	108628	22742	178538	0	51	-	-	0.0699	-	-	3.57	-	-
case2737sop_k	109822	22777	176602	0	71	-	-	0.053	-	-	3.76	-	-
case2737sop_k__api	109822	22777	176602	0	85	-	-	0.0491	-	-	4.18	-	-
case2736sp_k	110022	22878	176901	0	71	-	-	0.0502	-	-	3.57	-	-
case2736sp_k__sad	110022	22878	176901	0	77	-	-	0.0521	-	-	4.01	-	-
case2746wp_k__api	111106	23320	178556	0	-	-	36	-	-	0.258	-	-	9.29
case2746wp_k__sad	111106	23320	178556	0	78	-	-	0.0505	-	-	3.94	-	-
case2746wop_k	111822	23434	179829	0	69	-	-	0.0563	-	-	3.89	-	-
case2746wop_k__sad	111822	23434	179829	0	66	-	-	0.0524	-	-	3.46	-	-
case3012wp_k	120676	25202	193907	0	111	-	-	0.0565	-	-	6.27	-	-
case3012wp_k__sad	120676	25202	193907	0	117	-	-	0.0563	-	-	6.58	-	-
case2848_rte	122708	25858	197228	0	81	-	-	0.0742	-	-	6.01	-	-
case2848_rte__api	122708	25858	197228	0	87	-	-	0.084	-	-	7.31	-	-
case2848_rte__sad	122708	25858	197228	0	70	-	-	0.0722	-	-	5.05	-	-
case2868_rte	123912	26164	198869	0	85	-	-	0.0796	-	-	6.77	-	-
case2868_rte__api	123912	26164	198869	0	77	-	-	0.0779	-	-	6	-	-
case2868_rte__sad	123912	26164	198869	0	83	-	-	0.0757	-	-	6.28	-	-
case2853_sdet__sad	128886	27445	206896	0	105	-	-	0.0532	-	-	5.58	-	-
case3375wp_k	139126	29112	223999	0	93	-	-	0.0595	-	-	5.54	-	-

Table 7: Solve times and iteration counts for the SOCP Optimal Power Flow problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
case3375wp_k__sad	139126	29112	223999	0	110	-	-	0.0583	-	-	6.42	-	-
case2869_pegase__api	143608	30153	236217	0	55	-	-	0.0994	-	-	5.47	-	-
case2869_pegase__sad	143608	30153	236217	0	52	-	-	0.102	-	-	5.32	-	-
case2742_goc	144110	29856	236467	0	113	-	-	0.103	-	-	11.6	-	-
case2742_goc__sad	144110	29856	236467	0	109	-	-	0.102	-	-	11.1	-	-
case4661_sdet__api	198498	41599	320728	0	131	-	-	0.107	-	-	14	-	-
case3970_goc	205819	42789	337328	0	142	-	-	0.143	-	-	20.4	-	-
case4020_goc	216455	44877	355706	0	197	-	-	0.154	-	-	30.3	-	-
case4917_goc__sad	218213	45522	352833	0	-	-	177	-	-	0.458	-	-	81
case4601_goc	225588	46885	368445	0	178	-	-	0.153	-	-	27.2	-	-
case4601_goc__sad	225588	46885	368445	0	182	-	-	0.148	-	-	26.9	-	-
case4837_goc__sad	240160	49855	392884	0	132	-	-	0.198	-	-	26.1	-	-
case4619_goc	254753	52616	419210	0	154	-	-	0.215	-	-	33.1	-	-
case4619_goc__sad	254753	52616	419210	0	150	-	-	0.214	-	-	32.1	-	-
case5658_epigrids	282180	58620	461724	0	162	-	-	0.222	-	-	35.9	-	-
case5658_epigrids__api	282180	58620	461724	0	165	-	-	0.261	-	-	43.1	-	-
case5658_epigrids__sad	282180	58620	461724	0	160	-	-	0.216	-	-	34.5	-	-
case6468_rte__api	286248	59396	463599	0	91	-	-	0.22	-	-	20	-	-
case6468_rte__sad	286248	59396	463599	0	101	-	-	0.208	-	-	21	-	-
case6470_rte	287806	60144	465757	0	115	-	-	0.201	-	-	23.1	-	-
case6470_rte__api	287806	60144	465757	0	89	-	-	0.222	-	-	19.8	-	-
case6495_rte	288050	60099	465939	0	124	-	-	0.195	-	-	24.2	-	-
case6495_rte__api	288050	60099	465939	0	111	-	-	0.197	-	-	21.9	-	-
case6495_rte__sad	288050	60099	465939	0	112	-	-	0.193	-	-	21.6	-	-
case6515_rte__sad	288710	60239	466922	0	93	-	-	0.207	-	-	19.3	-	-
case7336_epigrids__api	358450	74618	585766	0	151	-	-	0.333	-	-	50.3	-	-
case10000_goc__api	440997	92799	712177	0	67	-	-	0.392	-	-	26.2	-	-
case10480_goc__sad	573754	118760	943278	0	166	-	-	0.548	-	-	91	-	-

