

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Kondo Box in a Carbon Nanotube IVAN BORZENETS, YURIY BOMZE, HENOK MEBRAHTU, GLEB FINKELSTEIN, Duke University — We realize the Kondo box in a carbon nanotube quantum dot interacting with an extra electron. We study the electronic transport through the nanotube in a regime where it has an odd number of electrons. We found that the zero-bias conductance is suppressed due to the antiferromagnetic exchange interaction between the nanotube and the extra electron. We characterize the excitations of the Kondo box system in magnetic field and determine the spin of the first few eigenstates.

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Date submitted: 28 Nov 2009

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