$L_1$  Horizontal Lyapunov ( $H_{lt} = -1.525$ ,  $a_{lt} = 0.10$ ) - Periodicity constraints verification Defect vector magnitude after convergence Position deviation at full period  $10^{-10}$  $10^{-10}$  $10^{-16}$  $10^{-16}$  $\frac{1}{2}\pi$  $2\pi$ Maximum number of corrections Velocity deviation at full period  $\equiv 150$ Number of corrections  $10^{-10}$  $\frac{1}{4}$   $10^{-13}$  $\frac{1}{2}\pi$  $\frac{1}{2}\pi$ Maximum collocation segment error Distribution of errors over collocated trajectory  $\max(e_i)$ - $\min(e_i)$ Number of nodes Number  $\frac{1}{2}\pi$  $\alpha$  [-]  $\alpha$  [-]

of iterations