

α_k is periodic with period N and has the following two values only:

$$\alpha_k = \begin{cases} 1, & k = \pm iN \text{ and } i = 0, 1, \dots \\ -1/N, & \text{elsewhere} \end{cases}$$

The autocorrelation function of a periodic PN sequence of period $N = 15$ is shown in Figure E.2.

F THE ERLANG-B AND ERLANG-C TABLES

Table F.1 Offered Traffic Load in Erlangs in an Erlang-B System (Number of Channels from 2 to 20)

Channel Number	Call Blocking Probability							
	0.001	0.002	0.005	0.010	0.020	0.050	0.070	0.100
2	0.046	0.065	0.105	0.152	0.223	0.381	0.470	0.595
3	0.194	0.249	0.349	0.455	0.602	0.899	1.057	1.271
4	0.439	0.535	0.701	0.869	1.092	1.525	1.748	2.045
5	0.762	0.900	1.132	1.361	1.657	2.218	2.504	2.881
6	1.146	1.325	1.622	1.909	2.276	2.960	3.305	3.758
7	1.579	1.798	2.157	2.501	2.935	3.738	4.139	4.666
8	2.051	2.311	2.730	3.127	3.627	4.543	4.999	5.597
9	2.557	2.855	3.333	3.783	4.345	5.370	5.879	6.546
10	3.092	3.426	3.961	4.461	5.084	6.216	6.776	7.511
11	3.651	4.021	4.610	5.160	5.841	7.076	7.687	8.487
12	4.231	4.637	5.279	5.876	6.615	7.950	8.610	9.474
13	4.830	5.270	5.964	6.607	7.401	8.835	9.543	10.470
14	5.446	5.919	6.663	7.352	8.200	9.729	10.485	11.473
15	6.077	6.582	7.375	8.108	9.010	10.633	11.434	12.484
16	6.722	7.258	8.100	8.875	9.828	11.543	12.390	13.500
17	7.378	7.946	8.834	9.652	10.656	12.461	13.353	14.522
18	8.046	8.644	9.578	10.437	11.491	13.385	14.321	15.548
19	8.724	9.351	10.331	11.230	12.333	14.315	15.294	16.579
20	9.411	10.068	11.092	12.031	13.182	15.249	16.271	17.613

Table F.2 Offered Traffic Load in Erlangs in an Erlang-B System (Number of Channels from 21 to 55)

