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Aspects of stroboscopic averaging for the invariant spin field

Wednesday 4 June 2025 16:00 (2 hours)

A new method is formulated for calculating the invariant spin field (ISF) at a phase space point by leveraging the property that spins which are distributed along the ISF achieve maximum time-averaged polarization. To quantify this, we construct the time-average of spin rotation matrices beginning at a certain phase space point. It is recognized that the ISF vector at that point achieves the matrix-norm, meaning that the ISF corresponds to the first right-singular vector of that matrix. We show the relation of this method with traditional stroboscopic averaging, such that these methods are two sides of the same coin. This approach offers a new perspective in invariant spin field calculations.

Footnotes

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