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Properties of a double point contact in the Moore-Read quantum Hall state. EDDY ARDONNE, Microsoft Station Q, EUN-AH KIM, Stanford University — The double point contact is an ideal setup to probe the statistics properties of the 5/2 quantum Hall state. We provide quantitative predictions for such a setup at finite temperature and voltage, based on the assumption that the system is in the Moore- Read (a.k.a. pfaffian) quantum Hall state. We will focus on the non-abelian features in our predictions for current, and in particular, in the current-current correlation measurements. We find that the current-current correlations have qualitatively different frequency dependence, depending on the state of the device. Therefore, the current-current correlations provide an excellent signature of the non-abelian statistics, which should be accessible with current technology.

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