Table 8: Solve times and iteration counts for the CBLIB Exponential Cone problem set

Problem	vars.	cons.	nnz(A)	nnz(P)	iterations			time per iteration(s)			total time (s)		
					ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
bss1	14	11	23	0	8	14	9	1.28e-05	8.13e-06	0.000153	0.000102	0.000114	0.00138
demb782	14	11	23	0	6	14	8	1.52e-05	7.99e-06	0.000154	9.1e-05	0.000112	0.00123
bss2	20	15	33	0	8	14	9	1.59e-05	1.07e-05	0.000158	0.000127	0.000149	0.00142
demb781	26	19	40	0	10	16	7	1.72e-05	1.45e-05	0.000173	0.000172	0.000232	0.00121
gptest	32	24	48	0	8	16	9	2.12e-05	1.5e-05	0.000168	0.00017	0.00024	0.00152
rijc781	32	24	48	0	8	16	9	2.15e-05	1.5e-05	0.000176	0.000172	0.00024	0.00158
rijc784	40	29	66	0	10	18	10	2.46e-05	2.25e-05	0.000186	0.000246	0.000404	0.00186
rijc785	44	33	83	0	10	17	9	2.77e-05	2.45e-05	0.000201	0.000277	0.000416	0.00181
rijc786	44	33	83	0	8	18	8	3.01e-05	2.38e-05	0.00021	0.000241	0.000428	0.00168
rijc782	56	40	87	0	12	17	11	3.13e-05	2.98e-05	0.00021	0.000376	0.000507	0.00231
rijc783	74	53	124	0	9	17	11	4.34e-05	3.84e-05	0.000232	0.00039	0.000653	0.00256
beck751	113	80	236	0	11	21	11	6.17e-05	5.58e-05	0.000271	0.000678	0.00117	0.00298
beck752	113	80	236	0	13	23	12	6e-05	5.8e-05	0.000294	0.00078	0.00133	0.00352
beck753	113	80	236	0	11	22	11	6.16e-05	5.41e-05	0.00027	0.000677	0.00119	0.00297
fiac81b	122	87	201	0	13	25	13	6.23e-05	6.22e-05	0.000305	0.00081	0.00156	0.00396
fang88	165	119	252	0	14	24	14	8.06e-05	8.44e-05	0.00033	0.00113	0.00203	0.00462
demb761	183	131	284	0	15	20	15	9.36e-05	9.3e-05	0.000352	0.0014	0.00186	0.00529
demb762	183	131	284	0	14	22	14	9.1e-05	9.1e-05	0.000361	0.00127	0.002	0.00505
demb763	183	131	284	0	15	20	14	8.68e-05	9.12e-05	0.000356	0.0013	0.00182	0.00499
fiac81a	289	191	496	0	13	22	10	0.000138	0.000138	0.000544	0.0018	0.00303	0.00544
rijc787	296	200	510	0	12	23	10	0.000143	0.000133	0.000567	0.00171	0.00306	0.00567
car	865	601	1584	0	19	26	10	0.00041	0.000424	0.00193	0.00779	0.011	0.0193
gp_dave_1	1441	705	3686	0	26	32	20	0.000683	0.000732	0.00438	0.0178	0.0234	0.0876
jha88	1691	1131	3005	0	14	24	13	0.000813	0.000736	0.00509	0.0114	0.0177	0.0662
varun	2013	1346	6788	0	24	47	24	0.00131	0.00106	0.00562	0.0315	0.05	0.135
gp_dave_2	2489	1219	6752	0	28	37	22	0.00129	0.00133	0.00731	0.0362	0.0493	0.161
LogExpCR_n20_m400	3223	2022	13238	0	30	25	18	0.0017	0.00148	0.0061	0.0511	0.0369	0.11
gp_dave_3	3537	1733	9818	0	-	40	24	-	0.00198	0.0117	-	0.0793	0.281
LogExpCR_n100_m400	3303	2102	45314	0	31	27	19	0.00569	0.00508	0.00782	0.176	0.137	0.148
mra01	5513	3681	10680	0	25	-	14	0.00271	-	0.0173	0.0678	-	0.242
LogExpCR_n20_m800	6423	4022	26411	0	27	28	21	0.00352	0.00295	0.013	0.0951	0.0827	0.272
LogExpCR_n100_m800	6503	4102	90322	0	34	30	23	0.0118	0.0107	0.0168	0.401	0.322	0.387
LogExpCR_n20_m1200	9623	6022	39574	0	27	27	21	0.00561	0.00492	0.0193	0.151	0.133	0.406
LogExpCR_n20_m1600	12823	8022	52729	0	28	29	20	0.00775	0.0105	0.0254	0.217	0.306	0.507
LogExpCR_n20_m2000	16023	10022	65872	0	31	33	23	0.00994	0.0133	0.0314	0.308	0.44	0.721
mra02	21965	14606	50050	0	28	-	17	0.0121	-	0.0549	0.339	-	0.933
cx02_100	31087	20693	56430	0	19	28	13	0.0159	0.017	0.0822	0.301	0.477	1.07
cx02_200	122187	81393	222880	0	22	35	13	0.0762	0.0887	0.36	1.68	3.11	4.68