Channel Number	Call Blocking Probability							
	0.001	0.002	0.005	0.010	0.020	0.050	0.070	0.100
21	10.108	10.793	11.860	12.838	14.036	16.189	17.253	18.651
22	10.812	11.525	12.635	13.651	14.896	17.132	18.238	19.692
23	11.524	12.265	13.416	14.470	15.761	18.080	19.227	20.737
24	12.243	13.011	14.204	15.295	16.631	19.031	20.219	21.784
25	12.969	13.763	14.997	16.124	17.505	19.985	21.214	22.833
26	13.701	14.522	15.795	16.959	18.383	20.943	22.212	23.885
27	14.439	15.285	16.598	17.797	19.265	21.904	23.213	24.939
28	15.182	16.054	17.406	18.640	20.150	22.867	24.216	25.995
29	15.930	16.828	18.218	19.487	21.039	23.833	25.221	27.053
30	16.684	17.606	19.034	20.337	21.932	24.802	26.228	28.113
31	17.442	18.389	19.854	21.191	22.827	25.773	27.238	29.174
32	18.205	19.175	20.678	22.048	23.725	26.746	28.249	30.237
33	18.972	19.966	21.505	22.909	24.626	27.721	29.262	31.301
34	19.742	20.761	22.336	23.772	25.529	28.698	30.277	32.367
35	20.517	21.559	23.169	24.638	26.435	29.677	31.293	33.434
36	21.296	22.361	24.006	25.507	27.343	30.657	32.311	34.503
37	22.078	23.166	24.846	26.378	28.253	31.640	33.330	35.572
38	22.864	23.974	25.689	27.252	29.166	32.623	34.351	36.643
39	23.652	24.785	26.534	28.129	30.081	33.609	35.373	37.715
40	24.444	25.599	27.382	29.007	30.997	34.596	36.396	38.787
41	25.239	26.416	28.232	29.888	31.916	35.584	37.421	39.861
42	26.037	27.235	29.085	30.771	32.836	36.574	38.446	40.936
43	26.837	28.057	29.940	31.656	33.758	37.565	39.473	42.011
44	27.641	28.881	30.797	32.543	34.682	38.557	40.501	43.088
45	28.447	29.708	31.656	33.432	35.607	39.550	41.529	44.165
46	29.255	30.538	32.517	34.322	36.534	40.545	42.559	45.243
47	30.066	31.369	33.381	35.215	37.462	41.540	43.590	46.322
48	30.879	32.203	34.246	36.108	38.392	42.537	44.621	47.401
49	31.694	33.039	35.113	37.004	39.323	43.534	45.653	48.481
50	32.512	33.876	35.982	37.901	40.255	44.533	46.687	49.562
51	33.331	34.716	36.852	38.800	41.189	45.532	47.721	50.643
52	34.153	35.558	37.724	39.700	42.124	46.533	48.755	51.726
53	34.977	36.401	38.598	40.602	43.060	47.534	49.791	52.808
54	35.803	37.247	39.474	41.505	43.997	48.536	50.827	53.891
55	36.630	38.094	40.351	42.409	44.936	49.539	51.864	54.975

Table F.3 Offered Traffic Load in Erlangs in an Erlang-B System (Number of Channels from 56 to 90)

Channel Number	Call Blocking Probability							
	0.001	0.002	0.005	0.010	0.020	0.050	0.070	0.100
56	37.460	38.942	41.229	43.315	45.875	50.543	52.901	56.059
57	38.291	39.793	42.109	44.222	46.816	51.548	53.940	57.144
58	39.124	40.645	42.990	45.130	47.758	52.553	54.978	58.229
59	39.959	41.498	43.873	46.039	48.700	53.559	56.018	59.315
60	40.795	42.353	44.757	46.950	49.644	54.566	57.058	60.401
61	41.633	43.210	45.642	47.861	50.589	55.573	58.098	61.488
62	42.472	44.068	46.528	48.774	51.534	56.581	59.139	62.575
63	43.313	44.927	47.416	49.688	52.481	57.590	60.181	63.663
64	44.156	45.788	48.305	50.603	53.428	58.599	61.223	64.750
65	44.999	46.650	49.195	51.518	54.376	59.609	62.266	65.839
66	45.845	47.513	50.086	52.435	55.325	60.619	63.309	66.927
67	46.691	48.378	50.978	53.353	56.275	61.630	64.353	68.016
68	47.540	49.243	51.872	54.272	57.226	62.642	65.397	69.106
69	48.389	50.110	52.766	55.191	58.177	63.654	66.442	70.196
70	49.239	50.979	53.662	56.112	59.129	64.667	67.486	71.286
71	50.091	51.848	54.558	57.033	60.082	65.680	68.532	72.376
72	50.944	52.718	55.455	57.956	61.035	66.694	69.578	73.467
73	51.799	53.590	56.354	58.879	61.990	67.708	70.624	74.558
74	52.654	54.463	57.253	59.803	62.945	68.722	71.671	75.649
75	53.511	55.337	58.153	60.727	63.900	69.738	72.718	76.741
76	54.368	56.211	59.054	61.653	64.857	70.753	73.765	77.833
77	55.227	57.087	59.956	62.579	65.814	71.769	74.813	78.925
78	56.087	57.964	60.859	63.506	66.771	72.786	75.861	80.018
79	56.948	58.842	61.763	64.434	67.729	73.803	76.909	81.110
80	57.810	59.720	62.667	65.363	68.688	74.820	77.958	82.203
81	58.673	60.600	63.573	66.292	69.647	75.838	79.007	83.297
82	59.537	61.480	64.479	67.222	70.607	76.856	80.057	84.390
83	60.403	62.362	65.386	68.152	71.568	77.874	81.106	85.484
84	61.268	63.244	66.294	69.084	72.529	78.893	82.156	86.578
85	62.135	64.127	67.202	70.016	73.490	79.912	83.207	87.672
86	63.003	65.011	68.111	70.948	74.452	80.932	84.258	88.766
87	63.872	65.896	69.021	71.881	75.415	81.952	85.309	89.861
88	64.742	66.782	69.932	72.815	76.378	82.972	86.360	90.956
89	65.612	67.668	70.843	73.749	77.342	83.993	87.411	92.051
90	66.484	68.556	71.755	74.684	78.306	85.014	88.463	93.146

