Observation Filters - Optimal

					No weight (original)						No weight-U (original)						Weighted						Weighted-U					
#	$\|\mathcal{G}\|$	% Obs	$\|O\|$	$\|G^*\|$	Time	AR	FPR	FNR	Acc	$\|S\|$	Time	AR	FPR	FNR	Acc	$\|S\|$	Time	AR	FPR	FNR	Acc	$\|S\|$	Time	AR	FPR	FNR	Acc	$\|S\|$
BLOCKS (624)	20.3	10	1.25	8.0	19.741	0.44	0.24	0.32	86.1	7.53	20.07	0.44	0.25	0.32	86.1	7.56	15.399	0.05	0.2	0.75	22.2	1.97	9.927	0.34	0.59	0.07	97.2	17.67
		30	3.08	3.97	20.43	0.46	0.14	0.4	77.8	2.5	17.436	0.44	0.24	0.31	86.1	4.67	12.883	0.23	0.2	0.58	58.3	1.67	8.544	0.2	0.77	0.04	97.2	16.36
		50	4.42	2.5	20.467	0.59	0.21	0.2	88.9	3.03	17.152	0.52	0.3	0.19	88.9	3.86	10.864	0.34	0.23	0.43	63.9	1.58	8.434	0.18	0.78	0.04	100.0	13.33
		70	6.67	1.94	20.609	0.85	0.05	0.1	97.2	1.83	16.547	0.76	0.14	0.1	97.2	2.42	10.54	0.5	0.15	0.35	77.8	1.19	6.739	0.27	0.67	0.06	100.0	8.42
		100	8.83	1.83	20.71	0.92	0.0	0.08	100.0	1.67	15.513	0.92	0.0	0.08	100.0	1.67	10.382	0.74	0.0	0.26	100.0	1.0	6.716	0.48	0.44	0.07	100.0	3.42
IPC-GRID (832)	7.5	10	1.63	2.71	8.008	0.87	0.05	0.08	93.8	2.67	8.473	0.88	0.05	0.07	95.8	2.69	8.101	0.35	0.17	0.48	43.8	1.19	7.047	0.4	0.53	0.07	87.5	5.44
		30	4.0	1.21	8.357	0.93	0.02	0.05	95.8	1.15	8.52	0.94	0.02	0.04	97.9	1.17	7.235	0.74	0.1	0.16	79.2	1.1	6.62	0.33	0.67	0.0	100.0	5.06
		50	6.19	1.13	8.431	0.96	0.01	0.03	97.9	1.08	8.545	0.96	0.01	0.03	97.9	1.08	7.138	0.9	0.03	0.07	95.8	1.04	6.402	0.44	0.56	0.0	100.0	3.98
		70	8.69	1.04	8.56	0.97	0.02	0.01	97.9	1.06	8.56	0.97	0.02	0.01	97.9	1.06	7.143	0.98	0.0	0.02	97.9	1.0	6.432	0.53	0.47	0.0	100.0	2.67
		100	11.88	1.0	8.511	1.0	0.0	0.0	100.0	1.0	8.504	1.0	0.0	0.0	100.0	1.0	7.1	1.0	0.0	0.0	100.0	1.0	6.487	0.69	0.31	0.0	100.0	1.63
LOGISTICS (624)	10.0	10	2.0	2.83	8.787	0.9	0.1	0.0	100.0	3.53	9.348	0.9	0.1	0.0	100.0	3.53	9.33	0.41	0.2	0.38	55.6	2.11	7.889	0.28	0.72	0.0	100.0	10.0
		30	5.75	1.19	9.143	0.92	0.08	0.0	100.0	1.47	9.362	0.92	0.08	0.0	100.0	1.47	9.334	0.81	0.09	0.1	83.3	1.19	7.917	0.12	0.88	0.0	100.0	9.83
		50	9.42	1.06	9.326	0.96	0.04	0.0	100.0	1.17	9.385	0.96	0.04	0.0	100.0	1.17	8.985	0.91	0.06	0.03	97.2	1.17	7.823	0.13	0.87	0.0	100.0	9.31
		70	13.25	1.03	9.356	0.99	0.01	0.0	100.0	1.06	9.426	0.99	0.01	0.0	100.0	1.06	8.074	0.97	0.01	0.01	97.2	1.03	7.807	0.21	0.79	0.0	100.0	7.44
		100	18.17	1.0	9.409	1.0	0.0	0.0	100.0	1.0	9.344	1.0	0.0	0.0	100.0	1.0	7.906	1.0	0.0	0.0	100.0	1.0	7.892	0.31	0.69	0.0	100.0	5.33
