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Tunable Conductance Anomaly in Asymmetrically Gated Quantum Point Contacts PHILLIP WU, PENG LI, ALBERT CHANG, Duke University — We have observed conductance anomalies in asymmetrically gated quantum point contacts formed in AlGaAs/GaAs two dimensional electron gas. The point contacts can be set in a regime with conductance anomaly that can be tuned continuously from $0.3 * 2e^2/h$ to $0.7 * 2e^2/h$, as well as in a regime without any anomalous features below $2e^2/h$. Differential conductance versus source drain bias (dI/dV_{sd}) in either regimes show strikingly contrasting behavior.

Phillip Wu
Duke University

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