

## Cardy Formula for SUSY Theories and Localization

*Tuesday, 11 July 2017 16:00 (1 hour)*

I will consider 4d  $\mathcal{N}=1$  supersymmetric theories on a compact Euclidean manifold of the form  $S^1 \times S^3$ . Taking the limit of shrinking  $S^1$ , I will present a formula for the limit of the localization integrand, derived by simple effective theory considerations. The limit is given in terms of an effective potential for the holonomies around the  $S^1$ , whose minima determine the asymptotic behavior of the partition function. If the potential is minimized in the origin, where it vanishes, the partition function has a Cardy-like behavior fixed by  $\text{Tr}(R)$ , while a nontrivial minimum gives a shift in the coefficient. I will also discuss the generalization to 6d  $\mathcal{N}=(1,0)$  indices and an application to Schur indices.

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