

Study of the scattering nature in Camassa-Holm equation

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Abstract:

Similar to KdV equation, the solutions of Camassa-Holm (CH) equation can be constructed by a pair of direct and inverse scattering sequences through the use of the corresponding Lax pair. The scattering data can be used to derive the expressions of the long time asymptotic behaviors of solutions of CH equation. In this talk some special initial conditions will be proposed to get their corresponding scattering data. The explicit relations between the initial conditions and scattering data will be presented in this study.