

Abstract Submitted  
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**Multiple regions of quantum criticality in YbAgGe** G.M. SCHMIEDESHOFF, Occidental College, S.L. BUD'KO, P.C. CANFIELD, Ames Laboratory, Iowa State University — YbAgGe is a stoichiometric heavy fermion antiferromagnet that exhibits field-induced quantum criticality. We present and discuss thermal expansion and magnetostriction measurements that reveal a new field-induced state. On the low-field side of this state we find evidence for a first-order phase transition and suggest that YbAgGe may be close to a quantum critical end point at 4.5 T. On the high-field side we find evidence for a second-order phase transition suppressed to a quantum critical point near 7.2 T. We will discuss these results in light of global phase diagrams proposed for Kondo lattice systems. Work at Occidental College was supported by the National Science Foundation under DMR-1006118. Work at Ames Laboratory was supported by the Department of Energy, Basic Energy Sciences under Contract No. DE-AC02-07CH11358.

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