



# Integrable equations and classical S-matrix

V.E Zakharov, A.V Odesskii, M. Onorato, M. Cisternino

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We study amplitudes of five-wave interactions for evolution Hamiltonian equations differ from the KdV equation by the form of dispersion law. We find that five-wave amplitude is canceled for all three known equations (KdV, Benjamin-Ono and equation of intermediate waves) and for two new equations which are natural generalizations of mentioned above.

Comments: 10 pages, latex, references added

Subjects: **Exactly Solvable and Integrable Systems (nlin.SI)**;  
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