



Convergence of Wigner integrals to the tetilla law

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If x and y are two free semicircular random variables in a non-commutative probability space (A, E) and have variance one, we call the law of $2^{-1/2}(xy+yx)$ the tetilla law (and we denote it by T), because of the similarity between the form of its density and the shape of the tetilla cheese from Galicia. In this paper, we prove that a unit-variance sequence $\{F_n\}$ of multiple Wigner integrals converges in distribution to T if and only if $E[F_n^4] \rightarrow E[T^4]$ and $E[F_n^6] \rightarrow E[T^6]$. This result should be compared with limit theorems of the same flavor, recently obtained by Kemp, Nourdin, Peccati & Speicher and Nourdin & Peccati.

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