Table 1: Computational Results for Feasible Problems on an IBM quad using Ng-Peyton solver (Part 1). *=terminated with `unknown` status.

	Before Preprocessing		After Preprocessing						CPU Time
Name	Rows	Cols	Rows	Cols	Relative Infeas.	Relative Comp.	Primal Objective	Iters	(secs)
25fv47	821	1876	788	1843	9.6e-12	6.0e-12	5.501846e+03	26	2.00
80bau3b	2262	12061	2140	11066	1.1e-11	7.6e-07	9.872244e+05	37	5.72
adlittle	56	138	55	137	8.6e-14	3.4e-11	2.254950e+05	12	0.02
afiro	27	51	27	51	9.1e-12	7.2e-15	-4.647531e+02	8	0.01
agg	488	615	390	477	5.4e-09	2.7e-12	-3.599177e+07	19	0.46
agg2	516	758	514	750	2.9e-11	3.9e-08	-2.023925e+07	23	1.04
agg3	516	758	514	750	2.8e-11	6.9e-14	1.031212e+07	22	1.00
bandm	305	472	240	395	8.1e-13	3.5e-12	-1.586280e+02	17	0.21
beaconfd	173	295	86	171	7.8e-13	2.4e-15	3.359249e+04	11	0.09
blend	74	114	71	111	7.8e-13	3.5e-15	-3.081215e+01	10	0.04
bnl1	643	1586	610	1491	8.6e-11	3.2e-08	1.977630e+03	39	1.23
bnl2	2324	4486	1964	4008	4.4e-09	8.2e-08	1.811237e+03	31	6.59
boeing1	351	726	331	697	4.1e-11	2.2e-11	-3.352136e+02	20	0.39
boeing2	166	305	125	264	2.8e-07	8.6e-09	-3.150187e+02	14	0.08
bore3d	233	334	81	138	4.0e-14	4.8e-13	1.373080e+03	16	0.07
brandy *	220	303	133	238	5.2e-04	7.8e-07	1.518511e+03	18	0.19
capri	271	482	241	436	3.2e-10	3.8e-12	2.690013e+03	19	0.22
cycle	1903	3371	1420	2773	5.3e-09	4.4e-11	-5.226393e+00	24	3.01
czprob	929	3562	671	2779	3.7e-10	1.1e-07	2.185197e+06	26	0.75
d2q06c	2171	5831	2132	5728	1.6e-08	8.4e-08	1.227842e+05	23	10.78
d6cube	415	6184	403	5443	2.0e-09	1.3e-08	3.154917e+02	16	3.97
degen2	444	757	444	757	3.1e-13	1.1e-11	-1.435178e+03	12	0.65
degen3	1503	2604	1503	2604	1.1e-11	5.5e-11	-9.872940e+02	14	10.95
dfl001	6071	12230	5984	12143	3.9e-10	4.1e-08	1.126640e+07	49	850.63
e226	223	472	198	429	1.0e-12	9.0e-10	-2.586493e+01	18	0.25
etamacro	400	816	334	669	1.6e-14	3.1e-08	-7.557152e+02	25	0.48
fffff800	524	1028	322	826	1.0e-06	6.9e-08	5.556796e+05	27	0.90
finnis	497	1064	438	935	6.9e-12	1.1e-08	1.727911e+05	25	0.44
fit1d	24	1049	24	1049	2.3e-13	1.4e-09	-9.146378e+03	18	0.81
fit1p	627	1677	627	1677	7.4e-09	4.6e-08	9.146378e+03	17	0.84
fit2d	25	10524	25	10524	6.2e-14	2.4e-08	-6.846429e+04	23	10.88
fit2p	3000	13525	3000	13525	4.5e-08	1.8e-06	6.846441e+04	19	5.73
forplan	161	492	121	447	3.3e-06	1.4e-08	-6.642190e+02	23	0.41
ganges	1309	1706	1113	1510	5.0e-07	9.7e-09	-1.095857e+05	17	0.95
gfrd-pnc	616	1160	590	1134	9.4e-15	2.2e-11	6.902236e+06	18	0.25
greenbea *	2392	5598	1933	4164	2.7e-03	1.2e-06	-7.255582e+07	61	9.78
greenbeb *	2392	5598	1932	4154	1.3e-05	5.9e-11	-4.302260e+06	39	5.69
grow15	300	645	300	645	4.9e-05	1.1e-13	-1.068709e+08	20	0.66
grow22	440	946	440	946	1.9e-06	5.4e-15	-1.608343e+08	23	1.13
grow7	140	301	140	301	1.7e-09	1.5e-09	-4.778781e+07	17	0.26
israel	174	316	174	316	5.4e-12	1.3e-08	-8.966448e+05	21	0.72
kb2	43	68	43	68	3.8e-10	1.5e-16	-1.749900e+03	13	0.02
lotfi	153	366	133	346	4.2e-09	1.4e-15	-2.526471e+01	15	0.09
maros-r7	3136	9408	2152	7440	1.9e-11	1.5e-11	1.497185e+06	14	34.04
maros	846	1966	655	1437	1.6e-08	6.9e-11	-5.806374e+04	20	0.76
mod2 *	34774	66409	28761	56348	8.8e-06	5.4e-05	4.550990e+07	73	211.59

