Abstract Submitted for the MAR06 Meeting of The American Physical Society

On the Lower Critical Dimension of the Edwards-Anderson Spin Glass¹ STEFAN BOETTCHER, Emory University, Physics Department — The Edwards-Anderson model of Spin Glasses is studied on dilute hyper-cubic lattices in dimensions d = 2, 3, ..., 7. Accurate predictions for the stiffness exponent y_d are obtained that describes low-energy excitations. Continuing y_d off the integers shows that its zero is located at d = 5/2 to within 0.1%, a prediction that is corroborated by other numerical and theoretical work.

Related Publication: Phys. Rev. Lett. 95, 197205 (2005).

Related Webpage: http://www.physics.emory.edu/faculty/boettcher/ .

 $^1{\rm This}$ work has been supported by grant 0312510 from the Division of Materials Research at the National Science Foundation and by the Emory University Research Council

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Date submitted: 28 Nov 2005

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