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Title:	Augmented superfield approach to gauge-invariant massive 2-form theory
Authors:	Krishna, S. (/jspui/browse?type=author&value=Krishna%2C+S.)
Keywords:	off-shell nilpotent (i.e. $s^2(a)b=0$ ) anticommuting $sbsab+sabsb=0$ Becchi–Rouet–Stora–Tyutin (BRST)
Issue Date:	2017
Publisher:	Springer
Citation:	European Physical Journal C, 77 (6)
Abstract:	We discuss the complete sets of the off-shell nilpotent (i.e. $s^2(a)b=0$ ) and absolutely anticommuting (i.e. $sbsab+sabsb=0$ ) Becchi–Rouet–Stora–Tyutin (BRST) ( $sb$ ) and anti-BRST ( $sab$ ) symmetries for the (3+1)-dimensional (4D) gauge-invariant massive 2-form theory within the framework of an augmented superfield approach to the BRST formalism. In this formalism, we obtain the coupled (but equivalent) Lagrangian densities which respect both BRST and anti-BRST symmetries on the constrained hypersurface defined by the Curci–Ferrari type conditions. The absolute anticommutativity property of the (anti-) BRST transformations (and corresponding generators) is ensured by the existence of the Curci–Ferrari type conditions which emerge very naturally in this formalism. Furthermore, the gauge-invariant restriction plays a decisive role in deriving the proper (anti-) BRST transformations for the Stückelberg-like vector field.
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