Table F.4 Offered Traffic Load in Erlangs in an Erlang-B System (Number of Channels from 91 to 200)

Channel Number	Call Blocking Probability							
	0.001	0.002	0.005	0.010	0.020	0.050	0.070	0.100
91	67.356	69.444	72.668	75.620	79.270	86.035	89.515	94.242
92	68.229	70.333	73.581	76.556	80.236	87.057	90.568	95.338
93	69.103	71.222	74.495	77.493	81.201	88.079	91.620	96.434
94	69.978	72.113	75.410	78.430	82.167	89.101	92.673	97.530
95	70.853	73.004	76.325	79.367	83.133	90.123	93.726	98.626
96	71.729	73.895	77.241	80.306	84.100	91.146	94.779	99.722
97	72.606	74.788	78.157	81.245	85.068	92.169	95.833	100.819
98	73.484	75.681	79.074	82.184	86.035	93.193	96.887	101.916
99	74.363	76.575	79.992	83.124	87.003	94.216	97.941	103.013
100	75.242	77.469	80.910	84.064	87.972	95.240	98.995	104.110
105	79.649	81.951	85.509	88.773	92.821	100.364	104.269	109.598
110	84.072	86.448	90.121	93.493	97.678	105.494	109.549	115.089
115	88.511	90.960	94.746	98.223	102.544	110.630	114.832	120.584
120	92.964	95.484	99.382	102.964	107.419	115.770	120.120	126.082
125	97.431	100.021	104.028	107.713	112.300	120.916	125.412	131.583
130	101.911	104.569	108.684	112.470	117.189	126.066	130.708	137.087
135	106.402	109.128	113.349	117.236	122.084	131.221	136.006	142.592
140	110.904	113.697	118.023	122.009	126.984	136.379	141.308	148.100
145	115.417	118.276	122.706	126.789	131.891	141.541	146.613	153.610
145	115.417	118.276	122.706	126.789	131.891	141.541	146.613	153.610
150	119.940	122.864	127.396	131.575	136.803	146.706	151.920	159.122
155	124.473	127.461	132.093	136.368	141.720	151.874	157.230	164.636
160	129.014	132.065	136.797	141.167	146.641	157.046	162.542	170.151
165	133.564	136.678	141.508	145.972	151.567	162.220	167.856	175.668
170	138.123	141.298	146.225	150.781	156.498	167.397	173.172	181.187
175	142.688	145.924	150.948	155.595	161.432	172.576	178.490	186.706
180	147.262	150.558	155.677	160.415	166.370	177.758	183.810	192.227
185	151.842	155.198	160.411	165.239	171.312	182.942	189.133	197.750
190	156.429	159.844	165.151	170.068	176.257	188.129	194.456	203.273
195	161.023	164.496	169.895	174.901	181.206	193.318	199.781	208.797
200	165.623	169.154	174.644	179.738	186.161	198.508	205.108	214.323