

127I(nu,e)127Xe reaction for solar neutrino spectrum clarification

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Solar neutrino spectrum measurement plays a crucial role for solar metallicity determination. $^{127}\text{I}(\nu, e)^{127}\text{Xe}$ reaction is sensitive to CNO and boron components of the solar neutrino spectrum due to the relatively high threshold (662 KeV).

For neutrinos with energies upper $S_n = 7.246$ MeV $^{127}\text{I}(\nu, e)$ capture produces $^{126}\text{Xe} + n$. The concentration ratio of ^{127}Xe and ^{126}Xe could clarify parameters of high energy solar neutrino spectrum and neutrino oscillations. We present production rate estimation for of ^{127}Xe and ^{126}Xe based on experimental strength function from $^{127}\text{I}(p, n)^{127}\text{Xe}$ reaction.

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