



 Numerical solution  
 Analytic solution

$$\begin{aligned}
 \omega_r &= \omega_{11} = \varpi_{11} & N_h &= 128 \\
 \omega_i/\omega_r &= 1.0\text{e-}05 & v_{A+}/v_{A-} &= 21 \\
 a_0/L_z &= 1.0 & k_{\perp} &= \pi \sin(\alpha)/(2L_z) \\
 \alpha &= 0.25\pi
 \end{aligned}$$