Case ii: Gamma Distribution

ARL Table for scale parameter increase from the in-control value in G(0.5,1.0)

		$n = 5$				$n = 10$				$n = 20$			
		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart	
β	μ_X	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+
1.0	0.5	99.47	196.74	98.12	196.16	97.45	198.38	98.50	198.51	100.66	203.80	99.60	199.37
1.2	0.6	51.15	61.62	62.72	88.60	41.39	45.85	57.54	76.71	30.69	31.93	50.26	65.18
1.4	0.7	25.90	27.38	40.88	47.99	16.54	17.13	33.95	38.65	9.39	9.33	26.07	29.14
1.6	0.8	14.57	14.86	27.23	30.55	8.24	8.28	20.94	22.89	3.99	3.94	15.17	15.92
1.8	0.9	9.10	9.40	19.45	20.94	4.79	4.76	14.27	15.02	2.09	2.07	9.69	10.08
2.0	1.0	6.26	6.35	14.67	15.44	2.97	3.03	10.35	10.64	1.20	1.20	6.88	6.90

ARL Table for scale parameter decrease from the in-control state in G(0.5,1.0)

		$n = 5$				$n = 10$				$n = 20$			
		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart	
β	μ_X	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+
1.0	0.50	198.90	98.97	197.80	96.23	200.69	98.92	197.07	98.73	197.54	100.22	199.39	97.19
0.9	0.45	156.13	115.63	173.98	114.19	130.96	103.68	175.79	117.56	100.26	87.84	176.87	125.67
0.8	0.40	119.28	108.41	156.16	124.94	80.65	76.95	155.63	131.20	47.32	46.71	155.89	136.57
0.7	0.35	88.46	85.29	134.86	124.10	48.39	48.24	136.02	127.28	21.14	21.32	136.90	132.36
0.6	0.30	60.79	60.78	115.49	112.38	26.80	26.71	116.44	114.13	9.21	9.23	114.52	114.83
0.5	0.25	40.46	40.49	96.20	94.29	13.78	13.89	94.31	94.61	3.64	3.66	95.23	96.02