Table 9: Solve times and iteration counts for the CBLIB Second-Order Cone problem set

					iterations			time per iteration(s)			total time (s)		
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek	ClarabelRs	ECOS	Mosek
sambal	63	31	87	0	11	14	13	3.12e-05	3.36e-05	0.000231	0.000343	0.00047	0.00301
nb	2506	2383	193902	0	20	-	12	0.0332	-	0.0113	0.664	-	0.136
nb_L2_bessel	2764	2641	211458	0	10	17	7	0.0381	0.0477	0.0145	0.381	0.81	0.101
nb_L1	4091	3176	195488	0	16	18	10	0.0355	0.0363	0.0203	0.568	0.653	0.203
nql30	6380	4501	20569	0	13	19	12	0.00795	0.00841	0.0361	0.103	0.16	0.434
sched_50_50_scaled	7503	4977	32962	0	19	29	18	0.00667	0.00704	0.0128	0.127	0.204	0.231
sched_50_50_orig	7506	4979	30467	0	-	-	28	-	-	0.0133	-	-	0.373
chainsing_1000_3	10984	6991	18971	0	14	18	10	0.00558	0.00642	0.0204	0.0781	0.116	0.204
qssp30	11255	7565	44414	0	16	18	13	0.012	0.0145	0.0506	0.192	0.26	0.658
sched_100_50_scaled	14587	9744	70032	0	26	37	17	0.0152	0.0135	0.0234	0.394	0.498	0.399
sched_100_50_orig	14590	9746	65037	0	33	-	-	0.0136	-	-	0.448	-	-
chainsing_1000_2	14976	9985	25957	0	15	16	14	0.00646	0.00868	0.0294	0.0968	0.139	0.411
chainsing_1000_1	18964	12976	32936	0	9	12	9	0.00829	0.00928	0.0366	0.0746	0.111	0.33
nql60	25360	18001	82539	0	13	22	11	0.0459	0.053	0.143	0.597	1.17	1.57
qssp60	44105	29525	178814	0	18	22	16	0.0806	0.12	0.195	1.45	2.65	3.12
nql90	56940	40501	185909	0	15	22	11	0.17	0.184	0.353	2.54	4.06	3.89
chainsing_10000_3	109984	69991	189971	0	-	-	16	-	-	0.218	-	-	3.48
chainsing_10000_2	149976	99985	259957	0	19	-	-	0.0852	-	-	1.62	-	-
chainsing_10000_1	189964	129976	329936	0	10	12	9	0.104	0.134	0.372	1.04	1.6	3.35

