



Antenna Pattern of SC Ant1, BLE Ant2

Appendix D

Total Gain Data

Freq(Hz)	2.45GPol.	TotalAnt. 1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-8.57/-8.18	-7.82/-3.44	-7.25/-4.70	-7.70/-8.09	-8.31/-8.37	-8.40/-8.79	-8.94/-8.57	-8.37/-9.05	-9.13/-9.05	-8.87/-8.87	-9.00/-3.06	-9.10/-9.16	-9.23/-9.27	-9.39/-9.48	-9.49/-9.42	-9.44/-9.38	-9.42/-9.38	-9.34/-9.40	-9.41/-10.51	-10.80/-10.58	-10.29/-10.20	-10.08/-9.84	-9.57/-9.40	-9.28/-9.58
Θ(7.5°)	-10.33/-10.10	-9.45/-8.71	-8.19/-8.12	-8.23/-8.47	-8.80/-8.86	-8.78/-9.19	-9.85/-9.76	-9.27/-9.04	-8.37/-7.90	-7.71/-7.48	-7.52/-7.68	-7.73/-7.68	-7.45/-7.26	-7.18/-7.20	-7.26/-7.26	-7.13/-6.78	-6.16/-5.62	-5.27/-5.09	-5.04/-5.22	-5.58/-5.93	-6.14/-6.35	-6.83/-7.50	-8.13/-8.79	-9.49/-10.03
Θ(15°)	-7.80/-7.69	-7.09/-6.55	-6.28/-6.23	-6.31/-6.48	-6.64/-6.56	-6.32/-6.37	-6.82/-6.90	-6.42/-6.02	-5.62/-5.06	-4.50/-4.18	-4.15/-4.22	-4.29/-4.22	-4.06/-3.93	-3.86/-3.89	-3.91/-3.80	-3.61/-3.37	-3.02/-2.68	-2.32/-2.05	-1.88/-1.93	-2.18/-2.44	-2.61/-2.85	-3.38/-4.06	-4.88/-5.74	-6.61/-7.38
Θ(22.5°)	-3.18/-3.12	-3.05/-3.25	-3.74/-4.37	-5.15/-6.06	-6.92/-7.36	-7.27/-6.94	-6.58/-5.95	-5.10/-4.32	-3.62/-2.90	-2.17/-1.61	-1.37/-1.127	-1.23/-1.20	-1.21/-1.35	-1.57/-1.86	-2.05/-2.08	-1.92/-1.69	-1.45/-1.26	-1.03/-0.76	-0.71/-0.83	-0.91/-1.10	-1.45/-1.91	-2.40/-2.88	-3.17/-3.26	
Θ(30°)	0.370/4.4	0.26/-0.32	-1.20/-2.18	-3.33/-4.95	-6.92/-8.93	-9.58/-8.01	-5.92/-4.39	-3.20/-2.35	-1.71/-1.12	-0.510/0.4	0.460/0.73	0.900/0.91	0.750/0.30	-0.32/-0.82	-1.11/-1.24	-1.20/-1.00	-0.75/-0.60	-0.40/-0.23	-0.08/-0.05	-0.15/-0.28	-0.35/-0.46	-0.85/-0.81	-0.89/-0.77	-0.420/0.3
Θ(37.5°)	2.682/7.3	2.341/5.2	0.47/-0.46	-1.30/-2.37	-3.69/-5.00	-5.39/-4.54	-2.97/-1.66	-0.66/-0.33	0.380/0.65	0.921/2.4	1.642/0.3	2.272/2.4	1.821/0.0	0.18/-0.28	-0.40/-0.43	-0.34/-0.17	0.010/0.18	0.290/3.5	0.270/0.05	-0.21/-0.44	-0.50/-0.50	-0.43/-0.24	0.160/0.80	1.582/2.8
Θ(45°)	3.823/8.2	3.272/3.0	1.260/6.3	0.430/1.3	-0.40/-1.08	-1.46/-1.60	-1.25/-0.46	0.511/1.17	1.501/6.5	1.741/9.0	2.252/7.4	2.393/0.1	2.361/3.0	0.350/0.4	0.170/0.38	0.550/0.68	0.820/0.98	1.010/8.6	0.550/0.07	-0.29/-0.32	-0.140/1.7	0.430/0.66	1.141/8.9	2.713/4.4
Θ(52.5°)	4.034/0.2	3.422/4.2	1.461/2.5	1.712/0.7	2.011/7.5	1.400/0.94	0.27/-0.05	0.361/0.00	1.301/4.3	1.541/7.8	2.333/0.5	3.493/2.3	2.200/7.8	-0.18/-0.20	0.370/8.8	1.131/2.4	1.391/5.7	1.571/3.5	1.010/6.9	0.650/0.98	1.451/8.2	1.861/6.9	1.722/1.4	2.853/5.6
Θ(60°)	4.014/0.6	3.412/2.5	1.221/2.7	2.172/8.1	2.892/7.8	2.562/2.2	1.470/5.9	0.270/0.58	0.860/0.90	0.981/3.6	2.032/9.4	3.573/4.2	2.360/8.1	-0.32/-0.27	0.431/0.7	1.481/7.4	2.112/4.4	2.652/5.8	2.241/8.4	1.671/9.2	2.332/5.6	2.351/8.5	1.461/6.8	2.503/4.3
Θ(67.5°)	3.703/7.0	2.881/3.9	0.200/4.2	1.442/0.2	1.831/7.3	1.741/5.9	1.020/1.4	-0.41/-0.33	0.090/3.5	0.501/0.5	1.902/9.0	3.533/3.4	2.230/7.5	-0.100/1.3	0.871/5.9	2.082/4.5	2.773/0.8	3.303/1.2	2.561/9.1	1.601/9.0	2.362/5.5	2.361/9.0	1.441/5.7	2.413/2.5
Θ(75°)	2.692/9.3	2.310/8.9	-0.130/2.2	1.091/4.1	0.840/3.2	0.460/4.6	-0.14/-1.06	-1.80/-1.97	-1.51/-0.87	-0.60/-0.00	0.992/1.1	2.922/9.4	2.040/7.0	-0.110/0.4	0.721/4.3	1.982/3.2	2.542/9.0	3.112/9.0	2.351/8.2	1.782/2.4	2.642/7.3	2.501/9.3	1.150/6.9	1.051/9.6
Θ(82.5°)	2.773/1.3	2.571/2.4	0.330/7.7	1.311/1.8	0.21/-0.82	-0.87/-0.86	-1.60/-2.79	-3.81/-3.89	-2.89/-1.92	-1.53/-1.41	-0.690/5.3	1.611/7.7	0.84/-0.58	-1.31/-0.98	-0.140/7.7	1.581/9.7	2.232/6.5	2.852/6.0	2.041/5.6	1.612/0.0	2.272/1.7	1.731/2.0	0.560/1.5	0.581/7.9
Θ(90°)	2.132/6.2	1.74/-0.24	-1.60/-0.66	-0.15/-0.03	-1.03/-2.64	-3.41/-3.51	-4.03/-4.94	-5.80/-5.30	-4.16/-3.09	-2.33/-2.13	-1.63/-0.62	0.530/8.9	-0.00/-1.52	-2.47/-2.33	-1.34/-0.06	1.121/4.7	1.541/8.7	1.921/3.6	0.36/-0.17	0.431/5.2	2.121/9.7	1.481/0.2	0.43/-0.04	0.071/0.3
