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## Theory of dynamic magnetic susceptibility in uniaxial superparamagnetic particles

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### Abstract

The dynamic magnetic susceptibility of small particles with an easy axis magnetization anisotropy is calculated in a model with a continuously variable orientation of their magnetic moment, i.e., based on the Fokker-Planck equation. Results are presented which can be used to determine the optimum range for the parameters of the problem and which ensure maximal response of the system to a stochastic resonance. The amplification factor for the ac hyperfine field is calculated for external radio frequency modulation. A comparison is made with results from a discrete orientation model employed by us earlier. © 1996 American Institute of Physics.

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