Magnus evolving matrix norms norms for non-local (LEFT) and semi-local (RIGHT) potential $\|\Omega(s)\|$ (TOP), $\|H(s)\|$ and $\|H_{od}(s)\|$ (MIDDLE), $\left\|\frac{B_k}{k!}ad_{\Omega}^k\right\|$ (BOTTOM) $ds=10^{-5}$

Non-local & ds = 1.0e-05Semi-local & ds = 1.0e-0510 10 8 8 $||\Omega(s)||$ $||\Omega(s)||$ 0.00 0.00 0.01 0.06 0.01 0.02 0.02 0.03 0.04 0.05 0.07 0.03 0.04 0.05 0.06 Non-local & ds = 1.0e-05Semi-local & ds = 1.0e-0510⁴ 10^{4} ||H(s)|| $||H_{od}(s)||$ 10³ 10³ ||H(s)||可 第 10² 可 第 10² $||H_{od}(s)||$ 10¹ 10¹ 100 0.00 100 0.00 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.01 0.02 0.03 0.04 0.05 0.06 Semi-local & ds = 1.0e-05Non-local & ds = 1.0e-0510⁴ 10^{4} ||k=0 term|| 10³ 10³ ||k=6 term|| 10^2 10² 10¹ 10^1 10⁰ 10⁰ 10-1 10^{-1} ||k=0 term|| 10-2 10-2 ||k=6 term|| 10⁻³ µ 0.00 10⁻³ 0.00 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.01 0.02 0.03 0.05

^{*}NOTICE THE X-AXIS: Non-local can evolve out past s > 0.06 whereas semi-local blows up before 0.06.







