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Low Energy Spectrum and Correlation Functions of the $S = 1/2$ Kagome Antiferromagnet ANDREAS LAUCHLI, Theoretische Physik, University of Innsbruck, Austria, RAINER JOHANNI, Computing Center of the Max Planck Society, Garching, Germany — We report a large scale Exact Diagonalization study of the $S = 1/2$ Heisenberg antiferromagnet on samples of up to 48 sites. The singlet spectrum at low energies involves only energy levels at the Gamma point, indicating the probable absence of spontaneous translation symmetry breaking in the thermodynamic limit. The spin-spin correlations are short ranged as expected, and the dimer-dimer correlation functions reveal traces of diamond-like resonances. We discuss the compatibility of our results with different theoretical proposals for the ground state of the Kagome antiferromagnet

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