Spin-1/2 Heisenberg Antiferromagnet on the Spatially Anisotropic Kagome Lattice ANDREAS SCHNYDER, Kavli Institute for Theoretical Physics, University of California, Santa Barbara, OLEG STARYKH, Department of Physics, University of Utah, LEON BALENTS, Physics Department, University of California, Santa Barbara — We study the quasi-one-dimensional limit of the Spin-1/2 quantum antiferromagnet on the Kagome lattice, a model Hamiltonian that might be of relevance for the mineral volborthite [1,2]. The lattice is divided into antiferromagnetic spin-chains (exchange J) that are weakly coupled via intermediate "dangling" spins (exchange J'). Using bosonization, renormalization group methods, and current algebra techniques we determine the ground state as a function of J'/J. The case of a strictly one-dimensional Kagome strip is also discussed.

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