Table 10: Solve times and iteration counts for the SDPLIB Semidefinite Programming problem set

					iterations		time per iteration(s)		total time (s)	
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	Mosek	ClarabelRs	Mosek	ClarabelRs	Mosek
truss1	19	6	25	0	11	10	7.8e-05	0.00015	0.000858	0.0015
truss4	37	13	52	0	10	9	0.00014	0.000295	0.0014	0.00265
hinf1	45	19	104	0	28	-	0.000147	-	0.00413	-
hinf4	55	19	130	0	24	-	0.000176	-	0.00422	-
hinf5	55	19	130	0	24	-	0.000185	-	0.00443	-
hinf6	55	19	130	0	23	-	0.000182	-	0.00419	-
hinf9	55	19	130	0	24	-	0.000191	-	0.00459	-
hinf10	72	31	210	0	26	-	0.000253	-	0.00658	-
control1	81	36	375	0	54	-	0.000415	-	0.0224	-
truss3	89	28	120	0	12	10	0.000356	0.000609	0.00427	0.00609
hinf11	106	46	447	0	25	-	0.000465	-	0.0116	-
hinf12	133	64	621	0	45	-	0.00064	-	0.0288	-
control2	265	66	2590	0	25	-	0.00337	-	0.0843	-
truss2	298	124	699	0	14	-	0.00121	-	0.017	-
qap5	351	136	1026	0	9	9	0.00672	0.0025	0.0605	0.0225
truss7	451	86	863	0	22	20	0.0016	0.00273	0.0353	0.0547
control3	585	136	8610	0	29	-	0.0129	-	0.373	-
qap6	703	229	1981	0	23	-	0.0205	-	0.47	-
truss6	901	172	1726	0	25	22	0.00321	0.00816	0.0803	0.179
control4	1030	231	20280	0	32	-	0.0393	-	1.26	-
theta1	1275	104	153	0	12	8	0.0726	0.0255	0.871	0.204
mcp124_1	886	563	1002	0	12	7	0.00396	2.09	0.0475	14.6
qap7	1275	358	3480	0	30	-	0.0696	-	2.09	-
control5	1600	351	39475	0	30	-	0.104	-	3.11	-
truss5	1816	208	2823	0	18	16	0.0336	0.0099	0.605	0.158
qap8	2145	529	5697	0	32	-	0.22	-	7.03	-
control6	2295	496	68070	0	36	-	0.223	-	8.03	-
mcp100	2274	1212	2324	0	11	7	0.0378	0.727	0.416	5.09
control7	3115	666	107940	0	38	-	0.449	-	17.1	-
mcp250_1	2774	1688	3126	0	12	9	0.0277	94.5	0.333	850
mcp124_2	3077	1695	3266	0	11	8	0.0852	2.04	0.937	16.3
control8	4060	861	160960	0	40	-	0.844	-	33.8	-
gpp100	5050	101	5150	0	26	-	1.66	-	43.2	-
theta2	5050	498	597	0	10	9	1.78	0.706	17.8	6.36
qap10	5151	1021	13101	0	25	-	1.74	-	43.6	-
control9	5130	1081	229005	0	35	-	1.49	-	52.2	-
truss8	6271	496	8286	0	-	14	-	0.0606	-	0.849
control10	6325	1326	313950	0	43	-	2.4	-	103	-
gpp124_1	7750	125	7874	0	30	-	4.74	-	142	-
gpp124_2	7750	125	7874	0	28	26	4.75	1.82	133	47.4
gpp124_3	7750	125	7874	0	-	24	-	1.83	-	43.9
gpp124_4	7750	125	7874	0	33	28	4.64	1.82	153	51
mcp124_3	6115	2884	5644	0	14	8	0.439	2.04	6.15	16.3
arch2	6290	3060	9192	0	24	-	0.14	-	3.36	-
arch4	6290	3060	9192	0	20	-	0.143	-	2.85	-
arch8	6290	3060	9192	0	24	-	0.139	-	3.35	-

Table 10: Solve times and iteration counts for the SDPLIB Semidefinite Programming problem set

					iterations		time per iteration(s)		total time (s)	
Problem	vars.	cons.	nnz(A)	nnz(P)	ClarabelRs	Mosek	ClarabelRs	Mosek	ClarabelRs	Mosek
CONTROL11	8449	3136	420750	0	40	-	3.9	-	156	-
ARCH0	8188	4061	10804	0	22	-	0.372	-	8.17	-
THETA3	11325	1106	1255	0	10	9	15.7	5.84	157	52.6
MCP124_4	9502	4016	7908	0	12	7	1.85	2.11	22.2	14.8
MCP250_2	9764	5189	10128	0	11	8	0.785	95.7	8.64	766
THETA4	20100	1949	2148	0	10	11	63.5	26.2	635	288
SS30	17772	8655	23688	0	34	-	2.22	-	75.4	-
MCP250_3	21480	9713	19176	0	13	8	11.1	95.4	145	763
THETA5	31375	3028	3277	0	-	10	-	94.1	-	941
MCP250_4	34524	15442	30634	0	14	9	47.4	94.4	664	850