

All-loop and all-pass-through corrections to the Gauss-Bonnet-Davies expansion in the presence of a background vector field

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Abstract

In this paper, we show that the Gauss-Bonnet-Davies expansion in the presence of a background vector field can be analyzed using the all-loop and all-pass-through corrections. The standard error of the Gauss-Bonnet expansion is found to be larger when the background vector field is small. The analysis of the Gauss-Bonnet expansion with a background vector field leads to a negative formula for the Gauss-Bonnet expansion.