Multi-Perturbation Common Eigenfunctions phi ($\lambda = 0.994$) $dr (\lambda = 0.994)$ $vr(\lambda = 0.994)$ $vm (\lambda = 0.994)$ dm ($\lambda = 0.994$) 0.5 0.2 Basis 1 (Closed) Basis 1 (Closed) Basis 1 (Closed) Basis 1 (Closed) 0.0 0.5 0.5 Basis 2 (Palindromic) Basis 2 (Palindromic) Basis 2 (Palindromic) Basis 2 (Palindromic) 0.1 0.4 0.4 -0.10.4 0.0 0.3 0.3 -0.20.3 -0.10.2 -0.30.2 -0.20.2 0.1 -0.4-0.30.1 0.1 0.0 -0.5-0.4Basis 1 (Closed) -0.1 0.0 0.0 Basis 2 (Palindromic) -0.50 phi ($\lambda = 0.986$) $dr (\lambda = 0.986)$ $vr(\lambda = 0.986)$ dm (λ =0.986) $vm (\lambda = 0.986)$ 0.150 0.00 0.20 0.12 0.15 0.125 0.15 0.10 -0.050.100 0.08 0.10 0.10 -0.100.075 0.06 0.05 0.05 0.050 0.04 -0.15 0.00 0.02 0.025 -0.05-0.200.00 0.00 0.000 -0.10-0.25 -0.02-0.025 -0.05 -0.153 3 phi ($\lambda = 0.838$) $dr (\lambda = 0.838)$ dm (λ =0.838) $vr (\lambda = 0.838)$ $vm (\lambda = 0.838)$ 0.2 -0.3 0.4 0.1 0.2 0.3 0.1 0.0 0.0 0.1 0.2 -0.10.0 0.0 0.1 -0.1-0.2-0.10.0 -0.1-0.2-0.2-0.3-0.1-0.2-0.3-0.2-0.4-0.3 3 3 Conformal Time $\boldsymbol{\eta}$ Conformal Time η Conformal Time $\boldsymbol{\eta}$ Conformal Time $\boldsymbol{\eta}$ Conformal Time $\boldsymbol{\eta}$