Results

Antonio Morais

April 2020

1 Results

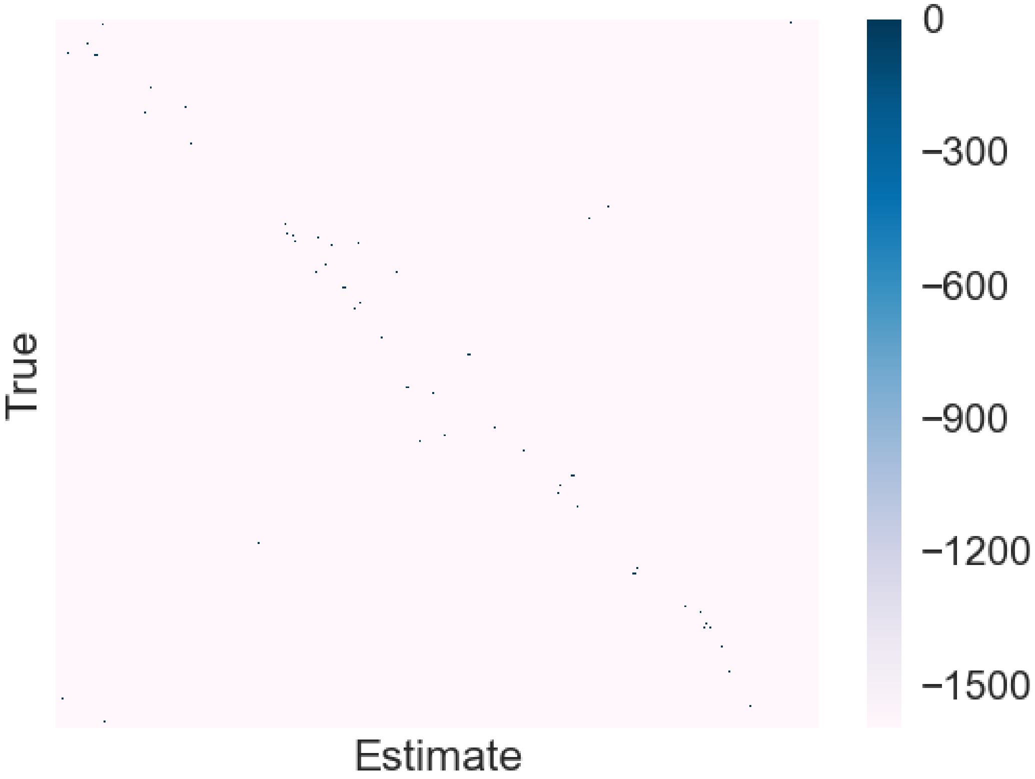

Figure 1: Kemar 1 Source 128 samples

Using	N° Sources	Noise	N° runs	N° Samples	Error Average	Max Error (Mi
Stacking Lego	1	20	50	128	0.1	2 (0)
Stacking Lego	1	20	50	256	0.04	4 (0)
Stacking Lego	1	20	50	512	0.1	6 (0)
Stacking Lego	1	20	50	1024	0	0 (0)
Stacking Lego	2	20	50	128	12.7/5.26	69 (0)
Stacking Lego	2	20	50	256	0.22/1.88	83 (0)
Stacking Lego	2	20	20	512	0.0/0.25	5 (0)
Stacking only 2 mics Lego	1	20	50	128	1.26	64 (0)
Stacking only 2 mics Lego	1	20	50	256	0.34	8 (0)
Stacking only 2 mics Lego	1	20	50	512	0.16	4 (0)
Stacking only 2 mics Lego	1	20	50	1024	0.06	2 (0)
Stacking only 2 mics Lego	1	20	50	2048	0	0 (0)
Stacking only 2 mics Lego	2	20	50	128	16/20.32	82 (0)
Stacking only 2 mics Lego	2	20	50	256	6.42/14.16	84 (0)
Stacking only 2 mics Lego	2	20	50	512	5.42/4.6	31 (0)
Stacking only 2 mics Lego	2	20	50	1024	0.36/0.22	10 (0)
Stacking Kemar	1	20	50	128	19.22	170 (0)
Stacking Kemar	1	20	50	256	20.28	171 (0)
Stacking Kemar	1	20	50	512	10.64	174 (0)
Stacking Kemar	1	20	50	1024	2.48	13 (0)
Stacking Kemar	1	20	50	2048	2	7 (0)
Stacking Kemar	2	20	50	128	31.32/45.48	154 (3)
Stacking Kemar	2	20	50	256	31.76/35.28	103 (1)
Stacking Kemar	2	20	50	512	32.52/25.52	132.5 (1
Stacking Omnidirectional	1	20	50	128	84.18	172 (16)
Stacking Omnidirectional	1	20	50	256	93.78	178 (24)
Stacking Omnidirectional	1	20	50	512	93.72	176 (0)
Stacking Omnidirectional	1	20	50	1024	105.2	176 (0)

