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Momentum-resolved probing of the $\nu = 2/3$ quantum Hall edge HENDRIK MEIER, Yale University, YUVAL GEFEN, Weizmann Institute of Science, LEONID GLAZMAN, Yale University — We evaluate the I-V characteristic for momentum-resolved tunneling between the $\nu = 2/3$ fractional quantum Hall state and a $\nu = 1$ state in another layer of a two-dimensional electron gas (2DEG). In a version of a double-layer geometry, the momentum of tunneling electrons may be boosted by an auxiliary magnetic field parallel to the two planes of 2DEGs. The threshold behavior of the I-V characteristic and its dependence on the boosting magnetic field yields information about the spectral function of the $\nu = 2/3$ edge. It may bring insights into the nature of the various (counter)propagating modes inside the $\nu = 2/3$ edge that have been discussed in the last twenty years. Effects due to in-plane disorder as well as of intralayer and interlayer Coulomb interaction are taken into account in our model.

Leonid Glazman
Yale Univ

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