

Supplementary material

Tab. 1: $n = 100$, $p = 100$, norm of the outliers is e^k .

	Cauchy								PP							
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8		
	True eigenvector															
	Spatial median															
$\phi = 0^\circ$	36.38	34.05	33.16	33.02	32.31	32.89	32.68	37.61	25.83	25.21	25.04	24.84	24.98	25.27		
$\phi = 30^\circ$	35.36	33.37	33.18	32.59	32.27	33.00	33.29	38.57	28.30	27.37	27.10	26.74	27.89	27.91		
$\phi = 60^\circ$	35.42	33.51	33.26	32.89	32.73	33.38	32.44	38.04	36.63	35.23	35.83	35.18	37.71	36.25		
$\phi = 90^\circ$	34.83	37.71	38.45	38.31	38.25	38.93	37.77	36.63	38.91	38.79	39.10	37.48	39.01	38.13		
	Column wise median															
$\phi = 0^\circ$	36.38	34.05	33.16	33.02	32.31	32.89	32.68	37.76	25.43	25.20	25.03	24.69	24.71	25.09		
$\phi = 30^\circ$	35.36	33.37	33.17	32.59	32.27	33.00	33.29	37.73	27.97	27.66	27.28	26.85	27.80	27.81		
$\phi = 60^\circ$	35.42	33.51	33.26	32.89	32.73	33.38	32.44	37.94	36.49	35.83	35.75	35.08	37.52	36.43		
$\phi = 90^\circ$	34.83	37.71	38.50	38.32	38.24	39.01	37.80	36.88	38.90	39.13	39.04	37.82	39.29	38.82		
	Sample eigenvector															
	Spatial median															
$\phi = 0^\circ$	25.37	22.25	21.83	21.31	21.16	21.61	21.40	28.50	20.41	20.49	20.23	19.94	20.65	20.19		
$\phi = 30^\circ$	23.47	22.28	21.90	21.35	21.36	21.30	21.47	28.33	21.98	21.60	21.10	21.27	21.39	22.10		
$\phi = 60^\circ$	23.49	22.73	22.59	22.05	21.58	22.29	21.79	27.38	25.99	25.41	25.53	24.89	27.57	26.17		
$\phi = 90^\circ$	22.96	25.72	26.49	26.27	27.15	26.64	26.30	26.64	28.71	28.11	28.21	26.56	28.53	27.57		
	Column wise median															
$\phi = 0^\circ$	25.37	22.25	21.83	21.31	21.16	21.61	21.40	28.46	20.15	20.65	20.31	20.03	20.63	20.29		
$\phi = 30^\circ$	23.47	22.28	21.90	21.35	21.36	21.30	21.47	27.06	21.63	21.69	21.24	21.43	21.35	21.91		
$\phi = 60^\circ$	23.49	22.73	22.59	22.05	21.58	22.29	21.79	27.84	25.98	25.81	25.44	24.84	27.35	26.10		
$\phi = 90^\circ$	22.96	25.72	26.51	26.27	27.09	26.72	26.25	27.09	28.60	28.23	27.91	27.07	28.52	28.42		

Tab. 2: $n = 500$, $p = 100$, norm of the outliers is e^k .

