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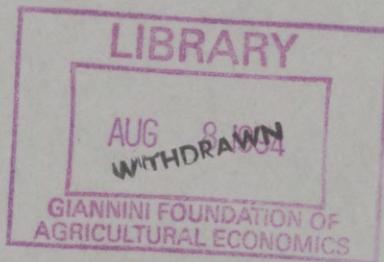
BURR DISTRIBUTION TABLES FOR APPROXIMATING p-VALUES
AND CRITICAL VALUES BY MATCHING SKEWNESS AND KURTOSIS

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BURR DISTRIBUTION TABLES FOR APPROXIMATING
p-VALUES AND CRITICAL VALUES
BY MATCHING SKEWNESS AND KURTOSIS

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Abstract

Tables are presented for parameters c, k of the Burr III and XII distribution, which cover a wide grid of skewness and kurtosis values. These enable distributions, whose first four moments are known, to be approximated. The form of the Burr III and XII distribution functions allows p-values to be readily calculated. Applications include hypothesis testing, modelling and simulation studies in a range of disciplines.

Key Words

Burr distributions; approximations; hypothesis testing; tables of parameters for given skewness and kurtosis.

1. Introduction

The problem of approximating distributions, and in particular p -values, is of continuing interest in statistics. Families of approximating distributions were useful originally for fitting functions to empirical data and hence estimating percentiles. Other applications are increasingly important, such as approximating distributions with known or estimable moments, hypothesis testing, modelling and simulation studies.

Approximating distributions is of particular concern and importance in the non-experimental sciences such as economics. Econometric models are used for forecasting and policy analysis, and their development in part is reliant on making accurate inferences

about parameters. Such tests generally are based on unknown probability distributions. Asymptotic assumptions are often inappropriate as data are limited. The consequences of misspecification can be serious, so it is important that accurate methods of approximating such distributions are available.

A particularly attractive family of distributions for these purposes is the Burr family. The Burr III and XII distributions can be used to approximate statistical distributions of a wide variety of shapes, when the first few moments are known or can be determined. These approximating families have an advantage for statistical inference over others, such as the traditional Pearson and Johnson distributions, as both the distribution function and its inverse have a simple closed mathematical form, thus avoiding numerical integration. This enables both *p*-values and critical values to be calculated directly and easily which is a major asset for a family of distributions. They can also be extended to multivariate distributions.

Burr distributions have been applied in areas of quality control, reliability studies, duration or failure time modelling, income distribution modelling and bio-assay. Originally proposed by Burr (1942), their properties, moment coverage, relationships with other distributions, and potential applications have been studied by Rodriguez (1977, 1982), Tadikamalla (1980) and in a comprehensive survey by Fry (1993). Additional recent studies include Hsien-Tang (1990), Padney and Uddin (1991), Sartawi and Abu-Salih (1991), Mohie (1991a,b), Al-Hussani and Jaheen (1992, 1993) and Ashour and El-Wakeel (1993). The generalised logistic distribution corresponds to the standard form of the Burr Type II distribution, which is the logarithm of a variate having a standard Burr Type III distribution. Related recent studies include Zelterman (1989), Ragab, Green and Tweedie (1990), Balakrishnan (1990), El-Saidi (1990, 1991, 1993), Gordon (1991), Ragab (1991a,b) and Thomas (1993).

The accuracy of Burr XII approximations to some standard distributions has been investigated by Pearson, Johnson and Burr (1979). More recent studies by Evans and Fry (1993) and Evans (1992) found that Burr III and XII approximations were reasonably accurate for many hypothesis tests of the linear regression model. These include tests for significance of coefficients and of autocorrelated and of heteroscedastic disturbances,

both based on standard distributions and those for which the true distribution of the test statistic was unknown. This latter group comprised test statistics which can be expressed as the ratio of quadratic forms in normal variates, and hence moments can be determined even though the true distribution is unknown.

Approximations by matching moments involves equating skewness and kurtosis to solve for the shape parameters c and k which define the appropriate Burr distribution. Tables here present values of these c and k parameters for a grid of skewness-kurtosis combinations. These tables extend those in Burr (1973): for Burr XII they cover negative skewness and they also give parameters for Burr III distributions which have a considerably wider range of moment coverage, as can be seen in the accompanying figures.

Test statistics and estimators frequently have unknown distributions in small samples, and despite the increase in computer power and usage, calculating p -values or tail probabilities, and significance or percentile points for data dependent distributions by numerical methods, is not yet standard or generally available in computer packages. Many practitioners in teaching and applied research may not have the facilities or inclination to compute these, and would find the tables presented here most useful.

2. Theory

The distribution functions of two solutions, Type XII and its ‘reciprocal’ Type III, of a differential equation given in Burr (1942), are characterised by the shape parameters c and k . The Burr XII distribution function and its inverse or percentile function, with $c > 0, k > 0$ are given, respectively, by

$$F(x) = 1 - (1 + x^c)^{-k} = \alpha, \quad (1)$$

$$x = [(1 - \alpha)^{-1/k} - 1]^{1/c}. \quad (2)$$

From (1) the tail probability or p -value α can be determined for any specified significance or percentile point x . Conversely, the significance point from any specified tail probability may be found from (2). Moments about the origin exist for $ck > r$ and are given by

$$\mu'_r = kB \left(1 + \frac{r}{c}, k - \frac{r}{c} \right) = \frac{\Gamma(1 + r/c)\Gamma(k - r/c)}{\Gamma(k)},$$

where $B(.,.)$ is the beta function. If X is a random variable following a Burr XII distribution, then the transformed random variable X^{-1} follows a Burr III distribution. Hence for Burr III, which has the greater moment coverage, the distribution function and moments (for $c > r$) can be determined from those of Burr XII with $c < 0$, and the opposite tail used. The distribution function of Burr III and its inverse are given by

$$F(x) = (1 + x^{-c})^{-k} = \alpha \quad (3)$$

$$x = (\alpha^{-1/k} - 1)^{-1/c}. \quad (4)$$

The extensive moment-coverage of these two families of distributions has been examined in terms of skewness-kurtosis, and bounding curves correspond to standard distributions. The Burr XII ‘lower northern’ boundary of curves with constant c and $k \rightarrow \infty$ corresponds to the Weibull distribution, passing through the point $(0, 2.71)$ and $(2, 9)$ in the $(\sqrt{\beta_1}, \beta_2)$ space. The ‘southwest’ boundary is given by the loci of $c \rightarrow \infty$ and k varying (corresponding to the generalised logistic distribution and passing through the logistic point $(0, 4.2)$ with $k = 1$). An extremity occurs when both c and $k \rightarrow \infty$ at the extreme value point $(-1.14, 5.4)$, and when $c = 1$ and $k \rightarrow \infty$ it passes through the exponential point $(2, 9)$. The Burr III ‘lower northern’ bound is given by $k \rightarrow 0$ and c varying and corresponds to the distribution of positive powers of a uniformly distributed random variable. The ‘southwest’ bound is given by $c \rightarrow -\infty$, k increasing from zero; the extreme point occurs at $(-2, 9)$ when $c \rightarrow -\infty$, $k \rightarrow 0$. As $k \rightarrow \infty$, the limiting distribution is the reciprocal Weibull.

Burr XII existence regions in terms of skewness and kurtosis are given in Rodriguez (1977, 1982) for loci of constant $c > 0$ curves for varying $k > 0$, and by Tadikamalla (1980) for loci of constant k for varying c . For Burr III, which extends the region of moment coverage, the corresponding moment ratio diagrams are given in the accompanying figures. Loci are presented in Figure 1 for constant c , in Figure 2 for constant k and for both constant c and k in Figure 3.

The different moment coverage in terms of skewness and kurtosis of various distributions, particularly those of the traditional Pearson and Johnson families, can be seen in Figure 4. The potential area of moment coverage is bounded ‘below’ the limit of all

frequency distributions, $\beta_2 - \beta_1 - 1 = 0$. Beta distributions correspond to the bounded Type I distributions of the Pearson family, which cover the smaller kurtosis areas of the moment-ratio diagrams. Near this limit are the U-shaped bimodal distributions, then with higher kurtosis for given skewness, the J-shaped, and next the unimodal Type I distributions which are bounded by the Pearson Type III or Gamma distributions line, $2\beta_2 - 3\beta_1 - 6 = 0$. Burr distributions cover a much larger range of more skewed and kurtotic distributions than these. The Burr III overlaps the Type I area coverage for most beta distributions, but not the extreme U-shapes. It also includes the unbounded Pearson Types IV (in both directions), and VI (one direction) or *F*, distributions, with their dividing boundary being the Pearson V or inverted gamma distribution. The heterotypic Pearson boundary corresponds to $\mu_8 = \infty$. The Johnson family of distributions is comprised of two non-overlapping systems: the bounded system covers the region between the limit of all frequency distributions and the lognormal curve, and the unbounded system covers the rest of the potential skewness-kurtosis plane.

3. Methodology

Determining which of the family of Burr III and XII distributions most closely approximates that of a given statistic, *t*, involves matching the first four moments: the mean (μ), variance (σ^2), skewness ($\sqrt{\beta_1} = \sqrt{\mu_3^2/\mu_2^3}$) and kurtosis ($\beta_2 = \mu_4/\mu_2^2$) (where μ_i is the *i*th moment about the mean). Equating the skewness and kurtosis coefficients of the Burr and *t* distributions, values of the shape parameters *c* and *k* are then the solutions of the two non-linear simultaneous equations (see Rodriguez (1982)):

$$\sqrt{\beta_1} = \frac{\Gamma^2(k)\lambda_3 - 3\Gamma(k)\lambda_2\lambda_1 + 2\lambda_1^3}{[\Gamma(k)\lambda_2 - \lambda_1^2]^{3/2}},$$

$$\beta_2 = \frac{\Gamma^3(k)\lambda_4 - 4\Gamma^2(k)\lambda_3\lambda_1 + 6\Gamma(k)\lambda_2\lambda_1^2 - 3\lambda_1^4}{[\Gamma(k)\lambda_2 - \lambda_1^2]^2},$$

where $\lambda_r = \mu'_r \Gamma(k) = \Gamma(1 + r/c) \Gamma(k - r/c)$; $r = 1, 2, 3, 4$.

Once the appropriate approximating Burr distribution is identified by the computed *c* and *k*, its mean and variance are determined as $\mu_B(c, k)$ and $\sigma_B^2(c, k)$. Matching the first two moments involves scaling and relocating each distribution to have a zero mean and unit

standard deviation then equating these 'standardised' variates $(t - \mu)/\sigma$ and $(x - \mu_B)/\sigma_B$, such that

$$x = \frac{\sigma_B}{\sigma}(t - \mu) + \mu_B \quad (5)$$

or

$$t = \frac{\sigma}{\sigma_B}(x - \mu_B) + \mu. \quad (6)$$

Calculation of p -values and percentile points then only involves simple arithmetic using (1) and (2) for Burr XII and (3) and (4) for Burr III. The Burr families are exceptionally attractive in this respect.

The use of this methodology in teaching and research is demonstrated in Evans and Fry (1993) and Faff, Lee and Fry (1992) for known and unknown distributions, respectively. For a simple example of its application, consider the χ^2_ν distribution whose first four moments are $\mu = \nu$, $\sigma^2 = 2\nu$, $\sqrt{\beta}_1 = 2^{3/2}\nu_{-1/2}$, $\beta_2 = 3 + 12\nu$ (see Evans, Hastings and Peacock (1993)). Hence for degrees of freedom, ν , say equal to 10, $(\mu, \sigma, \sqrt{\beta}_1, \beta_2)$ correspond to (10, 4.4721, 0.8944, 4.2). For a skewness of .9 and kurtosis of 4.2, from Table 2, $c = -6.7905$, $k = .1065$, $\mu_B = .4446$ and $\sigma_B = .3500$. For a calculated test statistic, t , the corresponding Burr III value x can be obtained from (5),

$$x = \frac{.35}{4.4721}(t - 10) + .4446.$$

Then substituting this in (3), the p -value is

$$\alpha = (1 + x^{6.7905})^{-1.1065}.$$

Alternatively, for a p -value of α , the Burr critical value can be determined from (4):

$$x_c = (\alpha^{-1/.1065} - 1)^{-1/6.7905}.$$

Then the corresponding critical value of the χ^2_{10} distribution is obtained from substituting this value of x in (6):

$$t_c = \frac{4.4721}{.35}(x_c - .4446) + 10.$$

For $\alpha = 0.95$ the value calculated is $t_c = 18.6$, whereas the tabulated value is 18.3.

Values of c, k, μ_B, σ_B are given in the accompanying tables for a grid of values of $\sqrt{\beta_1}, \beta_2$, with increments of .05 and .10, respectively. A finer grid is available from the authors on request. Burr XII with negative skewness are given in Table 1, to supplement those of Burr (1973). For Burr III, values are given in Table 2 for positive and negative skewness. By interpolation reasonably accurate solutions can be obtained for use by practitioners. These solutions could also be used as starting values for increased precision in readily accessible computer algorithms for solving non-linear simultaneous equations, such as DNEQNJ in IMSL or NLSYS in GAUSS. SHAPE, an interactive algorithm for use with the SAS package to fit Burr III (and hence also Burr XII) distributions has been developed by Rodriguez (1980), but does not appear to be in standard use.

4. Conclusion

The appeal of the family of Burr III and XII distributions is their flexibility and the ease of calculations of both critical and p -values. Empirical evidence suggests that approximations using Burr III or XII distributions, with appropriate choice of c and k , will be quite accurate if the skewness and kurtosis of the statistic to be approximated lie in the existence regions of these distributions. A useful feature of this approach is that this fact can be ascertained in advance by an inspection of these existence regions given in the accompanying figures.

Values of c and k defining the suitable Burr approximating distribution, corresponding to the required skewness and kurtosis, can be read from the accompanying tables. Critical values or p -values then can be determined using a hand calculator, which should prove useful in applied work or teaching.

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Table 1: Values of c and k for the Burr XII distribution, $\sqrt{\beta_1} < 0$.

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
-1.05	5.0	70.271638	149.76002	.923780	.016724	-0.35	3.1	6.5806771	16.157730	.614270	.111916
-1.00	4.8	45.711065	72.960623	.899485	.024957		3.2	7.5331904	8.2383382	.716367	.117713
	4.9	81.073670	15.691534	.960260	.015361		3.3	8.6773363	5.5998790	.784431	.115327
-0.95	4.6	32.335679	67.763660	.863101	.033658		3.4	10.086481	4.2698277	.835226	.108722
	4.7	48.275357	15.116085	.935050	.024999		3.5	11.877641	3.4607436	.874963	.099437
	4.8	89.297612	8.6411295	.970598	.014344		3.6	14.249264	2.9111279	.906807	.088252
-0.90	4.4	24.034977	105.52167	.805531	.041896		3.7	17.566698	2.5091314	.932629	.075604
	4.5	32.684435	16.013492	.904149	.035432		3.8	22.584405	2.1988606	.953626	.061738
	4.6	49.100413	8.8141461	.946920	.025282		3.9	31.153114	1.9492117	.970590	.046778
	4.7	92.453851	6.1396776	.975445	.014142		4.0	49.353065	1.7414106	.984045	.030757
-0.85	4.3	23.678893	19.142904	.863774	.046225		4.1	115.73787	1.5633306	.994310	.013628
	4.4	32.102475	9.5363701	.917846	.037123	-0.30	3.0	5.8167105	23.937575	.538794	.109200
	4.5	47.986535	6.4206332	.952444	.026378		3.1	6.6166235	9.7807138	.666802	.122809
	4.6	89.325358	4.8713011	.977377	.014871		3.2	7.5586077	6.2460951	.746182	.124110
-0.80	4.1	17.875229	28.483375	.805644	.056309		3.3	8.6914233	4.6268434	.804244	.119826
	4.2	22.814006	11.163319	.880361	.049463		3.4	10.089682	3.6892143	.849338	.112148
	4.3	30.664157	7.0375606	.923908	.039577		3.5	11.873288	3.0713246	.885424	.102125
	4.4	45.136996	5.1789282	.954503	.028436		3.6	14.247684	2.6286134	.914762	.090333
	4.5	80.923613	4.1158144	.977351	.016612		3.7	17.596625	2.2919586	.938775	.077099
-0.75	3.9	13.861429	94.761656	.693889	.061424		3.8	22.729762	2.0240786	.958396	.062595
	4.0	17.014794	14.884338	.828823	.061418		3.9	31.702894	1.8029962	.974246	.046885
	4.1	21.529386	8.2265716	.886975	.053302		4.0	51.727082	1.6147823	.986713	.029935
	4.2	28.557283	5.7417365	.925734	.042987	-0.25	2.9	138.63617	1.4499864	.995994	.011612
	4.3	41.065476	4.4355031	.954158	.031551		3.0	5.1201973	64.672357	.408002	.092015
	4.4	69.728611	3.6252156	.975818	.019444		3.1	6.5731011	7.3565307	.696709	.130875
	4.5	204.30389	3.0700048	.992576	.006902		3.2	7.4895797	5.1953034	.764817	.130004
-0.70	3.8	13.083218	26.907297	.748567	.070670		3.3	8.5912258	4.0385378	.816946	.124644
	3.9	15.935763	10.669837	.836560	.066642		3.4	9.9512323	3.3105896	.858434	.116304
	4.0	19.946052	6.7489953	.888126	.058018		3.5	11.687663	2.8047223	.892160	.105785
	4.1	26.025368	4.9746271	.924523	.047457		3.6	14.003916	2.4283540	.919881	.093537
	4.2	36.384677	3.9565918	.951872	.035799		3.7	17.283020	2.1337553	.942738	.079810
	4.3	58.133025	3.2918695	.972985	.023443		3.8	22.343228	1.8937248	.961491	.064718
-0.65	3.7	12.187776	17.222183	.761127	.077452		3.9	31.305728	1.6914876	.976631	.048261
	3.8	14.714063	8.7175931	.836559	.072496		4.0	51.924000	1.5159385	.988437	.030332
	3.9	18.191528	5.9043239	.885278	.063713		4.1	153.52761	1.3591237	.996981	.010678
	4.0	23.306847	4.4929838	.920749	.053048	-0.20	2.9	5.0591104	21.675639	.502970	.116131
	4.1	31.619507	3.6389570	.947817	.041247		3.0	5.7074534	9.4294654	.631426	.133679
	4.2	47.592648	3.0621999	.968911	.028687		3.1	6.4550001	6.1224559	.714197	.138007
	4.3	91.231542	2.6435772	.985452	.015579		3.2	7.3323497	4.5705351	.775812	.136012
-0.60	3.5	9.5192293	72.142367	.606130	.076768		3.3	8.3846283	3.6604790	.824281	.130079
	3.6	11.223399	13.653250	.759977	.084108		3.4	9.6810256	3.0557156	.863520	.121379
	3.7	13.421788	7.6859155	.830934	.079096		3.5	11.333113	2.6195792	.895804	.110562
	3.8	16.379575	5.4033841	.878926	.070421		3.6	13.533156	2.2860199	.922582	.098000
	3.9	20.594569	4.1895923	.914524	.059797		3.7	16.643620	2.0191185	.944812	.083884
	4.0	27.123173	3.4307138	.941981	.047946		3.8	21.440733	1.7975322	.963130	.068273
	4.1	38.668098	2.9072901	.963535	.035245		3.9	29.946750	1.6075923	.977929	.051104
	4.2	64.830089	2.5213505	.980534	.021908		4.0	49.636818	1.4398515	.989389	.032175
	4.3	182.907173	2.2225562	.993850	.008058	-0.15	4.1	150.40247	1.2870824	.997450	.011072
	3.4	8.7434773	43.534773	.615125	.084674		2.8	4.4036532	114.04942	.311258	.080329
	3.5	10.233111	12.096862	.749753	.090902		2.9	4.9475111	14.219400	.541262	.128854
	3.6	12.119796	7.1501449	.820263	.086414		3.0	5.5632087	7.7705620	.648066	.141845
	3.7	14.599034	5.1233262	.869094	.078116		3.1	6.2704235	5.4133938	.723138	.144891
	3.8	18.021216	4.0121610	.905726	.067703		3.2	7.0972262	4.1800749	.780889	.142416
	3.9	23.082249	3.3048850	.934196	.055922		3.3	8.0848721	3.4134912	.827178	.136283
	4.0	31.387861	2.8110299	.956686	.043171		3.4	9.2963664	2.8847697	.865139	.127476
	4.1	47.661265	2.4434832	.974525	.029676		3.5	10.832856	2.4932458	.896688	.116554
	4.2	94.440461	2.1567384	.988581	.015564		3.6	12.867755	2.1876343	.923073	.103832
-0.50	3.3	7.9626771	38.264157	.596848	.089795		3.7	15.725998	1.9389383	.945129	.089455
	3.4	9.2518544	11.588618	.731390	.097693		3.8	20.097958	1.7293570	.963405	.073432
	3.5	10.854389	6.9492738	.804408	.094308		3.9	27.761804	1.5471049	.978218	.055633
	3.6	12.911160	5.0091300	.855840	.086704		4.0	45.157540	1.3836600	.989661	.035744
	3.7	15.663516	3.9351145	.894033	.076717		4.1	128.41895	1.2319576	.997536	.013135
	3.8	19.561747	3.2472886	.924155	.065167	-0.10	2.8	4.2794473	35.117875	.397784	.106249
	3.9	25.552951	2.7648111	.948078	.052492		2.9	4.7920996	11.308631	.558441	.137970
	4.0	36.026538	2.4043418	.967169	.038941		3.0	5.3697138	6.8756625	.654613	.149147
	4.1	59.248044	2.1221112	.982317	.024654		3.1	6.0298735	4.9910835	.725342	.151794
	4.2	156.27178	1.8928895	.994124	.009698		3.2	6.7975400	3.9376132	.780931	.149316
-0.45	3.2	7.1978173	42.921426	.556693	.091939		3.3	7.7091780	3.2572915	.826106	.143304
	3.3	8.3055971	11.894527	.704284	.104069		3.4	8.8200746	2.7759256	.863544	.134634
	3.4	9.6572318	7.0329254	.782711	.102505		3.5	10.218231	2.4127127	.894933	.123808
	3.5	11.352475	5.0413112	.837499	.096004		3.6	12.052962	2.1249472	.921395	.111104
	3.6	13.555064	3.9486686	.878925	.086723		3.7	14.600378	1.8877884	.943683	.096631
	3.7	16.553367	3.2522604	.911395	.075616		3.8	18.436699	1.6855915	.962288	.080355
	3.8	20.906321	2.7650693	.937298	.063187		3.9	25.006648	1.5076883	.977471	.062077
	3.9	27.857588	2.4015750	.958092	.049725		4.0	39.291686	1.3460014	.989257	.041361
	4.0	40.847280	2.1170940	.974727	.035388		4.1	98.347187	1.1932063	.997312	.017311
	4.1	74.199844	1.8859561	.987838	.020254	-0.05	2.8	4.1222835	23.688100	.424054	.117891
	4.2	359.31537	1.6922994	.997842	.004336		2.9	4.6006384	9.9226369	.562510	.145078
-0.40	3.1	6.4641193	69.50945	.483927	.088018		3.0	5.1365445	6.3863699	.653176	.155865
	3.2	7.4118025	13.165068	.666534	.109267		3.1	5.7452741	4.7516679	.721690	.158763
	3.3	8.5472240	7.4244473	.753991	.110549		3.2	6.4483600	3.8000112	.776351	.

