

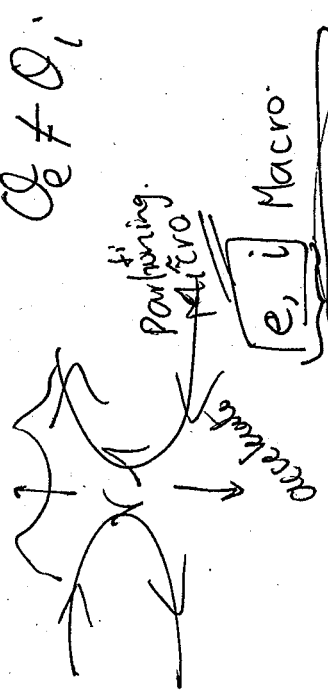
•  $\int f_{e,cs} = \int f_{i,cs}$   
 is initial condition

$Q = \frac{v}{c} = \frac{v_{mc2}}{c}$   
 $Q_i m_i c^2 = Q_e m_e c^2$

$Q_i/Q_e = m_e/m_i$   
 $\nabla \times B = \mu_0 J$   
 $j = \kappa_i v_i + n e e v_e$

1. task
2.  $\nabla \times B = \mu_0 J$
3. int x, v particles

verify  
 $I_c$



Instabilities:

- \* plasmod instability
- \* drift-kink
- \* filamentation
- \* numerical fire-hose
- \*  $v_{ci}$

• kinetic Alfvén  
 •  $v_{ci} = \frac{v}{c}$   
 •  $\delta = 20\%$   
 •  $\delta = 50\%$