Table 2: Computational Results for Feasible Problems on an IBM quad using Ng-Peyton solver (Part 2). *=terminated with `unknown` status.

	Before Preprocessing		After Preprocessing		Relative	Relative	Primal		CPU Time
Name	Rows	Cols	Rows	Cols	Infeas.	Comp.	Objective	Iters	(secs)
modszk1	687	1620	665	1599	3.4e-08	3.0e-12	3.206194e+02	22	0.65
NEMSafm	334	2348	322	1402	1.3e-14	1.7e-11	-6.792374e+03	17	0.24
NEMScem	651	1712	479	1540	2.2e-10	1.9e-08	8.977233e+04	19	0.35
NEMSemm1	3945	75352	3230	41048	1.1e-15	3.0e-06	5.129611e+05	57	217.62
NEMSemm2	6943	48878	4526	26754	1.6e-10	2.2e-06	5.810806e+05	37	13.02
NEMSpmm1	2372	8903	2227	7145	2.7e-08	4.8e-08	3.274158e+05	38	14.16
NEMSpmm2	2301	8734	2081	7944	4.2e-08	1.9e-07	2.917948e+05	40	16.50
NEMSwrld	7138	28550	5621	23706	1.5e-13	1.7e-06	-2.603094e+02	43	198.47
nesm	662	3105	654	2922	3.3e-12	1.4e-07	1.407604e+07	27	1.94
NL	7039	15325	6665	14680	1.9e-12	9.9e-07	1.229265e+06	35	35.28
pds-10	16558	49932	15648	48780	2.6e-10	3.5e-06	2.672717e+10	35	617.59
perold	625	1506	593	1374	8.8e-07	2.8e-11	-9.380755e+03	34	1.57
pilot.ja	940	2267	810	1804	2.9e-05	7.7e-08	-6.113136e+03	32	4.10
pilot	1441	4860	1368	4543	3.4e-07	2.5e-07	-5.574897e+02	31	27.88
pilot.we	722	2928	701	2814	2.3e-11	1.2e-07	-2.720107e+06	46	2.07
pilot4	410	1123	396	1022	8.6e-05	2.1e-08	-2.581139e+03	47	2.32
pilot87	2030	6680	1971	6373	5.2e-07	6.6e-07	3.017105e+02	30	85.26
pilotnov	975	2446	848	2117	2.4e-07	4.7e-09	-4.497276e+03	17	2.02
radex	16	26	15	25	1.9e-13	6.2e-14	3.584229e+05	8	0.02
recipe	91	204	64	123	1.3e-10	2.6e-15	-2.666160e+02	9	0.02
sc105	105	163	104	162	9.0e-09	2.4e-16	-5.220206e+01	10	0.02
sc205	205	317	203	315	1.1e-11	1.1e-13	-5.220206e+01	11	0.05
sc50a	50	78	49	77	3.1e-11	1.0e-15	-6.457508e+01	8	0.01
sc50b	50	78	48	76	2.8e-09	7.4e-11	-7.000000e+01	6	0.01
scagr25	471	671	469	669	3.2e-12	2.2e-13	-1.475343e+07	18	0.21
scagr7	129	185	127	183	1.7e-13	7.9e-09	-2.331390e+06	14	0.04
scfxm1	330	600	305	568	6.2e-07	1.6e-09	1.841676e+04	17	0.23
scfxm2	660	1200	610	1136	1.5e-08	5.3e-13	3.666026e+04	20	0.56
scfxm3	990	1800	915	1704	5.2e-08	3.6e-12	5.490125e+04	20	0.87
scorpion	388	466	340	412	4.4e-14	6.1e-16	1.878125e+03	12	0.12
scrs8	490	1275	421	1199	6.9e-13	1.1e-08	9.042970e+02	22	0.34
scsd1	77	760	77	760	7.1e-15	1.3e-15	8.666667e+00	9	0.09
scsd6	147	1350	147	1350	9.5e-15	2.8e-09	5.050000e+01	12	0.20
scsd8	397	2750	397	2750	5.2e-15	9.2e-08	9.050001e+02	11	0.36
sctap1	300	660	284	644	3.3e-14	2.3e-13	1.412250e+03	16	0.16
sctap2	1090	2500	1033	2443	2.1e-15	5.6e-15	1.724807e+03	14	0.58
sctap3	1480	3340	1408	3268	6.0e-16	1.3e-13	1.424000e+03	15	0.84
seba	515	1036	448	901	2.8e-13	2.7e-12	1.571160e+04	14	3.69
share1b	117	253	112	248	2.4e-08	3.4e-10	-7.658932e+04	19	0.11
share2b	96	162	96	162	1.4e-11	1.5e-14	-4.157322e+02	17	0.07
shell	536	1777	487	1451	2.4e-13	1.6e-11	1.208825e+09	21	0.36
ship04l	402	2166	292	1905	6.0e-14	2.8e-13	1.793325e+06	13	0.27
ship04s	402	1506	216	1281	1.0e-11	7.0e-09	1.798715e+06	13	0.16
ship08l	778	4363	470	3121	5.7e-14	8.9e-11	1.909055e+06	16	0.50
ship08s	778	2467	276	1604	3.1e-13	3.0e-11	1.920098e+06	12	0.19