Table 2: Values of c and k for the Burr III distribution

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
-1.95	8.7	-4529.3706	.05014232	.995634	.004382	-1.50	6.5	-132.92426	.18094319	.962070	.040396
-1.90	8.3	-1617.0268	.04416327	.986234	.013664		6.6	-147.23932	.19428544	.968134	.034601
	8.4	-1540.7262	.06965118	.990838	.009219		6.7	-169.05003	.20734528	.974024	.028759
	8.5	-2367.2609	.08878213	.995322	.004771		6.8	-203.80241	.22019485	.979742	.022871
-1.85	7.9	-1298.5642	.03097209	.975778	.023718		6.9	-264.87688	.23289138	.985291	.016936
	8.0	-812.41464	.06226862	.980736	.019135		7.0	-395.40254	.24548160	.990674	.010953
	8.1	-810.29625	.08331492	.985563	.014546		7.1	-851.67638	.25800459	.995892	.004922
	8.2	-993.98895	.10068373	.990262	.009952	-1.45	5.5	-179.33710	.05059710	.901182	.090350
	8.3	-1626.3857	.11601802	.994837	.005352		5.6	-127.09419	.07781298	.909123	.084796
-1.80	7.6	-638.31260	.04953202	.969464	.029860		5.7	-109.54613	.09883271	.916833	.079188
	7.7	-513.33291	.07429971	.974677	.025136		5.8	-101.82066	.11702454	.924320	.073525
	7.8	-510.45857	.09345140	.979750	.020402		5.9	-98.809497	.13355710	.931594	.067807
	7.9	-573.81704	.10992701	.984686	.015659		6.0	-98.839214	.14900066	.938661	.062036
	8.0	-736.38672	.12478087	.989490	.010907		6.1	-101.34237	.16368452	.945527	.056209
	8.1	-1194.0864	.13853418	.994165	.006146		6.2	-106.29377	.17781973	.952199	.050327
	8.2	-4948.9203	.15149006	.998713	.001375		6.3	-114.09214	.19155175	.958681	.044390
-1.75	7.2	-898.09865	.02466079	.956844	.041419		6.4	-125.66088	.20498644	.964976	.038397
	7.3	-422.91158	.06030149	.962492	.036568		6.5	-142.81623	.21820422	.971089	.032348
	7.4	-361.64469	.08266069	.967986	.031703		6.6	-169.24329	.23126846	.977023	.026242
	7.5	-355.74130	.10089906	.973330	.026825		6.7	-213.35635	.24423067	.982779	.020079
	7.6	-381.28469	.11694006	.978530	.021933		6.8	-299.01847	.25713388	.988360	.013858
	7.7	-443.18456	.13158547	.983588	.017027		6.9	-530.14837	.27001493	.993767	.007579
	7.8	-573.09640	.14526016	.988508	.012108	-1.40	5.2	-249.08495	.03127638	.886442	.101703
	7.9	-901.00926	.15822121	.993294	.007176		5.3	-127.29215	.06635750	.894963	.096095
-1.70	6.9	-507.00915	.03646908	.948807	.048861		5.4	-102.33359	.08981158	.903229	.090422
	7.0	-313.47866	.06683216	.954777	.043876		5.5	-91.841214	.10933931	.911254	.084686
	7.1	-272.77630	.08817320	.960582	.038874		5.6	-86.973611	.12677162	.919047	.078885
	7.2	-264.86238	.10602838	.966228	.033852		5.7	-85.216258	.14289521	.926618	.073020
	7.3	-275.07654	.12192578	.971718	.028813		5.8	-85.641840	.15813421	.933973	.067090
	7.4	-302.73918	.13655070	.977058	.023754		5.9	-87.934810	.17274885	.941120	.061095
	7.5	-355.41551	.15028016	.982250	.018678		6.0	-92.120091	.18691314	.948064	.055035
	7.6	-456.67438	.16334776	.987299	.013582		6.1	-98.511116	.20075099	.954809	.048909
	7.7	-690.56730	.17591013	.992208	.008469		6.2	-107.78516	.21435508	.961360	.042716
	7.8	-1663.9187	.18807854	.996979	.003337		6.3	-121.22317	.22779754	.967721	.036456
-1.65	6.6	-378.99344	.04113666	.939898	.056929		6.4	-141.30808	.24113654	.973893	.030127
	6.7	-248.88916	.07008961	.946224	.051817		6.5	-173.34592	.25442038	.979879	.023730
	6.8	-216.22839	.09117046	.952374	.046681		6.6	-230.82595	.26769036	.985682	.017263
	6.9	-206.93761	.10899920	.958352	.041521		6.7	-360.69565	.28098266	.991301	.010724
	7.0	-209.82994	.12496698	.964165	.036337		6.8	-914.61129	.29432981	.996738	.004113
	7.1	-222.81641	.13971625	.969816	.031129	-1.35	5.0	-148.33996	.04877389	.879091	.108071
	7.2	-247.69816	.15360612	.975310	.025896		5.1	-101.58119	.07711474	.887977	.102365
	7.3	-290.80216	.16686146	.980652	.020640		5.2	-86.148537	.09876997	.896599	.096584
	7.4	-368.86821	.17963419	.985843	.015360		5.3	-78.975157	.11748252	.904967	.090728
	7.5	-535.47564	.19203282	.990888	.010055		5.4	-75.560490	.13450199	.913095	.084797
	7.6	-1088.3539	.20413823	.995789	.004727		5.5	-74.402073	.15042920	.920991	.078790
-1.60	6.3	-323.80697	.04090409	.930002	.065650		5.6	-74.905939	.16560861	.928663	.072708
	6.4	-208.51833	.07036629	.936723	.060418		5.7	-76.868284	.18026038	.936117	.066549
	6.5	-178.50617	.09175729	.943254	.055157		5.8	-80.318601	.19453629	.943360	.060313
	6.6	-168.01185	.10985185	.949601	.049865		5.9	-85.490434	.20854716	.950396	.053999
	6.7	-166.89537	.12607127	.955770	.044543		6.0	-92.872047	.22237774	.957229	.047607
	6.8	-172.57457	.14106927	.961767	.039190		6.1	-103.35957	.23609541	.963863	.041135
	6.9	-185.04081	.15521060	.967596	.033807		6.2	-118.62107	.24975560	.970301	.034581
	7.0	-206.19667	.16872344	.973262	.028393		6.3	-142.01552	.26340535	.976543	.027946
	7.1	-240.85591	.18176193	.978768	.022949		6.4	-181.31767	.27708576	.982593	.021226
	7.2	-300.66441	.19443626	.984118	.017474		6.5	-259.32518	.29083365	.988449	.014420
	7.3	-419.48148	.20682866	.989313	.011969		6.6	-483.55712	.30468291	.994114	.007527
	7.4	-749.08345	.21900269	.994358	.006433	-1.30	4.8	-113.66464	.05889755	.870856	.114970
	6.0	-318.34498	.03554869	.918989	.075040		4.9	-85.590878	.08456197	.880141	.109180
	6.1	-183.94798	.06760403	.926148	.069701		5.0	-74.552964	.10527319	.889149	.103304
	6.2	-152.93965	.08988869	.933101	.064325		5.1	-69.126299	.12355261	.897893	.097341
	6.3	-141.03425	.10854154	.939856	.058912		5.2	-66.483711	.14037794	.906385	.091290
	6.4	-137.36011	.12519076	.946421	.053461		5.3	-65.591341	.15625104	.914636	.085152
	6.5	-138.93435	.14055760	.952801	.047973		5.4	-66.020114	.17147120	.922654	.078926
	6.6	-145.01652	.15503656	.959001	.042447		5.5	-67.617264	.18623515	.930445	.072611
	6.7	-156.03033	.16887146	.965027	.036883		5.6	-70.400479	.20068155	.938016	.066207
	6.8	-173.56285	.18222573	.970882	.031281		5.7	-74.536085	.21491369	.945372	.059711
	6.9	-201.15129	.19521555	.976570	.025641		5.8	-80.370340	.22901200	.952516	.053122
	7.0	-246.79468	.20792739	.982094	.019964		5.9	-88.525409	.24304163	.959453	.046440
	7.1	-331.79268	.22042795	.987458	.014248		6.0	-100.11941	.25705722	.966184	.039662
	7.2	-535.97278	.23277033	.992662	.008494		6.1	-117.28830	.27110610	.972712	.032786
-1.50	5.7	-447.93209	.02167803	.906710	.085108		6.2	-144.59272	.28523044	.979037	.025810
	5.8	-172.67498	.06138828	.914355	.079678		6.3	-193.70835	.29946896	.985160	.018732
	5.9	-136.18745	.08537458	.921776	.074203		6.4	-305.97162	.31385808	.991080	.011549
	6.0	-122.21246	.10494379	.928984	.068683		6.5	-809.46631	.32843305	.996796	.004257
	6.1	-116.53329	.12222734	.935987	.063117	-1.25	4.5	-213.47008	.02684174	.851612	.128167
	6.2	-115.49054	.13809468	.942791	.057506		4.6	-95.043644	.06493687	.861640	.122411
	6.3	-117.89737	.15300210	.949402	.051848		4.7	-74.567514	.08935626	.871359	.116556
	6.4	-123.55418	.16722453	.955827	.046145		4.8	-65.809789	.10960393	.880787	.110601

Table 2: Values of c and k for the Burr III distribution

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
-1.25	4.9	-61.344530	.12769643	.889939	.104547	-1.05	3.7	-420.00226	.00954571	.800405	.163107
	5.0	-59.106944	.14447739	.898829	.098393		3.8	-72.111252	.05964191	.812657	.157439
	5.1	-58.300327	.16039649	.907467	.092138		3.9	-53.926081	.08566205	.824512	.151609
	5.2	-58.581051	.17572851	.915861	.085781		4.0	-46.502057	.10686587	.836002	.145617
	5.3	-59.818508	.19065745	.924021	.079322		4.1	-42.596918	.12575042	.847154	.139465
	5.4	-62.013653	.20531516	.931951	.072758		4.2	-40.390288	.14329027	.857988	.133150
	5.5	-65.278861	.21980129	.939658	.066089		4.3	-39.195514	.15998972	.868522	.126672
	5.6	-69.855123	.23419471	.947145	.059313		4.4	-38.701756	.17615325	.878770	.120030
	5.7	-76.170827	.24856035	.954416	.052426		4.5	-38.759279	.19198469	.888745	.113219
	5.8	-84.973856	.26295363	.961473	.045428		4.6	-39.302687	.20763151	.898457	.106237
	5.9	-97.628617	.27742344	.968318	.038315		4.7	-40.320885	.22320740	.907913	.099079
	6.0	-116.85305	.29201429	.974951	.031084		4.8	-41.847252	.23880497	.917120	.091741
	6.1	-148.88048	.30676788	.981371	.023731		4.9	-43.961981	.25450347	.926082	.084217
	6.2	-211.75727	.32172435	.987579	.016254		5.0	-46.805990	.27037382	.934802	.076501
	6.3	-388.27149	.33692328	.993571	.008646		5.1	-50.611633	.28648213	.943282	.068585
-1.20	4.3	-162.02162	.03252329	.840820	.136179		5.2	-55.764833	.30289240	.951520	.060460
	4.4	-83.566609	.06784281	.851336	.130395		5.3	-62.935546	.31966869	.959516	.052117
	4.5	-66.585415	.09179360	.861526	.124498		5.4	-73.377696	.33687711	.967265	.043545
	4.6	-59.030988	.11189959	.871410	.118487		5.5	-89.720643	.35458777	.974763	.034730
	4.7	-55.081023	.12998209	.881006	.112363		5.6	-118.53877	.37287684	.982002	.025657
	4.8	-53.032143	.14682878	.890326	.106125		5.7	-182.13926	.39182898	.988973	.016310
	4.9	-52.208135	.16286711	.899384	.099771		5.8	-435.47905	.41154028	.995664	.006666
	5.0	-52.308283	.17836168	.908190	.093302	-1.00	3.6	-77.481703	.05025973	.796707	.167346
	5.1	-53.209077	.19349161	.916750	.086715		3.7	-53.004294	.07883320	.809213	.161624
	5.2	-54.894157	.20838662	.925073	.080008		3.8	-44.423639	.10105707	.821327	.155722
	5.3	-57.433521	.22314592	.933164	.073180		3.9	-40.083393	.12052897	.833079	.149641
	5.4	-60.990719	.23784899	.941028	.066228		4.0	-37.622341	.13847298	.844495	.143381
	5.5	-65.857632	.25256219	.948667	.059149		4.1	-36.219075	.15548585	.855596	.136940
	5.6	-72.533056	.26734309	.956084	.051940		4.2	-35.513937	.17191571	.866398	.130316
	5.7	-81.892066	.28224336	.963280	.044597		4.3	-35.332318	.18799059	.876916	.123506
	5.8	-95.577322	.29731093	.970255	.037117		4.4	-35.590336	.20387315	.887162	.116506
	5.9	-117.03011	.31259161	.977009	.029493		4.5	-36.257756	.21968774	.897146	.109312
	6.0	-154.82071	.32813039	.983540	.021722		4.6	-37.343610	.23553522	.906874	.101918
	6.1	-237.77789	.34397267	.989845	.013797		4.7	-38.893493	.25150189	.916352	.094316
	6.2	-560.88449	.36016525	.995920	.005712		4.8	-40.995669	.26766517	.925583	.086500
-1.15	4.1	-148.34047	.03254923	.828778	.144696		4.9	-43.797644	.28409768	.934570	.078460
	4.2	-76.365719	.06795186	.839825	.138913		5.0	-47.539917	.30087024	.943312	.070186
	4.3	-60.729651	.09199690	.850526	.133002		5.1	-52.623873	.31805442	.951808	.061666
	4.4	-53.720000	.11221554	.860905	.126962		5.2	-59.756681	.33572490	.960054	.052887
	4.5	-49.997623	.13043044	.870980	.120794		5.3	-70.294532	.35396179	.968045	.043831
	4.6	-47.996933	.14743036	.880768	.114497		5.4	-87.190080	.37285327	.975772	.034482
	4.7	-47.092041	.16364393	.890281	.108070		5.5	-118.29493	.39249869	.983225	.024816
	4.8	-46.998785	.17933716	.899531	.101511		5.6	-193.66783	.41301247	.990389	.014808
	4.9	-47.591744	.19469083	.908528	.094819		5.7	-633.17790	.43452912	.997249	.004426
	5.0	-48.837964	.20983660	.917278	.087991	-0.95	3.4	-100.82634	.03484065	.778965	.177580
	5.1	-50.774288	.22487588	.925788	.081024		3.5	-54.548277	.06904506	.792180	.172020
	5.2	-53.507426	.23989072	.934063	.073915		3.6	-43.487883	.09294358	.804967	.166260
	5.3	-57.233238	.25495040	.942106	.066661		3.7	-38.345206	.11327206	.817366	.160302
	5.4	-62.282779	.27011585	.949919	.059257		3.8	-35.485400	.13175280	.829405	.154147
	5.5	-69.218878	.28544260	.957503	.051698		3.9	-33.812196	.14914565	.841111	.147792
	5.6	-79.046355	.30098303	.964859	.043980		4.0	-32.875755	.16587037	.852504	.141237
	5.7	-93.718032	.31678814	.971984	.036095		4.1	-32.461884	.18219250	.863601	.134478
	5.8	-117.55987	.33290896	.978878	.028038		4.2	-32.463392	.19829700	.874416	.127511
	5.9	-162.39540	.34939792	.985536	.019800		4.3	-32.831173	.21432298	.884961	.120330
	6.0	-276.09190	.36631021	.991952	.011372		4.4	-33.554131	.23038210	.895245	.112929
	6.1	-1118.4800	.38370524	.998122	.002743		4.5	-34.652110	.24656924	.905275	.105300
	3.9	-163.09932	.02702627	.815355	.153687		4.6	-36.176700	.26296940	.915054	.097433
	4.0	-72.477954	.06529831	.826979	.147941		4.7	-38.219277	.27966232	.924587	.089320
	4.1	-56.557394	.08998033	.838234	.142050		4.8	-40.928964	.29672607	.933874	.080947
	4.2	-49.592335	.11055262	.849147	.136015		4.9	-44.548164	.31424001	.942913	.072301
	4.3	-45.880065	.12903128	.859740	.129835		5.0	-49.484312	.33228752	.951702	.063365
	4.4	-43.823180	.14626173	.870032	.123511		5.1	-56.465716	.35095891	.960234	.054120
	4.5	-42.792822	.16269663	.880037	.117040		5.2	-66.921137	.37035452	.968501	.044543
	4.6	-42.501368	.17861465	.889768	.110421		5.3	-84.072112	.39058870	.976493	.034609
	4.7	-42.814710	.19420456	.899236	.103652		5.4	-117.00624	.41179478	.984193	.024284
	4.8	-43.683866	.20960382	.908449	.096729		5.5	-205.13130	.43413177	.991583	.013530
	4.9	-45.119390	.22491862	.917414	.089650	-0.90	3.3	-61.243665	.05522808	.773241	.182692
	5.0	-47.186069	.24023537	.926136	.082410		3.4	-44.133559	.08217461	.786760	.177135
	5.1	-50.012102	.25562767	.934620	.075005		3.5	-37.492006	.10381883	.799855	.171359
	5.2	-53.815279	.27116091	.942867	.067429		3.6	-33.996388	.12304559	.812563	.165367
	5.3	-58.957824	.28689549	.950879	.059677		3.7	-31.955038	.14092211	.824914	.159156
	5.4	-66.060386	.30288919	.958655	.051741		3.8	-30.748107	.15798944	.836935	.152727
	5.5	-76.256458	.31919913	.966194	.043613		3.9	-30.095340	.17457221	.848645	.146076
	5.6	-91.833282	.33588344	.973493	.035285		4.0	-29.856608	.19088854	.860063	.139197
	5.7	-118.16841	.35300289	.980547	.026747		4.1	-29.961369	.20709821	.871202	.132087
	5.8	-171.55941	.37062249	.987350	.017986		4.2	-30.380014	.22332708	.882074	.124737
	5.9	-335.37341	.38881339	.993895	.008989		4.3	-31.112020	.23968069	.892688	.117139
							4.4	-32.182599	.25625274	.903050	.109283