	Cauchy				PP			
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=8
	True eigenvector							
	Spatial median							
$\phi = 0^\circ$	17.37	16.60	16.33	15.75	16.12	15.88	15.79	19.31 13.09 12.73 12.34 12.71 12.55 12.69
$\phi = 30^\circ$	16.99	16.34	15.96	16.21	15.99	15.98	15.91	18.81 14.55 14.48 14.57 14.40 14.44 14.36
$\phi = 60^\circ$	16.85	16.12	15.98	16.00	16.29	15.90	15.77	18.82 17.05 16.75 17.30 17.02 16.84 17.02
$\phi = 90^\circ$	17.04	17.68	20.40	21.55	21.87	22.05	22.03	18.77 18.82 18.42 18.26 18.40 18.34 18.49
	Column wise median							
$\phi = 0^\circ$	17.37	16.60	16.33	15.75	16.12	15.88	15.79	19.38 13.12 12.76 12.37 12.82 12.42 12.76
$\phi = 30^\circ$	16.99	16.34	15.96	16.21	15.99	15.98	15.91	18.83 14.55 14.52 14.62 14.42 14.49 14.36
$\phi = 60^\circ$	16.85	16.12	15.98	16.00	16.29	15.90	15.77	18.60 16.83 16.99 17.17 17.05 16.68 17.05
$\phi = 90^\circ$	17.04	17.68	20.39	21.55	21.87	22.14	22.10	18.74 18.80 18.43 18.47 18.18 18.34 18.66
	Sample eigenvector							
	Spatial median							
$\phi = 0^\circ$	10.87	10.10	9.82	9.71	9.78	9.95	9.55	13.92 9.03 9.13 9.03 9.12 9.31 8.88
$\phi = 30^\circ$	10.65	10.21	9.87	9.80	9.84	9.93	9.94	13.34 10.02 9.78 9.96 9.84 9.96 9.97
$\phi = 60^\circ$	10.75	10.10	9.79	9.64	9.89	9.73	9.93	13.53 11.48 10.97 11.59 11.07 11.09 11.63
$\phi = 90^\circ$	10.76	11.25	14.34	15.71	16.51	16.54	16.67	13.53 12.73 12.38 11.98 12.66 12.23 12.15
	Column wise median							
$\phi = 0^\circ$	10.87	10.10	9.82	9.71	9.78	9.95	9.55	14.01 8.93 9.12 9.06 9.15 9.27 8.86
$\phi = 30^\circ$	10.65	10.21	9.87	9.80	9.84	9.93	9.94	13.23 10.08 9.78 10.01 9.84 9.96 9.97
$\phi = 60^\circ$	10.75	10.10	9.79	9.64	9.89	9.73	9.93	13.20 11.23 11.18 11.42 11.16 10.98 11.73
$\phi = 90^\circ$	10.76	11.25	14.33	15.86	16.42	16.61	16.69	13.43 12.73 12.51 12.30 12.45 12.15 12.31

Tab. 3: $n = 1000$, $p = 100$, norm of the outliers is e^k .

	Cauchy								PP							
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8		
	True eigenvector															
	Spatial median															
$\phi = 0^\circ$	13.13	12.56	12.36	12.22	12.31	12.22	12.09	15.34	10.04	9.76	9.69	9.55	9.69	9.58		
$\phi = 30^\circ$	12.93	12.60	12.34	12.25	12.21	12.15	12.15	15.40	11.69	11.51	11.46	11.40	11.32	11.33		
$\phi = 60^\circ$	12.89	12.43	12.43	12.15	12.27	12.32	12.13	15.32	13.16	13.31	13.35	13.27	13.22	13.09		
$\phi = 90^\circ$	13.03	13.46	16.43	18.33	19.51	19.73	20.08	15.57	14.44	15.14	14.50	14.61	14.25	14.37		
	Column wise median															
$\phi = 0^\circ$	13.13	12.56	12.36	12.22	12.31	12.22	12.09	15.38	9.96	9.75	9.70	9.61	9.73	9.59		
$\phi = 30^\circ$	12.93	12.60	12.34	12.25	12.21	12.15	12.15	15.52	11.73	11.50	11.46	11.41	11.37	11.37		
$\phi = 60^\circ$	12.89	12.43	12.43	12.15	12.27	12.32	12.13	15.20	13.20	13.39	13.11	13.33	13.31	13.16		
$\phi = 90^\circ$	13.03	13.46	16.43	18.32	19.56	19.72	20.04	15.60	14.35	15.10	14.47	14.61	14.43	14.30		
	Sample eigenvector															
	Spatial median															
$\phi = 0^\circ$	8.18	7.58	7.34	7.42	7.46	7.41	7.36	11.68	6.77	6.66	6.64	6.88	6.82	6.74		
$\phi = 30^\circ$	8.18	7.53	7.29	7.32	7.33	7.31	7.32	11.85	7.81	7.73	7.76	7.67	7.88	7.78		
$\phi = 60^\circ$	7.95	7.56	7.53	7.46	7.45	7.40	7.44	11.69	8.77	8.85	8.99	8.81	8.64	8.87		
$\phi = 90^\circ$	8.11	8.42	11.41	14.23	15.37	16.01	16.83	11.85	9.84	10.51	9.95	9.86	9.55	9.78		
	Column wise median															
$\phi = 0^\circ$	8.18	7.58	7.34	7.42	7.46	7.41	7.36	11.62	6.75	6.74	6.72	6.90	6.81	6.78		
$\phi = 30^\circ$	8.18	7.53	7.29	7.32	7.33	7.31	7.32	11.81	7.89	7.65	7.85	7.75	7.81	7.77		
$\phi = 60^\circ$	7.95	7.56	7.53	7.46	7.45	7.40	7.44	11.28	8.83	8.93	8.73	8.85	8.76	8.94		
$\phi = 90^\circ$	8.11	8.42	11.41	14.18	15.44	16.19	16.80	11.89	9.69	10.48	9.97	9.89	9.63	9.54		