Table 1: Stacking. The number of frequencies is equivalent to (N° Samples/2) + 1, the error average is per source

Using	N° Sources	Noise	N° runs	N° frequencies	Wrong	Not find	find
Music Lego	1	20	50	65	0	0	50
Music Lego	2	20	50	65	2(1)	0	48
Music Lego	3	20	50	65	2(1)	0	48
Music Lego	4	20	50	65	6(1)	0	44
Music Lego	5	20	50	65	10(1)	0	40
Music Lego	1	20	50	129	1(1)	0	49
Music Lego	2	20	50	129	2(1)	0	48
Music Lego	3	20	50	129	3(1)	0	47
Music Lego	4	20	50	129	5(1)	0	45
Music Lego	5	20	50	129	12(2)	0	38
Music Lego	1	20	50	257	3(1)	0	47
Music Lego	2	20	50	257	1(1)	0	49
Music Lego	3	20	50	257	3(1)	0	47
Music Lego	4	20	50	257	5(1)	0	47
Music Lego	5	20	50	257	13(2)	0	47
Music Kemar	1	20	50	65	20(1)	0	30
Music Kemar	1	20	50	129	23(1)	0	27
Music Kemar	1	20	50	257	27(1)	0	23
Music Kemar	1	20	50	513	20(1)	0	30

Table 2: Music algorithm. The wrong column is when we found wrong sources than the ones searched, not find column is when there's some sources missing (so the ones in wrong are not counted but it's still wrong and didn't find the good one), and find is number of runs where we found every source. The number in brackets is the max wrong or not found in the runs.

Using	N° Sources	Noise	N° runs	N° frequencies	Wrong	Not find	find
Music Omni (1m)	1	20	50	65	3(1)	0	47
Music Omni (1m)	2	20	50	65	1(1)	0	49
Music Omni (1m)	3	20	50	65	3(2)	0	47
Music Omni (1m)	4	20	50	65	27(2)	0	23
Music Omni (0.1m)	1	20	50	65	2(1)	0	48
Music Omni (0.1m)	2	20	50	65	14(2)	0	36
Music Omni (0.1m)	3	20	50	65	25(3)	5(2)	20
Music Omni (0.1m)	4	20	50	65	45(4)	3(3)	2
Music Omni (1m)	1	20	50	129	0	0	50
Music Omni (1m)	2	20	50	129	0	0	50
Music Omni (1m)	3	20	50	129	2(1)	0	48
Music Omni (1m)	4	20	50	129	20(2)	0	30
Music Omni (0.1m)	1	20	50	129	0	0	50
Music Omni (0.1m)	2	20	50	129	10(2)	3(2)	37
Music Omni (0.1m)	3	20	50	129	23(3)	3(2)	24
Music Omni (0.1m)	4	20	50	129	45(4)	5(3)	50

Table 3: Music algorithm for omnidirectional, the number in brackets in using is the size of the unit circle (1m is 1 meter wide).