Θ(97.5°)	0.64/1.89	1.171/-1.16	-2.75/-1.43	-0.15/-0.03	-0.84/-2.55	-4.04/-4.38	-4.59/-4.97	-5.29/-4.50	-3.96/-3.72	-3.11/-2.45	-1.81/-1.21	-0.46/-0.10	-0.45/-1.03	-1.59/-1.65	-1.010/3.0	1.141/0.0	0.851/2.2	1.190/2.6	-0.85/-0.79	0.421/6.7	2.131/8.5	1.300/7.0	-0.23/-1.45	-2.38/-1.46
Θ(105°)	-1.460/3.8	-0.32/-3.32	-5.73/-4.61	-1.49/-2.30	-3.48/-3.75	-4.03/-4.32	-4.26/-3.33	-3.06/-0.47	-5.19/-4.23	-3.32/-3.16	-2.59/-1.54	-0.77/-0.70	-1.42/-2.11	-1.98/-0.87	-0.46/-1.18	-1.29/-0.39	-0.12/-0.79	-1.17/-0.57	0.541/5.9	1.891/3.5	0.33/-0.61	-1.87/-3.87	-5.41/-4.19	
Θ(112.5°)	-4.74/-3.08	-1.77/-7.68	-11.67/-9.69	-5.98/-1.77	-0.35/-0.44	-1.31/-2.15	-3.33/-5.58	-1.31/-2.08	-1.69/-2.56	-4.33/-6.29	-7.15/-6.57	-4.44/-2.30	-1.08/-1.71	-2.60/-4.10	-3.80/-2.60	-0.850/4.7	0.650/0.02	-0.62/-0.81	-0.480/1.5	0.081/2.7	-3.11/-3.95	-4.46/-5.48	-6.05/-6.13	
Θ(120°)	-7.23/-6.85	-7.31/-9.18	-9.69/-8.85	-6.12/-2.34	-0.420/0.7	-0.30/-1.16	-2.28/-3.47	-3.51/-2.87	-2.79/-3.37	-3.97/-4.78	-5.06/-4.31	-4.02/-4.09	-3.92/-4.49	-6.57/-7.58	-5.45/-3.66	-3.23/-2.72	-1.26/-0.26	-0.42/-1.45	-2.44/-2.86	-2.57/-1.76	-1.43/-1.99	-3.19/-4.45	-5.41/-6.51	-7.29/-7.27
Θ(127.5°)	-6.21/-5.93	-6.34/-6.71	-7.07/-8.42	-9.08/-5.42	-2.55/-1.03	-0.55/-0.74	-1.63/-3.09	-4.14/-4.45	-5.09/-6.15	-6.04/-5.18	-3.54/-2.39	-3.04/-5.66	-9.19/-11.69	-10.51/-7.52	-5.86/-5.51	-5.52/-4.07	-2.06/-1.08	-1.08/-1.46	-1.91/-2.59	-3.22/-2.86	-2.61/-2.86	-4.11/-6.08	-8.22/-6.69	-9.16/-7.25
Θ(135°)	-5.67/-5.22	-4.89/-4.68	-4.72/-5.76	-8.08/-8.66	-6.31/-3.88	-2.68/-2.46	-3.09/-4.67	-7.05/-9.19	-10.14/-9.86	-9.32/-7.71	-5.07/-3.54	-3.62/-5.24	-7.44/-8.31	-7.05/-6.78	-5.33/-4.91	-3.52/-4.78	-0.55/-0.18	-0.47/-1.10	-2.26/-4.13	-6.01/-6.53	-5.59/-4.41	-3.60/-3.60	-4.38/-5.46	-6.26/-6.33
Θ(142.5°)	-8.84/-7.28	-6.05/-4.74	-3.98/-4.40	-6.16/-8.88	-9.12/-7.72	-6.09/-5.47	-5.71/-6.46	-7.84/-8.35	-8.79/-9.19	-8.84/-7.41	-5.46/-5.04	-5.02/-10.31	-10.23/-9.53	-6.28/-1.95	-1.51/-1.90	-2.83/-4.19	-6.24/-8.52	-9.55/-8.37	-5.89/-3.71	-2.36/-2.14	-2.95/-4.43	-6.13/-7.45		
Θ(150°)	-8.51/-7.32	-6.12/-6.04	-4.30/-4.44	-5.83/-9.01	-14.08/-15.71	-14.44/-11.17	-9.05/-4.99	-6.16/-5.34	-5.01/-5.19	-5.36/-5.07	-4.61/-4.73	-5.71/-7.37	-9.42/-11.53	-12.59/-11.19	-8.54/-6.20	-4.58/-3.48	-3.85/-4.41	-5.19/-5.89	-6.20/-9.52	-5.33/-4.66	-3.78/-2.82	-2.21/-2.49	-3.55/-5.58	-7.98/-4.14
Θ(157.5°)	-7.83/-6.24	-5.27/-4.54	-4.01/-3.81	-4.35/-5.56	-7.11/-8.00	-7.78/-6.98	-5.83/-4.50	-3.61/-3.35	-3.56/-4.18	-5.00/-5.57	-5.82/-6.09	-6.45/-6.74	-6.79/-6.41	-5.70/-7.41	-3.63/-2.71	-2.14/-1.93	-1.97/-2.07	-2.27/-2.91	-2.76/-2.91	-3.09/-3.38	-3.59/-3.70	-3.96/-4.67	-6.29/-8.45	-11.12/-9.69
Θ(165°)	-7.55/-5.90	-4.88/-4.08	-3.56/-3.04	-2.74/-2.75	-2.90/-2.93	-2.81/-2.82	-2.84/-2.74	-2.76/-3.17	-3.90/-4.94	-6.26/-7.68	-8.53/-9.25	-6.83/-8.79	-7.60/-6.48	-5.47/-4.61	-3.81/-3.14	-2.71/-2.53	-2.51/-2.55	-2.82/-3.31	-3.85/-4.44	-5.20/-6.09	-7.68/-8.00	-9.07/-10.51	-12.60/-15.87	-13.55/-10.55
Θ(172.5°)	-6.55/-5.51	-5.21/-5.03	-4.87/-4.53	-4.19/-4.07	-4.09/-4.04	-4.07/-4.19	-4.53/-4.91	-5.46/-6.09	-6.84/-7.89	-8.29/-10.78	-12.15/-13.01	-13.62/-13.20	-12.05/-11.11	-9.90/-9.01	-8.35/-7.88	-7.70/-7.67	-7.74/-7.90	-8.28/-8.78	-9.42/-10.31	-11.49/-13.01	-14.55/-14.63	-15.21/-15.81	-15.58/-14.07	-11.15/-8.59
Θ(180°)	-7.68/-7.71	-8.27/-9.37	-10.51/-11.15	-11.03/-10.54	-10.73/-10.82	-11.61/-11.79	-12.15/-13.19	-14.85/-15.12	-15.13/-15.75	-14.56/-15.21	-14.91/-15.81	-16.07/-14.96	-15.83/-15.53	-15.14/-15.27	-15.29/-15.68	-15.74/-15.43	-15.39/-15.96	-15.58/-15.21	-14.59/-14.46	-14.26/-13.39	-12.10/-10.89	-10.22/-10.26	-10.13/-10.02	-9.07/-8.33
