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Spin response in high-T_c superconductors at higher energies BABAK SERADJEH, IGOR HERBUT, Simon Fraser University — We discuss our recent results on the spin sector of the theory of underdoped cuprates as fluctating d-wave superconductors (I. Herbut, PRL 94, 237001 (2005)). We improve on an earlier computation of spin response (I. Herbut and D. Lee, PRB 68, 104518 (2003)) by including the effects of non-relativistic terms in the dispersion of nodal quasipartciles and thus by going beyond the low-energy approximation employed in the earlier work. We find that non-relativistic effects tend to reduce the spin gap at (π, π). This could be relevant for recent neutron scattering measurements.

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