Table 3: Computational Results for Feasible Problems on an IBM quad using Ng-Peyton solver (Part 3). *=terminated with `unknown` status.

	Before Preprocessing		After Preprocessing						CPU Time
Name	Rows	Cols	Rows	Cols	Relative Infeas.	Relative Comp.	Primal Objective	Iters	(secs)
ship12l	1151	5533	610	4171	3.5e-14	2.0e-07	1.470188e+06	16	0.68
ship12s	1151	2869	340	1943	5.5e-14	3.6e-13	1.489236e+06	13	0.25
sierra	1227	2735	1212	2705	5.4e-16	8.0e-10	1.539436e+07	21	1.03
stair	356	614	356	532	1.6e-08	2.7e-09	-2.512670e+02	14	0.53
standata	359	1274	314	796	7.7e-15	5.4e-09	1.257700e+03	13	0.11
standgub	361	1383	314	796	7.7e-15	5.4e-09	1.257700e+03	13	0.13
standmps	467	1274	422	1192	3.4e-14	3.2e-15	1.406017e+03	26	0.38
stocfor1	117	165	102	150	4.3e-13	3.6e-11	-4.113198e+04	12	0.03
stocfor2	2157	3045	1980	2868	8.7e-11	1.0e-07	-3.902441e+04	20	1.26
stocfor3	16675	23541	15362	22228	2.0e-09	6.1e-08	-3.997678e+04	31	14.95
truss	1000	8806	1000	8806	1.3e-13	1.8e-09	4.588158e+05	20	2.73
tuff	333	628	257	567	3.5e-09	2.9e-13	2.921478e-01	20	0.40
vtp.base	198	346	72	111	1.5e-08	2.6e-09	1.298315e+05	11	0.02
wood1p *	244	2595	171	1718	5.4e-08	2.1e-14	1.442902e+00	22	5.58
woodw	1098	8418	708	5364	3.2e-11	1.2e-10	1.304476e+00	31	2.85
world *	34506	67147	28653	58028	1.9e-02	3.1e-04	7.185805e+07	58	181.26

Table 4: Computational Results for Infeasible Problems on IBM quad using Ng-Peyton solver *=terminated with `unknown` status; †=infeasibility detected during preprocessing.

