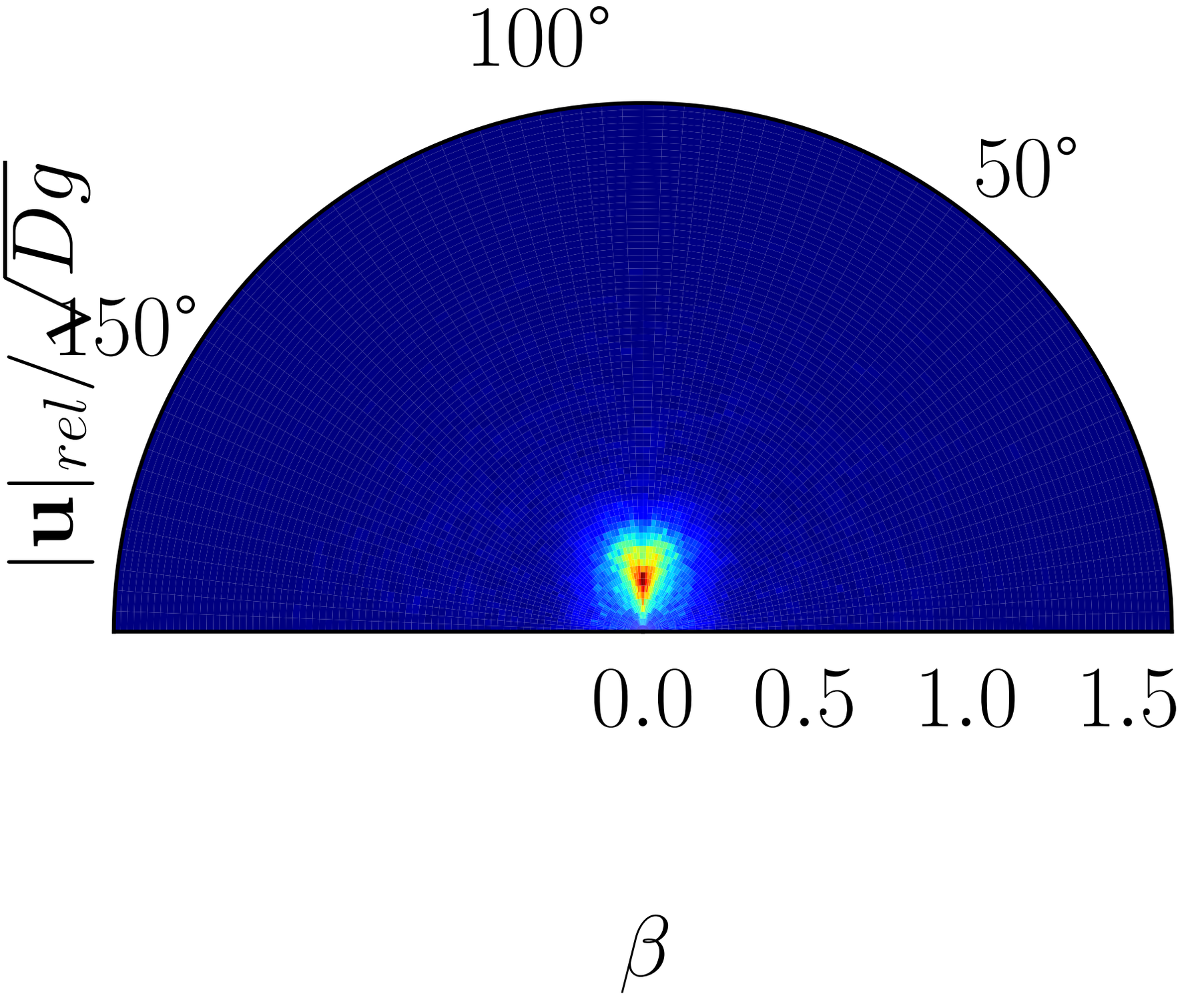$\phi = 0.05 \quad Ga = 50$