Universal Periods in Quantum Hall Droplets[1] GREGORY A. FI-
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Microsoft Station Q, UCSB — Using the hierarchy picture of the fractional quan-
tum Hall effect, we study the the ground state periodicity of a finite size quantum
Hall droplet in a quantum Hall fluid of a different filling factor. The droplet edge
charge is periodically modulated with flux through the droplet and will lead to a
periodic variation in the conductance of a nearby point contact, such as occurs in
some quantum Hall interferometers. Our model is consistent with experiment and
predicts that superperiods can be observed in geometries where no interfering tra-
jectories occur. The model may also provide an experimentally feasible method
of detecting elusive neutral modes and otherwise obtaining information about the
microscopic edge structure in fractional quantum Hall states.

[1]G. A. Fiete, G. Refael, M.P.A. Fisher, Phys. Rev. Lett. **99**, 166805 (2007).

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