MICONIC (624)	6.0	10	2.0	2.53	5.493	0.89	0.11	0.0	100.0	2.97	5.947	0.89	0.11	0.0	100.0	2.97	5.975	0.51	0.19	0.3	77.8	2.14	5.958	0.42	0.58	0.0	100.0	6.0
		30	5.42	1.22	5.768	0.95	0.05	0.0	100.0	1.36	5.941	0.95	0.05	0.0	100.0	1.36	6.017	0.82	0.1	0.08	88.9	1.31	5.984	0.2	0.8	0.0	100.0	6.0
		50	8.42	1.06	5.803	0.97	0.03	0.0	100.0	1.11	5.95	0.97	0.03	0.0	100.0	1.11	6.018	0.88	0.09	0.03	97.2	1.19	5.981	0.18	0.82	0.0	100.0	6.0
		70	11.92	1.0	5.899	0.98	0.02	0.0	100.0	1.06	5.94	0.98	0.02	0.0	100.0	1.06	5.993	0.99	0.01	0.0	100.0	1.03	6.022	0.17	0.83	0.0	100.0	5.94
		100	16.33	1.0	5.91	1.0	0.0	0.0	100.0	1.0	5.983	1.0	0.0	0.0	100.0	1.0	5.959	1.0	0.0	0.0	100.0	1.0	5.961	0.19	0.81	0.0	100.0	5.25
ROVERS (624)	6.0	10	1.67	2.28	5.929	0.83	0.13	0.04	97.2	2.75	6.414	0.83	0.13	0.04	97.2	2.75	6.45	0.47	0.19	0.33	66.7	1.81	6.457	0.38	0.62	0.0	100.0	6.0
		30	3.67	1.31	6.259	0.94	0.06	0.0	100.0	1.44	6.449	0.94	0.06	0.0	100.0	1.44	6.483	0.77	0.14	0.09	88.9	1.47	6.497	0.22	0.78	0.0	100.0	5.97
		50	5.75	1.19	6.34	0.92	0.01	0.07	88.9	1.08	6.453	0.92	0.01	0.07	88.9	1.08	6.42	0.89	0.03	0.08	94.4	1.08	6.478	0.22	0.78	0.0	100.0	5.53
		70	8.17	1.0	6.373	0.99	0.01	0.0	100.0	1.03	6.452	0.99	0.01	0.0	100.0	1.03	6.502	1.0	0.0	0.0	100.0	1.0	5.939	0.24	0.76	0.0	100.0	4.39
		100	10.83	1.0	6.43	1.0	0.0	0.0	100.0	1.0	6.456	1.0	0.0	0.0	100.0	1.0	6.564	1.0	0.0	0.0	100.0	1.0	5.955	0.49	0.51	0.0	100.0	2.5
SOKOBAN (624)	8.7	10	2.33	2.11	15.967	0.39	0.31	0.3	52.8	2.08	16.837	0.38	0.38	0.25	61.1	2.94	13.807	0.26	0.31	0.43	36.1	1.53	9.165	0.25	0.74	0.01	100.0	8.17
		30	6.5	1.25	16.354	0.75	0.13	0.13	80.6	1.25	16.473	0.64	0.3	0.06	91.7	2.06	12.547	0.72	0.11	0.17	80.6	1.08	7.97	0.17	0.83	0.0	100.0	7.94
		50	10.33	1.22	16.397	0.92	0.03	0.05	100.0	1.19	14.275	0.83	0.12	0.05	100.0	1.39	12.054	0.9	0.0	0.1	97.2	1.0	7.88	0.2	0.79	0.01	100.0	6.75
		70	14.67	1.03	16.29	0.99	0.0	0.01	100.0	1.0	13.463	0.94	0.04	0.01	100.0	1.08	11.162	0.99	0.0	0.01	100.0	1.0	7.95	0.3	0.69	0.01	100.0	4.67
		100	20.17	1.0	16.406	1.0	0.0	0.0	100.0	1.0	13.492	1.0	0.0	0.0	100.0	1.0	9.521	1.0	0.0	0.0	100.0	1.0	7.882	0.67	0.33	0.0	100.0	1.83
Average					11.049	0.88	0.06	0.06	95.16	1.77	10.424	0.86	0.08	0.05	96.23	1.96	8.73	0.74	0.09	0.18	83.33	1.26	7.158	0.31	0.68	0.01	99.4	6.76

Table 1: Results for weighted observation sequences, with optimal observations. Each observation ω_i receives weight i.

