Atomic fragments from the nuclear reaction of the ^{6}Li atom with slow neutrons

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Approximate probabilities of formation of various atoms and ions in different bound states are determined for the exothermic nuclear $(n,{}^{6}$Li$;t,{}^{4}$He)-reaction of atomic lithium-6 with slow neutrons. In our calculations of the final state probabilities we have assumed that the incident lithium atom is in its ground (doublet) atomic ${}^2S(L = 0)-$state. It is straightforward to generalize our analysis to other bound states of the three-electron Li atom.

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