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Mean field propagation of infinite-dimensional Wigner measures with a singular two-body interaction potential

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Abstract. We consider the quantum dynamics of many bosons systems in the mean field limit with a singular pair-interaction potential, including the attractive or repulsive Coulombic case in three dimensions. By using a measure transportation technique developed in [3], we show that Wigner measures propagate along the nonlinear Hartree flow. Such property was previously proved only for bounded potentials in our works [5,6] with a slightly different strategy.

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