

Exotic Localized Structures of the (2+1)-Dimensional Nizhnik-Novikov-Veselov System Obtained via the Extended Homogeneous Balance Method

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In this paper, we successfully apply the extended homogeneous balance method (EHBm) to derive a new type of variable separation solutions for the (2+1)-dimensional Nizhnik-Novikov-Veselov system. Novel localized coherent structures about multi-valued functions, i.e., special dromion, special peakon and foldon, and the interactions among them are discussed. Moreover, the explicit phase shifts for all the local excitations offered by the quantity U are given and applied to novel interactions among special dromion, special peakon and foldon in detail. – PACS numbers: 05.45.Yv, 02.30.Jr, 02.03.Ik

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