Tab. 4: $n = 100$, $p = 500$, norm of the outliers is e^k .

	Cauchy								PP							
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8		
	True eigenvector															
	Spatial median															
$\phi = 0^\circ$	50.30	47.65	46.70	45.85	45.85	46.36	45.49	84.16	23.68	20.39	18.14	18.51	21.32	18.19		
$\phi = 30^\circ$	50.47	46.93	46.28	45.63	46.02	46.40	45.70	83.70	55.24	56.47	52.97	55.38	58.12	55.11		
$\phi = 60^\circ$	50.41	47.77	46.48	46.29	45.85	47.08	46.14	83.37	82.60	82.67	83.67	83.53	83.80	83.35		
$\phi = 90^\circ$	51.55	51.08	51.67	51.48	51.13	50.98	51.30	83.47	84.12	83.44	83.49	83.64	83.29	83.73		
	Column wise median															
$\phi = 0^\circ$	50.35	47.65	46.73	45.84	45.88	46.39	45.51	84.10	25.40	20.84	18.31	19.68	19.17	18.13		
$\phi = 30^\circ$	50.59	46.94	46.27	45.65	46.01	46.37	45.72	83.49	57.03	57.22	53.76	53.30	58.67	57.36		
$\phi = 60^\circ$	50.35	47.75	46.44	46.32	45.87	47.08	46.09	83.82	82.49	83.22	83.52	83.61	83.77	83.56		
$\phi = 90^\circ$	51.59	50.99	51.67	51.45	51.21	51.10	51.52	84.03	83.70	83.43	83.73	83.41	83.22	83.76		
	Sample eigenvector															
	Spatial median															
$\phi = 0^\circ$	31.09	29.81	29.55	28.84	28.90	29.34	28.75	82.53	49.66	48.80	48.24	48.47	50.76	48.31		
$\phi = 30^\circ$	31.32	29.23	29.13	28.56	28.89	29.38	29.63	82.54	64.41	64.47	62.81	64.60	66.42	64.19		
$\phi = 60^\circ$	31.50	29.85	29.07	29.18	29.56	29.72	29.21	81.41	81.36	81.43	82.52	81.98	82.12	81.94		
$\phi = 90^\circ$	32.32	31.67	33.01	33.08	32.60	33.06	32.84	82.04	82.52	81.95	81.86	82.22	81.83	81.75		
	Column wise median															
$\phi = 0^\circ$	31.17	29.79	29.54	28.83	28.86	29.24	28.78	82.45	49.91	48.84	48.22	49.08	49.61	48.14		
$\phi = 30^\circ$	31.44	29.24	29.13	28.60	28.89	29.34	29.65	82.45	65.28	65.34	63.42	62.96	66.63	65.43		
$\phi = 60^\circ$	31.49	29.86	29.07	29.04	29.55	29.70	29.09	82.11	81.11	82.55	82.63	82.12	82.49	82.03		
$\phi = 90^\circ$	32.32	31.67	33.00	33.13	32.86	33.19	33.06	82.38	82.06	81.69	82.12	81.73	81.74	81.88		

Tab. 5: $n = 500$, $p = 500$, norm of the outliers is e^k .

