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THE SCALAR DOES NOT DECAY AT FINITE TEMPERATURES.

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We investigate medium effects on mesonic screening lengths for QCD with 2-flavours of dynamical staggered quarks on lattices with cutoff $a=1/6T$. In our study, T ranges from $0.89 T_c$ to $1.92 T_c$, spanning both the hadronic and the quark-gluon plasma phases. While chiral symmetry restoration in the vector channel appears to take place near T_c , it is seen in the scalar channel only above $1.33 T_c$. Varying spatial lattice sizes, we find very little volume dependence in our results at $0.94 T_c$, which is the expected critical end point temperature. This suggests that the scalar does not decay. We also comment on the nature of interactions around T_c and beyond.

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talk

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