

Multiparticle Quantum Superposition and Stimulated Entanglement by Parity Selective Amplification of Entangled States

Francesco De Martini and Giovanni Di Giuseppe

Dipartimento di Fisica and Istituto Nazionale di Fisica della Materia, Università “La Sapienza”,
Roma 00185, Italy

Reprint requests to Prof. F. D. M.; E-mail: demartini@caspur.it

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A multiparticle quantum superposition state has been generated by a novel phase-selective parametric amplifier of an entangled two-photon state. This realization is expected to open a new field of investigations on the persistence of the validity of the standard quantum theory for systems of increasing complexity, in a quasi *decoherence-free* environment. Because of its nonlocal structure the new system is expected to play a relevant role in the modern endeavor on quantum information and in the basic physics of entanglement. – Pacs: 03.65.Bz, 03.67.-a, 42.50.Ar, 89.70.+c

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