Observation Filters - Suboptimal

					No weight (original)						No weight-U (original)						Weighted						Weighted-U					
#	$\|\mathcal{G}\|$	% Obs	$\|O\|$	$\|G^*\|$	Time	AR	FPR	FNR	Acc	$\|S\|$	Time	AR	FPR	FNR	Acc	$\|S\|$	Time	AR	FPR	FNR	Acc	$\|S\|$	Time	AR	FPR	FNR	Acc	$\|S\|$
BLOCKS (624)	20.3	10	1.42	7.61	19.699	0.41	0.24	0.35	86.1	6.86	20.083	0.42	0.25	0.32	88.9	7.42	15.396	0.08	0.21	0.71	27.8	2.39	9.93	0.33	0.59	0.08	91.7	16.94
		30	3.83	3.58	20.387	0.49	0.2	0.31	77.8	3.17	17.332	0.35	0.4	0.25	86.1	6.92	12.985	0.2	0.28	0.51	61.1	1.94	8.591	0.18	0.78	0.04	100.0	16.78
		50	5.92	3.19	20.501	0.55	0.21	0.24	86.1	3.08	17.226	0.42	0.4	0.18	94.4	5.61	10.878	0.34	0.2	0.46	69.4	1.56	8.443	0.2	0.78	0.02	100.0	15.61
		70	8.5	2.53	20.509	0.71	0.08	0.21	91.7	2.06	16.505	0.56	0.28	0.17	94.4	3.06	10.485	0.45	0.14	0.41	83.3	1.28	6.751	0.18	0.78	0.04	100.0	13.53
		100	11.83	2.25	20.579	0.84	0.0	0.16	100.0	1.67	15.523	0.84	0.0	0.16	100.0	1.67	10.556	0.66	0.0	0.34	100.0	1.0	6.742	0.36	0.48	0.16	100.0	4.08
IPC-GRID (832)	7.5	10	2.06	1.58	8.063	0.77	0.14	0.09	91.7	1.81	8.516	0.75	0.19	0.06	97.9	2.4	8.157	0.4	0.25	0.35	54.2	1.23	7.095	0.26	0.67	0.07	87.5	5.19
		30	5.56	1.4	8.364	0.82	0.06	0.12	93.8	1.13	8.497	0.77	0.16	0.07	97.9	1.6	7.259	0.63	0.15	0.22	77.1	1.08	6.566	0.28	0.67	0.05	100.0	5.04
		50	8.88	1.35	8.437	0.84	0.06	0.09	93.8	1.13	8.558	0.84	0.14	0.02	100.0	1.56	7.121	0.75	0.11	0.13	91.7	1.15	6.387	0.32	0.64	0.05	100.0	4.42
		70	12.56	1.31	8.517	0.89	0.04	0.07	100.0	1.1	8.56	0.85	0.09	0.06	100.0	1.23	7.123	0.9	0.01	0.09	97.9	1.0	6.426	0.41	0.55	0.05	100.0	3.63
		100	17.25	1.5	8.517	0.94	0.0	0.06	100.0	1.0	8.6	0.94	0.0	0.06	100.0	1.0	7.191	0.94	0.0	0.06	100.0	1.0	6.426	0.57	0.38	0.06	100.0	1.75
LOGISTICS (624)	10.0	10	2.67	2.0	8.834	0.88	0.11	0.01	100.0	2.44	9.368	0.85	0.14	0.01	100.0	2.72	9.431	0.48	0.15	0.38	52.8	1.33	7.838	0.2	0.8	0.0	100.0	10.0
		30	7.5	1.14	9.219	0.91	0.09	0.0	100.0	1.33	9.337	0.75	0.25	0.0	100.0	2.14	9.358	0.75	0.15	0.1	80.6	1.31	7.843	0.11	0.89	0.0	100.0	9.97
		50	11.92	1.06	9.251	0.88	0.1	0.01	97.2	1.25	9.41	0.86	0.14	0.0	100.0	1.47	8.973	0.9	0.07	0.03	94.4	1.17	7.852	0.12	0.88	0.0	100.0	9.28
		70	16.67	1.03	9.315	0.97	0.03	0.0	100.0	1.08	9.378	0.92	0.08	0.0	100.0	1.19	8.079	0.96	0.03	0.01	97.2	1.06	7.869	0.2	0.8	0.0	100.0	8.11
		100	23.17	1.0	9.313	1.0	0.0	0.0	100.0	1.0	9.357	1.0	0.0	0.0	100.0	1.0	7.826	1.0	0.0	0.0	100.0	1.0	7.889	0.3	0.7	0.0	100.0	5.67
