

Abstract Submitted
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Charge Transfer Statistics in Quantum Point Contact G. GER-
SHON, Y. BOMZE, E. SUKHORUKOV, M. REZNIKOV, Technion, Israel Institute
of Technology — We present the results of the experimental study of the Charge
Transfer Statistics for a Quantum Point Contact up to the third cumulant. QPC
creates a variable transmission probability barrier, and therefore allows to check the
CTS predictions [1] beyond the Poissonian limit. It has been recently understood
that the intrinsic CTS is strongly affected by the measurement circuit, see [2] and
references therein. We calculated the effect of the measurement circuit for a simple
and realistic model of a capacitively shunted resistive load. We found the experi-
mental results to be consistent with the calculations. We believe the results to be
the first measurements of the third cumulant in a system different from the low
transmission tunneling junction.

[1] L. S. Levitov, G. B. Lesovik, JETP Lett. **58**, 230 (1993).

[2] B. Reulet, J. Senzier and D. E. Prober, Phys. Rev. Let. **91**, 196601 (2003).

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