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LOCALITY OF THE CONSERVATION LAWS FOR THE SOLITON EQUATIONS RELATED TO CAUDREY-BEALS-COIFMAN SYSTEM

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Abstract. We consider the hierarchies of Nonlinear Evolution Equations related to auxiliary problem of Caudrey-Beals-Coifman type. We give a proof that the conservation laws for these equations have local densities based on the theory of the generating operators related to the Caudrey-Beals-Coifman linear problem.

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1. Introduction

This article is about the theory of the so-called soliton equations (completely integrable equations). Their characteristic property is that they can be cast into the so called Lax form, or zero curvature form, that is, as compatibility condition (Lax