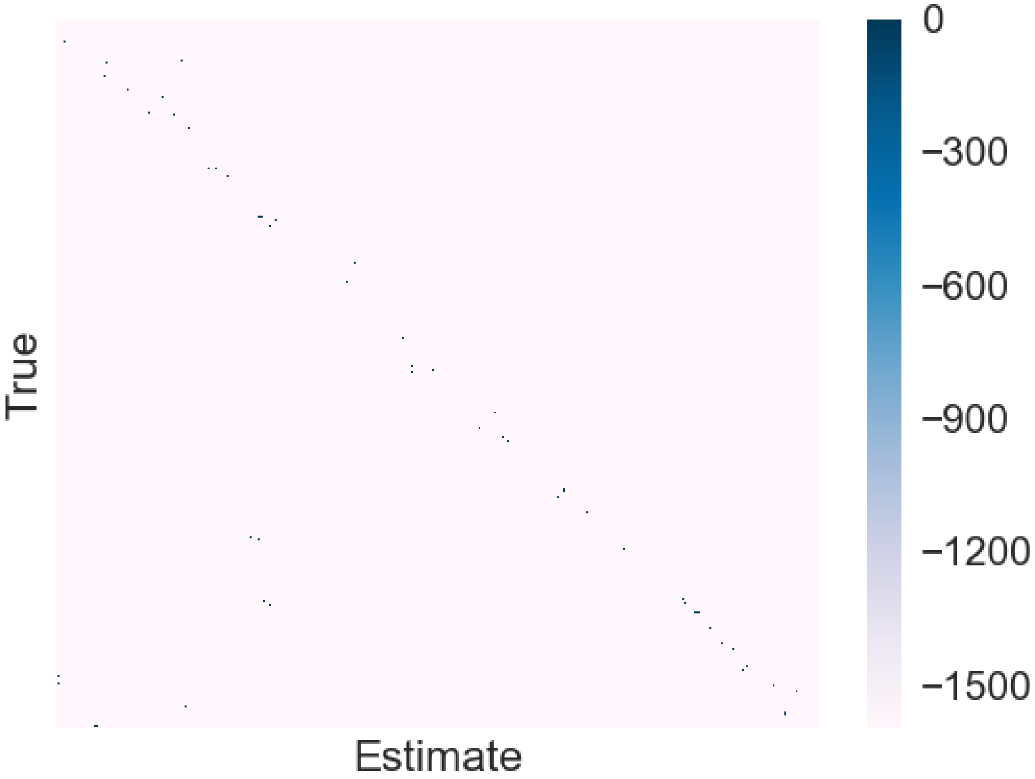

Figure 2: Kemar 1 Source 256 samples

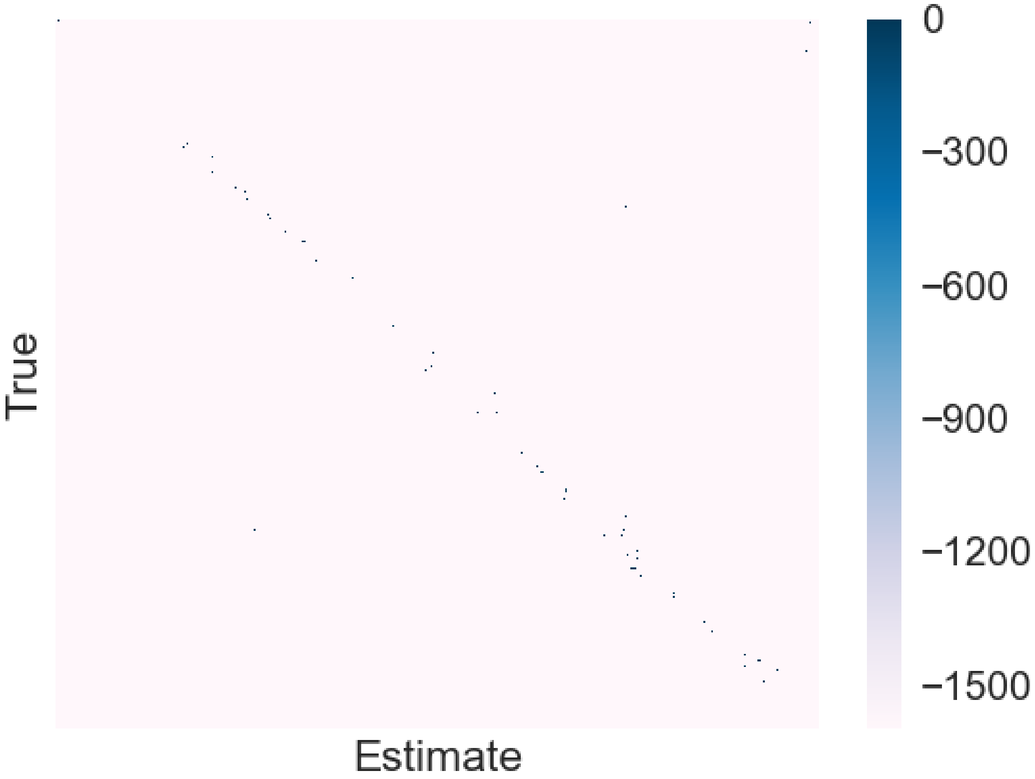

