

MULTIPLICITY DISTRIBUTIONS IN A TWO-COMPONENT BRANCHING PROCESS

NAOMICHI SUZUKI¹ AND MINORU BIYAJIMA²

¹*Matsusho Gakuen Junior College, Matsumoto 390-12, Japan*

²*Department of Physics, Faculty of Liberal Arts, Shinshu University, Matsumoto 390, Japan*

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Abstract. Probability (multiplicity) distributions and those densities (KNO scaling functions) are investigated in a two-component (charged and neutral) branching process. It is shown that the two-component KNO scaling functions depend effectively on one variable in two typical cases. A formula for multiplicity correlation between two components (charged and neutral particles) is formulated. It is applied to the analysis of experimental data.

Key words and phrases: Probability distribution, probability density, branching equation, Fokker-Planck equation.