

Abstract Submitted  
for the MAR17 Meeting of  
The American Physical Society

**Mahan excitons in Weyl semimetals**<sup>1</sup> ION GARATE, SIMON BERTRAND, RENÉ CÔTÉ, Institut Quantique, Université de Sherbrooke — We report on a theoretical study of excitons in weakly doped Weyl semimetals. Solving a two-body Coulomb problem in the presence of a monopole Berry vector potential, we obtain the binding energies of electron-hole pairs and establish their dependence on the monopole charge and on the sign of the magnetic quantum number. We discuss the implications of our results for optical absorption experiments.

<sup>1</sup>This research has been supported by Canada's NSERC and Qubec's RQMP

Ion Garate  
Institut Quantique, Université de Sherbrooke

Date submitted: 11 Nov 2016

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