

Abstract Submitted  
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**Is entanglement signaling really impossible?** JACK SARFATTI, ISEP — Quantum information theory is based on the premise that entanglement cannot be used as a stand-alone communication channel without a classical signal key decoder. The proof depends on linearity of observables, orthogonal base states, and unitary time evolution between measurements of the Schrodinger equation in configuration space. Spontaneous symmetry breakdown giving a Higgs-Goldstone condensate macro-quantum coherent Glauber ground state has a nonlinear non-unitary Landau-Ginzburg equation in ordinary physical space. The Glauber coherent states are non-orthogonal. The conditions for no-entanglement signaling are not satisfied in this case and it may mean the need for a generalized quantum theory that is to orthodox quantum theory as general relativity is to special relativity.

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