

[conversion reaction cross-sections]
 (Chapter 8.1 in *Elements*)

1/v cross-sections for prompt neutron-conversion reactions

CRX

Isotope	Absorption cross-section for 1.82-Å neutrons, barns/atom	Reaction
³ He	5333. (for unpolarized particles)	$n + {}^3\text{He} \rightarrow p + t + 0.764 \text{ MeV}$
⁶ Li	940.	$n + {}^6\text{Li} \rightarrow t + {}^4\text{He} + 4.79 \text{ MeV}$
¹⁰ B	3835.	$n + {}^{10}\text{B} \rightarrow {}^7\text{Li}^* + {}^4\text{He} \rightarrow$ ${}^7\text{Li} + {}^4\text{He} + 0.478 \text{ MeV } \gamma + 2.3 \text{ MeV (93%)}$ $\rightarrow {}^7\text{Li} + {}^4\text{He} + 2.8 \text{ MeV (7%)}$
¹⁴ N	1.90	$n + {}^{14}\text{N} \rightarrow {}^{14}\text{C} + p + 0.626 \text{ MeV}$
¹⁵⁵ Gd	61100.	$n + {}^{155}\text{Gd} \rightarrow {}^{156}\text{Gd}^* + (0.07 \dots 0.180 \text{ MeV}) e^-$
¹⁵⁷ Gd	259000.	$n + {}^{157}\text{Gd} \rightarrow {}^{158}\text{Gd}^* + (0.07 \dots 0.180 \text{ MeV}) e^-$
²³⁵ U	681. (note resonances at E = 0.285, 1.135, 2.028 eV)	$n + {}^{235}\text{U} \rightarrow \text{fission, 2 fragments} + \sim 160. \text{ MeV}$