

Second Order Form of The Generalized Field Theory

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Abstract

Wanas(1975) and Mikhail & Wanas (1981) had constructed a Generalized Field Theory (GFT) using Absolute Parallelism Space as a trial for generalization, following H.Weyl (1950) technique. Several successful applications on this theory were done by Wanas from 1981 to 1989. In this work a trial to write first order and second order theories for (GFT) is done. A modified PPN formalism has been done to suites (GFT) and the parameters of PPN were calculated. From the first order form, it is found that the quantities defined in the associated Riemannian space are formed from the symmetric potential and its derivatives only while in the second order theory , they are formed from symmetric and skew symmetric potentials and their derivatives. It is also clear from calculations that the first order theory suitable for studying the fields outside the matter distribution while the second order one studies fields within matter distribution

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