

Abstract Submitted
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Correlated observables in field theoretic terms: single- and multi-particle systems IAN DURHAM, Saint Anselm College — In recent years correlations between two degrees of freedom for a single particle have been experimentally demonstrated and further experiments have been suggested. This has presented a more direct test of non-contextuality. The results indicate that quantum mechanical entanglement is a more complex process than non-local theories generally suggest. The nature of both the single-particle and multi-particle entanglement processes suggest that perhaps a field theoretic solution is tenable where measurements actually transform the entire field.

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