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