Quantum-correlated Twin Photons from Sr2O2 Microstructure for 2,1 x 10 currie/mm Fast Thermal Neutron Floating

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Abstrak

Our research present a source of correlated photon pairs in Abrikosov-Balseiro-Russell (ABR) formalism that relies on spontaneous scattering in Sr-30, microstructure. Quantum correlations are shown between photon pairs that are generated through four-photon scattering where the pump photons are degenerate at a wavelength of ?49 mm with 2.1 x 10 currie/mm fast thermal neutron floating; and the signal also idler photons are nondegenerated at wavelength of 737 nm and 76 l nm, respectively. In non-Abellian system for ABR formalism, the quantum approaching will be shown Cerenkov's effect existing then the Canadian Deuterium Uranium (CANDU) nuclear reactor using by Sr;O; matrix to be barter for 2.1 x 10'3 currie/mm fast thermal neutron floating before the anti- neutrino particle shown up. Careful adjustment of the pump wavelength and polarization in Dirac's condition are shown to be critical to observing quantum correlations.