	Cauchy								PP							
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8		
	True eigenvector															
	Spatial median															
$\phi = 0^\circ$	23.25	22.66	22.27	21.85	21.59	21.80	21.53	24.81	17.78	17.47	17.23	17.16	17.11	16.99		
$\phi = 30^\circ$	23.50	22.46	22.26	21.94	22.02	21.68	21.62	25.22	18.67	18.49	18.29	18.29	18.17	18.19		
$\phi = 60^\circ$	23.11	22.18	21.90	21.72	21.81	21.83	21.66	25.06	21.43	21.41	21.46	21.31	21.35	21.13		
$\phi = 90^\circ$	23.45	22.96	24.19	25.82	26.21	26.36	26.39	25.16	23.58	23.57	23.94	23.54	23.64	23.55		
	Column wise median															
$\phi = 0^\circ$	23.25	22.66	22.27	21.85	21.59	21.80	21.53	24.95	17.83	17.51	17.33	17.20	17.22	17.14		
$\phi = 30^\circ$	23.50	22.46	22.26	21.94	22.02	21.68	21.62	25.16	18.68	18.51	18.36	18.33	18.22	18.23		
$\phi = 60^\circ$	23.11	22.18	21.90	21.72	21.81	21.83	21.66	25.10	21.39	21.48	21.35	21.26	21.32	21.15		
$\phi = 90^\circ$	23.45	22.96	24.19	25.80	26.20	26.42	26.34	25.03	23.42	23.64	24.10	23.57	23.62	23.56		
	Sample eigenvector															
	Spatial median															
$\phi = 0^\circ$	14.88	14.21	14.10	13.75	13.82	13.94	13.75	17.78	12.27	12.19	12.06	12.16	12.25	12.15		
$\phi = 30^\circ$	15.20	14.18	14.11	13.89	14.11	13.81	13.80	18.32	12.82	12.81	12.64	12.88	12.75	12.67		
$\phi = 60^\circ$	14.97	14.17	13.93	14.10	13.93	13.83	13.88	18.07	14.18	14.31	14.51	14.23	14.15	14.22		
$\phi = 90^\circ$	15.27	14.90	16.01	18.26	18.98	19.18	19.34	18.29	15.65	15.47	15.80	15.55	15.46	15.44		
	Column wise median															
$\phi = 0^\circ$	14.88	14.21	14.10	13.75	13.82	13.94	13.75	17.85	12.32	12.26	12.12	12.24	12.31	12.19		
$\phi = 30^\circ$	15.20	14.18	14.11	13.89	14.11	13.81	13.80	18.09	12.85	12.87	12.64	12.91	12.83	12.70		
$\phi = 60^\circ$	14.97	14.17	13.93	14.10	13.93	13.83	13.88	18.01	14.09	14.31	14.44	14.15	14.12	14.34		
$\phi = 90^\circ$	15.27	14.90	16.01	18.21	18.95	19.26	19.40	17.94	15.49	15.54	15.96	15.57	15.48	15.42		

Tab. 6: $n = 1000$, $p = 500$, norm of the outliers is e^k .

