

Abstract Submitted
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Kondo Effects in Single Layer Transition Metal Dichalcogenides

MICHAEL PHILLIPS¹, VIVEK AJI², University of California, Riverside — Inversion symmetry breaking and strong spin orbit coupling in two dimensional transition metal dichalcogenides leads to interesting new phenomena such as the valley hall and spin hall effects. They display optical circular dichroism and the ability to generate excitation with valley specificity. In this talk we report on the consequences of these properties on correlated states in hole doped systems focussing on the physics of the screening of magnetic impurities. Unlike typical metals, the breaking of inversion symmetry leads to the mixing of a triplet component to the Kondo cloud. Using a variational wave function approach we determine the nature of the many body state. With the ground state in hand we analyze the excitations generated by valley discriminating perturbations.

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