

The extended BRST Lagrangean formalism for the massive vector field with higher-order derivatives

Carmen Ionescu

Dept.of Theoretical Physics, University of Craiova, Romania

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Abstract

The paper presents the whole Lagrangean formalism for the $sp(2)$ BRST approach for the massive vector field with higher order derivatives. The BRST generator and the gauge-fixed action are obtained starting from the Hamiltonian $sp(2)$ analysis. The importance of this approach is connected with the possibility of explaining the form of the Lagrangean master equations and of understanding the significance of the non-canonical operators therein. We will perform an exhaustive study, with detailed computations, trying by that to offer a model of the algorithm which have to be followed in such problems.