Name	Before Preprocessing Rows	Before Preprocessing Cols	After Preprocessing Rows	After Preprocessing Cols	Relative Infeas.	Relative Comp.	Primal Objective	Iters	CPU Time (secs)
bgdbg1	348	629	249	509	1.8e+02	4.0e+00	4.155802e+01	6	0.05
bgetam	400	816	334	669	8.4e+01	1.2e+01	-3.571285e+04	7	0.16
bgindy	2671	10880	2657	10866	4.1e+01	2.6e+00	8.761120e+08	8	18.94
bgprtr	20	40	20	40	1.9e-01	3.3e-01	8.008869e+06	6	0.01
box1	231	261	231	261	5.9e-02	1.0e+00	5.775809e+02	4	0.03
ceria3d	3576	4400	3576	4400	8.0e-02	7.4e-02	-9.975419e-01	12	6.17
chemcom	288	744	288	744	4.9e+02	1.9e+00	3.908033e+05	8	0.11
cplex1	3005	5224	3005	5224	5.0e+07	9.2e+00	-2.701093e+09	5	0.56
cplex2 *	224	378	224	378	2.6e-07	5.9e-05	6.552110e-01	42	0.31
ex72a	197	215	197	215	4.2e-01	1.0e+00	4.579770e+02	4	0.05
ex73a	193	211	193	211	4.1e-01	1.0e+00	4.449144e+02	4	0.03
forest6	66	131	66	131	9.2e+01	6.5e-01	4.139797e+05	11	0.03
galenet	8	14	5	9	4.7e+01	9.4e-01	0.000000e+00	5	0.00
gosh	3792	13455	3479	12502	1.7e+01	1.1e+01	4.141377e+02	13	13.85
greenbea-i	2393	5596	1933	4153	1.1e+04	7.7e+00	2.433071e+03	10	1.91
itest2	9	13	9	13	2.0e+01	4.6e-01	0.000000e+00	5	0.01
itest6	11	17	10	15	5.0e+05	1.1e+00	8.730497e+05	5	0.00
klein1	54	108	54	108	3.1e+03	9.2e+00	0.000000e+00	32	0.14
klein2	477	531	477	531	3.5e+04	3.8e+02	0.000000e+00	23	6.49
klein3	994	1082	994	1082	9.5e+04	1.4e+03	0.000000e+00	27	54.94
mondou2	312	604	259	467	8.0e+00	4.0e+00	6.313890e+08	8	0.05
pang	361	741	333	685	1.1e-02	3.6e+00	2.108127e+04	16	0.28
pilot4i	410	1123	396	1022	1.3e+04	6.4e-01	-1.359148e+03	32	1.61
qual	323	464	305	441	2.2e+00	4.8e-03	-5.835719e+04	35	0.46
reactor	318	808	269	602	9.9e+00	6.4e-01	-3.285658e+05	9	0.12
refinery	323	464	303	439	3.5e+01	6.4e-01	-5.227856e+04	20	0.28
vol1	323	464	305	441	2.7e+00	5.9e-02	-6.099720e+04	31	0.39

Table 5: Computational Results for Large Problems on IBM quad using Ng-Peyton solver *=terminated with `unknown` status; †=infeasibility detected during preprocessing.

Name	Before Preprocessing Rows	Before Preprocessing Cols	After Preprocessing Rows	After Preprocessing Cols	Relative Infeas.	Relative Comp.	Primal Objective	Iters	CPU Time (secs)
bas1lp	5411	9825	5410	9824	7.5e-11	5.4e-09	3.630000e+02	9	362.94
baxter	27441	30733	23871	30122	1.3e-10	1.6e-09	5.600726e+07	28	1145.58
dbir1	18804	45775	14032	38763	2.7e-03	4.0e-07	-8.106706e+06	26	1868.51
fxm3_16 *	41340	85575	38630	82558	1.5e-02	5.6e-04	1.844682e+04	62	115.98
nug12 *	3192	8856	3192	8856	1.2e-08	2.2e-06	5.228951e+02	43	1708.21
pds-20	33874	108175	32287	106180	4.3e-10	7.5e-06	2.382181e+10	48	6890.92
seymour_lp	4944	6316	4827	6082	5.9e-09	2.0e-07	4.038465e+02	15	969.23