Bell's inequality in charmonium decays

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This talk addresses the issue of checking the Bell's inequality [1,2] in elementary particle physics. A new expression for the Bell's inequality is proposed in terms of experimentally measurable angular observables. As an example, the degree of violation of the Bell's inequality in the decays $\eta_c \to \Lambda\bar{\Lambda}$, $\chi_c \to \Lambda\bar{\Lambda}$, and $J/\psi \to \Lambda\bar{\Lambda}$ is studied.

[1] J. S. Bell, Physics **1**, 195 (1964); Rev. Mod. Phys. **38**, 447 (1966).
[2] A. Afriat, S. Selleri, *The Einstein-Podolsky-Rozen paradox in atomic, nuclear and particle physics*, Plenum Press, New-York, 1999.

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