Freq(Hz)	5.2GPol.	TotalAnt. 1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-1.73/-1.69	-1.24/-1.06	-1.191/-3.8	-1.55/-1.86	-1.97/-1.86	-1.67/-0.84	-0.65/-0.77	-0.99/-1.02	-0.86/-0.92	-0.68/-0.93	-1.20/-1.49	-1.66/-1.52	-1.35/-1.27	-1.03/-0.80	-0.99/-1.51	-1.71/-1.74	-1.85/-2.00	-1.99/-2.00	-2.01/-1.68	-1.45/-1.41	-1.55/-1.76	-2.05/-2.04	-1.95/-1.74	-1.59/-1.42
Θ(7.5°)	-1.31/-1.59	-2.05/-2.85	-3.42/-3.61	-3.75/-4.50	-5.18/-5.40	-5.72/-4.96	-4.57/-4.05	-4.12/-4.08	-3.59/-2.59	-2.12/-2.03	-1.94/-1.69	-1.46/-1.35	-1.14/-1.02	-1.17/-1.20	-1.21/-1.05	-0.89/-0.67	-0.93/-1.58	-1.93/-1.73	-1.32/-1.06	-1.13/-1.01	-0.93/-0.66	-0.58/-0.45	-0.41/-0.43	
Θ(15°)	0.071/-0.02	-2.68/-4.39	-7.22/-10.78	-12.10/-12.40	-12.26/-11.43	-11.22/-11.38	-10.76/-9.35	-9.71/-10.54	-9.99/-7.91	-6.05/-4.56	-3.53/-2.82	-2.35/-2.04	-2.02/-2.24	-2.71/-2.84	-2.74/-2.32	-1.66/-1.02	-0.55/-0.49	-0.44/-0.15	0.120/4.8	0.500/3.2	-0.09/-0.55	-0.67/-0.41	0.130/4.1	0.380/6.9
Θ(22.5°)	-0.56/-1.38	-2.50/-3.98	-4.90/-5.91	-6.79/-7.00	-9.76/-12.72	-13.68/-12.19	-11.13/-10.84	-13.06/-12.71	-12.03/-9.82	-8.31/-6.10	-4.88/-3.81	-3.21/-3.10	-3.35/-3.35	-2.99/-2.32	-1.61/-0.91	-0.130/2.5	0.380/5.1	1.101/8.5	2.643/3.1	3.563/5.6	3.122/1.0	0.780/0.9	-0.08/-0.28	-0.50/-0.33
Θ(30°)	-0.24/-0.52	-1.33/-2.61	-2.70/-1.92	-1.39/-1.68	-3.59/-5.73	-7.03/-4.14	-3.05/-4.61	-1.73/-1.38	-1.31/-0.93	-0.73/-0.43	-3.56/-2.29	-1.62/-1.84	-2.26/-1.68	-0.540/0.30	0.970/9.7	1.101/1.6	1.031/3.5	2.563/7.3	4.273/9.4	2.921/8.7	1.100/2.9	0.291/8.7	-0.19/-0.34	
Θ(37.5°)	-1.66/-0.82	-1.15/-3.10	-2.61/-0.63	0.390/1.6	-1.44/-3.29	-3.19/-1.77	-1.67/-2.69	-5.10/-9.04	-11.49/-7.10	-4.59/-3.63	-2.74/-1.15	-0.38/-0.67	-0.400/4.4	1.391/9.7	2.111/8.2	1.260/8.7	0.571/2.7	1.711/7.0	1.371/1.5	1.502/5.1	3.513/8.6	3.382/7.1	2.080/6.9	-1.22/-2.35
Θ(45°)	-0.33/-0.59	-1.																						



Antenna Pattern of SC Ant1, BLE Ant2

Appendix D

Θ(22.5°)	-1.27/-1.51	-2.53/-4.45	-6.41/-8.78	-13.35/-15.20	-15.43/-15.33	-13.47/-14.36	-15.03/-14.89	-12.05/-9.35	-7.90/-6.95	-7.13/-6.29	-4.88/-3.57	-2.49/-1.44	-0.42/-0.56	1.26/-1.69	1.92/-0.09	2.05/-1.73	1.55/-1.79	1.94/-1.60	1.17/-0.97	0.99/-1.46	2.02/-2.33	2.16/-1.37	0.32/-0.51	-0.89/-1.42
Θ(30°)	1.51/-1.18	0.27/-0.87	-1.00/-1.24	-2.10/-4.38	-7.21/-7.35	-5.39/-4.45	-5.04/-7.06	-10.98/-8.50	-5.96/-5.58	-5.77/-4.42	-3.28/-2.59	-1.76/-0.17	1.39/-2.23	2.27/-2.34	2.92/-3.45	3.70/-3.47	3.39/-3.75	4.13/-4.02	3.59/-3.02	2.39/-1.67	1.64/-2.24	2.98/-2.89	2.28/-1.56	1.13/-1.12
Θ(37.5°)	1.78/-1.89	1.24/-0.83	1.00/-1.24	-0.98/-1.18	-1.16/-2.90	-1.99/-0.87	0.22/-0.74	-2.94/-3.37	-1.85/-1.94	-2.62/-1.57	-0.75/-0.91	-0.61/-0.98	2.21/-2.62	2.22/-1.93	2.63/-3.70	4.00/-0.81	3.88/-3.75	2.49/-2.36	2.65/-3.35	3.34/-2.83	2.63/-0.04	4.20/-0.81	4.19/-2.93	1.97/-1.42
Θ(45°)	0.91/-1.23	0.71/-0.64	-0.33/-0.34	1.06/-1.53	0.65/-1.33	-2.28/-1.32	-0.23/-0.16	-1.12/-2.08	-0.40/-0.16	-1.25/-0.48	1.85/-1.68	1.67/-2.13	2.31/-2.78	2.85/-2.50	3.06/-4.07	3.78/-3.10	2.97/-2.37	1.80/-1.58	-0.10/-1.43	0.38/-2.32	2.93/-3.33	4.28/-0.82	4.21/-0.03	2.01/-1.13
Θ(52.5°)	1.25/-1.59	0.36/-1.58	-1.21/-0.01	1.38/-2.54	1.34/-0.48	0.96/-0.98	0.13/-0.18	0.10/-0.18	1.26/-1.45	0.50/-2.25	2.94/-1.60	1.35/-1.73	1.63/-1.48	1.84/-1.96	1.73/-2.62	2.11/-1.12	1.66/-1.29	0.72/-0.47	0.45/-0.08	-0.93/-0.52	2.10/-2.40	3.40/-4.11	3.32/-2.85	2.89/-1.61
Θ(60°)	0.49/-1.35	1.30/-0.30	1.03/-1.47	3.33/-4.50	3.03/-2.76	3.03/-2.76	3.51/-3.38	3.51/-3.38	3.01/-2.86	1.27/-2.64	2.93/-1.23	1.02/-1.66	1.63/-1.54	1.39/-2.48	1.79/-1.83	1.25/-0.03	1.77/-1.49	0.85/-1.20	1.30/-1.15	2.39/-2.28	3.10/-5.58	3.10/-5.58	1.81/-2.01	3.03/-4.15
