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On the equivariant micro-local lift for locally symmetric spaces

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Abstract

Let Y be a finite-volume locally symmetric space of non- positive curvature. I will show that every weak-* limit of the probability measures associated to a sequence of joint eigenfunctions of the invariant differential operators on Y , is the projection to Y of a measure on an appropriate bundle X over Y , invariant under a flow. Moreover, this construction respects the action of Hecke operators on functions on Y . This removes an assumption of “non- degeneracy” from a previous version of the lift due to A. Venkatesh and myself.