Block algebra in two-component BKP and D type Drinfeld-Sokolov hierarchies

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Abstract:

In this talk, we construct generalized additional symmetries of a two-component BKP hierarchy defined by two pseudo-differential Lax operators. These additional symmetry flows form a Block type algebra with some modified(or additional) terms because of a B type reduction condition of this integrable hierarchy. Further we show that the D type Drinfeld-Sokolov hierarchy, which is a reduction of the two-component BKP hierarchy, possess a complete Block type additional symmetry algebra. That D type Drinfeld-Sokolov hierarchy has a similar algebraic structure as the bigraded Toda hierarchy which is a differential-discrete integrable system.

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