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Anomalous interactions for mesons with J=1,2 and glueballs

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We consider the anomalous interactions for mesons with higher spin, the heterochiral nonets with $J^{PC} = 1^{+-}$ and 2^{-+}.
Based on the recent results of Ref. Phys.Rev.D 109 (2024) 7, L071502, under the approximation of a dilute gas of instantons the mixing angle between non-strange and strange mesons decreases strongly as J increases, and oscillates in sign. Anomalous interactions also open up new, rare decay channels. For glueballs, anomalous interactions indicate that the $X(2600)$ state is primarily gluonic.

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