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Valley selective excitations and the Kondo effect in two dimensional transition metal dichalcogenides[1] VIVEK AJI, MICHAEL PHILLIPS, University of California Riverside — Lack of inversion, strong spin orbit coupling, and nontrivial Berry curvature lead to interesting correlated phenomena in the two dimensional transition metal dichalcogenides (TMDCs). In this talk we report on Kondo effect in hole doped systems, focussing on the nature of the resonance for unequal chemical potential in the two valleys. The imbalance is generated by circularly polarized light that couples only to one of the valleys which is a property endowed by the Berry curvature of the bands. Using variational wave-function and numerical renormalization group approaches we establish the properties of the Kondo resonance namely the impurity spectral function, magnetization, entropy and susceptibility.

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