



Extended Data Figure 1 | Measurement schematic. The signal V_{LR} (V_{RR}) is the voltage measured with amplification chain L (R) in response to the injected voltage V_R . The trenches etched in the 2DEG, which can be seen in the form of a 'Y' through the metallic island, ensure that the only way

from one QPC to the other is across the metallic island. The experiment is performed in the quantum Hall regime at filling factor $\nu=2$, where the current propagates along the edges in the direction indicated by arrows.