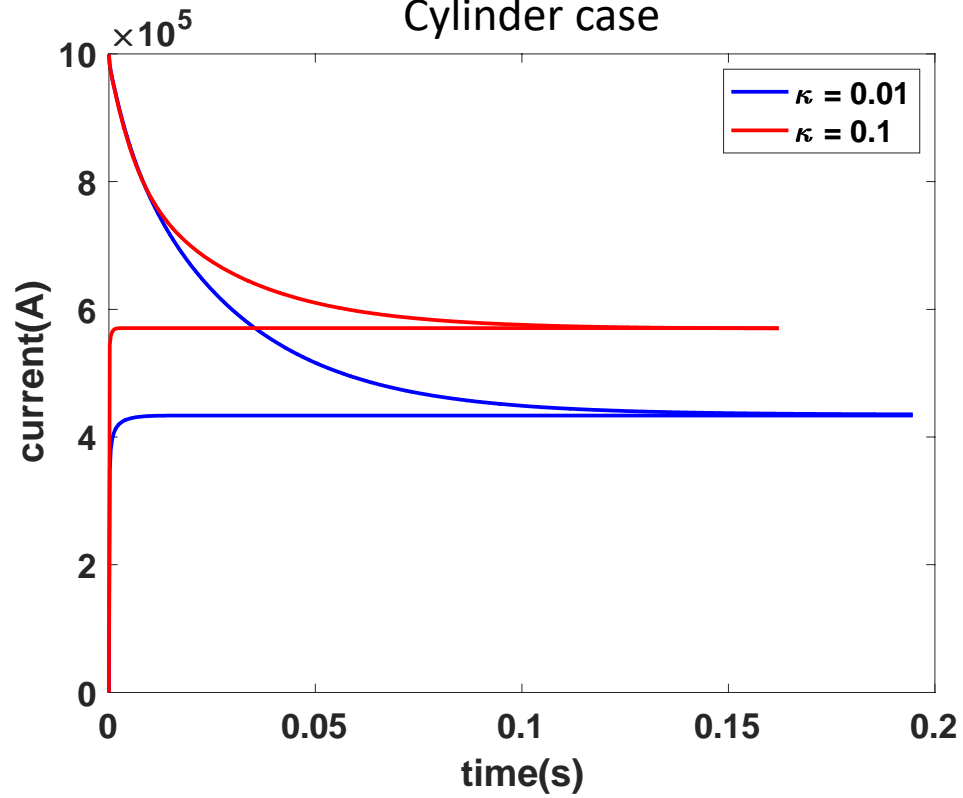


cylinder case with fixed
b1jrebz term

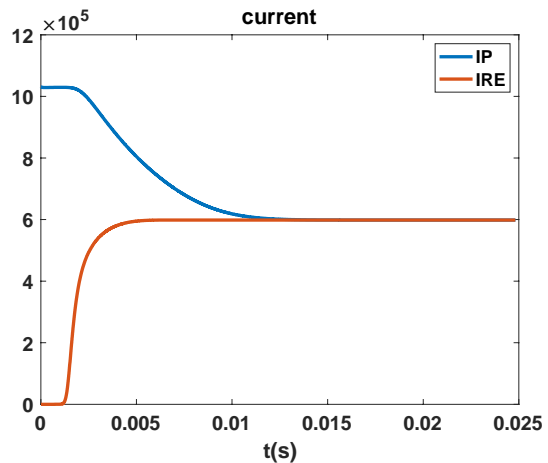
10/05/20

Cylinder case



- The decrease rate of the plasma current at the beginning of the two cases are nearly the same.
- The growth rate and the saturate value of the runaway current are higher with higher kappat.
- The cylinder cases results are similar with 1d case using the similar parameters.

