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Transport and Strong-Correlation Phenomena in Carbon Nanotube Quantum Dots in a Magnetic Field GEORGE MARTINS, Oakland University, Physics, EUGENE KIM, M. MIZUNO, University of Windsor — Transport through carbon nanotube (CNT) quantum dots (QDs) in a magnetic field is discussed. The evolution of the system from the ultraviolet to the infrared is analyzed; the strongly correlated (SC) states arising in the infrared (due to the Kondo effect) are investigated. Experimental consequences of the physics are presented – the SC states arising at various fillings are shown to be drastically different; these differences have distinct signatures in the conductance and, in particular, the noise. Besides CNT QDs, our results are also relevant to double QD systems.

George Martins
Oakland University, Physics

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