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Adiabatic limits, Theta functions, and Geometric quantization

In the geometric quantization of toric manifolds, Baier-Florentino-Mourão-Nunes have given a one-parameter family of complex structures such that the associated Kähler polarizations converge to the real polarization determined by the moment map. One of the generalizations of the Kähler quantization to possibly non-Kähler symplectic manifolds is the Spin^c quantization. In this talk, for a non-singular Lagrangian torus fibration on a compact, complete base with prequantum line bundle and a compatible almost complex structure invariant along the fiber, we show that the Spin^c quantization converges to the real quantization by the adiabatic(-type) limit. This talk is based on arXiv:1904.04076.