Θ(67.5°)	0.81/-1.02	1.49/-1.04	1.17/-1.16	4.32/-4.74	2.97/-2.80	4.07/-3.85	2.38/-0.72	1.19/-3.12	3.68/-2.93	2.57/-2.73	1.51/-0.24	0.50/-1.12	1.06/-1.46	1.64/-2.03	1.30/-1.03	0.56/-0.17	1.62/-1.58	1.25/-1.25	1.08/-1.81	1.72/-2.33	3.32/-2.68	2.80/-3.03	0.51/-1.50	3.24/-1.98
Θ(75°)	0.22/-0.24	0.88/-0.53	0.17/-0.25	3.96/-2.35	1.35/-1.60	3.58/-2.94	1.15/-0.71	0.24/-0.32	3.49/-2.04	2.03/-2.52	0.12/-0.89	-0.29/-1.13	0.93/-0.18	1.23/-1.69	0.80/-0.25	0.76/-0.49	2.31/-2.01	1.37/-0.44	0.21/-1.77	1.29/-2.32	3.98/-3.92	3.35/-3.13	-0.46/-0.07	1.70/-1.44
Θ(82.5°)	-2.13/-0.99	0.54/-0.76	-1.30/-1.52	2.71/-1.59	-0.32/-0.16	2.29/-1.72	0.21/-1.33	-0.43/-0.21	2.28/-0.12	0.37/-1.00	-2.19/-1.36	-0.57/-0.07	-0.49/-0.54	0.79/-0.86	-0.48/-0.51	0.84/-0.91	1.77/-2.49	1.24/-0.04	-0.61/-0.43	0.35/-2.14	3.82/-3.90	2.67/-2.45	-1.55/-2.50	0.27/-0.93
Θ(90°)	-5.36/-3.06	-0.98/-3.62	-4.21/-3.65	1.23/-0.07	-1.58/-0.87	0.65/-0.52	-1.82/-2.32	-1.27/-0.40	-0.10/-2.24	-1.85/-0.71	-3.32/-3.30	-2.25/-0.87	-1.79/-0.34	0.28/-0.77	-1.52/-1.57	-0.73/-0.53	-0.42/-2.13	0.74/-0.89	-3.82/-1.28	-1.08/-0.50	2.01/-2.37	0.94/-0.37	-2.54/-3.51	-0.74/-0.45
Θ(97.5°)	-7.74/-2.72	-1.47/-5.20	-5.31/-5.62	-1.76/-2.38	-2.78/-2.57	-1.70/-2.36	-2.63/-2.93	-2.70/-1.54	-2.67/-5.83	-4.23/-3.30	-5.18/-4.84	-2.93/-2.26	-3.51/-0.81	-1.48/-0.90	-2.26/-3.48	-2.83/-2.44	-2.87/-0.48	-2.82/-3.68	-6.41/-3.39	-4.97/-3.27	-1.18/-0.65	-1.34/-2.54	-5.50/-5.07	-0.88/-0.90
Θ(105°)	-8.12/-3.74	-2.66/-5.61	-6.33/-7.32	-4.18/-4.23	-4.42/-5.30	-5.81/-6.82	-5.01/-4.21	-6.43/-5.02	-4.57/-3.36	-5.31/-5.99	-7.34/-5.79	-4.24/-1.73	-2.17/-1.18	-3.72/-3.68	-5.06/-2.72	-4.28/-3.41	-4.32/-3.38	-5.90/-3.93	-6.99/-6.47	-3.80/-3.07	-3.40/-4.59	-6.22/-6.24	-1.62/-2.45	
Θ(112.5°)	-9.48/-4.66	-3.47/-6.09	-7.30/-6.76	-9.80/-10.12	-12.92/-9.74	-6.05/-6.81	-6.55/-6.39	-8.39/-6.49	-5.92/-8.88	-9.71/-7.63	-8.73/-6.63	-6.21/-5.28	-4.61/-3.22	-2.90/-2.94	-5.46/-8.23	-5.20/-1.91	-2.32/-5.71	-5.46/-4.68	-3.14/-1.11	-7.13/-10.89	-4.70/-3.74	-3.12/-3.29	-6.46/-7.43	-4.03/-4.07
Θ(120°)	-6.89/-6.53	-5.54/-6.56	-11.75/-8.25	-5.74/-6.86	-7.84/-8.96	-7.69/-7.21	-9.80/-8.98	-7.19/-8.75	-5.65/-8.03	-10.58/-5.57	-7.76/-8.95	-5.28/-6.56	-4.70/-3.31	-5.53/-8.95	-7.38/-3.42	-2.29/-6.22	-4.10/-1.78	-5.79/-2.18	-8.89/-11.24	-4.70/-3.62	-5.97/-5.98	-8.93/-12.23	-6.16/-5.42	
Θ(127.5°)	-10.91/-10.28	-8.12/-5.96	-8.02/-7.66	-5.22/-5.96	-7.71/-5.90	-8.57/-7.38	-7.77/-7.31	-9.00/-10.56	-9.75/-11.44	-10.96/-8.37	-7.09/-8.07	-7.71/-7.71	-8.32/-7.06	-3.97/-1.72	-6.68/-6.69	-12.91/-3.72	-5.54/-6.86	-7.76/-11.55	-6.24/-2.98	-11.47/-15.26	-6.47/-5.35	-9.34/-11.00	-5.25/-1.24	
Θ(135°)	-6.15/-8.61	-9.78/-8.47	-10.49/-10.13	-11.37/-15.48	-11.05/-6.33	-8.25/-9.09	-7.68/-10.28	-10.93/-8.82	-13.49/-10.85	-9.95/-9.20	-7.23/-9.13	-6.33/-4.26	-6.76/-6.05	-3.25/-6.04	-7.25/-8.22	-8.58/-3.66	-10.82/-5.97	-8.17/-12.37	-6.65/-1.16	-6.72/-15.41	-10.67/-4.87	-5.88/-11.11	-10.30/-9.17	-8.42/-5.52
Θ(142.5°)	-8.86/-7.84	-9.75/-9.24	-8.64/-11.08	-11.78/-9.93	-8.68/-7.06	-7.71/-7.82	-8.45/-11.08	-11.51/-11.89	-15.90/-11.69	-9.42/-14.49	-9.75/-8.42	-8.17/-9.81	-7.46/-5.31	-5.68/-7.21	-10.65/-9.91	-6.36/-8.98	-7.02/-6.54	-12.33/-14.80	-7.26/-3.39	-12.67/-6.81	-6.29/-14.44	-14.53/-9.59	-9.03/-10.24	
Θ(150°)	-1.25/-9.28	-7.65/-4.10	-11.49/-12.30	-15.21/-11.57	-8.55/-7.48	-7.11/-7.36	-8.64/-12.68	-11.67/-9.67	-13.84/-11.67	-8.01/-8.42	-8.12/-8.37	-13.13/-8.61	-7.10/-6.55	-7.32/-10.18	-14.07/-14.93	-13.93/-15.77	-14.82/-15.57	-11.79/-8.15	-10.43/-15.33	-15.14/-15.00	-10.15/-8.53	-9.12/-8.89	-9.89/-11.22	
