

## DINUCLEAR SYSTEM LIFETIME AND ANGULAR DISTRIBUTIONS OF QUASIFISSION FRAGMENTS\*

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A new dynamic model is proposed for the angular distributions and mass- angular correlations of quasifission fragments. The model is based on the unification of the stochastic approach to the description of the tilting mode in fission proposed in [1] and approaches based on the concept of the dinuclear system [2]. The model is able to describe experimental data for the  $^{32}\text{S}$ ,  $^{28}\text{Si} + ^{208}\text{Pb}$ ,  $^{64}\text{Ni} + ^{197}\text{Au}$ ,  $^{48}\text{Ti} + ^{166}\text{Er}$  and  $^{60}\text{Ni} + ^{154}\text{Sm}$  reactions. The analysis was performed with the angular momentum and deformation dependent relaxation time of the tilting mode. It is shown that the model is a suitable theoretical tool opening up new prospects in the study of quasifission, primarily its timescale.

[1] D.O. Eremenko et al. *Physics of Atomic Nuclei* 69 (2006) 1423.

[2] A.K. Nasirov et al. *Eur. Phys. J. A*, 2007, vol. 34, p. 325.

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