New Exact Solutions and Complex Wave Excitations for the (2+1)-Dimensional Asymmetric Nizhnik-Novikov-Veselov System

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Starting from an improved mapping approach and a linear variable separation approach, new families of variable separated solutions (including solitary wave solutions, periodic wave solutions and rational function solutions) with arbitrary functions for the (2+1)-dimensional asymmetric Nizhnik-Novikov-Veselov (ANNV) system are derived. Based on the derived solutions, we obtain some special complex wave excitations.