

Nonclassical Properties in Mesoscopic Josephson Junction with Excited Even and Odd Coherent States

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Abstract: Dynamic evolution of a mesoscopic Josephson junction (MJJ) interacting with excited even and odd coherent states is studied. It is shown that the supercurrent in MJJ exhibits both collapse and revival (CR) phenomenon and squeezing effect. It is also shown that the CR and squeezing of supercurrent are related to degree of excitation and average photon number.

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Key words: mesoscopic Josephson junction, excited even and odd coherent states, collapse and revival, squeezing effect

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