

## CONSISTENT ESTIMATION OF LOCATION REGION

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**Abstract.** Asymmetric multivariate probability distributions can be difficult to characterize in terms of their location. The works of Doksum (1975, *Scand. J. Statist.*, **2**, 11-22) and Blough (1985, *Ann. Inst. Statist. Math.*, **37**, 545-555) provide the construction of a location region for a given distribution. Any point in this closed, convex region will serve as a location parameter. It is the purpose of this paper to obtain a consistent estimator of the location region. Consistency is defined in terms of an appropriate pseudometric.

*Key words and phrases:* Asymmetry, location region, consistency, pseudometric.