

Abstract Submitted
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Singlet-Triplet Kondo effect in a quantum dot with dissipation CHUNG-TING KE, HENOK MEBRAHTU, Duke University, IVAN BORZENETS, Tokyo University, YURIY BOMZE, Duke University, ALEX SMIRNOV, NC State University, HAROLD BARANGER, GLEB FINKELSTEIN, Duke University — We studied the singlet-triplet Kondo effect in a carbon nanotube contacted by resistive leads which form dissipative baths. With dissipation parameter $r \approx 0.5$, the conventional spin 1/2 Kondo resonances in odd electron valleys are strongly suppressed. However, the singlet-triplet Kondo effect induced by applying perpendicular magnetic field in a 2-electron valley appears to survive. The resonance demonstrates an unusual dependence on the side gate voltage, being enhanced in a particular part of the phase space. We also report on the peculiar dependence of the resonance on bias voltage.

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