

## ISOTOPIC DEPENDENCE OF NEUTRON EMISSION FROM DINUCLEAR SYSTEM

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Using the statistical approach, we study the isotopic dependence of de-excitation of dinuclear systems formed in the entrance channel of heavy ion reactions  $^{62-73}\text{Ni} + ^{208}\text{Pb}$ . We estimate the probability  $P_n$  of neutron emission from the initial dinuclear system, the process which competes with the quasifission in  $R$  from the initial dinuclear system or the quasifission from more symmetrical dinuclear system. We propose two possible ways of the definition of the dinuclear system level density, corresponding to equal and non-equal temperatures of heavy and light fragments.

The calculated values of  $P_n$  are of the order of  $10^{-2}$  for the considered reactions and increase by factor of 3 when the mass of the dinuclear system increases from 270 to 281. The probability of neutron emission from the dinuclear system is very sensitive to the excitation energy. Therefore, the measurement of these neutrons in coincidence with quasifission products would help us to define the excitation energy of pre-scission configuration and conclude on its shape.

We also discuss the possible experiment for the observation of neutron emission from the dinuclear system.