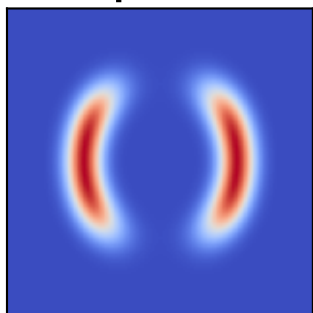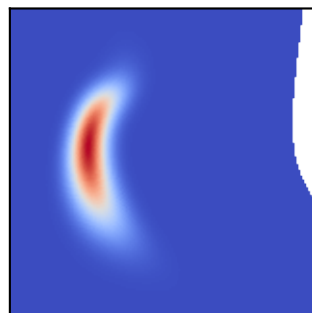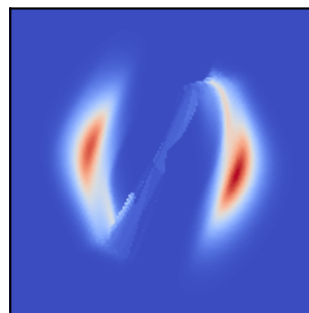$\exp^{-U(z)}$ K=2   K=8   K=32