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Study of The Total Reaction Cross Section of 17.0 MeV=N 132 Xe + 238 U Heavy Ion Interactions

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Abstract: We have studied heavy ion nuclear interactions of 17.0 MeV/N $^{132}\text{Xe}+^{238}\text{U}$ using muscovite mica as Solid State Nuclear Track Detector (SSNTD). Experimental reaction cross section has been determined by two independent methods. Theoretical reaction cross section has been calculated by a classical formula taking into account the energy dependence of the nuclear radius parameter. The cross section determined in the present work has been compared with those at two other energies for the same reaction.

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