Θ(157.5°)	-12.64/-14.33	-11.82/-11.82	-11.48/-12.55	-15.56/-12.53	-11.67/-10.29	-10.04/-12.16	-15.49/-15.63	-11.90/-11.01	-11.07/-9.97	-8.36/-8.15	-9.29/-10.17	-11.30/-11.14	-8.82/-7.92	-9.04/-12.17	-14.42/-10.84	-8.26/-9.00	-11.12/-14.39	-15.41/-13.94	-10.52/-9.59	-11.47/-13.43	-11.96/-10.86	-10.86/-12.30	-13.50/-12.31	-11.25/-11.04
Θ(165°)	-13.88/-13.63	-13.12/-12.58	-13.46/-11.41	-9.58/-8.43	-8.57/-9.90	-11.75/-10.63	-9.31/-7.71	-7.10/-7.32	-7.83/-8.59	-9.56/-10.66	-11.45/-11.40	-10.53/-9.06	-8.10/-7.63	-7.28/-7.67	-6.88/-8.30	-10.54/-13.29	-15.59/-16.10	-14.61/-12.70	-12.01/-10.40	-8.97/-1.70	-5.82/-5.36	-6.41/-6.94	-11.60/-14.14	-13.46/-13.32
Θ(172.5°)	-7.83/-5.53	-5.07/-5.60	-6.41/-7.87	-9.22/-10.87	-12.38/-13.97	-14.61/-13.66	-13.87/-13.43	-13.09/-12.49	-11.32/-11.15	-11.95/-12.18	-12.67/-12.24	-11.48/-12.23	-13.14/-14.18	-14.03/-13.81	-15.04/-14.67	-14.45/-14.72	-14.87/-14.43	-13.91/-12.95	-10.17/-10.19	-8.96/-7.90	-7.36/-8.08	-10.47/-12.88	-14.14/-14.86	-12.79/-10.39
Θ(180°)	-13.04/-11.88	-12.20/-12.03	-11.27/-11.23	-12.78/-13.06	-12.80/-12.74	-11.44/-11.34	-11.07/-10.84	-10.36/-9.93	-10.45/-11.81	-13.41/-14.53	-15.14/-15.28	-14.52/-13.59	-13.55/-14.99	-15.25/-15.69	-14.75/-15.80	-14.51/-16.33	-13.71/-11.95	-12.56/-12.23	-11.50/-11.09	-11.65/-13.07	-13.51/-12.42	-11.17/-10.51	-10.53/-10.07	-11.06/-12.65
Freq(Hz)	5.885GPol.	TotalAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.87/-3.80	-3.42/-3.14	-3.55/-3.79	-3.55/-3.31	-3.37/-3.43	-2.86/-2.60	-2.39/-2.52	-2.70/-2.63	-2.58/-3.19	-3.57/-3.87	-4.16/-4.17	-3.85/-3.80	-4.29/-4.81	-5.22/-5.50	-4.66/-3.81	-3.76/-4.14	-4.58/-4.35	-3.78/-3.27	-3.39/-3.65	-3.99/-4.05	-3.30/-3.99	-4.15/-4.23	-4.70/-4.65	-4.32/-3.86
Θ(7.5°)	-4.68/-5.16	-4.92/-4.89	-5.41/-6.57	-6.25/-4.96	-4.74/-4.56	-4.91/-4.81	-4.67/-4.52	-4.84/-4.72	-4.34/-4.51	-3.99/-3.42	-2.86/-2.44	-2.31/-2.11	-1.65/-1.39	-1.08/-0.66	-0.43/-0.34	-0.22/-0.17	0.49/-0.42	0.22/-0.00	-0.13/-0.23	-0.51/-1.00	-1.54/-2.18	-2.98/-3.82	-4.10/-4.46	
Θ(15°)	-4.35/-3.99	-3.95/-4.10	-4.59/-6.61	-6.69/-6.25	-7.22/-6.63	-9.77/-8.67	-9.90/-10.13	-9.14/-8.15	-7.71/-7.27	-6.93/-6.04	-5.79/-5.07	-4.01/-3.00	-2.14/-1.47	-0.82/-0.35	0.14/-0.56	0.77/-0.87	0.76/-0.75	0.86/-0.92	0.96/-1.04	1.37/-1.68	1.89/-1.98	1.75/-1.10	0.05/-1.24	-2.87/-4.17
Θ(22.5°)	-2.41/-2.81	-3.52/-4.78	-6.27/-7.52	-8.69/-10.34	-11.89/-12.48	-13.67/-15.68	-14.44/-15.62	-9.84/-7.63	-7.16/-7.88	-8.33/-8.18	-7.58/-6.28	-4.44/-2.39	-1.01/-0.35	-0.28/-0.02	0.77/-1.63	2.29/-2.67	2.61/-2.12	1.91/-2.21	2.63/-2.42	1.72/-0.90	0.86/-1.36	1.65/-1.38	0.57/-0.56	-1.32/-1.93
Θ(30°)	0.55/-0.07	-0.84/-1.41	-1.42/-1.66	-2.69/-5.04	-7.88/-9.96	-7.91/-5.70	-6.23/-10.51	-10.47/-5.99	-4.30/-4.74	-6.27/-6.48	-5.40/-4.34	-2.71/-0.50	1.05/-1.58	1.25/-1.33	2.13/-0.00	3.84/-2.40	4.00/-3.59	3.61/-4.14	4.71/-4.92	4.39/-2.30	2.12/-1.87	2.25/-2.43	1.77/-1.16	0.93/-0.87
Θ(37.5°)	0.73/-0.61	0.21/-0.28	0.87/-1.15	1.14/-0.41	-0.78/-2.20	-2.02/-0.25	-0.16/-0.87	-2.84/-3.09	-2.26/-3.48	-4.41/-2.51	-1.24/-1.07	-0.39/-0.91	1.68/-1.90	1.29/-1.15	2.63/-3.94	4.21/-3.83	3.49/-3.49	3.24/-2.75	2.22/-2.24	3.15/-3.76	3.77/-3.57	3.80/-3.62	2.49/-1.36	1.05/-0.93
Θ(45°)	0.93/-0.94	0.43/-0.32	0.77/-0.85	1.44/-2.02	1.16/-0.92	-1.75/-0.53	0.02/-0.50	-0.67/-1.13	-0.29/-1.12	-1.73/-0.58	0.99/-0.13	0.83/-2.37	2.67/-2.35	2.61/-2.60	2.81/-3.00	2.67/-2.14	3.15/-3.49	0.48/-0.60	-0.06/-1.09	2.20/-2.79	3.80/-4.49	3.58/-2.66	2.36/-1.40	