Figure 3: Kemar 1 Source 512 samples

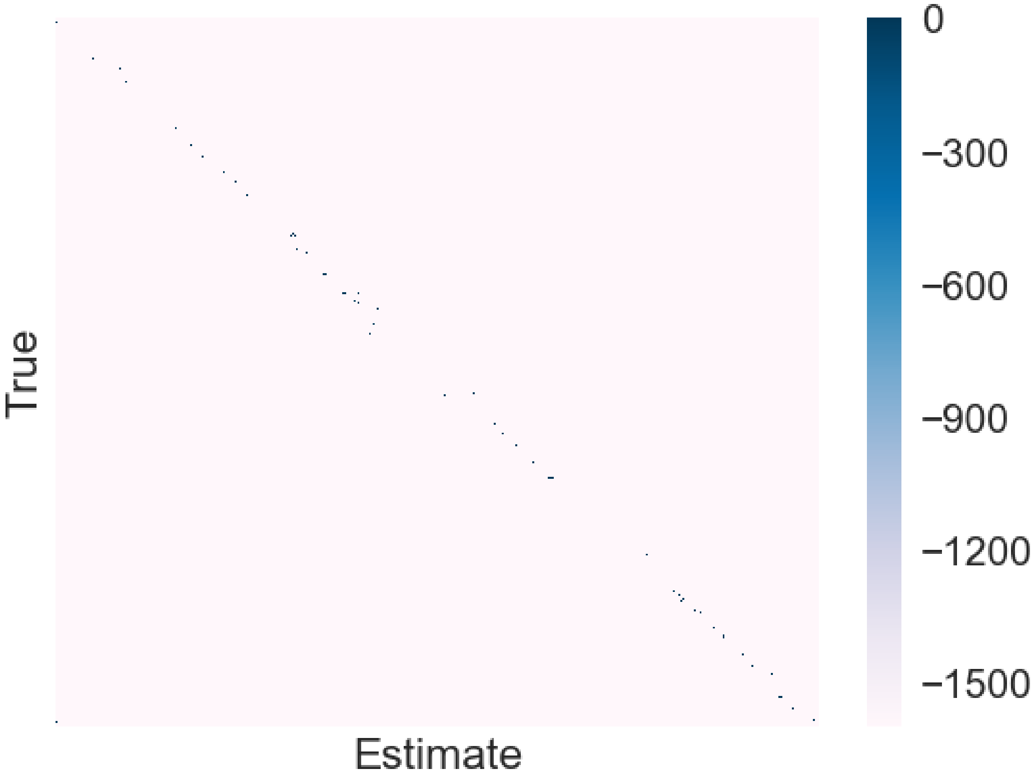

Figure 4: Kemar 1 Source 1024 samples

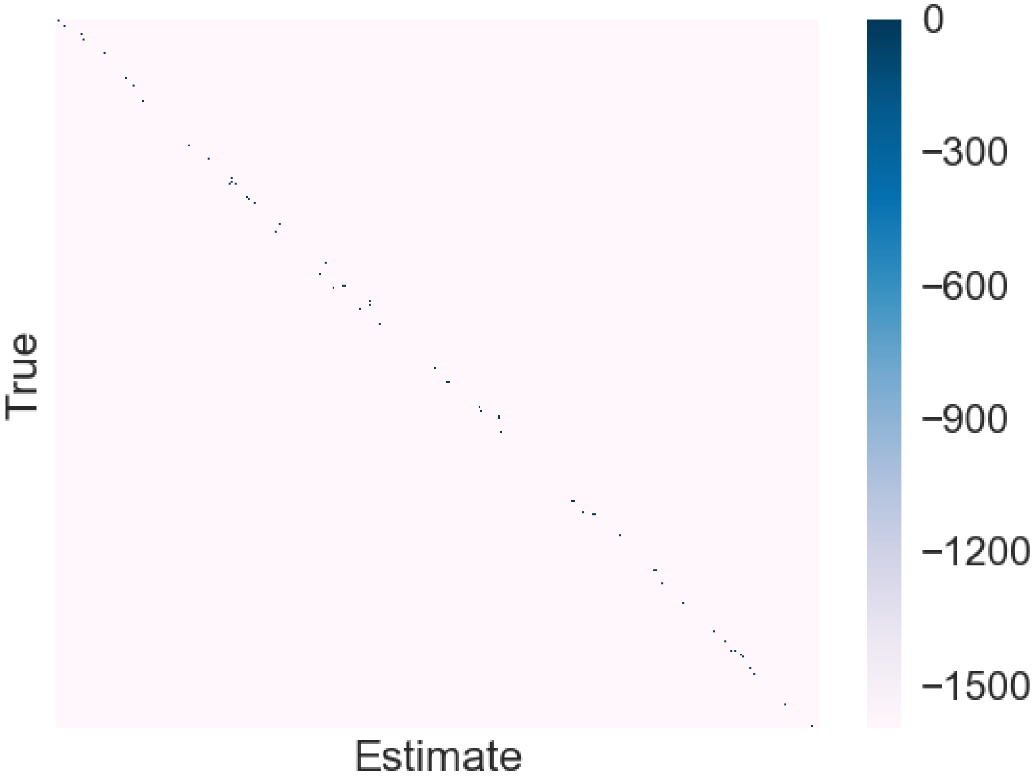

