

Quantum Physics

Heralded Entanglement of Arbitrary Degree in Remote Qubits

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Incoherent scattering of photons off two remote atoms with a Lambda-level structure is used as a basic Young-type interferometer to herald long-lived entanglement of an arbitrary degree. The degree of entanglement, as measured by the concurrence, is found to be tunable by two easily accessible experimental parameters. Fixing one of them to certain values unveils an analog to the Malus' law. An estimate of the variation in the degree of entanglement due to uncertainties in an experimental realization is given.

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