

Table 1: Confidence intervals for the expected value (parameter) of a Poisson random variable.

Suppose that one observation, N , is obtained from a Poisson distribution with expected value λ . Ninety percent, 95 percent and 99 percent confidence intervals for the parameter λ are given. For $N > 100$ a normal approximation with variance N may be used.

N	<i>Percent confidence</i>					
	90		95		99	
	<i>Lower limit</i>	<i>Upper limit</i>	<i>Lower limit</i>	<i>Upper limit</i>	<i>Lower limit</i>	<i>Upper limit</i>
0	0.00	3.00	0.00	3.69	0.00	5.30
1	0.05	4.74	0.03	5.57	0.01	7.43
2	0.36	6.30	0.24	7.22	0.10	9.27
3	0.82	7.75	0.62	8.77	0.34	10.98
4	1.37	9.15	1.09	10.24	0.67	12.59
5	1.97	10.51	1.62	11.67	1.08	14.15
6	2.61	11.84	2.20	13.06	1.54	15.66
7	3.29	13.15	2.81	14.42	2.04	17.13
8	3.98	14.43	3.45	15.76	2.57	18.58
9	4.70	15.71	4.12	17.08	3.13	20.00
10	5.43	16.96	4.80	18.39	3.72	21.40
11	6.17	18.21	5.49	19.68	4.32	22.78
12	6.92	19.44	6.20	20.96	4.94	24.14
13	7.69	20.67	6.92	22.23	5.58	25.50
14	8.46	21.89	7.65	23.49	6.23	26.84
15	9.25	23.10	8.40	24.74	6.89	28.16
16	10.04	24.30	9.15	25.98	7.57	29.48
17	10.83	25.50	9.90	27.22	8.25	30.79
18	11.63	26.69	10.67	28.45	8.94	32.09
19	12.44	27.88	11.44	29.67	9.64	33.38
20	13.25	29.06	12.22	30.89	10.35	34.67
21	14.07	30.24	13.00	32.10	11.07	35.95
22	14.89	31.41	13.79	33.31	11.79	37.22
23	15.72	32.59	14.58	34.51	12.52	38.48
24	16.55	33.75	15.38	35.71	13.26	39.74
25	17.38	34.92	16.18	36.90	14.00	41.00
26	18.22	36.08	16.98	38.10	14.74	42.25
27	19.06	37.23	17.79	39.28	15.49	43.50
28	19.90	38.39	18.61	40.47	16.25	44.74
29	20.75	39.54	19.42	41.65	17.00	45.98
30	21.59	40.69	20.24	42.83	17.77	47.21
31	22.44	41.84	21.06	44.00	18.53	48.44
32	23.30	42.98	21.89	45.17	19.30	49.67
33	24.15	44.13	22.72	46.34	20.08	50.89
34	25.01	45.27	23.55	47.51	20.86	52.11
35	25.87	46.40	24.38	48.68	21.64	53.32
36	26.73	47.54	25.21	49.84	22.42	54.54
37	27.59	48.68	26.05	51.00	23.21	55.75
38	28.46	49.81	26.89	52.16	24.00	56.96
39	29.33	50.94	27.73	53.31	24.79	58.16
40	30.20	52.07	28.58	54.47	25.59	59.36
41	31.07	53.20	29.42	55.62	26.38	60.56
42	31.94	54.32	30.27	56.77	27.18	61.76
43	32.81	55.45	31.12	57.92	27.99	62.96
44	33.69	56.57	31.97	59.07	28.79	64.15
45	34.56	57.69	32.82	60.21	29.60	65.34
46	35.44	58.82	33.68	61.36	30.41	66.53
47	36.32	59.94	34.53	62.50	31.22	67.72
48	37.20	61.05	35.39	63.64	32.03	68.90
49	38.08	62.17	36.25	64.78	32.85	70.08
50	38.96	63.29	37.11	65.91	33.67	71.25
51	39.84	64.40	37.97	67.04	34.49	72.42
52	40.72	65.51	38.83	68.16	35.31	73.58
53	41.60	66.62	39.69	69.28	36.13	74.74
54	42.48	67.73	40.55	70.39	36.95	75.89
55	43.36	68.84	41.41	71.50	37.77	77.04
56	44.24	69.94	42.27	72.61	38.59	78.19
57	45.12	71.05	43.13	73.71	39.41	79.34
58	46.00	72.15	43.99	74.82	40.23	80.48
59	46.88	73.25	44.85	75.92	41.05	81.63
60	47.76	74.35	45.71	77.02	41.87	82.77
61	48.64	75.45	46.57	78.12	42.69	83.91
62	49.52	76.55	47.43	79.22	43.51	85.05
63	50.40	77.65	48.29	80.32	44.33	86.19
64	51.28	78.75	49.15	81.42	45.15	87.33
65	52.16	79.85	50.01	82.52	45.97	88.47
66	53.04	80.95	50.87	83.62	46.79	89.61
67	53.92	82.05	51.73	84.72	47.61	90.75
68	54.80	83.15	52.59	85.82	48.43	91.89
69	55.68	84.25	53.45	86.92	49.25	93.03
70	56.56	85.35	54.31	88.02	50.07	94.17
71	57.44	86.45	55.17	89.12	50.89	95.31
72	58.32	87.55	56.03	90.22	51.71	96.45
73	59.20	88.65	56.89	91.32	52.53	97.59
74	60.08	89.75	57.75	92.42	53.35	98.73
75	60.96	90.85	58.61	93.52	54.17	99.87
76	61.84	91.95	59.47	94.62	54.99	101.01
77	62.72	93.05	60.33	95.72	55.81	102.15
78	63.60	94.15	61.19	96.82	56.63	103.29
79	64.48	95.25	62.05	97.92	57.45	104.43
80	65.36	96.35	62.91	99.02	58.27	105.57
81	66.24	97.45	63.77	100.12	59.09	106.71
82	67.12	98.55	64.63	101.22	59.91	107.85
83	68.00	99.65	65.49	102.32	60.73	108.99
84	68.88	100.75	66.35	103.42	61.55	110.13
85	69.76	101.85	67.21	104.52	62.37	111.27
86	70.64	102.95	68.07	105.62	63.19	112.41
87	71.52	104.05	68.93	106.72	64.01	113.55
88	72.40	105.15	69.79	107.82	64.83	114.69
89	73.28	106.25	70.65	108.92	65.65	115.83
90	74.16	107.35	71.51	110.02	66.47	116.97
91	75.04	108.45	72.37	111.12	67.29	118.11
92	75.92	109.55	73.23	112.22	68.11	119.25
93	76.80	110.65	74.09	113.32	68.93	120.39
94	77.68	111.75	74.95	114.42	69.75	121.53
95	78.56	112.85	75.81	115.52	70.57	122.67
96	79.44	113.95	76.67	116.62	71.39	123.81
97	80.32	115.05	77.53	117.72	72.21	124.95
98	81.20	116.15	78.39	118.82	73.03	126.09
99	82.08	117.25	79.25	119.92	73.85	127.23
100	82.96	118.35	80.11	121.02	74.67	128.37