

Low temperature analysis of correlation functions of the Blume-Emery-Griffiths model at the antiquadrupolar-disordered interface

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We show that at low temperatures the d dimensional Blume-Emery-Griffiths model in the antiquadrupolar-disordered interface has all its infinite volume correlation functions $\langle \prod_{i \in A} \sigma_i^{n_i} \rangle_\tau$, where $A \subset \mathbb{Z}^d$ is finite and $\sum_{i \in A} n_i$ is odd, equal zero, regardless of the boundary condition τ . In particular, the magnetization $\langle \sigma_i \rangle_\tau$ is zero, for all τ . We also show that the infinite volume mean magnetization $\lim_{\Lambda \rightarrow \infty} \left\langle \frac{1}{|\Lambda|} \sum_{i \in \Lambda} \sigma_i \right\rangle_{\Lambda, \tau}$ is zero, for all τ .