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Dispersive focusing of nonlinear internal waves in horizontally inhomogeneous ocean

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The shapes of intensive internal waves generated by dispersive focusing of internal transient wave groups are studied for real horizontal-variable hydrology in frames of the Gardner equation. Some real shelves are chosen for study. Special attention is paid to shelves with sign-variable quadratic and cubic nonlinear coefficients. The wave groups leading to abnormal internal wave as high peak or “three sisters” are studied. The difference in the shapes of abnormal amplitude internal waves obtained from the same initial wave groups on the various shelves is discussed.