Runtime at each wavenumber k, accuracy  $=10^{-16}$ 1 SV requested 2 SV requested 125 - 1.0 125 1.0 100 0.8 0.8 100 runtime [ms] 0.6 0.6 75 75 direct Arnoldi 50 0.40.450 0.2 0.2 25 25 0.0 0.0 0 0 0 2 4 6 8 10 2 4 6 8 10 4 SV requested 8 SV requested 1.0 150 1.0 100 0.8 0.8 runtime [ms] 100 75 0.6 0.6 0.450 0.450 0.2 0.2 25 0.0 0.0 0 6 6 2 8 0 2 4 8 0 4 10 10 32 SV requested 16 SV requested 120 1.0 1.0 200 100 0.8 0.8 runtime [ms] 80 0.6 0.6 150 60 0.40.4 100 40 0.2 0.2 50 20 0.0 0.0 2 6 6 4 8 10 0 2 4 8 10 0 64 SV requested 100 SV requested 120 120 1.0 1.0 0.8 0.8 100 100 runtime [ms] 0.6 0.6 80 80 0.4 0.4 60 60 0.2 0.2 0.0 0.0 40 40 2 4 6 8 10 0 2 4 6 8 0 10

wavenumber k

wavenumber k