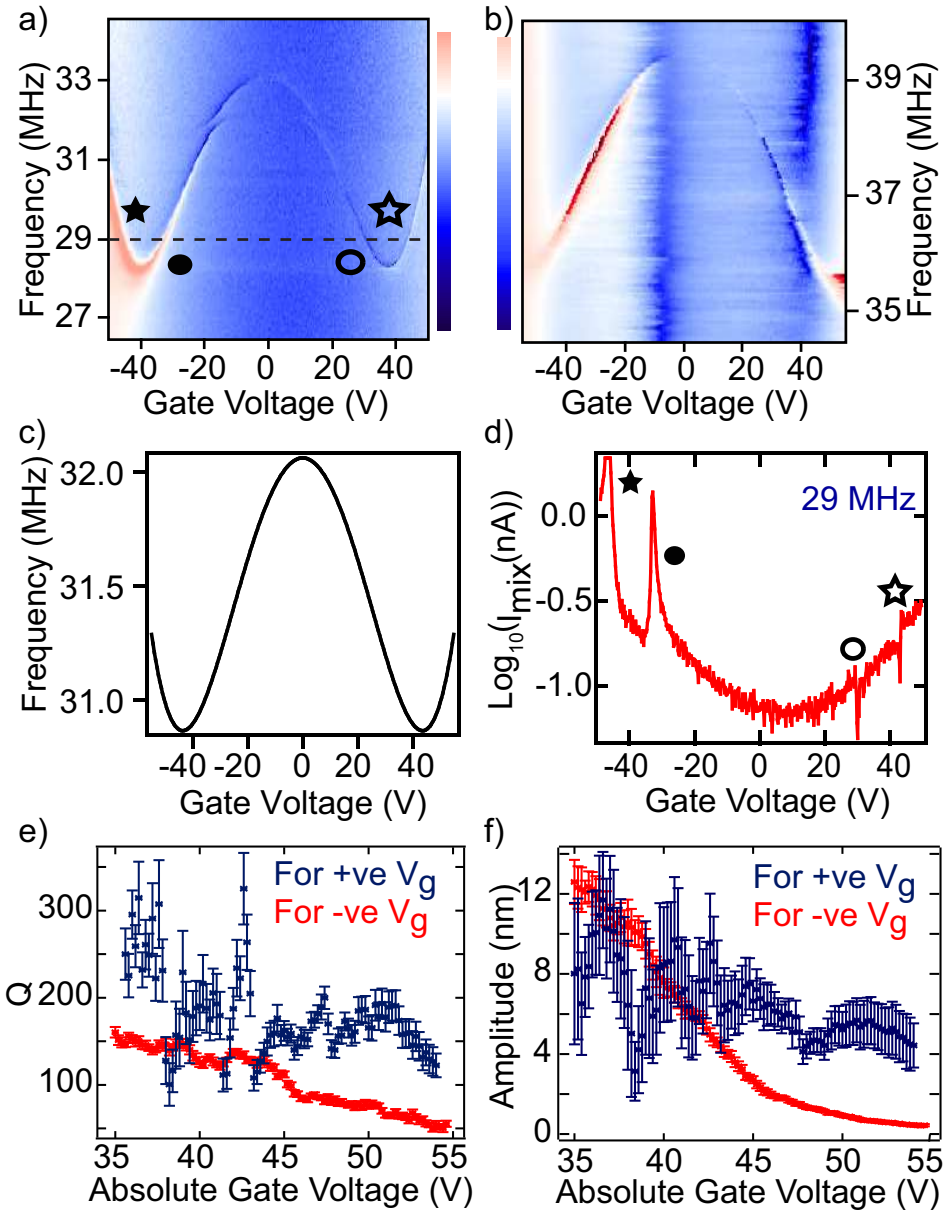

FIG. 2: (color online) a) and b) Color logscale plots of mixing current as a function of V_g^{DC} and $\omega/2\pi$ for two devices (for device-1, Fig.2a, diameter d=100 nm, length l=2.9 μm, for device-2, Fig.2b, d=120 nm, l= 3.1 μm). c) *Calculated* dispersion as a function of V_g^{DC}. d) Lineplot at 29 MHz for device-1 (dashed line in Fig.2a). e) The plot of the Q as a function of V_g^{DC} for device-1. f) The plot of the "amplitude" z_{amp}^{reso} as a function of V_g^{DC} for device-1. (The red and blue traces in Fig.2e, and in Fig.2f, show the data for negative and positive gate voltages).