Figure 5: Kemar 1 Source 2048 samples

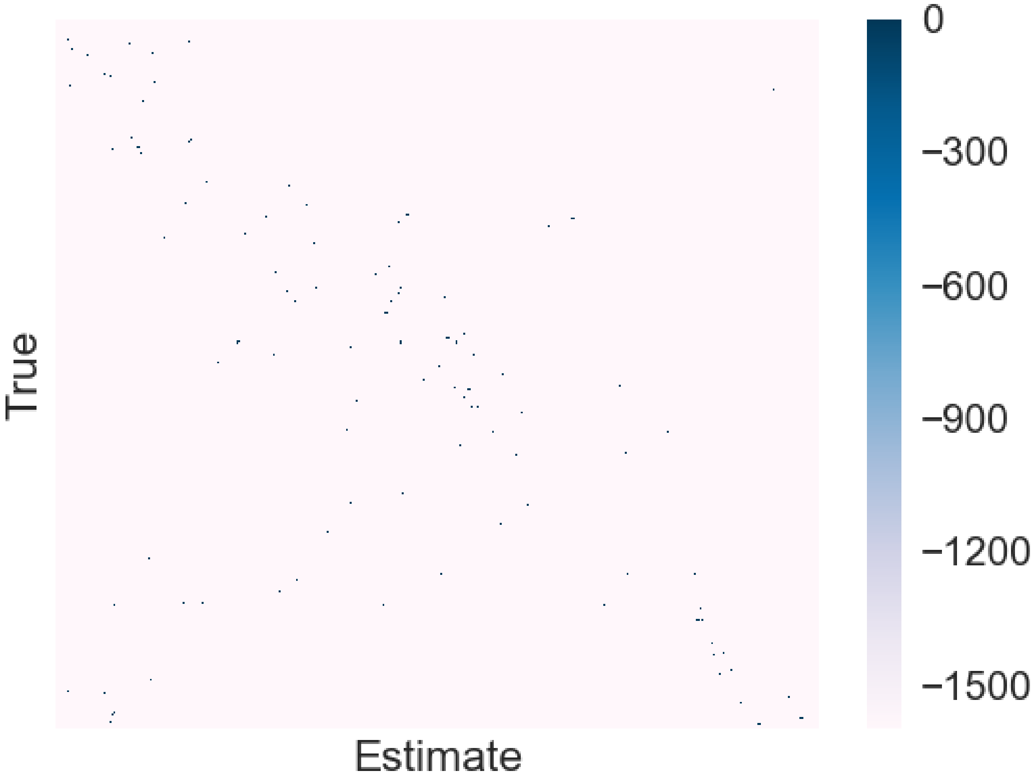

Figure 6: Kemar 2 Source 128 samples