Table 2: Values of c and k for the Burr III distribution

	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B		$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
-0.90	4.5	-33.645281	.27313072	.913164	.101156		-0.75	5.1	-201.66328	.51509271	.993584	.012341	
	4.6	-35.590813	.29040019	.923032	.092746		-0.70	2.7	-101.95352	.02377450	.708312	.216699	
	4.7	-38.165582	.30814821	.932655	.084036			2.8	-41.843477	.06205613	.724303	.212088	
	4.8	-41.607666	.32646662	.942028	.075007			2.9	-32.184811	.08642994	.739746	.207166	
	4.9	-46.320134	.34545538	.951148	.065637			3.0	-27.886128	.10690610	.754708	.201940	
	5.0	-53.032838	.36522635	.960007	.055900			3.1	-25.478061	.12549695	.769243	.196415	
	5.1	-63.206116	.38590807	.968592	.045765			3.2	-24.001269	.14304335	.783396	.190592	
	5.2	-80.235545	.40765183	.976890	.035193			3.3	-23.074947	.16000111	.797203	.184468	
	5.3	-114.22478	.43064012	.984878	.024138			3.4	-22.517888	.17665882	.810695	.178038	
	5.4	-214.66395	.45509876	.992532	.012541			3.5	-22.235237	.19322102	.823897	.171295	
-0.85	3.1	-89.913012	.03365404	.752212	.193507			3.6	-22.176038	.20984654	.836829	.171295	
	3.2	-47.692015	.06798880	.766531	.188222			3.7	-22.315093	.22666889	.849510	.156823	
	3.3	-37.843953	.09186943	.780379	.182695			3.8	-22.644875	.24380843	.861952	.149064	
	3.4	-33.253450	.11220973	.793805	.176930			3.9	-23.172442	.26138048	.874168	.140931	
	3.5	-30.669686	.13074585	.806845	.170928			4.0	-23.919565	.27950165	.886165	.132400	
	3.6	-29.118552	.14824154	.819531	.164688			4.1	-24.925821	.29829540	.897948	.123442	
	3.7	-28.200119	.16511973	.831890	.158207			4.2	-26.255601	.31789772	.909519	.114022	
	3.8	-27.722205	.18164977	.843943	.151482			4.3	-28.011702	.33846381	.920877	.104098	
	3.9	-27.585908	.19802149	.855707	.144507			4.4	-30.361785	.36017640	.932016	.093619	
	4.0	-27.741824	.21438010	.867196	.137274			4.5	-33.592871	.38325734	.942928	.082521	
	4.1	-28.171527	.23084467	.878423	.129774			4.6	-38.234701	.40798428	.953596	.070721	
	4.2	-28.880071	.24751922	.889397	.121995			4.7	-45.379355	.43471626	.963997	.058116	
	4.3	-29.894586	.26449975	.900122	.113926			4.8	-57.691982	.46393525	.974098	.044563	
	4.4	-31.267682	.28187942	.910604	.105551			4.9	-83.839302	.49631788	.983847	.029866	
	4.5	-33.086501	.29975269	.920844	.096852			5.0	-177.26296	.53287012	.993166	.013737	
	4.6	-35.490822	.31821909	.930840	.087807	-0.65	2.5	-75.874206	.03009321	.696067	.223248		
	4.7	-38.708346	.33738708	.940589	.078393			2.7	-37.896490	.06454182	.712484	.218869	
	4.8	-43.126954	.35737848	.950084	.068578			2.8	-29.746657	.08806980	.728340	.214156	
	4.9	-49.456273	.37833390	.959314	.058328			2.9	-25.961758	.10811276	.743707	.209117	
	5.0	-59.138622	.40041994	.968265	.047599			3.0	-23.799465	.12643696	.758642	.203759	
	5.1	-75.611697	.42383912	.976917	.036338			3.1	-22.455539	.14381163	.773194	.198082	
	5.2	-109.56621	.44884447	.985244	.024477			3.2	-21.601684	.16066398	.787403	.192085	
	5.3	-219.38897	.47576154	.993208	.011928			3.3	-21.078970	.17726980	.801300	.185761	
-0.80	3.0	-59.867950	.04824202	.744091	.199363			3.4	-20.803137	.19382819	.814913	.179102	
	3.1	-40.302323	.07678844	.758763	.194160			3.5	-20.728351	.21049677	.828266	.172095	
	3.2	-33.523247	.09897564	.772963	.188695			3.6	-20.831480	.22741075	.841377	.164725	
	3.3	-30.049028	.11849246	.786740	.182971			3.7	-21.104997	.24469456	.854263	.156974	
	3.4	-28.012617	.13657438	.800134	.176991			3.8	-21.554195	.26246998	.866936	.148817	
	3.5	-26.768345	.15382337	.813177	.170751			3.9	-22.197198	.28086270	.879406	.140228	
	3.6	-26.031447	.17059356	.825895	.164249			4.0	-23.067506	.30000846	.891679	.131171	
	3.7	-25.659511	.18712099	.838312	.157480			4.1	-24.219871	.32005976	.903758	.121605	
	3.8	-25.577928	.20357866	.850446	.150436			4.2	-25.741715	.34119399	.915645	.111480	
	3.9	-25.749840	.22010385	.862311	.143108			4.3	-27.775307	.36362420	.927334	.100733	
	4.0	-26.163134	.23681335	.873920	.135484			4.4	-30.563233	.38761456	.938818	.089285	
	4.1	-26.825324	.25381284	.885282	.127550			4.5	-34.550687	.41350348	.950082	.077034	
	4.2	-27.763151	.27120338	.896403	.119291			4.6	-40.648203	.44174067	.961103	.063843	
	4.3	-29.026217	.28908639	.907286	.110687			4.7	-51.051942	.47295007	.971843	.049527	
	4.4	-30.695689	.30756802	.917934	.101715			4.8	-72.760234	.50804534	.982248	.033813	
	4.5	-32.901400	.32676359	.928344	.092348			4.9	-146.70372	.54846451	.992224	.016284	
	4.6	-35.855165	.34680248	.938511	.082553	-0.60	2.5	-67.998394	.03149203	.682417	.229940		
	4.7	-39.919329	.36783414	.948428	.072293			2.6	-35.432795	.06473768	.699282	.225845	
	4.8	-45.761428	.39003614	.958081	.061518			2.7	-27.961599	.08784976	.715567	.221392	
	4.9	-54.752808	.41362520	.967452	.050169			2.8	-24.443393	.10763104	.731351	.216592	
	5.0	-70.218399	.43887353	.976517	.038172			2.9	-22.415738	.12576680	.746696	.211452	
	5.1	-102.82752	.46613387	.985241	.025429			3.0	-21.144043	.14300065	.761655	.205974	
	5.2	-215.87663	.49588020	.993575	.011809			3.1	-20.325763	.15974949	.776271	.200156	
-0.75	2.9	-48.233823	.05690114	.734813	.205569			3.2	-19.813447	.17628494	.790579	.193992	
	3.0	-35.530538	.08276291	.749860	.200485			3.3	-19.528322	.19280520	.804610	.187473	
	3.1	-30.336143	.10390949	.764433	.195119			3.4	-19.426989	.20946914	.818390	.180584	
	3.2	-27.522613	.12287825	.778581	.189474			3.5	-19.486870	.22641492	.831940	.173310	
	3.3	-25.828989	.14064881	.792347	.183551			3.6	-19.699541	.24377166	.845278	.165629	
	3.4	-24.780008	.15773053	.805764	.177348			3.7	-20.067993	.26166769	.858419	.157513	
	3.5	-24.156111	.17443630	.818861	.170861			3.8	-20.606384	.28023758	.871375	.148932	
	3.6	-23.844492	.19098209	.831663	.164084			3.9	-21.341959	.29962890	.884156	.139847	
	3.7	-23.785277	.20753136	.844187	.157006			4.0	-22.319749	.32001008	.896766	.130209	
	3.8	-23.949050	.22421799	.856451	.149618			4.1	-23.611759	.34158009	.909209	.119959	
	3.9	-24.326976	.24115950	.868466	.141905			4.2	-25.334769	.36458198	.921483	.109024	
	4.0	-24.927006	.25846562	.880243	.133850			4.3	-27.686557	.38932259	.933584	.097308	
	4.1	-25.773921	.27624449	.891789	.125433			4.4	-31.026432	.41620328	.945498	.084687	
	4.2	-26.912811	.29460785	.903107	.116630			4.5	-36.078758	.44577083	.957206	.070991	
	4.3	-28.417066	.31367592	.914199	.107413			4.6	-44.553382	.47880780	.968673	.055982	
	4.4	-30.403923	.33358280	.925063	.097748			4.7	-61.700284	.51650836	.979843	.039299	
	4.5	-33.064741	.35448287	.935694	.087594			4.8	-115.50676	.56086496	.990614	.020351	
	4.6	-36.727453	.37655914	.946083	.076899	-0.55	2.4	-68.964992	.02899293	.667289	.236686		
	4.7	-41.998050	.40003496	.956214	.065600			2.5	-34.096670	.06281708	.684624	.232933	
	4.8	-50.127555	.42519105	.966066	.053619			2.6	-26.704922	.08587320	.701353	.228795	
	4.9	-64.174021	.45239181	.975611	.040851			2.7	-23.263798	.10553728	.717565	.224289	
	5.0	-94.103817	.48212827	.984805	.027156			2.8	-21.283464	.12354698	.733327	.219422	

Table 2: Values of c and k for the Burr III distribution

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
-0.55	2.9	-20.035941	.14065933	.748696	.214200	-0.40	3.2	-15.329704	.22222125	.794060	.206615
	3.0	-19.224049	.15729662	.763721	.208619		3.3	-15.395645	.23951867	.808989	.199470
	3.1	-18.703433	.17373376	.778441	.202674		3.4	-15.561247	.25753692	.823817	.191789
	3.2	-18.396815	.19017179	.792890	.196356		3.5	-15.832169	.27644614	.838568	.183523
	3.3	-18.261140	.20677266	.807096	.189650		3.6	-16.221541	.29644426	.853268	.174610
	3.4	-18.273229	.22367828	.821084	.182537		3.7	-16.752234	.31777064	.867939	.164972
	3.5	-18.423125	.24102241	.834874	.174996		3.8	-17.461452	.34072563	.882604	.154508
	3.6	-18.711211	.25893939	.848486	.166996		3.9	-18.409730	.36570069	.897287	.143085
	3.7	-19.147603	.27757156	.861934	.158503		4.0	-19.699227	.39322785	.912012	.130522
	3.8	-19.753445	.29707680	.875229	.149473		4.1	-21.514356	.42406731	.926807	.116563
	3.9	-20.564441	.31763731	.888381	.139852		4.2	-24.224588	.45937716	.941702	.100824
	4.0	-21.637931	.33947104	.901397	.129574		4.3	-28.700757	.50108483	.956736	.082678
	4.1	-23.066551	.36284764	.914280	.118554		4.4	-37.656704	.55286172	.971965	.060958
	4.2	-25.005745	.38811264	.927029	.106681		4.5	-66.886303	.62361865	.987481	.032912
	4.3	-27.733909	.41572587	.939637	.093810	-0.35	2.1	-51.168470	.03046610	.610167	.260092
	4.4	-31.800875	.44632709	.952091	.079738		2.2	-27.533154	.06063354	.628872	.257859
	4.5	-38.465332	.48085711	.964364	.064171		2.3	-21.791797	.08194328	.646900	.255146
	4.6	-51.397311	.52080584	.976408	.046653		2.4	-19.031505	.10029484	.664366	.251984
	4.7	-87.951947	.56879974	.988130	.026393		2.5	-17.404399	.11720262	.681362	.248392
-0.50	2.3	-84.993156	.02186935	.650613	.243380		2.6	-16.350735	.13334559	.697963	.244381
	2.4	-33.858904	.05881104	.668443	.240030		2.7	-15.637563	.14911107	.714233	.239954
	2.5	-25.934073	.08219750	.685633	.236268		2.8	-15.149878	.16475733	.730224	.235106
	2.6	-22.391041	.10189149	.702281	.232114		2.9	-14.824829	.18047874	.745985	.229828
	2.7	-20.378475	.11983593	.718463	.227580		3.0	-14.626121	.19643721	.761556	.224105
	2.8	-19.112364	.13684323	.734244	.222672		3.1	-14.532627	.21278009	.776975	.217915
	2.9	-18.281465	.15335737	.749675	.217389		3.2	-14.532914	.22965193	.792276	.211227
	3.0	-17.736734	.16966400	.764802	.211726		3.3	-14.622601	.24720394	.807491	.204006
	3.1	-17.398755	.18597060	.779661	.205674		3.4	-14.803313	.26560301	.822651	.196202
	3.2	-17.222962	.20244383	.794285	.199219		3.5	-15.082781	.28504189	.837784	.187757
	3.3	-17.184591	.21922972	.808702	.192341		3.6	-15.476083	.30575236	.852921	.178594
	3.4	-17.271661	.23646628	.822937	.185016		3.7	-16.008485	.32802389	.868092	.168614
	3.5	-17.481783	.25429268	.837011	.177214		3.8	-16.721031	.35223196	.883330	.157688
	3.6	-17.821138	.27285718	.850942	.168897		3.9	-17.681672	.37888441	.898669	.145639
	3.7	-18.305154	.29232533	.864747	.160018		4.0	-19.008961	.40870260	.914153	.132220
	3.8	-18.960977	.31288955	.878440	.150518		4.1	-20.928441	.44277696	.929836	.117060
	3.9	-19.832652	.33478185	.892031	.140325		4.2	-23.931084	.48290201	.945790	.099562
	4.0	-20.991123	.35829200	.905529	.129344		4.3	-29.351945	.53243406	.962132	.078636
	4.1	-22.554143	.38379518	.918940	.117454		4.4	-42.830582	.59922653	.979089	.051801
	4.2	-24.728875	.41179706	.932267	.104491		4.5	-228.19241	.71591182	.997422	.009131
	4.3	-27.913951	.44301238	.945506	.090222	-0.30	2.1	-31.118756	.04903256	.606601	.264272
	4.4	-32.987375	.47851432	.958644	.074307		2.2	-22.621483	.07216139	.625134	.262179
	4.5	-42.352031	.52005253	.971655	.056199		2.3	-19.153354	.09108502	.643046	.259607
	4.6	-65.936452	.57085316	.984474	.034910		2.4	-17.231286	.10814209	.660446	.256582
	4.7	-267.76058	.63827151	.996935	.008250		2.5	-16.019745	.12422729	.677419	.253121
-0.45	2.3	-35.055280	.05258231	.650677	.247018		2.6	-15.205666	.13981018	.694038	.249232
	2.4	-25.681815	.07683197	.668346	.243696		2.7	-14.643349	.15518649	.710362	.244916
	2.5	-21.823315	.09673783	.685439	.239956		2.8	-14.255801	.17056905	.726446	.240167
	2.6	-19.692444	.11469102	.702045	.235816		2.9	-13.999128	.18612877	.742336	.234973
	2.7	-18.364068	.13161579	.718235	.231283		3.0	-13.847415	.20201642	.758074	.229313
	2.8	-17.489281	.14799818	.734066	.226360		3.1	-13.785620	.21837631	.773699	.223163
	2.9	-16.905531	.16414338	.749588	.221044		3.2	-13.806062	.23535638	.789249	.216488
	3.0	-16.527337	.18026944	.764844	.215326		3.3	-13.906767	.25311732	.804757	.209243
	3.1	-16.306694	.19654948	.779871	.209193		3.4	-14.090981	.27184237	.820260	.201373
	3.2	-16.216275	.21313398	.794701	.202625		3.5	-14.367626	.29174949	.835791	.192805
	3.3	-16.241632	.23016452	.809361	.195597		3.6	-14.752871	.31310824	.851389	.183448
	3.4	-16.377501	.24778358	.823878	.188080		3.7	-15.273400	.33626487	.867092	.173180
	3.5	-16.626336	.26614295	.838273	.180033		3.8	-15.972866	.36168269	.882948	.161838
	3.6	-16.998384	.28541238	.852569	.171407		3.9	-16.925081	.39001142	.899012	.149195
	3.7	-17.513237	.30578973	.866782	.162142		4.0	-18.263518	.42221691	.915354	.134914
	3.8	-18.203400	.32751450	.880931	.152159		4.1	-20.256971	.45985148	.932073	.118467
	3.9	-19.121259	.35088718	.895031	.141362		4.2	-23.548886	.50571212	.949328	.098922
	4.0	-20.352801	.37629914	.909097	.129617		4.3	-30.243199	.56589789	.967420	.074303
	4.1	-22.046254	.40428168	.923140	.116750		4.4	-55.753750	.66067189	.987219	.038271
	4.2	-24.478275	.43559267	.937172	.102510		4.5	-24.595440	.60642534	.601667	.268601
	4.3	-28.231359	.47138404	.951201	.086523		2.2	-19.740491	.08046673	.620052	.266689
	4.4	-34.788961	.51356677	.965229	.068179		2.3	-17.326962	.09789033	.637865	.264296
	4.5	-49.474227	.56576298	.979247	.046350		2.4	-15.876782	.11401828	.655208	.261447
	4.6	-119.45225	.63668137	.993194	.018400		2.5	-14.922226	.12946263	.672163	.258158
-0.40	2.2	-38.913142	.04365857	.631270	.253758		2.6	-14.264184	.14457960	.688798	.254434
	2.3	-26.089556	.06971302	.649440	.250943		2.7	-13.802829	.15961077	.705176	.250274
	2.4	-21.593887	.09009662	.666992	.247683		2.8	-13.482847	.17474083	.721347	.245671
	2.5	-19.233453	.10816473	.684025	.243999		2.9	-13.271753	.19012610	.737360	.240609
	2.6	-17.791062	.12504609	.700619	.239905		3.0	-13.150105	.20591105	.753259	.235067
	2.7	-16.844557	.14129839	.716840	.235407		3.1	-13.106711	.22223959	.769084	.229014
	2.8	-16.205820	.15725856	.732744	.230503		3.2	-13.136243	.23926442	.784875	.222410
	2.9	-15.778295	.17316066	.748379	.225186		3.3	-13.238160	.25715636	.800672	.215207
	3.0	-15.508189	.18918661	.763786	.219446		3.4	-13.416546	.27611530	.816514	.207339

