Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Local field distributions in spin glasses DAVID SHERRINGTON, University of Oxford, HELMUT G. KATZGRABER, ETH Zurich, STEFAN BOETTCHER, Emory University — Numerical results for the local field distributions of a family of Ising spin-glass models are presented. In particular, the Edwards-Anderson model in dimensions two, three, and four is considered, as well as spin glasses with long-range power-law-modulated interactions that interpolate between a nearest-neighbor Edwards-Anderson system in one dimension and the infinite-range Sherrington-Kirkpatrick model. Remarkably, the local field distributions only depend weakly on the range of the interactions and the dimensionality and show strong similarities except for near zero local field.

David Sherrington
University of Oxford

Date submitted: 12 Nov 2007 Electronic form version 1.4