	Cauchy								PP							
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8		
	True eigenvector															
	Spatial median															
$\phi = 0^\circ$	17.85	17.28	17.04	16.78	16.60	16.66	16.74	20.40	13.56	13.35	13.24	12.99	13.18	13.19		
$\phi = 30^\circ$	17.81	17.11	17.03	16.79	16.75	16.63	16.53	20.43	14.35	14.25	14.02	14.03	14.00	13.92		
$\phi = 60^\circ$	17.77	16.82	16.81	16.58	16.61	16.46	16.54	20.55	16.27	16.22	16.13	16.18	15.89	15.94		
$\phi = 90^\circ$	17.66	17.86	18.27	20.75	21.81	22.13	22.47	20.37	18.04	17.85	17.96	18.09	18.02	18.13		
	Column wise median															
$\phi = 0^\circ$	17.85	17.28	17.04	16.78	16.60	16.66	16.74	20.33	13.62	13.51	13.27	13.12	13.26	13.34		
$\phi = 30^\circ$	17.81	17.11	17.03	16.79	16.75	16.63	16.53	20.14	14.37	14.27	14.12	14.06	14.06	13.95		
$\phi = 60^\circ$	17.77	16.82	16.81	16.58	16.61	16.46	16.54	20.16	16.27	16.24	15.99	16.18	15.99	16.06		
$\phi = 90^\circ$	17.66	17.86	18.27	20.77	21.82	22.12	22.40	20.08	17.95	17.86	17.92	18.06	17.99	18.17		
	Sample eigenvector															
	Spatial median															
$\phi = 0^\circ$	11.63	10.89	10.74	10.59	10.57	10.57	10.52	15.58	9.28	9.22	9.13	9.12	9.14	9.13		
$\phi = 30^\circ$	11.55	10.79	10.76	10.66	10.54	10.56	10.50	15.57	9.74	9.67	9.70	9.62	9.67	9.59		
$\phi = 60^\circ$	11.52	10.65	10.55	10.56	10.57	10.54	10.55	15.62	10.61	10.41	10.63	10.58	10.45	10.46		
$\phi = 90^\circ$	11.42	11.56	11.95	15.33	16.71	17.27	17.86	15.57	11.67	11.56	11.68	11.82	11.58	11.84		
	Column wise median															
$\phi = 0^\circ$	11.63	10.89	10.74	10.59	10.57	10.57	10.52	15.40	9.33	9.28	9.18	9.20	9.23	9.21		
$\phi = 30^\circ$	11.55	10.79	10.76	10.66	10.54	10.56	10.50	15.15	9.75	9.73	9.73	9.63	9.72	9.63		
$\phi = 60^\circ$	11.52	10.65	10.55	10.56	10.57	10.54	10.55	15.14	10.52	10.47	10.47	10.59	10.58	10.63		
$\phi = 90^\circ$	11.42	11.56	11.95	15.34	16.74	17.31	17.88	15.10	11.55	11.58	11.62	11.77	11.59	11.84		

Tab. 7: $n = 100$, $p = 1000$, norm of the outliers is e^k .

