Number of Ionized Dopants vs doping density for Si at $T = 300K$

Legend:
- $N_A{}^-/N_A$ Si (red)
- $N_T{}^-/N_T$ Si (black)

Si Parameter:

$E_g = 1.12$ eV
$m_n^* = 1.18\ m_e$
$m_p^* = 0.81\ m_e$

y-axis: $N_A{}^-/N_A$

x-axis: doping density / m^{-3}