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Anderson Impurity in Dirac and Weyl semimetals JINHUA SUN, DONG-HUI XU, FU-CHUN ZHANG, YI ZHOU, Department of Physics, Zhejiang University, Hangzhou, China — We utilize variational method to study the Kondo screening of an Anderson impurity in three-dimensional Dirac and Weyl semimetals. We find that the spin correlation between the magnetic impurity and conduction electrons in both the systems are strongly anisotropic due to the spin-orbit coupling, and the spin-spin correlations are of power-law decay in both systems. The differences between Dirac and Weyl semimetals are also inverstigagted.

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