	Cauchy								PP							
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8		
	True eigenvector															
	Spatial median															
$\phi = 0^\circ$	58.58	54.66	54.12	53.68	53.02	52.67	53.17	85.22	79.24	78.20	80.20	77.34	80.58	78.32		
$\phi = 30^\circ$	59.20	55.05	54.34	53.31	52.74	53.31	52.92	85.51	84.22	82.62	83.76	84.32	83.66	84.97		
$\phi = 60^\circ$	58.88	56.01	54.19	53.65	53.69	53.18	53.80	85.14	84.89	84.28	84.88	85.12	84.72	84.84		
$\phi = 90^\circ$	59.19	59.14	59.20	60.02	60.83	60.39	59.83	85.27	85.70	85.03	85.27	84.88	85.04	85.35		
	Column wise median															
$\phi = 0^\circ$	58.94	54.66	54.03	53.67	53.02	52.69	53.18	84.71	79.92	78.32	81.20	78.74	80.17	79.03		
$\phi = 30^\circ$	59.43	54.96	54.18	53.40	52.75	53.24	52.96	85.17	83.62	83.28	83.33	84.29	84.00	84.75		
$\phi = 60^\circ$	58.59	55.89	54.21	53.67	53.67	53.28	53.86	85.45	84.90	84.19	84.83	84.99	84.72	84.81		
$\phi = 90^\circ$	59.20	59.10	58.98	60.23	60.92	60.67	60.05	85.42	85.39	85.60	85.02	85.12	85.51	84.75		
	Sample eigenvector															
	Spatial median															
$\phi = 0^\circ$	36.06	33.15	33.73	33.67	32.58	32.53	33.06	83.52	80.09	79.60	80.87	79.20	80.26	79.42		
$\phi = 30^\circ$	36.48	34.86	33.80	33.09	33.01	33.10	32.94	83.94	82.68	82.44	83.36	83.23	82.76	82.97		
$\phi = 60^\circ$	36.82	34.50	33.91	33.52	34.45	33.12	33.39	83.00	83.13	83.16	83.82	83.93	83.24	83.29		
$\phi = 90^\circ$	36.52	35.94	36.91	37.42	38.87	38.86	38.29	83.15	84.14	83.74	83.48	83.08	82.86	83.65		
	Column wise median															
$\phi = 0^\circ$	36.53	33.12	33.60	33.69	32.62	32.51	33.16	83.06	80.36	80.17	81.87	80.50	80.76	80.16		
$\phi = 30^\circ$	36.55	34.72	33.91	33.09	33.11	33.16	32.79	83.07	82.36	82.76	82.65	83.07	82.93	83.12		
$\phi = 60^\circ$	36.42	34.46	33.96	33.61	34.41	33.07	33.47	83.78	82.86	82.71	84.05	83.46	82.71	82.78		
$\phi = 90^\circ$	36.50	36.12	36.81	37.18	39.34	39.11	38.51	83.63	83.73	83.69	83.65	84.03	83.66	83.00		

Tab. 8: $n = 500$, $p = 1000$, norm of the outliers is e^k .

	Cauchy								PP							
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8		
	True eigenvector															
	Spatial median															
$\phi = 0^\circ$	31.40	29.72	29.72	29.33	29.15	29.02	28.90	70.60	7.34	4.13	3.44	3.34	3.33	3.33		
$\phi = 30^\circ$	30.96	29.40	29.54	29.23	29.08	28.92	28.89	71.09	32.42	31.29	30.76	30.54	30.50	30.48		
$\phi = 60^\circ$	30.98	29.60	29.04	28.97	29.16	29.14	28.81	70.98	62.49	61.06	60.81	60.60	60.47	60.55		
$\phi = 90^\circ$	30.89	31.22	31.74	32.64	33.17	33.39	33.34	71.13	70.51	70.87	70.60	70.50	70.82	70.50		
	Column wise median															
$\phi = 0^\circ$	31.40	29.72	29.72	29.33	29.15	29.02	28.90	70.56	8.79	4.44	3.49	3.35	3.33	3.32		
$\phi = 30^\circ$	30.96	29.40	29.54	29.23	29.08	28.92	28.89	71.09	32.70	31.35	30.76	30.54	30.50	30.48		
$\phi = 60^\circ$	30.98	29.60	29.04	28.97	29.16	29.14	28.81	71.03	62.58	61.01	60.74	60.61	60.50	60.55		
$\phi = 90^\circ$	30.89	31.22	31.74	32.65	33.16	33.34	33.33	71.05	70.69	70.84	70.51	70.47	70.76	70.40		
	Sample eigenvector															
	Spatial median															
$\phi = 0^\circ$	19.95	18.60	18.46	18.35	18.24	18.20	17.93	68.88	25.63	24.88	24.90	24.83	24.73	24.71		
$\phi = 30^\circ$	19.43	18.30	18.39	18.22	18.16	18.01	18.13	68.95	39.55	38.79	38.45	38.17	38.14	38.14		
$\phi = 60^\circ$	19.76	18.60	18.12	18.20	18.40	18.19	18.01	69.17	64.07	63.13	62.96	62.87	62.79	62.77		
$\phi = 90^\circ$	19.49	19.85	20.16	21.81	22.45	23.00	22.94	69.09	68.46	68.69	68.77	68.54	68.72	68.56		
	Column wise median															
$\phi = 0^\circ$	19.95	18.60	18.46	18.35	18.24	18.20	17.93	68.76	26.08	24.93	24.91	24.83	24.73	24.72		
$\phi = 30^\circ$	19.43	18.30	18.39	18.22	18.16	18.01	18.13	68.98	39.72	38.88	38.44	38.20	38.15	38.14		
$\phi = 60^\circ$	19.76	18.60	18.12	18.20	18.40	18.19	18.01	69.10	64.10	63.12	62.89	62.91	62.82	62.77		
$\phi = 90^\circ$	19.49	19.84	20.16	21.87	22.41	22.87	22.84	68.99	68.62	68.59	68.70	68.45	68.73	68.43		

