Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

Kondo-correlated transport in single molecule ferromagnetic break junction devices with controllable electrode magnetization alignment GAVIN SCOTT, TING-CHEN HU, Bell Labs - Murray Hill — A quantum dot attached to electrodes with magnetizations that can be switched between parallel and anti-parallel alignment has been proposed as a platform for investigating quantum criticality associated with the destruction of Kondo entanglement. We have fabricated single molecule break junction devices with elliptical ferromagnetic electrodes designed to suit this purpose. Low temperature transport measurements, supported by micromagnetic simulations, were used to investigate the magnetoresistance response on control samples during the magnetization reversal process. We show results of Kondo-correlated transport as the source and drain contacts are switched between parallel and anti-parallel magnetization configurations.

Gavin Scott
Bell Labs - Murray Hill

Date submitted: 06 Nov 2015 Electronic form version 1.4