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SIGNATURE OF INTERMITTENCY DURING EMISSION OF TARGET ASSOCIATED PARTICLES IN HEAVY ION COLLISIONS AT SPS ENERGIES

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Abstract: A study of intermittent type of fluctuations of target fragments produced in the interactions of ^{32}S-AgBr at 200 AGeV using the method of scaled factorial moments, F_q has been performed. An intermittent behaviour is observed for fast and slow target fragments for the experimental data in terms of new scaled variable $X(\cos\theta)$ suggested by Bialas and Gazdzicki. The variations of the anomalous fractal dimensions, d_q, and the generalized dimensions, D_q, with the order of the moments, q, are investigated with the help of F_q, moments. The anomalous dimension, d_q increases linearly with the order of moments, q, suggesting the multifractality with the production mechanism of target associated fragments.

Keywords: nucleus-nucleus collisions; intermittency; scaled factorial moments; anomalous dimensions; multifractals.

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