

$$v_{ei} = \frac{4\sqrt{3}\pi}{9} \cdot \frac{e^4 n_i \ln \Lambda}{(4\pi\epsilon_0)^2 m^{1/2} (kT_e)^{3/2}}; \quad \mu = \frac{e}{m(v_{en} + v_{ei})}; \text{ thus } \frac{1}{\mu} = \frac{1}{\mu_{en}} + \frac{1}{\mu_{ei}}$$

$$\ln \Lambda \approx 5 - 8$$

$$\begin{aligned} \mu_{ei} &= \frac{9}{4\sqrt{3}\pi} \cdot \frac{(4\pi\epsilon_0)^2 (kT_e)^{3/2}}{m^{1/2} e^3 n_i \ln \Lambda} = \frac{9}{4\sqrt{3}\pi} \cdot \frac{(4\pi\epsilon_0)^2 (k)^{3/2}}{m^{1/2} e^3 \ln \Lambda} \cdot \frac{(T_e)^{3/2}}{n_i} \\ &= 1.342 \times 10^{16} \cdot \frac{(T_e)^{3/2}}{n_i} \end{aligned}$$

$$\text{Here } [T_e] = \text{K}, [n_i] = \text{m}^{-3}, \text{ and } [\mu_{ei}] = \frac{\text{m}^2}{\text{V}\cdot\text{s}}$$

$$\text{For } n_i = 4.299557 \times 10^{24} \text{ m}^{-3}, T_e = 10000 \text{ K: } \mu_{ei} = 3.121 \times 10^{-3} \frac{\text{m}^2}{\text{V}\cdot\text{s}}$$