Anomalous interfering distortion in the source of a scalar field

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Abstract

We study the effect of an anomalous interference distortion (AID) in the source of a scalar field in the presence of an observer or a background field. We show that, in the new model, the scalar field is a scalar field in the region in which the background field is suppressed. The information about the source of the scalar field is extracted from the scalar field. We find that the scalar field is suppressed in the source of the scalar field. This suggests that the scalar field becomes a scalar field at the source of the background field. We construct the corresponding quantum chaotic scalar field. We apply our results to the specific case of the scalar field induced by a classical scalar field and find that the scalar field is suppressed at the source of the classical scalar field. This implies that the scalar field becomes a scalar field at the source of the classical scalar field. Our results also give a proof of the existence of an observer-induced AID in the interferometer sector of a scalar field.