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Near threshold states $D_{s0}^{*}(2317)$ and $D_{s1}(2460)$

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Early theoretical studies and lattice simulations predicted the charmed-strange mesons $D_{s0}^*(2317)$ and $D_{s1}(2460)$ to be broad states lying above the thresholds, DK and D^*K , respectively. Experiments found narrow states below threshold. We present results of a high statistics Nf = 2 study with a lattice spacing of approximately 0.071 fm, taking explicitly into account the thresholds by including four quark operators. We find a lowering of the meson's masses relative to the two-quark operator results. Two pion masses with multiple volumes were employed, $Lm_{\pi} = 2.5, 3.4, 4.2$ and 6.7 at $m_{\pi} = 289$ MeV and $Lm_{\pi} = 2.8$ and 3.5 at $m_{\pi} = 150$ MeV. The volume dependence of the resulting spectrum is investigated according to Luescher's formula.

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