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MULTIVARIATE LIOUVILLE DISTRIBUTIONS, II

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Abstract: In this paper, we use the multivariate Liouville distributions to generalize many aspects of the classical approach to statistical reliability theory. Using the results of Gupta and Richards [10], we show that the assumption of independent, identically distributed, exponential data can often be replaced by the more general requirement that the observations have certain Liouville distributions. In this context, we generalize many classical results on the construction of minimum variance unbiased estimators, inference under Type I and Type II censoring plans, and applications to prediction problems and stress-strength studies.

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