

Variable Separation Solutions for the (2+1)-Dimensional Breaking Soliton Equation

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Z. Naturforsch. **61a**, 423 – 429 (2006); received July 5, 2006

With the variable separation approach and based on the general reduction theory, we successfully obtain the variable separation solutions for the (2+1)-dimensional breaking soliton equation using of the projective Riccati equation. Based on one of the variable separation solutions and by selecting appropriate functions, a new type of interaction between the multi-valued and the single-valued solitons, that is a compacton-like semi-foldon and a 4-compacton, is investigated.

Key words: Breaking Soliton Equation; Projective Riccati Equation; Variable Separation Solution; Soliton.