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Lambda-(anti)Lambda Spin Correlation in Heavy-Ion Collisions

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Recent experimental data indicate a strong phi vector meson spin alignment which can be explained as a result of a short distance correlation of fluctuating strong-force field. If such strong-force for strange quark exists in the late stage of heavy-ion collisions, it will also lead to spin-spin correlation of final state hyperons such as Lambda-(anti)Lambda. We calculate such spin-spin correlation within the CLVisc hydrodynamics with the strength of the fluctuating strong-field given by the phi meson spin alignment. The correlation is found to be 100 times stronger than that due to spin polarization by local vorticity.

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