

MULTI-PARTICLE CORRELATION AMONG GREY PARTICLES EMITTED IN NUCLEUS-NUCLEUS INTERACTIONS

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Abstract:

The short range correlation among emitted knock on nucleons from heavy ion collisions is used to reveal the dynamic characteristics of the reactions at high energy. Two- and three-particle correlations are considered in angular space to explain the emission of gray particles from collectively excited states of the nucleus as a Fermi liquid drop. Positive correlation is detected only among particles emitted in the extreme backward direction which is the coldest domain. It is interpreted as direct non-statistical emission (splashing) of nucleons via the dynamical distortion of the Fermi surface accompanying the collective motion

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