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12. Probability and Statistics

1991 MS Classification: 62, 65, 68

Ishikawa, Takeshi, Shonan Institute of Technology, Japan :

On modified maximum likelihood estimation for Rayleigh distribution.

For defining a Modified Maximum Likelihood estimate of scale parameter of Rayleigh distribution, a useful approximation method is provided instead of hyperbolic approximation and linear approximation for a function which appears in the Maximum Likelihood equation with type II left censored sample. This new approximation is shown to perform better in a wide range of left censoring size, in the sence of accuracy, than those above two approximations. The esimate of the scale parameter obtained is shown to be asymptotically unbiased.

Reference: S. Lalitha, and A. Mishra, Modified maximum likelihood estimation for Rayleigh distribution, *Commun. Statist. -Theory Meth.,* **25** (1996), 389-401.