Table 2: Values of c and k for the Burr III distribution

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
-0.25	3.5	-13.680781	.29638478	.832444	.198724	-0.10	3.9	-13.586587	.40350283	.885154	.177110
	3.6	-14.047282	.31827308	.848509	.189251		4.0	-14.600959	.44238092	.905342	.160814
	3.7	-14.543048	.34218620	.864762	.178778		4.1	-16.248465	.49206217	.927212	.140396
	3.8	-15.212693	.36868297	.881266	.167104		4.2	-19.606962	.56416332	.952235	.111960
	3.9	-16.133304	.39857464	.898105	.153941	-0.05	1.9	-27.742563	.04042433	.530965	.286448
	4.0	-17.449302	.43312319	.915391	.138848		2.0	-19.430243	.06165453	.550062	.286732
	4.1	-19.468922	.47449280	.933299	.121087		2.1	-16.242268	.07863283	.568466	.286445
	4.2	-23.011776	.52700995	.952141	.099215		2.2	-14.498224	.09378708	.586314	.285639
	4.3	-31.499380	.60227584	.972670	.069489		2.3	-13.393103	.10799129	.603714	.284352
-0.20	2.0	-29.405768	.04581886	.576474	.274213		2.4	-12.635954	.12169080	.620756	.282610
	2.1	-21.120369	.06821349	.595374	.273040		2.5	-12.093683	.13516045	.637515	.280424
	2.2	-17.803378	.08640789	.613624	.271348		2.6	-11.696293	.14859474	.654059	.277802
	2.3	-15.970659	.10276118	.631344	.269173		2.7	-11.403504	.16214758	.670449	.274740
	2.4	-14.811125	.11815853	.648630	.266542		2.8	-11.190757	.17595299	.686739	.271230
	2.5	-14.024434	.13306039	.665562	.263465		2.9	-11.042622	.19013780	.702982	.267252
	2.6	-13.471542	.14775535	.682207	.259950		3.0	-10.949424	.20483078	.719230	.262781
	2.7	-13.079003	.16245052	.698626	.255994		3.1	-10.905461	.22017071	.735535	.257783
	2.8	-12.804704	.17731200	.714871	.251586		3.2	-10.908079	.23631479	.751951	.252210
	2.9	-12.623365	.19248640	.730991	.246711		3.3	-10.957296	.25344892	.768536	.246000
	3.0	-12.519702	.20811420	.747032	.241343		3.4	-11.055865	.27180161	.785355	.239074
	3.1	-12.484986	.22433974	.763037	.235450		3.5	-11.209810	.29166454	.802483	.231325
	3.2	-12.515319	.24132022	.779050	.228989		3.6	-11.429661	.31342503	.820013	.222610
	3.3	-12.610906	.25923553	.795114	.221903		3.7	-11.732923	.33762078	.838061	.212727
	3.4	-12.776068	.27830039	.811277	.214121		3.8	-12.149149	.36504016	.856784	.201386
	3.5	-13.020003	.29878141	.827589	.205550		3.9	-12.731242	.39692463	.876413	.188132
	3.6	-13.358573	.32102257	.844108	.196065		4.0	-13.584595	.43543910	.897321	.172189
	3.7	-13.817894	.34548651	.860902	.185500		4.1	-14.962135	.48502832	.920218	.152006
	3.8	-14.441571	.37282590	.878058	.173618		4.2	-17.753850	.55831072	.946975	.123318
	3.9	-15.306391	.40401830	.895693	.160071	0.00	1.9	-24.669751	.04337880	.519757	.289982
	4.0	-16.560806	.44065078	.913978	.144300		2.0	-18.148434	.06293174	.538666	.290634
	4.1	-18.539317	.48562592	.933198	.125310		2.1	-15.398864	.07899872	.556901	.290711
	4.2	-22.233706	.54544261	.953934	.100936		2.2	-13.840637	.09348217	.574597	.290269
	4.3	-33.454982	.64334573	.978057	.063707		2.3	-12.833584	.10712514	.591858	.289349
-0.15	1.9	-49.603918	.02451179	.549512	.278793		2.4	-12.134082	.12032088	.608776	.287975
	2.0	-24.235358	.05369717	.569000	.278450		2.5	-11.627358	.13331791	.625425	.286163
	2.1	-18.908779	.07351801	.587731	.277535		2.6	-11.251865	.14629518	.641872	.283920
	2.2	-16.398019	.09043355	.605852	.276102		2.7	-10.971663	.15939611	.658179	.281244
	2.3	-14.917667	.10595133	.623476	.274186		2.8	-10.764574	.17274687	.674400	.278129
	2.4	-13.947291	.12072964	.640697	.271812		2.9	-10.616482	.18646768	.690591	.274556
	2.5	-13.273958	.13513893	.657593	.268992		3.0	-10.518393	.20068129	.706804	.270504
	2.6	-12.793214	.14942434	.674231	.265730		3.2	-10.453067	.23113561	.739512	.260811
	2.7	-12.447767	.16376960	.690671	.262025		3.3	-10.482608	.24770522	.756125	.255068
	2.8	-12.203908	.17832762	.706966	.257865		3.4	-10.555339	.26544844	.773001	.248631
	2.9	-12.041052	.19323774	.723166	.253233		3.5	-10.675839	.28464495	.790220	.241398
	3.0	-11.946629	.20863714	.739320	.248102		3.6	-10.852324	.30566571	.807880	.233229
	3.1	-11.913465	.22467004	.755473	.242437		3.7	-11.098530	.32902491	.826107	.223934
	3.2	-11.938462	.24149656	.771673	.236193		3.8	-11.437539	.35547438	.845073	.213230
	3.3	-12.022075	.25930289	.787970	.229309		3.9	-11.910179	.38619348	.865027	.200684
	3.4	-12.168400	.27831462	.804415	.221709		4.0	-12.596184	.42322601	.886373	.185556
	3.5	-12.385924	.29881580	.821070	.213290		4.1	-13.680844	.47072139	.909877	.166384
	3.6	-12.689228	.32117832	.838003	.203918		4.2	-15.776368	.54015208	.937510	.139248
	3.7	-13.102393	.34591056	.855300	.193406	0.05	1.8	-71.352865	.01332898	.487763	.291504
	3.8	-13.665946	.37374401	.873074	.181487		1.9	-22.906614	.04439864	.507322	.293218
	3.9	-14.452231	.40580260	.891481	.167757		2.0	-17.264935	.06281706	.526045	.294269
	4.0	-15.604405	.44397820	.910762	.151547		2.1	-14.766777	.07815686	.544105	.294741
	4.1	-17.459256	.49193472	.931346	.131596		2.2	-13.321860	.09205320	.561633	.294694
	4.2	-21.119167	.55884121	.954219	.104841		2.3	-12.376341	.10517285	.578736	.294170
	4.3	-37.632421	.69574289	.984300	.054967		2.4	-11.713239	.11787602	.595503	.293195
-0.10	1.9	-33.628637	.03480069	.540898	.282694		2.5	-11.228568	.13039318	.612009	.291788
	2.0	-21.311241	.05871609	.560186	.282646		2.6	-10.865893	.14289154	.628323	.289957
	2.1	-17.368731	.07688206	.578754	.282027		2.7	-10.591950	.15550577	.644503	.287704
	2.2	-15.330760	.09282547	.596743	.280890		2.8	-10.386018	.16835461	.660608	.285023
	2.3	-14.076541	.10764468	.614262	.279270		2.9	-10.234768	.18155123	.676690	.281900
	2.4	-13.233192	.12186649	.631404	.277193		3.0	-10.129561	.19521108	.692805	.278314
	2.5	-12.637642	.13580403	.648244	.274671		3.2	-10.038007	.22443498	.725352	.269620
	2.6	-12.206561	.14967287	.664850	.271708		3.4	-10.04961	.25727592	.758736	.258557
	2.7	-11.892960	.16363988	.681282	.268302		3.5	-10.183042	.27560244	.775928	.251943
	2.8	-11.668638	.17784774	.697595	.264441		3.6	-10.317927	.29562630	.793582	.244449
	2.9	-11.516113	.19242948	.713839	.260109		3.7	-10.509791	.31781576	.811828	.235899
	3.0	-11.424584	.20751861	.730065	.255277		3.8	-10.775626	.34284848	.830840	.226039
	3.1	-11.387820	.222325770	.746322	.249911		3.9	-11.144937	.37177214	.850870	.214479
	3.2	-11.403095	.23980705	.762661	.243963		4.0	-11.673484	.40636341	.872321	.200570
	3.3	-11.470760	.25735516	.779136	.237371		4.1	-12.483800	.45009912	.895928	.183074
	3.4	-11.594346	.27613260	.795806	.230056		4.2	-13.936573	.51184650	.923447	.158918
	3.5	-11.781234	.29643241	.812741	.221910		4.3	-18.947524	.64657559	.964843	.109897
	3.6	-12.044155	.31864197	.830020	.212792	0.10	1.8	-59.220123	.01521238	.474346	.293917
	3.7	-12.404202	.34329661	.847748	.202503		1.9	-21.951275	.04385993	.493719	.296073
	3.8	-12.897013	.37117680	.866060	.190757		2.0	-16.681159	.06150339	.512257	.297554

Table 2: Values of c and k for the Burr III distribution

	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
0.10	2.1	-14.305629	.07625443	.530133	.298450		0.25	3.2	-8.7709390	.18685140	.653079	.303485
	2.2	-12.919912	.08962986	.547480	.298823			3.4	-8.6729615	.21214250	.684199	.297762
	2.3	-12.007504	.10225720	.564404	.298720			3.6	-8.6652400	.24059900	.716486	.290036
	2.4	-11.363882	.11447750	.580994	.298170			3.8	-8.7543150	.27380036	.750644	.279748
	2.5	-10.890382	.12650940	.597326	.297194			3.9	-8.8432472	.29297308	.768745	.273350
	2.6	-10.533187	.13851144	.613467	.295804			4.0	-8.9709219	.31455379	.787787	.265857
	2.7	-10.260421	.15061088	.629478	.294003			4.1	-9.1502398	.33940529	.808073	.256946
	2.8	-10.052113	.16291941	.645415	.291789			4.2	-9.4045921	.36896965	.830086	.246091
	2.9	-9.8953022	.17554284	.661334	.289150			4.3	-9.7821406	.40599899	.854703	.232298
	3.0	-9.7814572	.18858836	.677287	.286070			4.4	-10.409339	.45714897	.883929	.213231
	3.2	-9.6627919	.21641901	.709520	.278470			4.5	-11.945969	.55331185	.926478	.178417
	3.4	-9.6762896	.24754888	.742601	.268651	0.30	1.9	-25.900494	.02879633	.429006	.301985	
	3.6	-9.8306823	.28366969	.777153	.256018			2.0	-17.015898	.04664215	.446872	.305469
	3.7	-9.9730930	.30443331	.795250	.248337			2.1	-13.962425	.06030580	.463995	.308294
	3.8	-10.173155	.32771452	.814106	.239476			2.2	-12.336316	.07224497	.480526	.310554
	3.9	-10.450948	.35438893	.833959	.229108			2.3	-11.309482	.08325982	.496581	.312317
	4.0	-10.842923	.38589232	.855178	.216704			2.4	-10.598582	.09373684	.512255	.313632
	4.1	-11.423779	.42488492	.878407	.201304			2.5	-10.077602	.10390336	.527628	.314538
	4.2	-12.385152	.47744997	.905028	.180767			2.6	-9.6812045	.11391183	.542768	.315060
	4.3	-14.583031	.56665097	.939920	.147264			2.7	-9.3718935	.12387547	.557734	.315217
0.15	1.8	-63.340506	.01341998	.459813	.295831			2.8	-9.1265555	.13388592	.572584	.315022
	1.9	-21.630950	.04197853	.479013	.298462			2.9	-8.9301828	.14402321	.587366	.314481
	2.0	-16.352271	.05913689	.497368	.300402			3.0	-8.7726610	.15436210	.602131	.313593
	2.1	-13.994354	.07341812	.515055	.301746			3.1	-8.6470048	.16497664	.616928	.312355
	2.2	-12.622263	.08633231	.532207	.302563			3.2	-8.5483378	.17594405	.631804	.310754
	2.3	-11.718639	.09849755	.548933	.302903			3.4	-8.4195957	.19928480	.662006	.306392
	2.4	-11.079905	.11024727	.565321	.302798			3.6	-8.3718498	.22522146	.693205	.300277
	2.5	-10.608178	.12179364	.581448	.302275			3.8	-8.4044831	.25498074	.726011	.291996
	2.6	-10.250151	.13328917	.597381	.301346			4.0	-8.5330099	.29060918	.761334	.280806
	2.7	-9.9742466	.14485508	.613180	.300020			4.1	-8.6456150	.31173534	.780393	.273706
	2.8	-9.7606354	.15659650	.628903	.298296			4.2	-8.8042810	.33613188	.800788	.265212
	2.9	-9.5963710	.16861189	.644604	.296167			4.3	-9.0300670	.36527589	.823053	.254782
	3.0	-9.4728274	.18099971	.660334	.293621			4.4	-9.3668201	.40203760	.848173	.241391
	3.2	-9.3270590	.20732084	.692106	.287181			4.5	-9.9329581	.45361363	.878496	.222524
	3.4	-9.3000108	.23657234	.724696	.278695			4.6	-11.459090	.55976281	.926143	.184791
	3.6	-9.3928529	.27022089	.758703	.267658	0.35	1.9	-33.021248	.02100897	.410624	.301661	
	3.7	-9.4919096	.28939639	.776493	.260924			2.0	-18.116337	.04075804	.428370	.305724
	3.8	-9.6353404	.31072650	.795002	.253160			2.1	-14.339778	.05462448	.445328	.309089
	3.9	-9.8360980	.33490612	.814444	.244103			2.2	-12.475856	.06643241	.461660	.311864
	4.0	-10.116745	.36302873	.835139	.233348			2.3	-11.339291	.07717923	.477486	.314125
	4.1	-10.520277	.39699590	.857608	.220198			2.4	-10.567393	.08730969	.492907	.315931
	4.2	-11.143112	.44068622	.882860	.203269			2.5	-10.007914	.09707288	.508003	.317323
	4.3	-12.287049	.50491481	.913533	.178808			2.6	-9.5846882	.10662966	.522845	.318334
0.20	1.8	-119.81903	.00666852	.444232	.297159			2.7	-9.2550437	.11609546	.537492	.318988
	1.9	-21.955488	.03886641	.463275	.300301			2.8	-8.9931092	.12556068	.551999	.319299
	2.0	-16.270376	.05582815	.481454	.302727			2.9	-8.7822698	.13510173	.566418	.319279
	2.1	-13.826171	.06975729	.498949	.304543			3.0	-8.6113920	.14478768	.580794	.318932
	2.2	-12.423618	.08227143	.515897	.305823			3.1	-8.4727853	.15468484	.595176	.318259
	2.3	-11.505558	.09400845	.532408	.306623			3.2	-8.3610342	.16486034	.609607	.317254
	2.4	-10.857917	.10530539	.548572	.306981			3.4	-8.2038960	.18633794	.638815	.314202
	2.5	-10.379158	.11637317	.564467	.306925			3.6	-8.1216178	.20989909	.668835	.309618
	2.6	-10.014446	.12736099	.580160	.306473			3.8	-8.1083391	.23648616	.700190	.303211
	2.7	-9.7314565	.13838550	.595711	.305635			4.0	-8.1697912	.26757518	.733614	.294464
	2.8	-9.5099216	.14954609	.611176	.304416			4.2	-8.3292998	.30581676	.770303	.282405
	2.9	-9.3365794	.16093419	.626609	.302813			4.3	-8.4631114	.32918265	.790524	.274559
	3.0	-9.2025189	.17263962	.642062	.300817			4.4	-8.6534460	.35703703	.812646	.264899
	3.2	-9.0301095	.19738484	.673240	.295576			4.5	-8.9357906	.39204724	.837661	.252475
	3.4	-8.9659048	.22466639	.705166	.288468			4.6	-9.4035125	.44078520	.867894	.234997
	3.6	-9.0047866	.25572320	.738405	.279085			4.7	-10.572737	.53640321	.914371	.201303
	3.8	-9.1631552	.29255193	.773751	.266702	0.40	1.9	-94.114126	.00683284	.391501	.300447	
	3.9	-9.3014617	.31418248	.792592	.258991			2.0	-20.247150	.03382402	.409166	.305128
	4.0	-9.4951991	.33893026	.812537	.249903			2.1	-15.039806	.04831392	.425987	.309062
	4.1	-9.7682105	.36809372	.833988	.238958			2.2	-12.780160	.06015142	.442135	.312371
	4.2	-10.168026	.40405440	.857651	.225292			2.3	-11.474054	.07071930	.457744	.315144
	4.3	-10.811097	.45215070	.885016	.207016			2.4	-10.612147	.08056302	.472916	.317446
	4.4	-12.163181	.53138039	.921065	.177621			2.5	-9.9979694	.08996850	.487736	.319328
	1.9	-23.143628	.03452945	.446581	.301503			2.6	-9.5380564	.09911186	.502275	.320826
	2.0	-16.464151	.05165276	.464594	.304443			2.7	-9.1817654	.10811452	.516596	.321969
	2.1	-13.807752	.06536333	.481899	.306753			2.8	-8.8991005	.11706806	.530752	.322777
	2.2	-12.325337	.07754705	.498638	.308515			2.9	-8.6711114	.12604706	.544794	.323265
	2.3	-11.367913	.08889702	.514923	.309790			3.0	-8.4852368	.13511655	.558767	.323443
	2.4	-10.696956	.09976660	.530848	.310622			3.1	-8.3328466	.14433678	.572716	.323314
	2.5	-10.202144	.11037130	.546489	.311044			3.2	-8.2078566	.15376668	.586684	.322880
	2.6	-9.8248392	.12086009	.561915	.311077			3.4	-8.0238705	.17350145	.614852	.321070
	2.7	-9.5308287	.13134677	.577186	.310736			3.6	-7.9113312	.19487149	.643646	.317916
	2.8	-9.2987910	.14192615	.592358	.310029			3.8	-7.8603688	.21859821	.673509	.313225
	2.9	-9.1147973	.15268336	.607482	.308958			4.0	-7.8703457	.24574259	.705032	.306647
	3.0	-8.9694517	.16370020	.622609	.307518			4.2	-7.9514176	.27806000	.739101	.297558

