Observation of geo-neutrinos: the case of $^{13}C(\alpha,n)^{16}O$

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Abstract

The absolute cross section of the $^{13}C(\alpha,n)^{16}O$ reaction has been measured at E_α = 0.8 to 8.0 MeV with an overall accuracy of 4%. The precision is needed to subtract reliably a background in the observation of geo-neutrinos, e.g. in the KamLAND detector.