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## Effect of the entrance channel on the excitation function of charged particle induced nuclear reactions

The effect of the entrance nuclear reaction channel was investigated from the perspective of the excited level population in the compound nucleus. A detailed comparison between analog reaction channels that are supposed to form the same compound nucleus was explained. Results showed that nuclei have a long-term “memory” of the entrance channel than expected by the usual model assumption. The large effect of the entrance channel may be associated with the slow-varying isospin degree of freedom during pre-equilibrium reactions and the diversity of the spin distribution among different reaction configurations.

### Notes

**Primary author:** ELMAGHRABY, Elsayed (Egyptian Atomic Energy Authority)

**Presenter:** ELMAGHRABY, Elsayed (Egyptian Atomic Energy Authority)