

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Electronic Mach-Zehnder interferometer as a tool to probe fractional statistics KAM TUEN LAW, DIMA FELDMAN, Brown University, YUVAL GEFEN, Weizmann Institute of Science — We study transport through an electronic Mach-Zehnder interferometer recently devised at the Weizmann Institute. We show that this device can be used to probe statistics of quasiparticles in the fractional quantum Hall regime. We calculate the tunneling current through the interferometer as the function of the Aharonov-Bohm flux and voltage bias, and demonstrate that its flux-dependent component is strongly sensitive to the statistics of tunneling quasiparticles.

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Date submitted: 29 Nov 2005

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