Table 2: Values of c and k for the Burr III distribution

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
0.40	4.4	-8.1339604	.31893203	.777278	.284725	0.60	2.1	-72.399853	.00721557	.343308	.299286
	4.5	-8.2861811	.34475162	.798842	.276118		2.2	-19.025748	.02913700	.359124	.305067
	4.6	-8.5089790	.37676837	.823115	.265121		2.3	-14.196694	.04127528	.374156	.310101
	4.7	-8.8649571	.42008575	.852063	.249960		2.4	-12.072844	.05114642	.388558	.314517
	4.8	-9.6154420	.49455327	.892923	.223927		2.5	-10.835524	.05990126	.402446	.318412
	2.0	-25.034790	.02529169	.389331	.303605		2.6	-10.013249	.06799618	.415912	.321854
	2.1	-16.279315	.04128934	.406051	.308142		2.7	-9.4229025	.07566939	.429029	.324901
	2.2	-13.317023	.05340758	.422044	.312009		2.8	-8.9769909	.08306575	.441860	.327593
	2.3	-11.743170	.06392014	.437454	.315308		2.9	-8.6279384	.09028297	.454457	.329965
	2.4	-10.747920	.07355539	.452390	.318115		3.0	-8.3474646	.09739240	.466866	.332044
0.45	2.5	-10.056255	.08266117	.466942	.320488	0.65	3.1	-8.1176252	.10444970	.479128	.333850
	2.6	-9.5463166	.09143918	.481185	.322471		3.2	-7.9264529	.11150083	.491280	.335401
	2.7	-9.1550299	.10002209	.495181	.324096		3.3	-7.7656534	.11858586	.503356	.336708
	2.8	-8.8462036	.10850581	.508985	.325390		3.4	-7.6292936	.12574127	.515389	.337782
	2.9	-8.5974891	.11696534	.522647	.326371		3.5	-7.5130278	.13300184	.527410	.338629
	3.0	-8.3943121	.12546353	.536213	.327054		3.6	-7.4136141	.14040208	.539449	.339252
	3.1	-8.2267666	.13405637	.549724	.327446		3.8	-7.2561159	.15576508	.563712	.339830
	3.2	-8.0879058	.14279659	.563221	.327552		4.0	-7.1433981	.17214522	.588442	.339491
	3.4	-7.8776645	.16092942	.590337	.326907		4.2	-7.0679330	.18993414	.613943	.338161
	3.6	-7.7378859	.18031307	.617894	.325073		4.4	-7.0263226	.20966413	.640599	.335700
0.50	3.8	-7.6553743	.20150209	.646272	.321931	0.65	4.6	-7.0189173	.23212309	.668935	.331865
	4.0	-7.6251629	.22526181	.675944	.317255		4.8	-7.0508648	.25859561	.699748	.326228
	4.2	-7.6498019	.25276679	.707573	.310650		5.0	-7.1361728	.29146872	.734426	.317973
	4.4	-7.7424343	.28605081	.742214	.301392		5.2	-7.3127386	.33623962	.775960	.305225
	4.6	-7.9393642	.32929699	.781860	.287975		5.3	-7.4693762	.36767193	.801656	.295625
	4.7	-8.1057612	.35759721	.804873	.278662		5.4	-7.7396398	.41381330	.834881	.281024
	4.8	-8.3601048	.39439417	.831720	.266204		4.9	-8.8191285	.450008647	.866561	.247071
	2.0	-46.005880	.01268227	.368921	.301069		2.3	-16.549770	.01735478	.337437	.300569
	2.1	-18.620352	.03329548	.385593	.306258		2.4	-13.152453	.03243485	.352462	.306275
	2.2	-14.222488	.04614766	.401469	.310714		2.5	-11.448514	.04304799	.366780	.311291
0.55	2.3	-12.199374	.05678917	.416708	.314559	0.70	2.6	-10.397691	.06008916	.380525	.315730
	2.4	-11.000293	.06632160	.431431	.317882		2.7	-9.6762411	.06761702	.406681	.323204
	2.5	-10.196843	.07520141	.445732	.320751		2.8	-9.1470470	.07478470	.419240	.326355
	2.6	-9.6177897	.08367293	.459691	.323217		2.9	-8.7410828	.08171103	.431532	.329171
	2.7	-9.1799338	.09188789	.473373	.325319		3.0	-8.4194677	.08847816	.443603	.331685
	2.8	-8.8375374	.09995085	.486834	.327087		3.1	-8.1584897	.09514708	.455497	.333922
	2.9	-8.5632108	.10794007	.500123	.328546		3.2	-7.9428050	.10176587	.467249	.335903
	3.0	-8.3394902	.11591838	.513287	.329712		3.3	-7.7620214	.10837448	.478893	.337644
	3.1	-8.1546979	.12393942	.526364	.330599		3.4	-7.6088389	.11500775	.490461	.339157
	3.2	-8.0007343	.13205168	.539396	.331216		3.5	-7.4779812	.12169745	.501983	.340453
0.55	3.3	-7.8718202	.14030120	.552419	.331568		3.6	-7.3655420	.12847365	.513487	.341539
	3.4	-7.7637486	.14873381	.565471	.331655		3.8	-7.1848420	.14240449	.536551	.343098
	3.6	-7.5985195	.16634124	.591813	.331028		4.0	-7.0505096	.15704865	.559882	.343843
	3.8	-7.4887626	.18530560	.618746	.329272		4.2	-6.9529107	.17269287	.583727	.343748
	4.0	-7.4263153	.20618469	.646655	.326252		4.4	-6.8865734	.18969994	.608374	.342743
	4.2	-7.4090919	.22977602	.676043	.321723		4.6	-6.8491327	.20856711	.634194	.340696
	4.4	-7.4414602	.25734192	.707639	.315258		4.8	-6.8412045	.23003217	.661696	.337385
	4.6	-7.5382000	.29114801	.742656	.306057		5.0	-6.8673644	.25529654	.691660	.332416
	4.8	-7.7394979	.33612363	.783539	.292375		5.2	-6.9395809	.28658199	.725439	.325049
	4.9	-7.9132408	.36656228	.807932	.282541		5.4	-7.0895623	.32895222	.765938	.313588
0.55	5.0	-8.1930281	.40826704	.837589	.268678		5.5	-7.2216253	.35844477	.790966	.304953
	5.1	-8.8125398	.48408132	.882035	.243221		5.6	-7.4450960	.40104793	.823109	.291934
	2.1	-24.193350	.02356325	.364667	.303334		2.3	-22.502727	.02178451	.330527	.301293
	2.2	-15.810726	.03820585	.380478	.308422		2.4	-15.099475	.03429384	.344832	.306964
	2.3	-12.943929	.04928426	.395587	.312841		2.5	-12.435627	.04383667	.358491	.311987
	2.4	-11.414017	.05886552	.410128	.316699		2.6	-10.989382	.05207967	.371620	.316468
	2.5	-10.443141	.06761585	.424205	.320073		2.7	-10.062274	.05958023	.384311	.320486
	2.6	-9.7660065	.07585320	.437902	.323023		2.8	-9.4106576	.06660734	.396638	.324101
	2.7	-9.2647708	.08376109	.451289	.325597		2.9	-8.9249625	.07331646	.408660	.327360
	2.8	-8.8783265	.09145913	.464422	.327831		3.0	-8.5479033	.07980820	.420429	.330303
0.55	2.9	-8.5715514	.09903258	.477354	.329752		3.1	-8.2463538	.08615332	.431987	.332958
	3.0	-8.3227154	.10654684	.490130	.331383		3.2	-7.9997149	.09240488	.443374	.335351
	3.1	-8.1176103	.11405530	.502788	.332740		3.3	-7.7944544	.09860498	.454622	.337502
	3.2	-7.9465473	.12160424	.515369	.333838		3.4	-7.6212939	.10478866	.465763	.339427
	3.3	-7.8026878	.12923567	.527907	.334684		3.5	-7.4736497	.11098641	.476825	.341139
	3.4	-7.6810852	.13698968	.540436	.335284		3.6	-7.3467192	.11722590	.487835	.342648
	3.6	-7.4909735	.15302642	.565606	.335755		3.7	-7.2369188	.12353313	.498819	.343961
	3.8	-7.3566887	.17005777	.591162	.335234		3.8	-7.1415252	.12993343	.509802	.345086
	4.0	-7.2674009	.18849750	.617420	.333649		4.0	-6.9860330	.14311607	.531864	.346781
	4.2	-7.2179345	.20889762	.644766	.330859		4.2	-6.8684032	.15699227	.554227	.347740
0.55	4.4	-7.2078329	.23206544	.673722	.326612		4.4	-6.7814131	.17181890	.577119	.347936
	4.6	-7.2422509	.25930482	.705067	.320469		4.6	-6.7208942	.18792335	.600810	.347308
	4.8	-7.3362309	.29301350	.740136	.311596		4.8	-6.6850531	.20575413	.625645	.345741
	4.9	-7.4161948	.31373911	.759826	.305632		5.0	-6.6744388	.22597282	.652099	.343038
	5.0	-7.5306877	.33862117	.781741	.298105		5.2	-6.6927284	.24964433	.680898	.338864
	5.1	-7.7017957	.37029605	.807148	.288118		5.4	-6.7493240	.27869986	.713279	.332588
	5.2	-7.9907605	.41576967	.839275	.273334		5.6	-6.8682186	.31738295	.751814	.322823

Table 2: Values of c and k for the Burr III distribution

	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
0.70	5.8	-7.1361408	.37977352	.804506	.305036	0.85	4.6	-6.5190367	.13883089	.508482	.356359	
	5.9	-7.5121219	.44839494	.851394	.284205		4.8	-6.4293207	.15019405	.527732	.358088	
0.75	2.4	-19.567176	.02413016	.322728	.301468		5.0	-6.3586786	.16224246	.547418	.359281	
	2.5	-14.176008	.03511758	.336373	.307133		5.2	-6.3047134	.17517915	.567728	.359908	
	2.6	-11.931668	.04385004	.349418	.312185		5.4	-6.2661289	.18927175	.588897	.359914	
	2.7	-10.649814	.05149671	.361970	.316721		5.6	-6.2426690	.20489327	.611233	.359208	
	2.8	-9.8058359	.05849802	.374110	.320816		5.8	-6.2353010	.22259759	.635176	.357635	
	2.9	-9.2025588	.06507749	.385905	.324526		6.0	-6.2468321	.24327594	.661398	.354937	
	3.0	-8.7475228	.07136802	.397411	.327897		6.2	-6.2836076	.26853460	.691060	.350634	
	3.1	-8.3910585	.07745715	.408673	.330965		6.4	-6.3609883	.30185468	.726568	.343681	
	3.2	-8.1038848	.08340711	.419732	.333759		6.6	-6.5314186	.35437635	.775231	.330763	
	3.3	-7.8675278	.08926486	.430623	.336303		6.7	-6.7483209	.40759459	.816834	.316302	
	3.4	-7.6697136	.09506775	.441377	.338617	0.90	2.6	-33.592899	.01169958	.282706	.292329	
	3.5	-7.5019470	.10084678	.452022	.340717		2.7	-16.700449	.02479914	.295278	.298761	
	3.6	-7.3581524	.10662884	.462584	.342617		2.8	-13.000122	.03344925	.307232	.304531	
	3.7	-7.2338669	.11243809	.473088	.344326		2.9	-11.212926	.04059714	.318676	.309751	
	3.8	-7.1257391	.11829709	.483556	.345854		3.0	-10.127318	.04693863	.329693	.314506	
	4.0	-6.9482769	.13025084	.504475	.348389		3.1	-9.3870879	.05277219	.340349	.318861	
	4.2	-6.8113183	.14266490	.525521	.350255		3.2	-8.8455023	.05825864	.350697	.322867	
	4.4	-6.7058771	.15572951	.546878	.351457		3.3	-8.4299223	.06349687	.360782	.326565	
	4.6	-6.6263256	.16967015	.568752	.351976		3.4	-8.0998809	.06855326	.370641	.329989	
	4.8	-6.5693354	.18477393	.591389	.351759		3.5	-7.8308857	.07347538	.380306	.333166	
	5.0	-6.5334072	.20143128	.615102	.350710		3.6	-7.6071690	.07829905	.389806	.336120	
	5.2	-6.5188522	.22021047	.640317	.348669		3.7	-7.4180839	.08305251	.399164	.338870	
	5.4	-6.5283460	.24200759	.667676	.345361		3.8	-7.2561624	.08775882	.408403	.341431	
	5.6	-6.5686978	.26839643	.698241	.340290		3.9	-7.1160008	.09243749	.417543	.343818	
	5.8	-6.6564835	.30264464	.734112	.332411		4.0	-6.9935870	.09710549	.426603	.346043	
	5.9	-6.7307972	.32503445	.755461	.326684		4.1	-6.8858771	.10177808	.435600	.348114	
	6.0	-6.8437575	.35416939	.780998	.318751		4.2	-6.7905186	.10646932	.444550	.350042	
	6.1	-7.0458462	.39866578	.815630	.305957		4.4	-6.6298482	.11596045	.462371	.353489	
0.80	2.4	-51.830472	.00827607	.300448	.294710		4.6	-6.5008212	.12568188	.480189	.356428	
	2.5	-17.989606	.02519665	.314174	.301102		4.8	-6.3963806	.13573848	.498121	.358886	
	2.6	-13.575013	.03514907	.327211	.306783		5.0	-6.3117729	.14624506	.516293	.360873	
	2.7	-11.579962	.04324047	.339685	.311880		5.2	-6.2437766	.15733548	.534843	.362390	
	2.8	-10.402745	.05038321	.351693	.316481		5.4	-6.1902655	.16917412	.553930	.363417	
	2.9	-9.6135225	.05694621	.363310	.320659		5.6	-6.1499780	.18197317	.573749	.363916	
	3.0	-9.0426993	.06312291	.374598	.324467		5.8	-6.1224382	.19602046	.594551	.363824	
	3.1	-8.6084651	.06903047	.385609	.327949		6.0	-6.1080318	.21172856	.616681	.363035	
	3.2	-8.2660362	.07474694	.396383	.331139		6.2	-6.1083208	.22972991	.640644	.361375	
	3.3	-7.9886520	.08032813	.406959	.334067		6.4	-6.1268787	.25108577	.667254	.358542	
	3.4	-7.7592550	.08581630	.417369	.336756		6.6	-6.1716307	.27783429	.698012	.353946	
	3.5	-7.5664180	.09124497	.427641	.339225		6.8	-6.2634631	.31494796	.736424	.346144	
	3.6	-7.4021795	.09664190	.437802	.341490		6.9	-6.3470644	.34197495	.761611	.339726	
	3.7	-7.2608120	.10203096	.447874	.343565	0.95	7.0	-6.5058128	.38579034	.798078	.328471	
	3.8	-7.1380867	.10743346	.457881	.345461		2.7	-33.624153	.01114186	.273076	.290313	
	4.0	-6.9365350	.11835617	.477780	.348749		2.8	-16.657497	.02367550	.285144	.296799	
	4.2	-6.7797233	.12955828	.497658	.351408		2.9	-12.956840	.03192631	.296617	.302635	
	4.4	-6.6566260	.14118845	.517673	.353465		3.0	-11.170084	.03873042	.307599	.307932	
	4.6	-6.5601823	.15341004	.537989	.354929		3.1	-10.084585	.04475551	.318166	.312771	
	4.8	-6.4858518	.16641662	.558789	.355785		3.2	-9.3441755	.05028764	.328383	.317218	
	5.0	-6.4308598	.18045290	.580292	.355992		3.3	-8.8022019	.05548079	.338299	.321322	
	5.2	-6.3938466	.19584727	.602771	.355476		3.4	-8.3860796	.06042944	.347956	.325125	
	5.4	-6.3748303	.21306851	.626596	.354111		3.5	-8.0553765	.06519688	.357390	.328658	
	5.6	-6.3755513	.23283574	.652309	.351687		3.6	-7.7856198	.06982824	.366631	.331951	
	5.8	-6.4005660	.25636098	.680773	.347834		3.7	-7.5610549	.07435740	.375705	.335026	
	6.0	-6.4604722	.28599394	.713591	.341825		3.8	-7.3710421	.07881084	.384635	.337901	
	6.2	-6.5841956	.32757711	.754543	.331855		3.9	-7.2081172	.08321006	.393443	.340594	
	6.3	-6.6989122	.35841946	.781519	.323686		4.0	-7.0668775	.08757303	.402146	.343118	
	6.4	-6.9289693	.41086772	.821672	.308930		4.1	-6.9433105	.09191523	.410763	.345485	
0.85	2.5	-37.388198	.01099813	.291984	.293797		4.2	-6.8343697	.09625036	.419308	.347706	
	2.6	-17.114865	.02534993	.304988	.300197		4.4	-6.6514481	.10494833	.436243	.351740	
	2.7	-13.199182	.03455316	.317462	.305915		4.6	-6.5045899	.11375776	.453062	.355277	
	2.8	-11.346624	.04212523	.329403	.311068		4.8	-6.3850572	.12276416	.469870	.358356	
	2.9	-10.231783	.04883688	.340900	.315744		5.0	-6.2869814	.13205437	.486769	.361003	
	3.0	-9.4758677	.05501272	.352022	.320008		5.2	-6.2063225	.14172260	.503866	.363233	
	3.1	-8.9249676	.06082624	.362828	.323915		5.4	-6.1402742	.15187709	.521278	.365051	
	3.2	-8.5035240	.06638366	.373365	.327506		5.6	-6.0869155	.16264822	.539137	.366445	
	3.3	-8.1696818	.07175617	.383671	.330816		5.8	-6.0450147	.17420042	.557603	.367395	
	3.4	-7.8982137	.07699480	.393782	.333871		6.0	-6.0139406	.18675034	.576874	.367856	
	3.5	-7.6729332	.08213816	.403727	.336697		6.2	-5.9936736	.20059741	.597215	.367761	
	3.6	-7.4829387	.08721678	.413533	.339311		6.4	-5.9849471	.21617926	.618995	.366998	
	3.7	-7.3206009	.09225580	.423224	.341730		6.6	-5.9896320	.23418259	.642774	.365383	
	3.8	-7.1804108	.09727666	.432821	.343968		6.8	-6.0117104	.25579726	.669484	.362587	
	3.9	-7.0582860	.10229827	.442346	.346035		7.0	-6.0601258	.28343036	.700942	.357938	
	4.0	-6.9511352	.10733782	.451816	.347942		7.2	-6.1606908	.32362617	.741886	.349613	
	4.1	-6.8565742	.11241142	.461249	.349696		7.3	-6.2610000	.35591229	.771126	.342008	
	4.2	-6.7727360	.11753450	.470665	.351304	1.00	2.8	-37.592096	.00947582	.263067	.287757	
	4.4	-6.6316027	.12799041	.489508	.354101		2.9	-16.984491	.02206037	.274674	.294316	