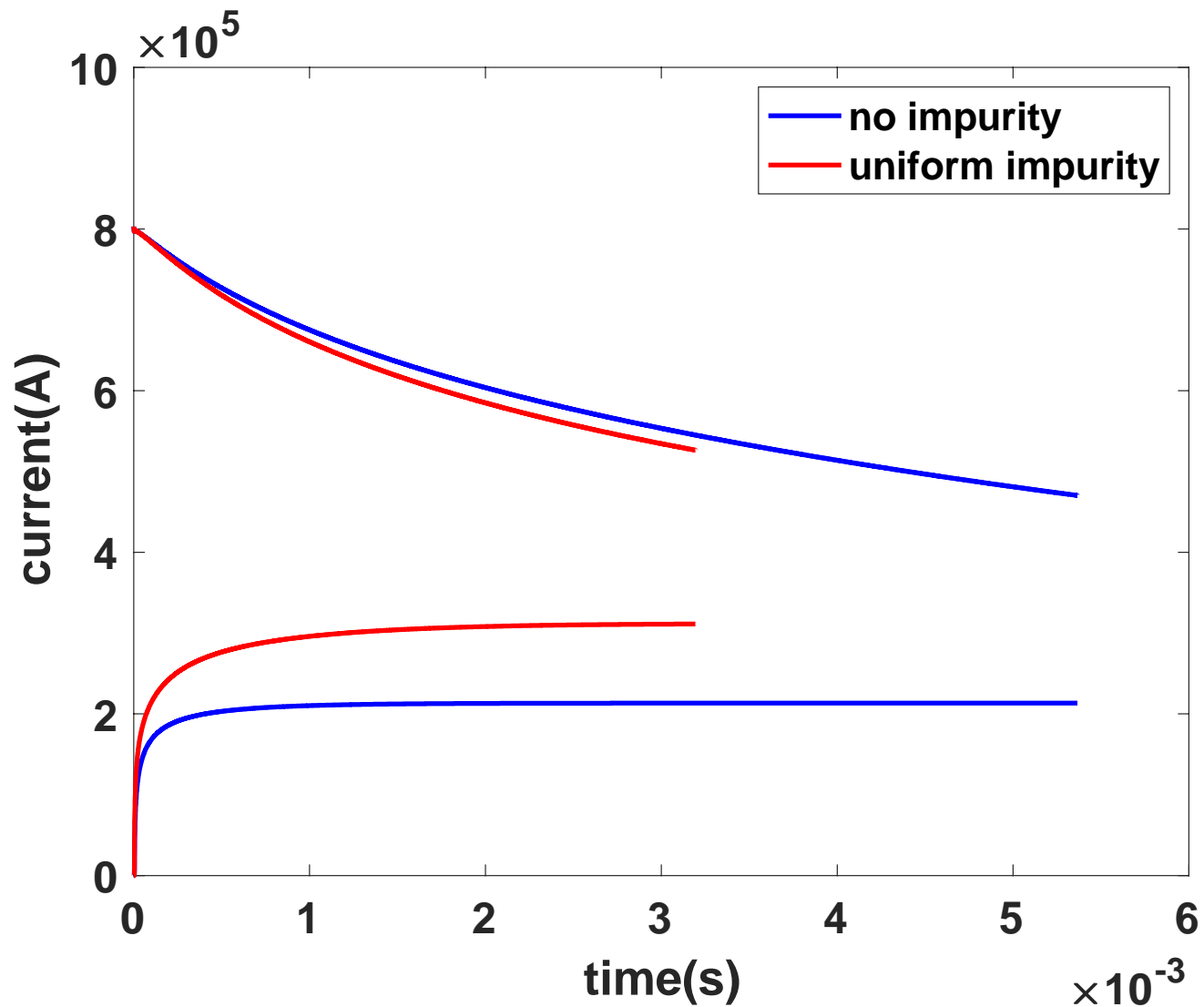
1d case



177053 case with fixed
b1jrebz term

09/28/20

$v_{re} \sim c$, $k_{\text{ppat}} = 0.06$, $\text{etar} = 1e-4$, neon impurity ($k_{\text{prad}_z} = 10$)

