

HW#1

Due 2022/10/05

1. Calculate the Debye length and plasma parameter for
 - (a) ionosphere with $T_e = 10^3$ K and $n = 10^{12} \text{ m}^{-3}$
 - (b) solar wind with $T_e = 10^5$ K and $n = 10^7 \text{ m}^{-3}$.
2. Derive $\Lambda_D \gg 1$ from the condition of $e\Phi \ll K_B T$, where Λ_D is the plasma parameter.