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Study of K^0_S pair production in single-tag two-photon collisions at Belle

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We report a measurement of the cross section for K^0_S pair production in single-tag two-photon collisions, gamma*gamma* ⟶ *K^0_S K^0_S for Q^2 up to 30 GeV^2, where Q^2 is the negative of the invariant mass squared of the tagged photon. The measurement covers the kinematic range 1.0 GeV < W < 2.6 GeV and |cos theta|*<1.0 for the total energy and kaon scattering angle, respectively, in the gamma* gamma center-of-mass system. These results are based on a data sample of 759 fb-1 collected with the Belle detector at the KEKB asymmetric-energy e+ e- collider. For the first time, the transition form factor of the f'2(1525) meson is measured separately for the helicity-0, -1, and -2 components and also compared with theoretical calculations. Finally, the partial decay widths of the chi_c0 and chi_c2 mesons are measured as a function of Q^2.

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