Θ(52.5°)	1.33/-1.70	0.37/-0.26	-0.14/-0.50	1.32/-2.72	1.34/-0.28	0.02/-0.32	0.10/-0.11	0.92/-0.87	1.05/-0.44	0.06/-2.66	2.59/-0.53	1.10/-2.60	2.64/-1.62	2.04/-2.52	3.07/-2.66	1.28/-0.13	0.97/-1.78	2.17/-2.14	1.12/-0.15	-0.45/-0.17	1.38/-1.82	3.00/-4.04	3.20/-2.82	3.43/-1.76
Θ(60°)	0.95/-1.17	0.99/-0.89	1.24/-0.73	3.65/-4.77	3.38/-2.63	2.82/-2.88	1.57/-0.83	2.01/-2.63	2.78/-2.66	1.41/-2.32	2.38/-4.11	1.95/-2.76	2.43/-1.94	2.39/-3.95	3.08/-1.36	1.51/-0.59	1.40/-2.15	2.18/-2.23	1.71/-1.62	1.20/-2.13	1.95/-1.54	2.81/-3.91	2.36/-2.47	3.65/-1.96
Θ(67.5°)	1.75/-1.09	2.11/-2.25	1.62/-1.63	4.71/-5.20	3.56/-3.02	3.61/-3.26	1.78/-0.97	3.30/-2.22	2.24/-2.23	1.10/-2.76	1.45/-2.39	1.76/-0.85	2.00/-3.03	1.98/-1.05	1.76/-2.08	2.07/-2.03	1.41/-1.42	1.60/-1.86	1.40/-1.81	3.10/-2.76	3.01/-3.98	1.64/-1.52	3.36/-2.56	
Θ(75°)	0.47/-0.06	1.92/-0.00	0.65/-1.50	4.93/-4.50	2.30/-1.79	2.65/-2.15	0.83/-0.46	1.75/-2.65	2.74/-2.82	1.96/-1.30	-0.87/-0.42	0.99/-2.14	1.60/-1.15	2.15/-2.80	1.05/-0.08	1.55/-								



Antenna Pattern of SC Ant1, BLE Ant2

Appendix D

Θ(75°)	0.76/1.50	0.47/2.30	1.60/1.76	0.86/1.51	3.77/1.78	-0.30/2.29	-2.77/2.08	-0.56/2.29	4.17/1.77	0.60/0.86	2.80/1.63	0.56/1.25	0.99/1.59	2.91/3.07	2.01/0.24	-2.44/-1.97	0.29/1.90	-0.18/0.64	0.45/-0.20	0.02/-0.48	1.85/2.87	3.42/0.00	0.31/0.90	2.92/2.71
Θ(82.5°)	-0.20/0.70	0.07/1.63	0.35/0.43	-0.77/-0.28	1.75/-1.59	-1.42/-1.99	-2.84/-1.50	-1.05/-0.07	3.08/-0.29	-0.95/-0.29	2.16/0.44	-0.37/-0.01	0.57/-0.04	2.18/1.96	1.04/-1.67	-2.33/-1.65	-0.06/1.44	0.57/-0.05	-0.25/-1.25	0.45/-0.64	2.25/3.30	3.41/0.32	-0.72/-1.01	2.55/2.35
Θ(90°)	-1.73/-0.84	-1.01/0.02	-2.41/-1.71	-2.55/-2.24	-1.08/-5.10	-2.10/-1.54	-3.50/-2.25	-1.76/-2.27	0.96/2.54	-3.50/-2.42	0.69/-0.87	-1.28/-2.11	0.30/-2.14	1.70/0.83	-0.13/-3.44	-2.76/-3.56	-2.87/-0.45	-0.77/-2.91	-1.91/-4.56	-0.38/-2.26	0.93/2.30	1.24/-1.26	-2.99/-3.44	1.05/1.23
Θ(97.5°)	-2.79/-2.36	-1.80/-1.44	-5.03/-4.11	-3.23/-4.46	-2.78/-5.91	-3.42/-3.41	-7.53/-4.41	-3.16/-4.88	-1.03/-5.25	-7.01/-5.12	-2.01/-2.20	-2.66/-3.40	-0.64/-3.01	0.74/0.05	-0.53/-4.28	-4.40/-5.32	-5.95/-3.28	-4.77/-6.02	-3.77/-8.17	-1.57/-5.73	-3.84/0.09	-2.08/-3.91	-5.73/-4.37	-0.80/0.21
Θ(105°)	-4.93/-5.16	-4.12/-3.68	-5.60/-4.22	-3.89/-7.65	-3.64/-3.03	-4.76/-7.52	-8.54/-7.71	-5.66/-6.22	-2.44/-7.38	-8.37/-5.97	-4.52/-3.89	-3.44/-4.22	-3.33/-2.98	-1.96/-0.74	-0.93/-4.90	-5.00/-6.57	-3.86/-4.59	-5.96/-4.65	-3.83/-5.61	-2.50/-4.43	-5.70/-2.99	-2.99/-5.44	-9.19/-6.49	-2.71/-1.59
Θ(112.5°)	-6.70/-6.47	-4.02/-5.50	-4.42/-3.55	-5.54/-9.48	-8.47/-6.05	-5.86/-6.19	-6.21/-7.37	-5.39/-6.43	-8.30/-7.81	-8.99/-6.05	-5.90/-6.19	-4.56/-4.86	-5.18/-3.43	-2.12/-2.12	-2.77/-7.99	-8.99/-6.54	-2.54/-3.22	-7.51/-3.70	-3.28/-2.87	-2.81/-5.38	-4.64/-2.25	-2.76/-5.00	-9.94/-7.26	-4.47/-2.84
Θ(120°)	-7.83/-7.45	-6.14/-5.92	-6.21/-7.35	-6.57/-9.82	-8.83/-12.28	-13.37/-11.99	-10.14/-9.64	-8.24/-7.17	-5.00/-7.34	-11.48/-8.27	-6.23/-8.94	-4.97/-6.38	-7.47/-4.04	-4.02/-3.77	-3.81/-7.96	-11.82/-8.67	-4.93/-4.77	-8.02/-6.68	-8.05/-5.09	-8.39/-10.54	-5.65/-5.35	-4.94/-7.38	-13.20/-8.12	-3.97/-3.43
Θ(127.5°)	-7.86/-10.83	-9.44/-9.46	-11.29/-12.56	-7.41/-6.13	-9.11/-6.88	-5.88/-7.96	-10.22/-7.79	-6.48/-7.06	-7.84/-12.29	-10.41/-9.40	-10.51/-7.12	-5.61/-8.22	-5.86/-6.78	-4.24/-2.38	-6.48/-9.90	-7.80/-13.13	-3.34/-7.33	-7.44/-5.69	-7.54/-1.61	-8.81/-8.47	-6.57/-11.09	-12.69/-11.63	-8.59/-4.79	
Θ(135°)	-10.18/-9.52	-9.07/-10.25	-10.74/-13.55	-14.19/-14.86	-10.33/-9.27	-11.19/-12.93	-12.54/-12.83	-10.67/-13.44	-12.57/-15.31	-11.36/-9.51	-11.28/-7.45	-7.10/-5.51	-8.41/-7.59	-4.06/-5.28	-7.02/-13.32	-8.33/-9.00	-4.43/-11.42	-5.99/-5.81	-7.16/-2.02	-11.94/-11.51	-7.91/-6.28	-10.09/-8.34	-11.71/-9.74	-9.67/-7.42
