

**19th Workshop: Noncommutative Probability, Noncommutative Harmonic Analysis  
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**ABSTRACT**

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**Scaling limits for the Gibbs states on distance-regular graphs with classical parameters**

**Abstract:** We determine the possible scaling limits in the quantum central limit theorem with respect to the Gibbs state, for a growing distance-regular graph that has so-called classical parameters with base unequal to one. We also explicitly describe the corresponding weak limits of the normalized spectral distribution of the adjacency matrix. We demonstrate our results with the known infinite families of distance-regular graphs having classical parameters and with unbounded diameter. This talk is based on joint work with Masoumeh Koohestani and Nobuaki Obata.