MICONIC (624)	6.0	10	3.0	1.83	5.502	0.76	0.24	0.0	100.0	2.67	5.915	0.74	0.26	0.0	100.0	3.0	5.982	0.65	0.14	0.21	72.2	1.64	5.997	0.31	0.69	0.0	100.0	6.0
		30	7.67	1.25	5.767	0.89	0.1	0.01	100.0	1.47	5.936	0.65	0.35	0.0	100.0	2.5	6.002	0.81	0.13	0.07	91.7	1.33	5.996	0.21	0.79	0.0	100.0	6.0
		50	12.25	1.03	5.841	0.98	0.02	0.0	100.0	1.08	5.993	0.82	0.18	0.0	100.0	1.5	5.981	0.97	0.01	0.01	97.2	1.03	5.979	0.17	0.83	0.0	100.0	5.97
		70	17.33	1.0	5.882	0.99	0.01	0.0	100.0	1.03	6.014	0.9	0.1	0.0	100.0	1.31	5.956	1.0	0.0	0.0	100.0	1.0	6.029	0.17	0.83	0.0	100.0	5.94
		100	24.0	1.0	5.95	1.0	0.0	0.0	100.0	1.0	5.991	1.0	0.0	0.0	100.0	1.0	5.944	1.0	0.0	0.0	100.0	1.0	5.987	0.18	0.82	0.0	100.0	5.67
ROVERS (624)	6.0	10	1.83	2.39	6.013	0.83	0.13	0.04	88.9	2.89	6.396	0.83	0.13	0.04	88.9	2.89	6.485	0.47	0.19	0.34	75.0	1.92	6.445	0.4	0.6	0.0	100.0	6.0
		30	4.5	1.39	6.266	0.88	0.06	0.06	88.9	1.39	6.405	0.81	0.14	0.06	88.9	1.75	6.494	0.67	0.16	0.17	86.1	1.39	6.453	0.23	0.77	0.0	100.0	5.97
		50	7.17	1.11	6.349	0.93	0.04	0.03	94.4	1.14	6.428	0.86	0.11	0.03	94.4	1.33	6.444	0.94	0.01	0.04	97.2	1.06	6.43	0.2	0.8	0.0	100.0	5.58
		70	10.0	1.06	6.358	0.94	0.03	0.03	94.4	1.08	6.506	0.92	0.07	0.01	97.2	1.22	6.463	0.96	0.03	0.01	100.0	1.08	5.965	0.27	0.73	0.0	100.0	4.69
		100	13.67	1.0	6.471	1.0	0.0	0.0	100.0	1.0	6.492	1.0	0.0	0.0	100.0	1.0	6.505	1.0	0.0	0.0	100.0	1.0	5.867	0.45	0.55	0.0	100.0	2.75
SOKOBAN (624)	8.7	10	3.33	1.83	16.066	0.52	0.23	0.26	61.1	1.78	16.897	0.44	0.38	0.18	72.2	3.17	13.808	0.4	0.26	0.33	55.6	1.39	8.972	0.23	0.76	0.0	100.0	8.14
		30	8.67	1.28	16.483	0.77	0.07	0.15	83.3	1.08	16.567	0.62	0.35	0.03	97.2	2.67	12.534	0.73	0.13	0.14	88.9	1.22	7.997	0.16	0.83	0.0	100.0	7.94
		50	13.75	1.33	16.595	0.79	0.06	0.14	91.7	1.17	14.372	0.66	0.31	0.03	100.0	2.58	12.286	0.76	0.09	0.16	97.2	1.19	8.022	0.21	0.79	0.0	100.0	7.25
		70	19.33	1.36	16.524	0.8	0.02	0.18	97.2	1.03	13.715	0.85	0.07	0.08	100.0	1.39	11.069	0.82	0.0	0.18	100.0	1.0	7.92	0.25	0.72	0.03	100.0	5.94
		100	27.0	1.33	16.417	0.83	0.0	0.17	100.0	1.0	13.63	0.83	0.0	0.17	100.0	1.0	9.37	0.83	0.0	0.17	100.0	1.0	7.613	0.49	0.44	0.07	100.0	2.67
Average					11.066	0.83	0.08	0.09	93.94	1.7	10.45	0.77	0.17	0.07	96.62	2.31	8.738	0.72	0.1	0.19	84.95	1.26	7.144	0.26	0.71	0.02	99.31	7.22

Table 2: Results for weighted observation sequences, with suboptimal observations. Each observation ω_i receives weight i.