

The maximal operator of a normal Ornstein-Uhlenbeck semigroup is of weak type $(1, 1)$

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Abstract. Consider a normal Ornstein-Uhlenbeck semigroup in Euclidean space, whose covariance is given by a positive definite matrix. The drift matrix is assumed to have eigenvalues only in the left half-plane. We prove that the associated maximal operator is of weak type $(1, 1)$ with respect to the invariant measure. This extends earlier work by G. Mauceri and L. Noselli. The proof goes via the special case where the matrix defining the covariance is I and the drift matrix is diagonal.

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