

Z-ratio : $Z\text{-ratio} = \frac{\#n^0}{\#p^+} = \frac{\text{Mass\#} - \text{Atomic\#}}{\text{Atomic\#}}$

Ratio $p^+ : n^0$

Small: (1.0-1.2)

Carbon-12 ($^{12}_6\text{C}$)

$$Z = \frac{12 - 6}{6} = \frac{6}{6} = 1 \quad (1:1)$$

Medium (1.2-1.3)

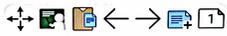
Silver-108 ($^{108}_{47}\text{Ag}$)

$$Z = \frac{108 - 47}{47} = \frac{61}{47} = 1.3 \quad (1:1.3)$$

Large (1.3-1.5)

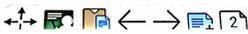
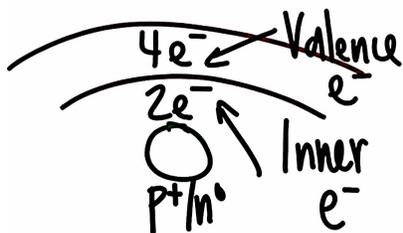
Lead-207 ($^{207}_{82}\text{Pb}$)

$$Z = \frac{207 - 82}{82} = \frac{125}{82} = 1.52 \quad (1:1.5)$$

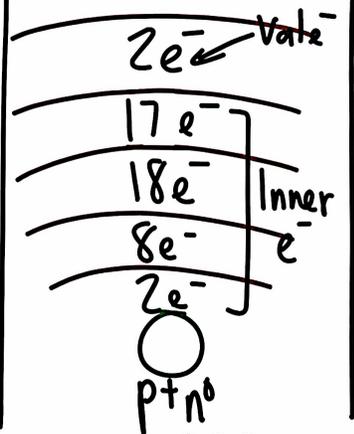


Carbon-12
($6p^+, 6n^0, 6e^-$)

More Inner e^- =
More shielding = Less Stable



Silver-108
($47p^+, 61n^0, 47e^-$)



Lead-207
($82p^+, 125n^0, 82e^-$)