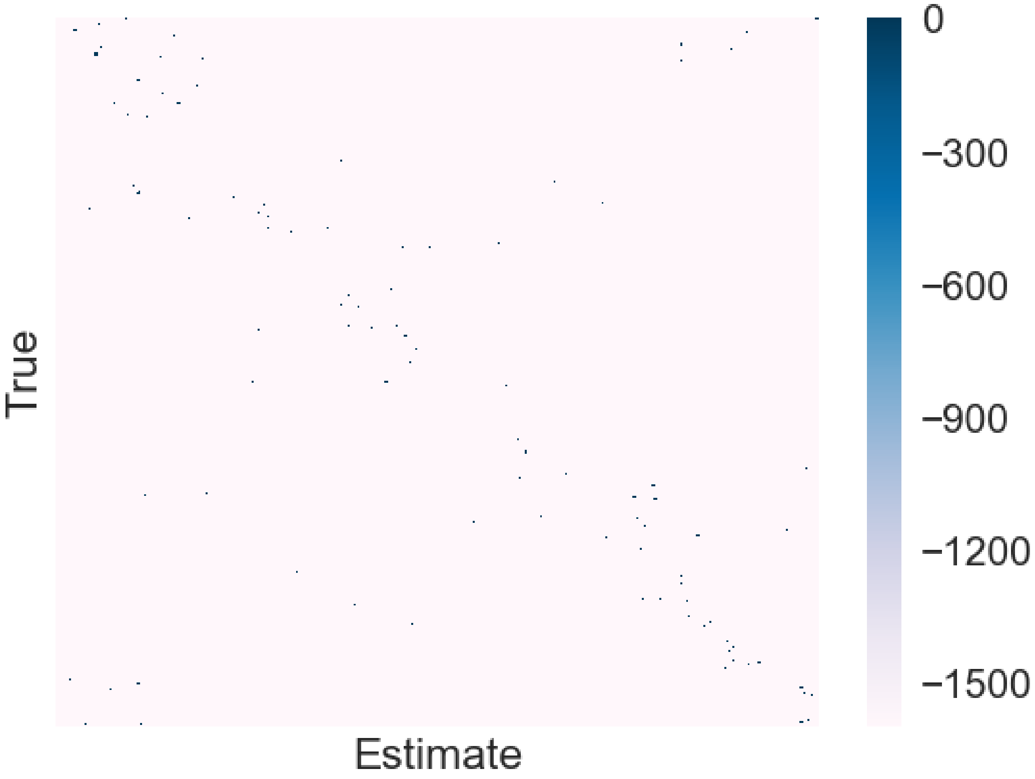

Figure 7: Kemar 2 Source 256 samples

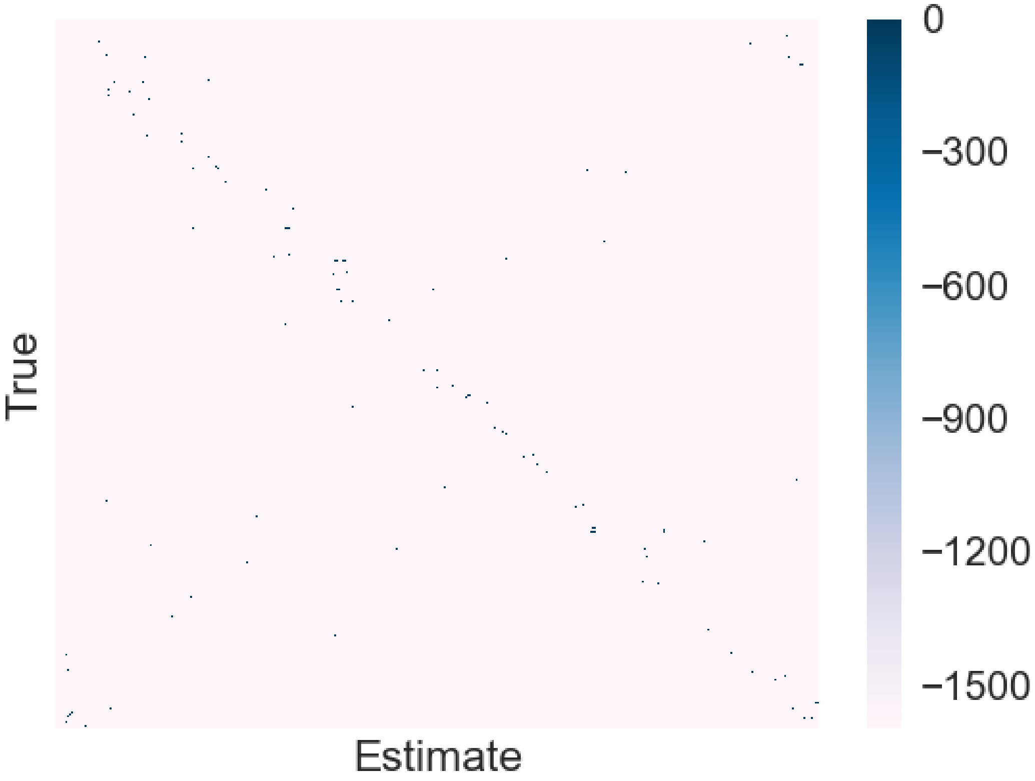

Figure 8: Kemar 2 Source 512 samples