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Nuclear Physics A 945 (2016) 67–79

NUCLEAR PHYSICS A

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Fission fragment mass distribution studies in $^{30}Si + ^{180}Hf$ reaction

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Received 20 August 2015; received in revised form 19 September 2015; accepted 22 September 2015

Available online 30 September 2015

Abstract

Fission fragment mass–angle and mass ratio distributions have been measured for the $^{30}Si + ^{180}Hf$ reaction in the beam energy range 128–148 MeV. Quasifission signature is observed in this reaction, forming the compound system ^{210}Rn. The results are compared with a very asymmetric reaction $^{16}O + ^{194}Pt$, forming the same compound nucleus. Calculations assuming saddle point, scission point and DNS models have been performed to interpret the experimental results. The results strongly suggest the entrance channel dependence of quasifission in heavy ion collisions.

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http://dx.doi.org/10.1016/j.nuclphysa.2015.09.011