REGRESSIONS FOR SUMS OF SQUARES OF SPACINGS

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Abstract. Starting with a new formula for the regression of sum of squares of spacings (SSS) with respect to the maximum we present a characterization of a family of beta type mixtures in terms of the constancy of regression of normalized SSS of order statistics. Related characterization for records describes a family of minima of independent Weibull distributions.

Key words and phrases: Sum of squares of spacings, regression characterizations, mixtures, beta distribution, Weibull distribution, order statistics, record values.