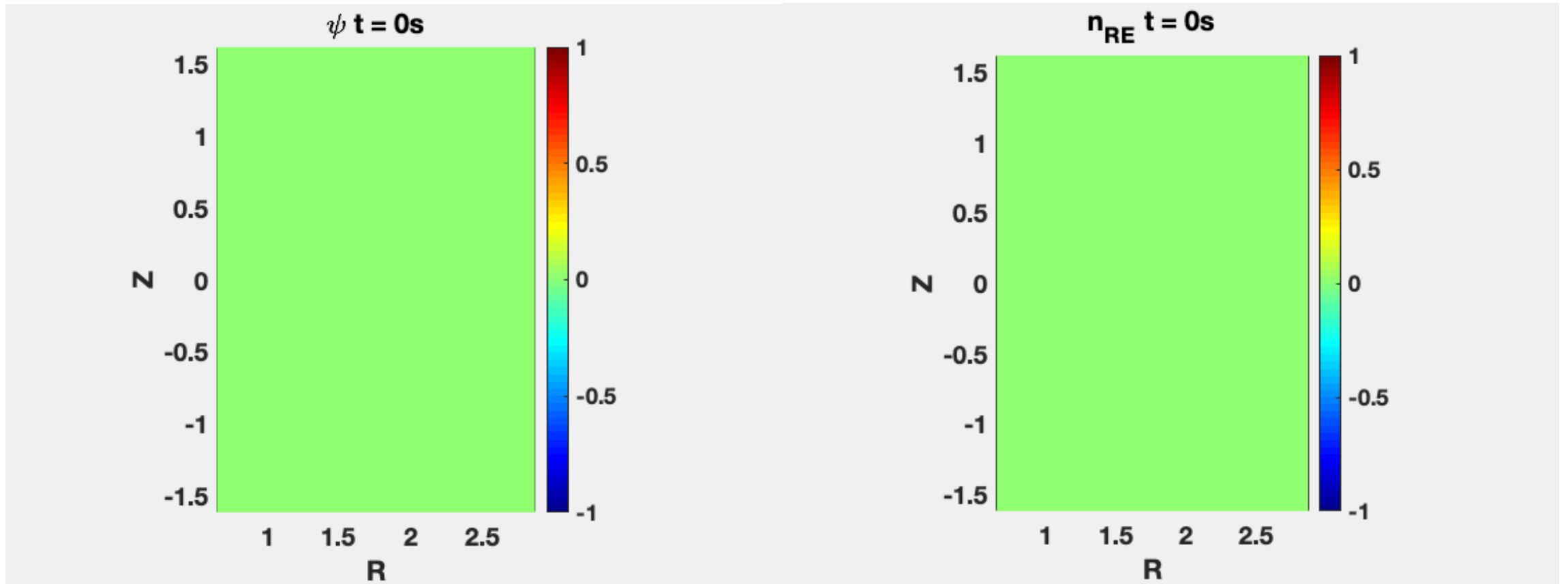


- The plasma current dropped faster with impurity.
- The growth rate is larger with impurity than without impurity. The saturate value is larger with impurity.

177040 case with RE

09/28/20

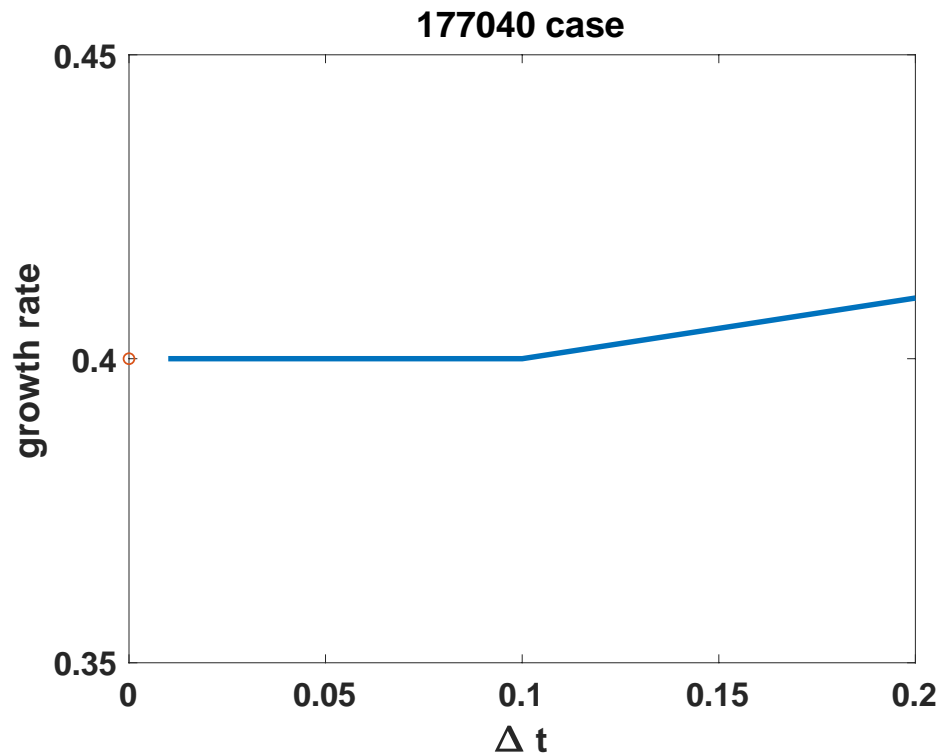
etar = 3e-2, eta0=1.0, idenfun=3, dt=0.1, I_RE=I_0



