The fate of 1D spin-charge separation away from Fermi points
THOMAS SCHMIDT, Yale University, ADILET IMAMBEKOV, Rice University, LEONID GLAZMAN, Yale University — The momentum-resolved dynamic responses of a one-dimensional (1D) electron liquid are singular at the spectrum of the lowest-energy excitation branch, i.e. at the spinon spectrum. These power-law singularities survive at arbitrary momentum. We express the corresponding exponents in terms of the spinon spectrum. Special attention is paid to the electron spectral function measured in tunneling experiments.

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