Table 2: Values of c and k for the Burr III distribution

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
1.00	3.0	-13.068028	.03005025	.285705	.300232	1.10	4.2	-7.1591583	.06969044	.348599	.334955
	3.1	-11.217128	.03658393	.296257	.305614		4.3	-7.0077136	.07326180	.356130	.337824
	3.2	-10.102815	.04234241	.306405	.310543		4.4	-6.8751770	.07678889	.363558	.340545
	3.3	-9.3464815	.04761160	.316209	.315084		4.5	-6.7581821	.08028271	.370895	.343129
	3.4	-8.7944934	.05254368	.325718	.319287		4.6	-6.6541387	.08375282	.378153	.345587
	3.5	-8.3714734	.05723140	.334972	.323191		4.8	-6.4772120	.09065506	.392475	.350154
	3.6	-8.0356766	.06173640	.344004	.326831		5.0	-6.3325878	.09755490	.406602	.354301
	3.7	-7.7619438	.06610239	.352843	.330233		5.2	-6.2124707	.10450407	.420606	.358072
	3.8	-7.5341288	.07036195	.361514	.333420		5.4	-6.1115059	.11155074	.434552	.361500
	3.9	-7.3413541	.07454039	.370038	.336413		5.6	-6.0259009	.11874237	.448505	.364612
	4.0	-7.1760028	.07865801	.378436	.339226		5.8	-5.9529055	.12612812	.462529	.367426
	4.1	-7.0325701	.08273165	.386725	.341875		6.0	-5.8904944	.13376126	.476690	.369956
	4.2	-6.9069716	.08677564	.394921	.344372		6.2	-5.8371654	.14170181	.491060	.372209
	4.3	-6.7961092	.09080250	.403038	.346726		6.4	-5.7918095	.15001981	.505718	.374188
	4.4	-6.6975882	.09482341	.411091	.348948		6.6	-5.7536297	.15879964	.520756	.375887
	4.6	-6.5304254	.10288769	.427051	.353022		6.8	-5.7220930	.16814634	.536284	.377296
	4.8	-6.3944891	.11104357	.442896	.356645		7.0	-5.6969119	.17819494	.552437	.378394
	5.0	-6.2825060	.11936181	.458717	.359855		7.2	-5.6780558	.18912538	.569390	.379146
	5.2	-6.1894910	.12791374	.474602	.362677		7.4	-5.6658035	.20118779	.587378	.379501
	5.4	-6.1119454	.13677582	.490641	.365128		7.6	-5.6608672	.21474826	.606734	.379377
	5.6	-6.0473831	.14603426	.506932	.367217		7.8	-5.6466663	.23038034	.627968	.378638
	5.8	-5.9940476	.15579082	.523584	.368940		8.0	-5.6799781	.24907363	.651930	.377047
	6.0	-5.9507418	.16617062	.540723	.370287		8.2	-5.7127875	.27281463	.680282	.374120
	6.2	-5.9167379	.17733369	.558507	.371233		8.4	-5.7798295	.30692284	.717326	.368556
	6.4	-5.8917526	.18949336	.577132	.371733		8.5	-5.8452203	.33377174	.743745	.363348
	6.6	-5.8759962	.20294747	.596866	.371722	1.15	3.3	-14.661378	.02266083	.251903	.290048
	6.8	-5.8703359	.21813581	.618088	.371089		3.4	-12.016368	.02885324	.261360	.295743
	7.0	-5.8766901	.23575713	.641380	.369655		3.5	-10.579145	.03411210	.270427	.300979
	7.2	-5.8990174	.25704352	.667736	.367090		3.6	-9.6550407	.03881877	.279159	.305822
	7.4	-5.9462902	.28456205	.699152	.362708		3.7	-9.0027707	.04315569	.287603	.310324
	7.6	-6.0459512	.32577992	.741207	.354511		3.8	-8.5140103	.04722688	.295794	.314528
	7.7	-6.1533270	.36154840	.773444	.346327		3.9	-8.1321633	.05109843	.303764	.318467
1.05	2.9	-53.452021	.00632169	.252758	.284668		4.0	-7.8244986	.05481545	.311538	.322171
	3.0	-17.766987	.01999339	.263947	.291319		4.1	-7.5076499	.05841052	.319139	.325663
	3.1	-13.351772	.02786711	.274571	.297328		4.2	-7.3572222	.06190816	.326586	.328963
	3.2	-11.360755	.03420295	.284726	.302804		4.3	-7.1750132	.06532749	.333897	.332088
	3.3	-10.185147	.03974334	.294485	.307829		4.4	-7.0174747	.06868383	.341086	.335054
	3.4	-9.3956637	.04478693	.303905	.312467		4.5	-6.8798102	.07198979	.348168	.337874
	3.5	-8.8233006	.04948935	.313033	.316768		4.6	-6.7584199	.07525598	.355153	.340558
	3.6	-8.3866138	.05394404	.321907	.320772		4.8	-6.5540345	.08170437	.368881	.345557
	3.7	-8.0410403	.05821254	.330561	.324514		5.0	-6.3886626	.08808973	.382347	.350119
	3.8	-7.7599512	.06233805	.339021	.328020		5.2	-6.2521215	.09446171	.395622	.354293
	3.9	-7.5263682	.06635249	.347311	.331314		5.4	-6.1377698	.10086347	.408766	.358121
	4.0	-7.3289108	.07028044	.355453	.334416		5.6	-6.0408533	.10733480	.421836	.361634
	4.1	-7.1596418	.07414144	.363465	.337341		5.8	-5.9579882	.11391435	.434886	.364858
	4.2	-7.0128435	.07795152	.371363	.340104		6.0	-5.8866893	.12064137	.447971	.367813
	4.3	-6.8842848	.08172418	.379163	.342719		6.2	-5.8251002	.12755749	.461145	.370512
	4.4	-6.7707631	.08547103	.386877	.345194		6.4	-5.7718200	.13470849	.474465	.372967
	4.6	-6.5794767	.09292732	.402100	.349765		6.6	-5.7257889	.14214638	.487995	.375184
	4.8	-6.4248177	.10039166	.417123	.353878		6.8	-5.6862124	.14993205	.501805	.377163
	5.0	-6.2976267	.10792633	.432028	.357580		7.0	-5.6525134	.15813888	.515975	.378901
	5.2	-6.1917204	.11558969	.446894	.360907		7.2	-5.6243041	.16685780	.530603	.380389
	5.4	-6.1027861	.12344005	.461794	.363884		7.4	-5.6013775	.17620493	.545808	.381611
	5.6	-6.0277432	.13153885	.476805	.366531		7.6	-5.5837178	.18633351	.561743	.382539
	5.8	-5.9643608	.13995411	.492008	.368857		7.8	-5.5715409	.19745364	.578611	.383134
	6.0	-5.9110187	.14876426	.507491	.370867		8.0	-5.5653822	.20986727	.596698	.383332
	6.2	-5.8665618	.15806328	.523356	.372557		8.2	-5.5662835	.22403565	.616425	.383031
	6.4	-5.8302112	.16796786	.539722	.373914		8.4	-5.5762157	.24072545	.638480	.382058
	6.6	-5.8015236	.17862813	.556737	.374914		8.6	-5.5991867	.26138468	.664122	.380080
	6.8	-5.7803939	.19024496	.574592	.375517		8.8	-5.6451040	.28943610	.696247	.376304
	7.0	-5.7671138	.20309926	.593542	.375662		9.0	-5.7569598	.33927798	.746599	.367398
	7.2	-5.7625247	.21760604	.613957	.375251	1.20	3.4	-15.970474	.01960806	.240475	.285684
	7.4	-5.7683699	.23442449	.636401	.374119		3.5	-12.613218	.02590606	.249631	.291508
	7.6	-5.7881603	.25471556	.661839	.371972		3.6	-10.928190	.03111647	.258396	.296862
	7.8	-5.8297573	.28089322	.692215	.368192		3.7	-9.8851986	.03571737	.266826	.301817
	8.0	-5.9169878	.31995151	.732953	.360987		3.8	-9.1653834	.03992054	.274966	.306425
	8.1	-6.0102603	.35362175	.764191	.353733		3.9	-8.6339631	.04384171	.282853	.310730
	3.1	-19.243563	.01746535	.253031	.287814		4.0	-8.2231283	.04755242	.290517	.314767
	3.2	-13.852555	.02540310	.263285	.293931		4.1	-7.8946735	.05110053	.297984	.318567
	3.3	-11.617100	.03161979	.273075	.299511		4.2	-7.6252781	.05452004	.305276	.322152
	3.4	-10.339287	.03699203	.282473	.304638		4.3	-7.3998282	.05783621	.312412	.325545
	3.5	-9.4959836	.04184755	.291535	.309376		4.4	-7.2080609	.06106848	.319408	.328762
	3.6	-8.8911923	.04635141	.300308	.313776		4.5	-7.0427425	.06423227	.326279	.331820
	3.7	-8.4331341	.05060061	.308828	.317880		4.6	-6.8986154	.06734012	.333039	.334730
	3.8	-8.0725330	.05465807	.317128	.321722		4.7	-6.7717597	.07040246	.339698	.337506
	3.9	-7.7803391	.05856742	.325233	.325328		4.8	-6.6591883	.07342815	.346268	.340156
	4.0	-7.5382173	.06236059	.333167	.328723		5.0	-6.4681123	.07939920	.359178	.345115
	4.1	-7.3339740	.06606188	.340950	.331926		5.2	-6.3120015	.08530445	.371837	.349667

Table 2: Values of c and k for the Burr III distribution

	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
1.20	5.4	-6.1821126	.09118578	.384304	.353860		1.30	6.8	-5.6734266	.10958882	.414478	.369060
	5.6	-6.0724811	.09707940	.396632	.357732			7.0	-5.6204313	.11483038	.425078	.371909
	5.8	-5.9788947	.10301832	.408872	.361313			7.2	-5.5732959	.12018449	.435725	.374586
	6.0	-5.8982950	.10903408	.421069	.364628			7.4	-5.5312855	.12567470	.446452	.377100
	6.2	-5.8284107	.11515811	.433269	.367697			7.6	-5.4938134	.13132697	.457293	.379458
	6.4	-5.7675259	.12142297	.445516	.370535			7.8	-5.4604114	.13717053	.468287	.381664
	6.6	-5.7143275	.12786364	.457857	.373154			8.0	-5.4307089	.14323899	.479474	.383721
	6.8	-5.6678040	.13451878	.470342	.375562			8.2	-5.4044189	.14957176	.490903	.385631
	7.0	-5.6271760	.14143242	.483025	.377764			8.4	-5.3813282	.15621596	.502628	.387391
	7.2	-5.5918496	.14865598	.495966	.379763			8.6	-5.3612935	.16322909	.514714	.388998
	7.3	-5.5760320	.15240275	.502555	.380686			8.8	-5.3442420	.17068297	.527241	.390444
	7.4	-5.5613863	.15625109	.509235	.381556			9.0	-5.3301787	.17866949	.540307	.391718
	7.6	-5.5354850	.16429348	.522915	.383137	1.35	3.8	-17.421757	.01555991	.214728	.276061	
	7.8	-5.5139766	.17287869	.537106	.384494			3.9	-13.222043	.02134755	.222763	.281852
	8.0	-5.4968320	.18213095	.551938	.385607			4.0	-11.274116	.02600032	.230449	.287199
	8.2	-5.4841874	.19221729	.567576	.386447			4.1	-10.108867	.03004759	.237834	.292166
	8.4	-5.4764006	.20337180	.584249	.386970			4.2	-9.3198752	.03370722	.244957	.296804
	8.6	-5.4741643	.21594006	.602287	.387105			4.3	-8.7443768	.03709391	.251849	.301153
	8.8	-5.4787467	.23046945	.622199	.386736			4.4	-8.3031066	.04027678	.258535	.305247
	9.0	-5.4925648	.24791923	.644856	.385659			4.5	-7.9523739	.04330134	.265039	.309113
1.25	3.5	-18.249815	.01614605	.229043	.280845			4.6	-7.6659276	.04619939	.271378	.312775
	3.6	-13.511139	.02275891	.237929	.286813			4.7	-7.4269567	.04899492	.277570	.316253
	3.7	-11.426282	.02800562	.246421	.292298			4.8	-7.2241525	.05170376	.283627	.319564
	3.8	-10.206253	.03255115	.254576	.297371			4.9	-7.0496033	.05434170	.289564	.322721
	3.9	-9.3903925	.03665687	.262438	.302090			5.0	-6.8975941	.05691924	.295390	.325739
	4.0	-8.8001435	.04045736	.270046	.306500			5.1	-6.7638854	.05944554	.301116	.328628
	4.1	-8.3502189	.04403271	.277429	.310638			5.2	-6.6452604	.06192819	.306750	.331398
	4.2	-7.9942183	.04743518	.284612	.314533			5.4	-6.4438394	.06678753	.317775	.336614
	4.3	-7.7045245	.05070117	.291618	.318211			5.6	-6.2790212	.07153924	.328520	.341447
	4.4	-7.4635788	.05385726	.298466	.321694			5.8	-6.1415002	.07621590	.339034	.345944
	4.5	-7.2596365	.05692366	.305171	.325000			6.0	-6.0249459	.08084401	.349356	.350143
	4.6	-7.0845192	.05991617	.311748	.328144			6.2	-5.9248928	.08544598	.359523	.354077
	4.7	-6.9323417	.06284751	.318210	.331140			6.4	-5.8380963	.09004154	.369568	.357770
	4.8	-6.7987529	.06572814	.324568	.334000			6.6	-5.7621393	.09464861	.379519	.361246
	5.0	-6.5749241	.07137106	.337013	.339353			6.8	-5.6951844	.09928408	.389405	.364523
	5.2	-6.3945504	.07690132	.349154	.344271			7.0	-5.6358094	.10396433	.399253	.367617
	5.4	-6.2459816	.08236253	.361051	.348810			7.2	-5.5828977	.10870567	.409088	.370541
	5.6	-6.1214866	.08779028	.372757	.353013			7.4	-5.5355620	.11352486	.418936	.373307
	5.8	-6.0157230	.09321519	.384318	.356917			7.6	-5.4930902	.11843944	.428823	.375923
	6.0	-5.9248757	.09866478	.395776	.360550			7.8	-5.4549070	.12346826	.438775	.378398
	6.2	-5.8461474	.10416496	.407171	.363936			8.0	-5.4205456	.12863193	.448823	.380737
	6.4	-5.7774413	.10974103	.418542	.367095			8.2	-5.3896273	.13395345	.458994	.382946
	6.6	-5.7171580	.11541862	.429926	.370042			8.4	-5.3618466	.13945896	.469325	.385028
	6.8	-5.6640606	.12122456	.441361	.372791			8.6	-5.3369602	.14517864	.479851	.386984
	7.0	-5.6171832	.12718779	.452886	.375351			8.8	-5.3147800	.15114800	.490617	.388816
	7.2	-5.5757676	.13334034	.464543	.377729			9.0	-5.2951692	.15740958	.501671	.390522
	7.4	-5.5392192	.13971852	.476377	.379931	1.40	3.9	-23.085698	.01099830	.203270	.270003	
	7.6	-5.5070767	.14636450	.488439	.381959			4.0	-14.974568	.01766552	.211123	.275979
	7.8	-5.4789916	.15332832	.500789	.383812			4.1	-12.181315	.02256268	.218617	.281487
	8.0	-5.4547161	.16067073	.513493	.385487			4.2	-10.678315	.02667864	.225802	.286596
	8.2	-5.4340983	.16846723	.526634	.386975			4.3	-9.7158120	.03033132	.232719	.291361
	8.4	-5.4170863	.17681408	.540316	.388265			4.4	-9.0376670	.03367104	.239400	.295826
	8.6	-5.4037424	.18583776	.554668	.389336			4.5	-8.5298665	.03678290	.245873	.300026
	8.8	-5.3942754	.19571024	.569866	.390160			4.6	-8.1331496	.03972057	.252158	.303991
	9.0	-5.3891017	.20667579	.586151	.390691			4.7	-7.8133614	.04252050	.258277	.307746
1.30	3.6	-23.067957	.01199894	.217637	.275532			4.8	-7.5493000	.04520877	.264244	.311311
	3.7	-14.928218	.01935535	.226286	.281663			4.9	-7.3270439	.04780486	.270075	.314705
	3.8	-12.144549	.02476340	.234535	.287292			5.0	-7.1370408	.05032376	.275782	.317941
	3.9	-10.650612	.02931752	.242442	.292496			5.1	-6.9724997	.05277734	.281376	.321035
	4.0	-9.6954602	.03336783	.250053	.297334			5.2	-6.8284490	.05517520	.286866	.323997
	4.1	-9.0233050	.03707956	.257405	.301854			5.4	-6.5877717	.05983418	.297570	.329566
	4.2	-8.5204891	.04054616	.264531	.306095			5.6	-6.3942542	.06435042	.307955	.334717
	4.3	-8.1280088	.04382657	.271454	.310087			5.8	-6.2349589	.06876074	.318072	.339505
	4.4	-7.8118899	.04696084	.278198	.313859			6.0	-6.1013716	.07309378	.327961	.343974
	4.5	-7.5510582	.04997766	.284780	.317431			6.2	-5.9876439	.07737273	.337660	.348160
	4.6	-7.3316853	.05289849	.291217	.320823			6.4	-5.8896174	.08161709	.347201	.352094
	4.7	-7.1442880	.05573987	.297524	.324051			6.6	-5.8042496	.08584380	.356612	.355799
	4.8	-6.9821276	.05851497	.303712	.327129			6.8	-5.7292606	.09006808	.365919	.359299
	4.9	-6.8402733	.06123447	.309792	.330069			7.0	-5.6629072	.09430398	.375147	.362610
	5.0	-6.7150271	.06390723	.315776	.332883			7.2	-5.6038334	.09856487	.384318	.365748
	5.2	-6.5036556	.06914138	.327486	.338166			7.4	-5.5509686	.10286377	.393454	.368726
	5.4	-6.3319060	.07426578	.338906	.343043			7.6	-5.5034573	.10721374	.402576	.371555
	5.6	-6.1894520	.07931793	.350089	.347563			7.8	-5.4606084	.11162810	.411706	.374246
	5.8	-6.0693485	.08432839	.361079	.351768			8.0	-5.4218589	.11612079	.420864	.376807
	6.0	-5.9667425	.08932323	.371920	.355692			8.2	-5.3867473	.12070663	.430072	.379244
	6.2	-5.8781359	.09432563	.382646	.359362			8.4	-5.3548938	.12540174	.439354	.381563
	6.4	-5.8009419	.09935703	.393293	.362801			8.6	-5.3259852	.13022383	.448734	.383769
	6.6	-5.7332062	.10443797	.403893	.366028			8.8	-5.2997643	.13519281	.458238	.385867