Θ(142.5°)	-7.51/-8.35	-9.13/-8.17	-8.67/-9.92	-11.77/-9.73	-9.50/-11.00	-11.26/-10.33	-11.68/-10.63	-11.76/-16.16	-9.24/-8.40	-13.26/-10.16	-13.55/-14.38	-6.94/-4.93	-9.43/-10.83	-6.68/-8.18	-12.20/-12.74	-15.34/-12.49	-14.96/-12.95	-11.45/-10.98	-12.34/-6.63	-9.71/-15.21	-13.04/-11.05	-14.65/-13.70	-11.20/-14.15	-10.90/-7.95
Θ(150°)	-8.59/-12.31	-12.30/-10.33	-10.06/-14.30	-14.67/-12.07	-10.08/-8.65	-10.39/-11.03	-12.62/-12.83	-10.38/-15.37	-13.45/-9.26	-9.37/-12.12	-10.55/-11.27	-9.83/-9.81	-10.39/-12.13	-8.36/-11.85	-15.28/-11.80	-9.77/-14.28	-13.92/-12.82	-12.04/-14.05	-9.75/-7.27	-9.64/-15.62	-14.69/-12.41	-12.80/-14.53	-13.56/-12.36	-10.32/-8.05
Θ(157.5°)	-12.14/-13.43	-15.21/-12.39	-10.85/-12.55	-14.52/-12.50	-10.80/-10.50	-11.16/-15.12	-15.79/-10.92	-9.05/-9.71	-10.66/-8.91	-8.39/-11.10	-15.58/-15.78	-13.68/-9.88	-8.78/-8.87	-9.60/-14.84	-14.97/-15.25	-11.41/-11.04	-15.43/-15.58	-13.79/-11.53	-12.87/-12.13	-12.78/-15.00	-15.55/-12.66	-8.27/-7.07	-8.48/-12.28	
Θ(165°)	-14.07/-13.50	-12.79/-13.31	-15.41/-15.66	-13.94/-12.32	-10.64/-9.90	-11.08/-13.05	-10.85/-9.36	-10.05/-11.91	-15.01/-14.43	-14.44/-14.42	-14.86/-14.77	-15.38/-14.26	-14.32/-14.54	-15.03/-12.71	-11.25/-12.28	-13.24/-12.90	-11.80/-10.50	-11.31/-12.93	-11.23/-8.36	-7.09/-6.91	-7.98/-10.57	-11.70/-11.13	-10.46/-11.25	-13.77/-15.00
Θ(172.5°)	-15.66/-15.29	-12.89/-11.78	-11.03/-11.39	-12.11/-12.73	-12.91/-12.53	-13.16/-13.13	-12.07/-12.10	-13.15/-14.74	-14.70/-15.40	-13.84/-13.27	-13.64/-15.32	-14.94/-15.71	-14.96/-15.07	-14.85/-14.26	-13.60/-12.98	-12.90/-13.14	-13.72/-14.92	-14.81/-15.11	-14.24/-11.68	-9.59/-8.62	-8.48/-7.57	-7.29/-7.37	-8.00/-8.42	-9.91/-14.09
Θ(180°)	-14.46/-12.45	-14.17/-15.62	-14.32/-13.11	-12.08/-12.33	-12.50/-12.99	-13.60/-14.23	-13.05/-11.98	-11.43/-12.78	-13.28/-14.02	-14.81/-15.02	-15.01/-15.35	-15.33/-15.05	-15.09/-14.29	-12.99/-12.94	-12.96/-12.72	-12.54/-12.97	-13.92/-14.48	-16.10/-14.74	-12.84/-13.37	-14.56/-15.47	-15.73/-15.82	-15.66/-14.57	-15.66/-14.57	-14.44/-14.26
Freq(Hz)	6.995GPdL	TotalAnt.1	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-4.51/-4.50	-4.23/-4.18	-4.38/-4.60	-4.46/-4.65	-4.62/-4.80	-4.83/-4.56	-4.83/-4.52	-5.15/-4.31	-4.33/-4.14	-4.27/-4.76	-4.96/-4.95	-4.75/-4.58	-4.54/-4.72	-4.77/-4.98	-4.79/-4.87	-5.31/-5.73	-5.82/-5.51	-5.32/-5.57	-6.57/-6.38	-5.90/-5.28	-4.93/-5.08	-5.30/-5.64	-5.84/-5.86	-4.89/-5.31
Θ(7.5°)	-6.88/-5.58	-6.40/-6.73	-6.88/-7.14	-8.00/-9.16	-9.65/-9.52	-9.83/-9.93	-10.48/-11.29	-9.83/-8.49	-7.68/-7.21	-6.49/-6.06	-5.06/-4.24	-3.39/-2.75	-2.61/-2.15	-1.93/-1.43	-1.53/-1.65	-2.02/-1.91	-1.51/-1.64	-2.00/-2.72	-3.10/-3.59	-4.12/-3.40	-4.21/-4.46	-4.48/-4.63	-4.36/-4.17	-3.99/-4.54
Θ(15°)	-1.32/-2.43	-3.62/-5.11	-6.02/-7.15	-7.76/-9.51	-10.61/-10.57	-11.39/-12.59	-11.92/-9.92	-10.45/-9.64	-9.10/-8.54	-8.20/-6.55	-4.92/-3.44	-1.99/-1.10	-0.47/-0.11	0.24/0.26	0.53/0.83	0.84/0.93	1.09/1.17	1.37/1.31	1.01/0.60	0.20/0.14	-0.37/-1.23	-2.22/-2.88	-2.39/-1.53	-0.93/-0.86
Θ(22.5°)	-0.58/-1.99	-3.39/-4.09	-5.33/-6.15	-7.60/-8.56	-7.56/-6.94	-8.02/-8.35	-6.77/-5.62	-5.17/-5.15	-5.31/-5.56	-6.66/-6.38	-4.43/-3.01	-2.30/-2.01	-1.44/-0.66	-0.11/0.44	0.58/1.24	1.72/1.82	1.97/2.35	2.52/2.17	1.18/0.44	0.08/0.68	1.51/1.48	0.66/-0.40	-0.28/0.67	0.93/0.64
Θ(30°)	-0.39/-2.15	-2.77/-2.43	-2.99/-4.35	-4.42/-4.84	-4.91/-5.37	-6.27/-8.48	-9.63/-7.77	-5.65/-4.59	-4.78/-5.37	-6.39/-6.75	-5.24/-2.71	-1.62/-1.64	-1.41/-0.56	0.31/0.86	1.25/1.59	2.02/2.20	2.06/2.49	3.39/3.53	3.19/2.75	1.92/0.78	0.87/1.86	2.14/1.63	1.70/2.30	2.35/1.36
