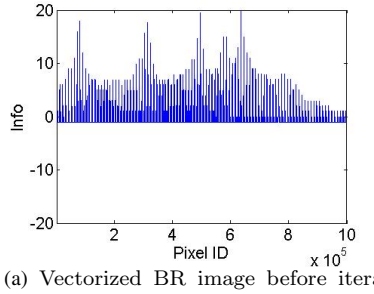
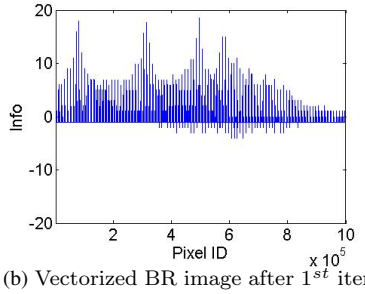
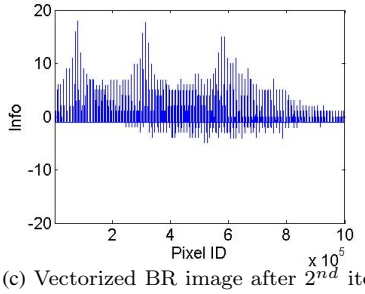


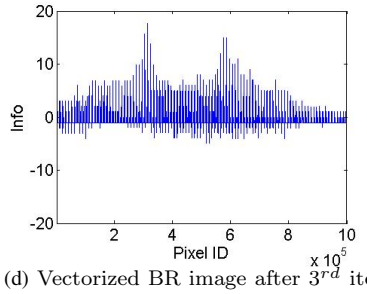
(a) Vectorized BR image before iteration,



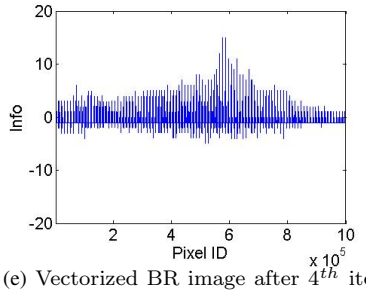
(b) Vectorized BR image after 1^{st} iteration,



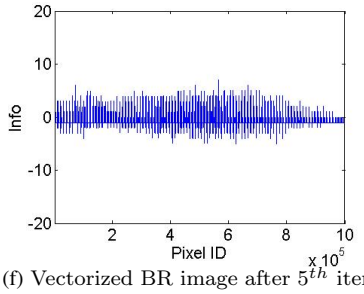
(c) Vectorized BR image after 2^{nd} iteration,



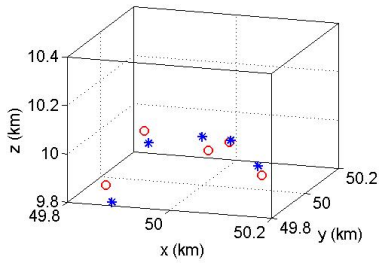
(d) Vectorized BR image after 3^{rd} iteration,



(e) Vectorized BR image after 4^{th} iteration,



(f) Vectorized BR image after 5^{th} iteration,



(g) Positioning result of PGC algorithm

Figure 1 Results of multi-target positioning via PGC algorithm

Table 1 RMSE under different SNRs and number of sensors

RMSE-RNG(m)		Target 1	Target 2	Target 3	Target 4	Target 5
STD=0.0	5	6.64±0.00	5.43±0.00	3.53±0.00	4.62±0.00	8.46±0.00
	10	6.64±0.00	5.43±0.00	3.53±0.00	4.62±0.00	4.55±0.00
	30	6.64±0.00	5.43±0.00	3.53±0.00	4.62±0.00	4.55±0.00
	50	6.64±0.00	5.43±0.00	10.4±0.00	4.62±0.00	4.55±0.00
STD=0.2	5	13.61±7.91	19.67±14.27	9.95±2.43	9.00±0.00	2.79±2.61
	10	8.83±0.16	6.14±1.64	6.28±0.67	9.00±0.00	2.17±0.00
	30	8.20±0.10	5.23±0.00	6.59±1.51	9.00±0.00	2.17±0.00
	50	8.19±0.00	5.23±0.00	11.88±2.87	9.03±0.10	2.17±0.00
STD=0.4	5	24.79±9.36	86.22±97.96	75.96±127.75	179.49±309.94	162.97±331.86
	10	11.65±6.87	24.08±54.49	8.67±1.63	46.24±157.38	5.82±2.84
	30	12.23±7.39	14.25±33.50	16.37±50.45	20.29±92.67	5.11±1.99
	50	9.30±3.51	8.36±8.24	9.71±2.55	6.72±0.06	5.02±1.85
STD=0.6	5	58.78±74.47	165.56±118.66	139.98±143.8	346.37±326.05	332.89±463.65
	10	16.02±16.34	39.45±69.28	34.14±97.98	107.49±245.12	60.29±225.87
	30	14.13±12.17	29.51±48.82	2.73±4.46	20.69±47.41	37.039±129.14

Table 2 RMSE at different locations

RMSE(m)	[0,0,10]km ($\lambda_{\min} = 0.8$)		[60,80,10]km ($\lambda_{\min} = 0.0417$)		[-60,80,10]km ($\lambda_{\min} = 0.0404$)		[300,200,10]km ($\lambda_{\min} = 0.0027$)	
	GEO	BR	GEO	BR	GEO	BR	GEO	BR
Target 1	0.0022	0.0051	1.5265	0.5660	0.9797	0.3628	0.0063	0.0006
Target 2	11.5525	10.3469	19.8286	8.9840	26.0218	5.1272	1352.67	4.4984
Target 3	4.9828	4.2996	146.0908	6.5096	12.4568	5.2936	120.05	6.1731
Target 4	3.6273	3.2873	4.8182	2.4887	138.2496	11.7931	1805.93	5.4227
Target 5	8.4615	8.7021	104.4607	4.2748	45.8997	3.6982	1187.33	4.7971