Table 2: Values of c and k for the Burr III distribution

$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B
1.40	9.0	-5.2760211	.14033130	.467896	.387857	1.55	6.0	-6.4772475	.05319615	.269747	.322205
1.45	4.1	-18.337745	.01349881	.199625	.269671	6.2	-6.2981023	.05685166	.278471	.327168	
	4.2	-13.595047	.01892998	.206956	.275360	6.4	-6.1487738	.06040595	.286951	.331814	
	4.3	-11.490860	.02322589	.213968	.280627	6.6	-6.0221893	.06387968	.295220	.336179	
	4.4	-10.254356	.02693244	.220704	.285533	6.8	-5.9133912	.06728946	.303304	.340295	
	4.5	-9.4251238	.03026550	.227199	.290124	7.0	-5.8187940	.07064901	.311228	.344187	
	4.6	-8.8238669	.03333657	.233479	.294439	7.2	-5.7357361	.07396994	.319011	.347877	
	4.7	-8.3646870	.03621205	.239569	.298509	7.4	-5.6621978	.07726233	.326672	.351385	
	4.8	-8.0007474	.03893527	.245487	.302360	7.6	-5.5966166	.08053511	.334229	.354726	
	4.9	-7.7041237	.04153636	.251252	.306016	7.8	-5.5377643	.08379635	.341696	.357915	
	5.0	-7.4570362	.04403725	.256877	.309494	8.0	-5.4846612	.08705349	.349088	.360963	
	5.1	-7.2475779	.04645456	.262374	.312811	8.2	-5.4365159	.09031354	.356417	.363883	
	5.2	-7.0674483	.04880120	.267756	.315980	8.4	-5.3926822	.09358317	.363697	.366683	
	5.3	-6.9106692	.05108750	.273032	.319014	8.6	-5.3526271	.09686892	.370939	.369371	
	5.4	-6.7728162	.05332186	.278210	.321925	8.8	-5.3159071	.10017720	.378156	.371956	
	5.6	-6.5412514	.05766154	.288305	.327409	9.0	-5.2821507	.10351449	.385357	.374443	
	5.8	-6.3539269	.06186418	.298095	.332496	1.60	4.7	-14.040695	.01607641	.186030	.265762
	6.0	-6.1989568	.06596248	.307625	.337237	4.8	-11.764725	.01985322	.192107	.270824	
	6.2	-6.0684402	.06998185	.316934	.341675	4.9	-10.448402	.02308460	.197947	.275556	
	6.4	-5.9569060	.07394282	.326053	.345842	5.0	-9.5729155	.02597324	.203577	.280000	
	6.6	-5.8604379	.07786253	.335013	.349767	5.1	-8.9412757	.02862204	.209020	.284190	
	6.8	-5.7761536	.08175574	.343837	.353476	5.2	-8.4604612	.03109165	.214296	.288154	
	7.0	-5.7018826	.08563552	.352550	.356987	5.3	-8.0802265	.03342135	.219421	.291915	
	7.2	-5.6359574	.08951376	.361172	.360318	5.4	-7.7708116	.03563831	.224408	.295494	
	7.4	-5.5770755	.09340155	.369723	.363485	5.5	-7.5133605	.03776223	.229270	.298907	
	7.6	-5.5242041	.09730949	.378222	.366499	5.6	-7.2952925	.03980794	.234018	.302170	
	7.8	-5.4765141	.10124794	.386687	.369374	5.7	-7.1078633	.04178693	.238660	.305295	
	8.0	-5.4333327	.10522724	.395134	.372117	5.8	-6.9447897	.04370834	.243205	.308294	
	8.2	-5.3941086	.10925794	.403581	.374739	5.9	-6.8014309	.04557959	.247660	.311175	
	8.4	-5.3583868	.11335097	.412046	.377245	6.0	-6.6742787	.04740678	.252032	.313949	
	8.6	-5.3257897	.11751785	.420546	.379643	6.2	-6.4583544	.05094870	.260549	.319202	
	8.8	-5.2960019	.12177098	.429099	.381938	6.4	-6.2815080	.05436663	.268796	.324105	
	9.0	-5.2687601	.12612382	.437725	.384134	6.6	-6.1336943	.05768494	.276808	.328703	
1.50	4.4	-12.725456	.01962294	.202338	.274262	6.8	-6.0080996	.06092257	.284614	.333029	
	4.5	-11.013297	.02347548	.208918	.279325	7.0	-5.8999269	.06409469	.292238	.337114	
	4.6	-9.9477449	.02685572	.215249	.284055	7.2	-5.8056941	.06721378	.299702	.340983	
	4.7	-9.2094795	.02992291	.221360	.288494	7.4	-5.7228086	.07029034	.307025	.344656	
	4.8	-8.6627138	.03276439	.227275	.292677	7.6	-5.6492971	.07333341	.314224	.348152	
	4.9	-8.2388543	.03543413	.233015	.296632	7.8	-5.5836299	.07635090	.321314	.351487	
	5.0	-7.8991361	.03796823	.238597	.300383	8.0	-5.5246015	.07934991	.328309	.354674	
	5.1	-7.6198390	.04039227	.244035	.303949	8.2	-5.4712485	.08233686	.335221	.357725	
	5.2	-7.3855584	.04272513	.249344	.307348	8.4	-5.4227911	.08531770	.342062	.360651	
	5.3	-7.1858159	.04498125	.254534	.310595	8.6	-5.3785912	.08829802	.348844	.363461	
	5.4	-7.0132142	.04717196	.259615	.313703	8.8	-5.3381216	.09128315	.355575	.366163	
	5.5	-6.8623694	.04930638	.264596	.316683	9.0	-5.3009424	.09427826	.362267	.368765	
	5.6	-6.7292619	.05139197	.269485	.319544	1.65	4.9	-13.553982	.01608123	.180902	.263654
	5.8	-6.5046757	.05544054	.279014	.324948	5.0	-11.517577	.01955936	.186641	.268562	
	6.0	-6.3220815	.05935697	.288250	.329972	5.1	-10.299158	.02256394	.192161	.273160	
	6.2	-6.1703952	.06317059	.297236	.334666	5.2	-9.4734877	.02526296	.197487	.277487	
	6.4	-6.0421879	.06690421	.306005	.339068	5.3	-8.8706162	.02774472	.202639	.281574	
	6.6	-5.9322808	.07057620	.314587	.343212	5.4	-8.4078443	.03006236	.207635	.285446	
	6.8	-5.8369455	.074204181	.323008	.347123	5.5	-8.0395990	.03225079	.212489	.289126	
	7.0	-5.7534253	.07779404	.331291	.350826	5.6	-7.7384969	.03433349	.217214	.292632	
	7.2	-5.6796351	.08136429	.339456	.354339	5.7	-7.4869977	.03633096	.221821	.295980	
	7.4	-5.6139674	.08492277	.347522	.357680	5.8	-7.2732982	.03825401	.226320	.299183	
	7.6	-5.5551616	.08847887	.355507	.360862	5.9	-7.0891377	.04011402	.230719	.302255	
	7.8	-5.5022151	.09204137	.363426	.363900	6.0	-6.9285466	.04191939	.235026	.305205	
	8.0	-5.4543202	.09561869	.371295	.366803	6.1	-6.7870947	.04367694	.239247	.308042	
	8.2	-5.4108190	.09921906	.379128	.369582	6.2	-6.6614189	.04539228	.243388	.310776	
	8.4	-5.3711705	.10285063	.386939	.372244	6.4	-6.4475400	.04871456	.251454	.315959	
	8.6	-5.3349261	.10652169	.394743	.374798	6.6	-6.2719328	.05191631	.259260	.320805	
	8.8	-5.3017110	.11024073	.402554	.377250	6.8	-6.1248484	.05502009	.266839	.325354	
	9.0	-5.2712105	.11401665	.410386	.379606	7.0	-5.9996469	.05804342	.274216	.329641	
1.55	4.4	-22.129738	.01014950	.184162	.261844	7.2	-5.8916385	.06100028	.281415	.333694	
	4.5	-14.827609	.01573488	.190911	.267497	7.4	-5.7974096	.06390217	.288456	.337536	
	4.6	-12.149404	.01989759	.197362	.272736	7.6	-5.7144123	.06675867	.295356	.341189	
	4.7	-10.67803	.02340562	.203553	.277622	7.8	-5.6407035	.06957801	.302130	.344669	
	4.8	-9.7269972	.02651816	.209517	.282199	8.0	-5.5747742	.07236732	.308793	.347991	
	4.9	-9.0518522	.02936013	.215279	.286506	8.2	-5.5154329	.07513290	.315357	.351170	
	5.0	-8.5438801	.03200299	.220860	.290573	8.4	-5.4617262	.07788045	.321833	.354217	
	5.1	-8.1455870	.03449213	.226279	.294425	8.6	-5.4128812	.08061511	.328232	.357141	
	5.2	-7.8235946	.03685849	.231552	.298085	8.8	-5.3682645	.08334168	.334563	.359953	
	5.3	-7.5570686	.03912426	.236690	.301571	9.0	-5.3273518	.08606466	.340836	.362660	
	5.4	-7.3322697	.04130603	.241707	.304899	1.70	5.0	-17.184400	.01181733	.169922	.256097
	5.5	-7.1397373	.04341659	.246613	.308083	5.2	-11.378123	.01906700	.181019	.265982	
	5.6	-6.9727257	.04546604	.251415	.311134	5.3	-10.217416	.02188344	.186249	.270464	
	5.7	-6.8262844	.04746254	.256123	.314063	5.4	-9.4212683	.02442071	.191297	.274688	
	5.8	-6.6966913	.04941279	.260744	.316879	5.5	-8.8353402	.02675736	.196182	.278683	

Table 2: Values of c and k for the Burr III distribution

	$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B		$\sqrt{\beta_1}$	β_2	c	k	μ_B	σ_B	
1.70	5.6	-8.3830485	.02894130	.200921	.282474		1.85	6.2	-8.4633078	.02522131	.180814	.272185		
	5.7	-8.0216294	.03100430	.205526	.286081			6.3	-8.0951971	.02698665	.184786	.275617		
	5.8	-7.7251394	.03296869	.210010	.289521			6.4	-7.7926995	.02866458	.188653	.278898		
	5.9	-7.4768388	.03485087	.214382	.292810			6.5	-7.5390036	.03026929	.192423	.282042		
	6.0	-7.2653976	.03666330	.218651	.295960			6.6	-7.3227016	.03181155	.196104	.285059		
	6.1	-7.0828490	.03841574	.222825	.298982			6.7	-7.1357550	.03329981	.199701	.287959		
	6.2	-6.9234134	.04011596	.226912	.301887			6.8	-6.9723216	.03474082	.203221	.290751		
	6.3	-6.7827874	.04177032	.230916	.304684			6.9	-6.8280445	.03614005	.206669	.293443		
	6.4	-6.6576951	.04338406	.234845	.307380			7.0	-6.6996024	.03750208	.210049	.296043		
	6.6	-6.4444832	.04650666	.242493	.312498			7.2	-6.4804486	.04012918	.216622	.300988		
	6.8	-6.2691140	.04951187	.249891	.317288			7.4	-6.2999554	.04264641	.222970	.305628		
	7.0	-6.1220088	.05242075	.257068	.321791			7.6	-6.1483691	.04507193	.229117	.310000		
	7.2	-5.9966256	.05524966	.264049	.326038			7.8	-6.0190183	.04741978	.235083	.314133		
	7.4	-5.8883331	.05801165	.270856	.330057			8.0	-5.9071741	.04970109	.240886	.318052		
	7.6	-5.7937536	.06071737	.277507	.333871			8.2	-5.8093838	.05192488	.246541	.321777		
	7.8	-5.7103620	.06337570	.284017	.337500			8.4	-5.7230635	.05409860	.252062	.325328		
	8.0	-5.6362297	.06599419	.290402	.340960			8.6	-5.6462384	.05622851	.257460	.328719		
	8.2	-5.5698569	.06857937	.296674	.344267			8.8	-5.5773711	.05831995	.262747	.331965		
	8.4	-5.5100583	.07113695	.302844	.347433			9.0	-5.5152459	.06037751	.267930	.335077		
	8.6	-5.4558842	.07367202	.308924	.350470	1.90		6.0	-11.698648	.01575459	.157836	.253002		
	8.8	-5.4065638	.07618917	.314922	.353388			6.1	-10.472420	.01809311	.162135	.257152		
	9.0	-5.3614650	.07869259	.320847	.356195			6.2	-9.6337811	.02019109	.166289	.261080		
	9.1	-5.3155599	.00598787	.159149	.248127			6.3	-9.0175895	.02211612	.170311	.264809		
	9.2	-16.849010	.01161206	.164766	.253475			6.4	-8.5423968	.02390929	.174214	.268359		
	9.3	-13.165822	.01536137	.170136	.258453			6.6	-7.8516869	.02720050	.181699	.274986		
	9.5	-10.195477	.02107425	.180255	.267493			6.7	-7.5911058	.02873155	.185299	.278091		
	9.6	-9.4119796	.02347319	.185049	.271627			6.8	-7.3692250	.03020147	.188812	.281072		
	9.7	-8.8328196	.02568358	.189690	.275542			6.9	-7.1776639	.03161853	.192246	.283940		
	9.8	-8.3843393	.02774979	.194192	.279260			7.0	-7.0103473	.03298932	.195605	.286701		
	9.9	-8.0251085	.02970137	.198569	.282802			7.1	-6.8627548	.03431921	.198895	.289365		
	10.0	-7.7298587	.03155920	.202830	.286183			7.2	-6.7314469	.03561263	.202119	.291938		
	10.1	-7.4822186	.03333864	.206985	.289418			7.4	-6.5075807	.03810435	.208387	.296833		
	10.2	-7.2710716	.03505138	.211042	.292519			7.6	-6.3233644	.04048807	.214436	.301430		
	10.3	-7.0885804	.03670659	.215009	.295496			7.8	-6.1687531	.04278139	.220290	.305764		
	10.4	-6.9290465	.03831159	.218891	.298360			8.0	-6.0368883	.04499788	.225968	.309861		
	10.5	-6.7882189	.03987237	.222696	.301119			8.2	-5.9229151	.04714828	.231487	.313749		
	10.6	-6.6628566	.04139387	.226427	.303781			8.4	-5.8232935	.04924125	.236861	.317445		
	10.7	-6.4489859	.04433506	.233688	.308836			8.6	-5.7353765	.05128395	.242104	.320970		
	10.8	-6.2728831	.04716168	.240709	.313574			8.8	-5.6571428	.05328237	.247225	.324337		
	10.9	-6.1250238	.04989359	.247515	.318031			9.0	-5.5870202	.05524160	.252236	.327561		
	11.0	-5.9988927	.05254620	.254130	.322239	1.95		5.9	-63.822269	.00252121	.138671	.235295		
	11.1	-5.8898709	.05513177	.260575	.326224			6.2	-12.015861	.01468839	.152025	.249197		
	11.2	-5.7945862	.05766031	.266866	.330009			6.4	-9.7990842	.01899493	.160114	.257170		
	11.3	-5.7105148	.06014010	.273019	.333612			6.5	-9.1488528	.02085209	.163963	.260853		
	11.4	-5.6357277	.06257818	.279046	.337051			6.7	-8.2543079	.02419899	.171325	.267710		
	11.5	-5.5687235	.06498058	.284961	.340339			6.8	-7.9305337	.02573552	.174857	.270914		
	11.6	-5.5083149	.06735254	.290772	.343489			6.9	-7.6601788	.02720116	.178299	.273986		
	11.7	-5.4535497	.06969871	.296490	.346512			7.0	-7.4304875	.02860648	.181659	.276936		
	11.8	-5.4036551	.07202323	.302124	.349419			7.1	-7.2325471	.02995970	.184941	.279774		
	11.9	-5.3155599	.07447246	.307419	.355419			7.2	-7.0599249	.03126734	.188152	.282508		
1.80	5.5	-13.200245	.01472746	.164594	.255419	2.00		7.3	-6.9078516	.03253469	.191295	.285146		
	5.7	-10.229947	.02016084	.174218	.264270			7.4	-6.7727096	.03376614	.194375	.287695		
	5.8	-9.4437766	.02244176	.178779	.268325			7.6	-6.5426248	.03613535	.200360	.292546		
	5.9	-8.8619539	.02454247	.183196	.272169			7.8	-6.3535787	.03839809	.206133	.297103		
	6.0	-8.4110141	.02650515	.187481	.275824			8.0	-6.1951033	.04057157	.211717	.301400		
	6.1	-8.0495629	.02835790	.191647	.279308			8.2	-6.0600721	.04266900	.217129	.305465		
	6.2	-7.7523202	.03012058	.195703	.282636			8.4	-5.9434526	.04470083	.222386	.309323		
	6.3	-7.5028906	.03180783	.199658	.285823			8.6	-5.8415821	.04667546	.227502	.312992		
	6.4	-7.2901314	.03343080	.203519	.288879			8.8	-5.7517269	.04859981	.232488	.316491		
	6.5	-7.1061812	.03499821	.207294	.291816			9.0	-5.6718022	.05047966	.237355	.319835		
	6.6	-6.9453209	.03651706	.210988	.294643			7.4	-7.1218379	.02957820	.180870	.278185		
	6.7	-6.8032818	.03799304	.214607	.297367			7.5	-6.9639867	.03078935	.183878	.280200		
	6.8	-6.6768078	.03943088	.218156	.299996			7.6	-6.8239383	.03196495	.186824	.283327		
	6.9	-6.4609647	.04220738	.225060	.304994			7.7	-6.5859768	.03422349	.192548	.288139		
	7.0	-6.2831607	.04487180	.231731	.309682			7.8	-6.3908906	.03637673	.198066	.292660		
	7.1	-6.1338135	.04744308	.238194	.314095			8.0	-6.2276380	.03844163	.203400	.296924		
	7.2	-6.0063650	.04993584	.244472	.318265			8.2	-6.0887330	.04043119	.208567	.300959		
	7.3	-5.8961638	.05236173	.250583	.322216			8.4	-5.9689073	.04235563	.213582	.304789		
	7.4	-5.7998129	.05473019	.256543	.325971			8.6	-5.8643371	.04422317	.218459	.308432		
	7.5	-5.7147691	.05704906	.262367	.329548			8.8	-5.7721753	.04604054	.223209	.311907		
	7.6	-5.6390881	.05932494	.268066	.332964			9.0	-5.7721753	.04604054	.223209	.311907		
	7.7	-5.5712559	.06156347	.273653	.336231									
	7.8	-5.5100753	.06376954	.279136	.339363									
	7.9	-5.4545856	.06594744	.284525	.342370									
	8.0	-5.4055596												

