# A Limit Theorem for Shifted Schur Measure

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**Abstract.** To each partition $\lambda = (\lambda_1, \lambda_2, \ldots)$ with distinct parts we assign the probability $Q_\lambda(x)P_\lambda(y)/Z$ where $Q_\lambda$ and $P_\lambda$ are the Schur $Q$-functions and $Z$ is a normalization constant. This measure, which we call the shifted Schur measure, is analogous to the much-studied Schur measure. For the specialization of the first $m$ coordinates of $x$ and the first $n$ coordinates of $y$ equal to $\alpha$ $(0 < \alpha < 1)$ and the rest equal to zero, we derive a limit law for $m, n \to \infty$ with $m/n$ fixed. For the Schur measure the $\alpha$-specialization limit law was derived by Johansson. Our main result implies that the two limit laws are identical. This work is joint work with Harold Widom.