An Estimation of Uniform Distribution if Data are Measured with Additive Error

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We consider the problem of estimating the edges of the symmetric uniform distribution when data are measured with a normal additive error. The main purpose is to argument that the model is regular, as well as to give sufficient conditions for the existence of the maximum likelihood estimator and to suggest a numerical procedure for its computation. Also some generalizations of a similar problem in plane are studied. For this purpose we use some special numerical procedures for solving the nonlinear least squares problem.