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## Probing mesonic and diquark wavefunctions in two color QCD at non-zero baryon density

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The properties of the ground state of two-color QCD at non-zero baryon chemical potential  $\mu$  present an interesting problem in strongly-interacting gauge theory; in particular the nature of the physically-relevant degrees of freedom in the superfluid phase in the high- $\mu$  regime still needs clarification. In this study we present evidence for in-medium effects at high  $\mu$  by studying the wave functions of mesonic and diquark states using orthodox lattice simulation techniques, made possible by the absence of a Sign Problem for the model with  $N_f=2$ . Our results show that beyond onset the spatial extent of hadrons decreases with  $\mu$ , and are consistent with the existence of a dynamically-gapped Fermi surface in this regime.

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