Applied Physics Letters Volume 59, Issue 1, Pages 102-104, July 1991 American Institute of Physics

Interference Phenomena Due to a Double Bend in a Quantum Wire

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Abstract

Narrow channel devices were fabricated using a split-gate high electron mobility transistor structure in which electrons are forced through a double-bend discontinuity. The low-temperature conductance shows a number of peaks in the lowest quantized conductance plateau which correspond qualitatively to resonance effects that are predicted for the geometrical discontinuities of the double bend.