There is a 2/1 mode with rotation

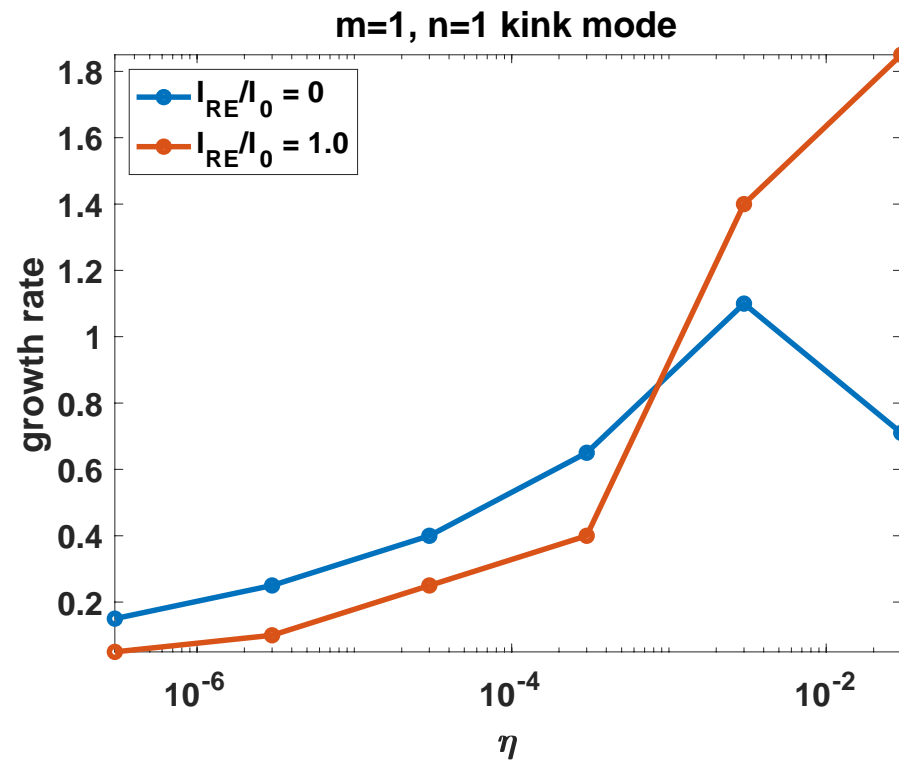
$\eta_0=1.0$, $i_{\text{den}}=3$, $\Delta t=0.1$, $I_{\text{RE}}=I_0$,
 $\text{numvar} = 1$, $v_{\text{re}}=50v_A$, $\text{isplitstep}=1$, $\text{thimp}=1.0$

Growth rate with different time step



$\eta_0=1.0$, $i_{\text{den}}=3$, $\Delta t=0.1$, $I_{\text{RE}}=I_0$,
 $\text{numvar}=1$, $v_{\text{re}}=50v_A$, $\text{isplitstep}=1$, $\text{thimp}=1.0$

Growth rate with different plasma resistivity



etar=3e-4, idenfun=3, dt=0.1, I_RE=I_0,
numvar=1, v_re=50v_A, isplitstep=1, thimp=1.0

Growth rate with different vacuum resistivity

