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X(3872) as a virtual companion pole

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We study the state X(3872) as a companion state of a regular axial-vector charm-anticharm state, which is dressed by D-D*mesonic loops. As a consequence, in addition to a quite broad quark-antiquark state predicted by the quark model, a very narrow peak at the D-D* threshold -identified with X(3872) -emerges quite naturally. Moreover, the quarkonium core can explain the prompt production of this state. Quite interestingly, our approach can explain the magnitude of the isospin-suppressed decay into a j/Psi and a rho meson. Radiative decays are also studied. In conclusion, a consistent picture of the different and quite conflicting features of this enigmatic states can be explained in a simple quantum field theoretical framework.

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