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## Testing the dark sector interaction by using the isolated galaxy pairs from SDSS DR10

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By analyzing the spin alignment of isolated galaxy pairs from SDSS DR10 and in N-body simulation data for the coupled dark energy (cDE) model, we constrain the strength of dark sector interaction of cDE model. We perform Kolmogorov-Smirnov 2-sample tests to 6 different cases, one is the spin alignments from SDSS DR10 and in N-body simulation data for LCDM model, others are the spin alignments from SDSS DR10 and in N-body simulation data for cDE models with 5 different values of the strength of dark sector interaction. As a result, LCDM model and cDE model with zero dark sector interaction are the most consistent to SDSS DR10.

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