Tab. 9: $n = 1000$, $p = 1000$, norm of the outliers is e^k .

	Cauchy				PP			
	k=-Inf	k=3	k=4	k=5	k=6	k=7	k=8	k=8
	True eigenvector							
	Spatial median							
$\phi = 0^\circ$	24.28	23.20	23.44	22.94	22.71	22.73	22.88	28.11 16.97 16.96 16.75 16.64 16.68 16.70
$\phi = 30^\circ$	24.71	23.22	23.29	22.90	22.86	22.66	22.68	28.45 18.12 18.08 17.87 17.85 17.72 17.70
$\phi = 60^\circ$	24.30	23.25	22.89	22.68	22.72	22.72	22.67	28.10 20.95 20.69 20.48 20.48 20.42 20.50
$\phi = 90^\circ$	24.07	24.42	24.71	26.55	27.17	27.36	27.62	28.00 24.68 24.89 24.77 24.84 24.68 24.53
	Column wise median							
$\phi = 0^\circ$	24.28	23.20	23.44	22.94	22.71	22.73	22.88	27.57 17.13 17.14 16.93 16.82 16.88 16.85
$\phi = 30^\circ$	24.71	23.22	23.29	22.90	22.86	22.66	22.68	28.08 18.15 18.12 17.94 17.96 17.82 17.74
$\phi = 60^\circ$	24.30	23.25	22.89	22.68	22.72	22.72	22.67	27.71 20.92 20.69 20.53 20.52 20.47 20.51
$\phi = 90^\circ$	24.07	24.42	24.71	26.54	27.16	27.40	27.43	27.30 24.78 24.96 24.76 24.83 24.64 24.62
	Sample eigenvector							
	Spatial median							
$\phi = 0^\circ$	15.49	14.54	14.65	14.48	14.31	14.29	14.35	21.49 12.32 12.31 12.31 12.25 12.27 12.31
$\phi = 30^\circ$	15.82	14.54	14.56	14.35	14.32	14.22	14.24	21.66 12.79 12.71 12.70 12.64 12.64 12.58
$\phi = 60^\circ$	15.48	14.57	14.39	14.22	14.30	14.28	14.26	21.31 13.87 13.76 13.67 13.66 13.56 13.77
$\phi = 90^\circ$	15.46	15.55	15.93	18.28	19.39	19.92	20.40	21.44 15.93 16.13 15.98 16.13 15.94 15.72
	Column wise median							
$\phi = 0^\circ$	15.49	14.54	14.65	14.48	14.31	14.29	14.35	20.69 12.40 12.46 12.46 12.43 12.45 12.48
$\phi = 30^\circ$	15.82	14.54	14.56	14.35	14.32	14.22	14.24	20.95 12.82 12.80 12.78 12.75 12.72 12.72
$\phi = 60^\circ$	15.48	14.57	14.39	14.22	14.30	14.28	14.26	20.71 13.82 13.71 13.72 13.73 13.61 13.71
$\phi = 90^\circ$	15.46	15.55	15.93	18.29	19.45	19.92	20.16	20.45 16.03 16.26 15.96 16.09 15.93 15.84