(a) and (b) plots of rescaled ΔE versus $pL/2\pi$.

Legend:
- ◆ positive overlap with $J_n|\psi_{\mathrm{i}}\rangle$
- ◆ negative overlap with $J_n|\psi_{\mathrm{i}}\rangle$
- ■ positive overlap with $\bar{J}_n|\psi_{\mathrm{i}}\rangle$
- ■ negative overlap with $\bar{J}_n|\psi_{\mathrm{i}}\rangle$