

Abstract Submitted
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Positivity of Partial Transpose and Separability of Dicke state mixtures ELIE WOLFE, SUSANNE YELIN, University of Connecticut — We study mixtures of permutation symmetric (Dicke) states, with a special focus on superradiance time evolution. For such systems we develop necessary separability criteria for general N-qubit systems based on the condition of Positive Partial Transpose. We also compose sufficient separability criteria for the specific cases of two and three qubits. Comparing the criteria we prove that, for Dicke state mixtures, the PPT test is always sufficient to imply full separability.

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