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**Spin dynamics in the two-component strongly repulsive 1D Bose gas** MIKHAIL ZVONAREV, THIERRY GIAMARCHI, University of Geneva, VADIM CHEIANOV, University of Lancaster — We investigate spin diffusion in the two-component one-dimensional Bose gas in the limit of strong repulsion. While the spectrum of charge excitations can be linearized in such a system, it remains quadratic in the spin sector, and the Luttinger Liquid description is not applicable. However, we showed that dynamical Green's functions of the system can still be found by using a mapping onto an effective spinless model. In this way we get an exact analytic expression for the one-particle and spin-spin Green's functions and found an anomalously low spin-diffusion rate.

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