Θ(37.5°)	0.97/0.81	0.61/0.54	-0.26/-1.77	-2.96/-3.47	-3.35/-2.73	-2.22/-3.62	-5.04/-3.58	-2.52/-2.70	-2.27/-4.02	-7.18/-7.46	-4.92/-2.26	-0.96/0.15	0.37/0.76	1.30/1.43	1.62/1.24	1.13/1.70	2.14/3.01	3.64/3.49	3.04/2.37	1.99/1.27	1.07/2.57	3.57/3.35	3.63/3.83	2.75/1.42
Θ(45°)	1.67/2.05	1.73/1.47	0.57/0.23	-1.13/-0.99	-0.43/-1.31	-2.95/-5.62	-4.19/-1.16	-1.04/-2.30	-1.03/-0.08	-2.61/-5.03	-1.37/0.48	1.32/2.75	2.29/1.99	2.98/2.36	1.91/1.43	0.58/0.93	0.47/0.21	0.81/1.00	0.61/-0.51	-0.84/-0.84	-0.19/1.96	3.83/3.74	4.10/4.10	1.81/0.44
Θ(52.5°)	1.48/1.67	0.67/0.62	1.10/1.03	-0.54/0.74	0.91/-1.76	-5.80/-7.03	-3.22/-0.44	-0.10/-1.98	-1.81/0.27	-0.38/0.08	2.00/2.30	2.37/3.35	2.47/3.04	3.58/2.72	2.40/1.20	-0.43/-0.64	-3.12/-1.64	-0.71/0.01	-0.35/-2.27	-2.23/-1.69	-1.22/1.31	2.54/2.49	3.56/3.65	0.91/-0.05
Θ(60°)	0.93/0.89	-0.57/1.60	2.23/1.14	-1.44/1.11	2.15/-0.47	-3.96/-3.64	-2.58/-0.78	0.50/1.19	0.42/0.56	1.25/2.75	3.33/3.10	2.63/3.53	2.70/3.43	3.31/3.16	2.86/1.26	-1.37/-2.02	-4.86/-1.45	-0.43/0.03	-0.48/-2.34	-1.89/-2.07	-2.09/1.35	2.57/0.84	2.16/2.34	-0.33/0.02
Θ(67.5°)	0.05/0.55	-0.51/2.98	3.22/1.89	-0.90/1.46	3.46/0.13	-3.57/3.13	-1.99/-1.81	-0.46/2.55	2.50/1.20	0.98/3.92	3.88/2.32	2.50/2.40	1.32/2.89	2.36/2.47	2.41/0.39	-1.24/-1.34	-4.50/-2.76	-1.38/0.18	0.47/-1.92	-2.29/-0.82	-1.41/1.59	2.90/0.35	0.65/1.26	-0.14/0.55
Θ(75°)	-0.82/-0.27	-0.20/2.95	2.76/1.88	-1.17/0.98	2.88/-0.19	-2.58/-1.30	-0.88/-1.18	-0.33/-1.51	1.81/1.08	0.58/3.23	2.85/1.14	1.87/1.35	0.56/1.07	1.02/1.69	1.48/-0.44	0.19/-0.07	-3.06/-1.18	-2.57/-0.54	0.70/-0.80	-1.01/-0.92	-1.42/1.09	3.14/-0.30	-1.05/-0.10	0.55/0.77
Θ(82.5°)	-2.61/-0.98	-1.21/1.55	1.56/0.76	-2.06/1.12	0.18/-1.32	-2.19/-1.08	-1.58/-2.84	-1.71/0.76	-0.13/0.81	-1.11/2.44	1.79/-0.72	1.42/-0.62	0.15/-1.26	0.50/1.15	-0.18/-2.40	0.50/0.97	0.05/-1.21	-3.53/-2.32	1.18/-0.23	-2.26/-0.56	-0.22/0.89	2.05/0.12	-2.95/-1.82	0.42/-0.09
Θ(90°)	-4.53/-2.10	-2.90/-0.67	-0.49/-1.75	-3.71/-0.06	-3.83/-2.80	-2.62/-2.82	-3.98/-3.96	-3.06/-0.02	-1.55/-0.37	-3.60/-0.03	0.31/-4.34	0.13/-3.02	-0.01/-3.96	-0.41/0.15	-1.39/-3.80	-0.10/0.23	0.01/3.14	-5.09/-6.30	-0.27/-2.57	-1.98/-2.67	-1.06/-0.25	-0.64/-1.27	-4.70/-3.04	-0.41/-1.64
Θ(97.5°)	-5.75/-3.46	-3.97/-3.33	-3.75/-5.12	-7.85/-3.23	-6.78/-6.03	-4.40/-5.14	-7.48/-4.91	-4.01/-2.07	-3.13/-3.46	-6.50/-2.35	-1.53/-7.79	-1.05/-4.15	-0.89/-5.40	-0.93/-1.42	-1.83/-5.12	-2.43/-1.90	-3.32/-8.04	-8.71/-5.77	-2.89/-6.80	-1.94/-5.78	-5.50/-3.01	-3.40/-3.98	-6.04/-4.21	-1.86/-3.40
Θ(105°)	-6.36/-5.87	-4.91/-4.54	-5.46/-5.93	-6.94/-7.45	-3.19/-6.05	-8.77/-7.02	-10.16/-8.31	-7.08/-5.58	-3.82/-8.20	-1.70/-4.47	-3.70/-8.48	-3.66/-4.45	-2.63/-4.52	-2.12/-1.82	-1.54/-5.24	-5.82/-4.87	-4.50/-7.39	-9.55/-5.70	-2.76/-5.65	-5.16/-4.59	-4.41/-5.99	-8.45/-4.92	-3.15/-4.08	
Θ(112.5°)	-10.10/-7.25	-5.19/-8.63	-5.65/-4.97	-6.11/-10.88	-6.83/-6.95	-8.76/-10.53	-11.20/-10.58	-10.43/-6.83	-7.02/-12.69	-8.76/-6.52	-7.73/-6.23	-5.33/-4.08	-4.47/-5.23	-3.88/-2.58	-5.30/-9.37	-4.54/-4.98	-3.62/-7.41	-9.40/-4.45	-3.89/-4.45	-3.72/-4.78	-7.13/-6.31	-4.40/-5.18	-14.57/-6.84	-5.52/-4.90
Θ(120°)	-10.83/-9.94	-8.97/-7.82	-9.54/-7.29	-7.74/-8.02	-12.57/-12.88	-12.54/-11.28	-8.56/-7.17	-7.71/-9.48	-8.60/-7.06	-9.88/-6.30	-6.00/-4.92	-6.38/-5.19	-5.63/-5.48	-5.97/-3.18	-4.85/-10.51	-8.08/-9.33	-7.04/-6.36	-12.73/-7.41	-6.19/-2.94	-8.31/-8.22	-10.75/-7.72	-5.80/-10.63	-15.79/-8.43	-3.58/-4.26
Θ(127.5°)	-9.84/-9.25	-10.01/-10.98	-13.36/-14.56	-9.81/-7.08	-9.70/-6.13	-7.00/-9.96																		

E1(XY plane) – $\Theta(90)\Phi(0-360)$
E2(XZ plane) – $\Theta(0-180)\Phi(0)$ and $\Theta(0-180)\Phi(180)$
E3(YZ plane) – $\Theta(0-180)\Phi(90)$ and $\Theta(0-180)\Phi(270)$