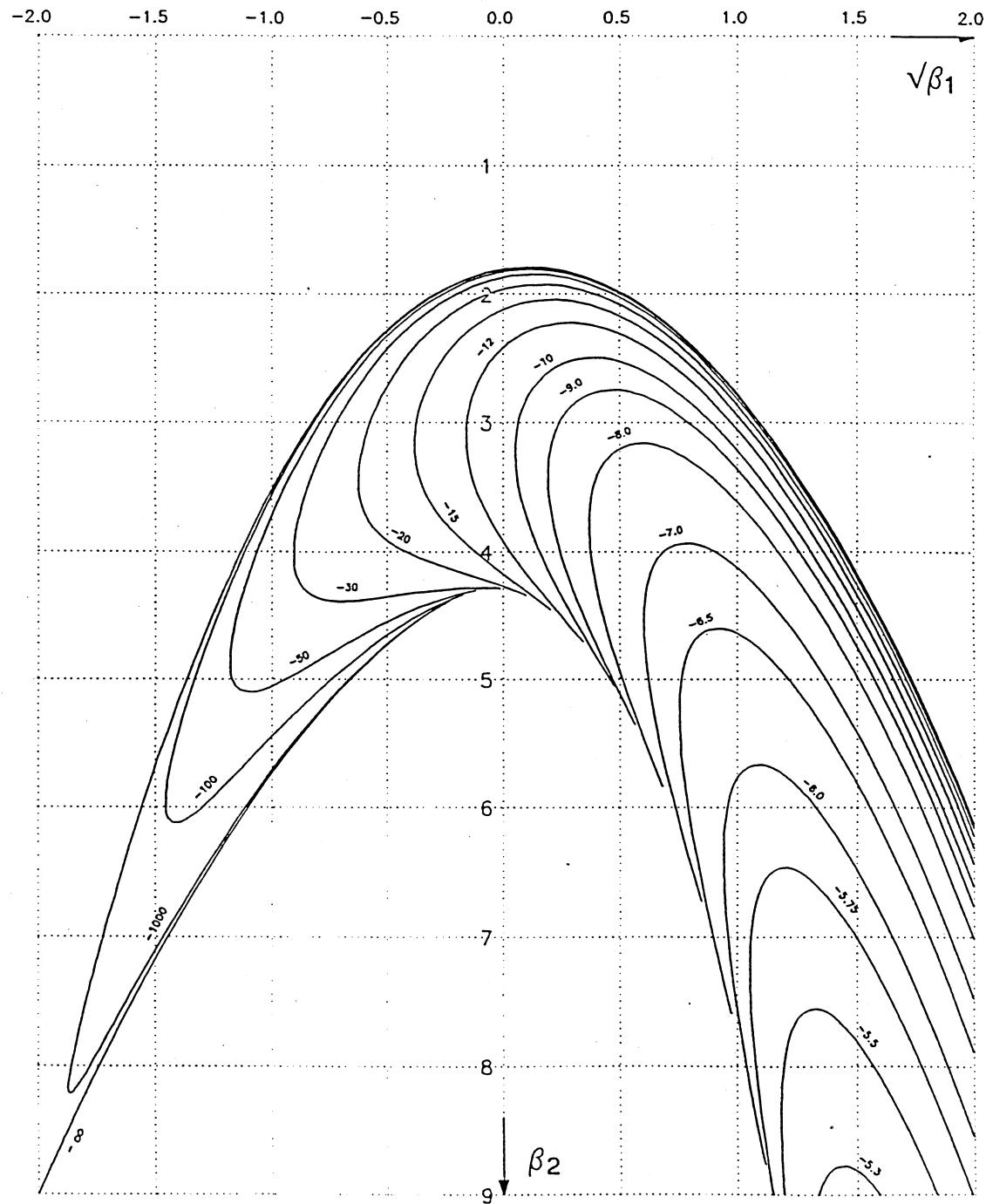


Figure 1: The Burr III distribution in the skewness ($\sqrt{\beta_1}$), kurtosis (β_2) plane: curves for constant c , k varying.

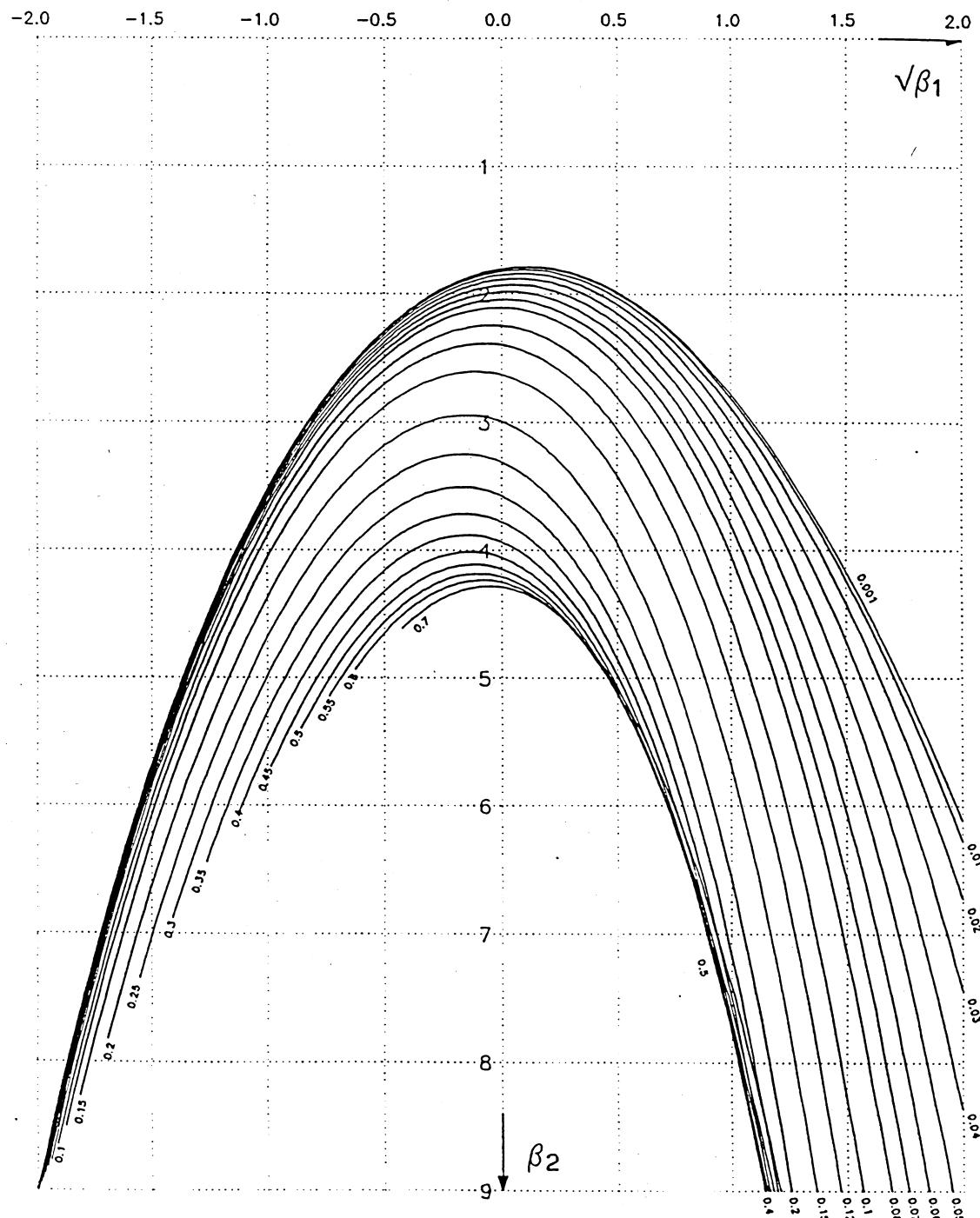


Figure 2: The Burr III distribution in the skewness ($\sqrt{\beta_1}$), kurtosis (β_2) plane: curves for constant k , c varying.

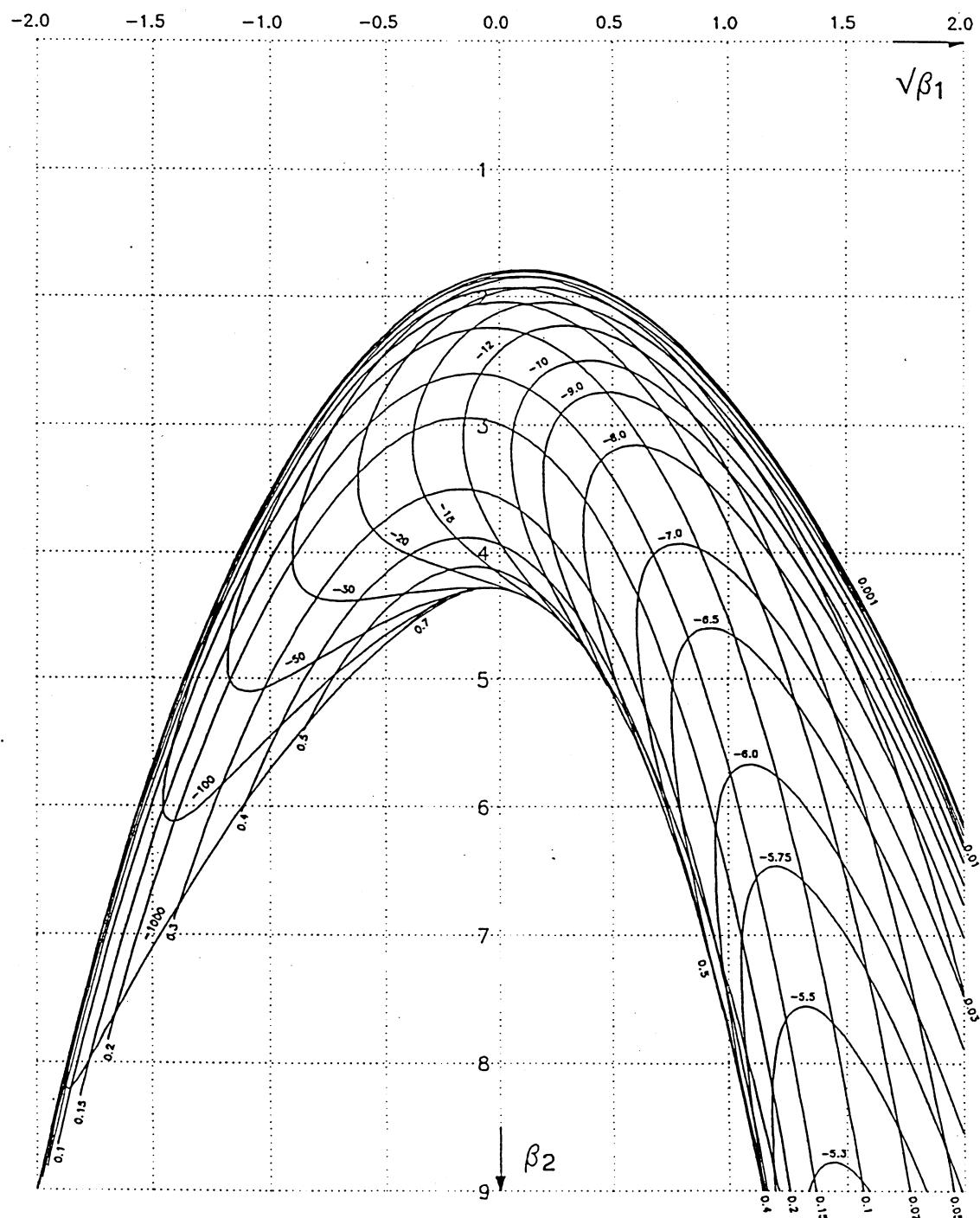


Figure 3: The Burr III distribution in the skewness ($\sqrt{\beta_1}$), kurtosis (β_2) plane: curves for constant c , k varying, and for constant k , c varying.

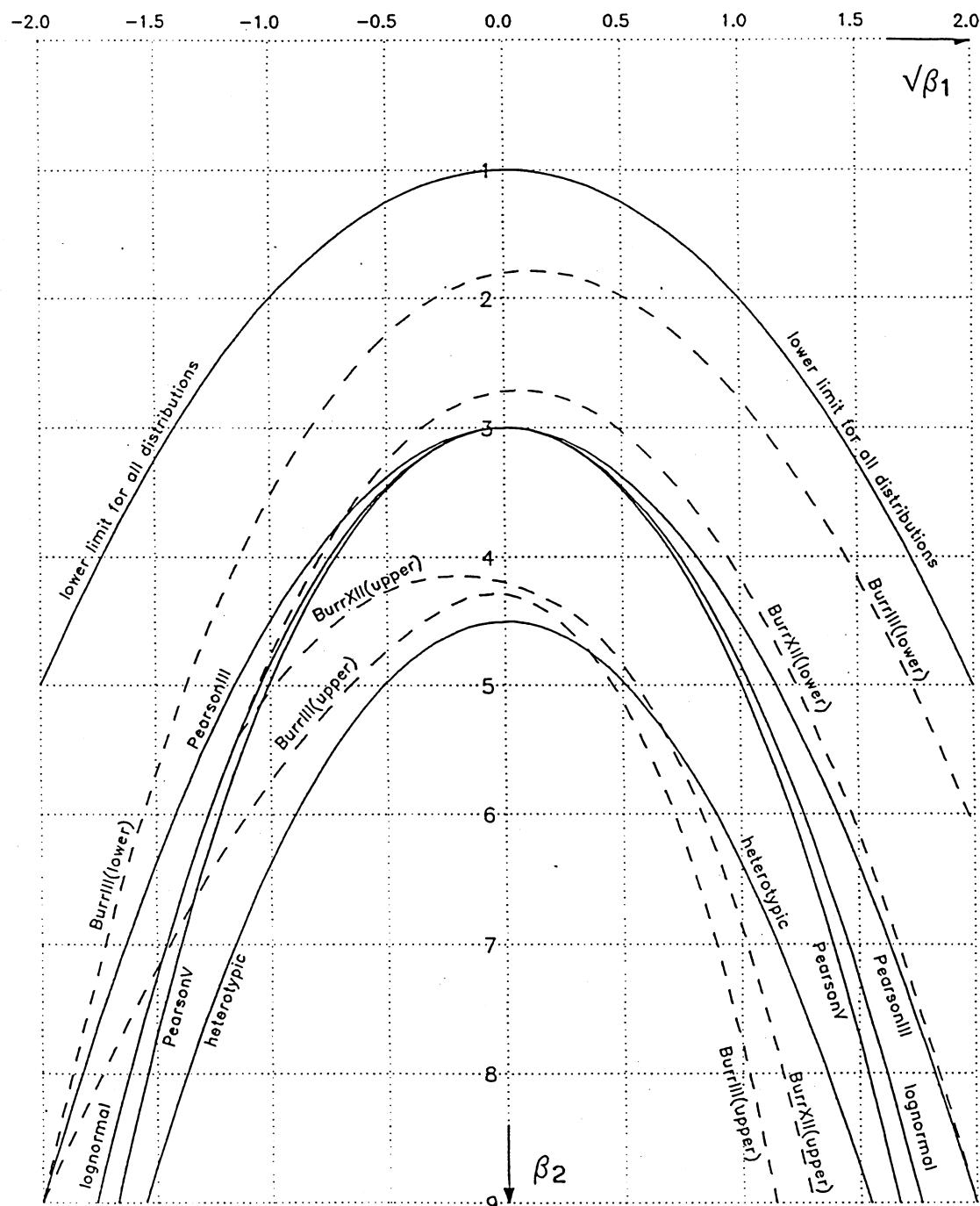


Figure 4: Moment coverage of various distribution families in the skewness ($\sqrt{\beta_1}$), kurtosis (β_2) plane.

