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## Searching for the QCD critical point using Lee-Yang edge singularities

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Using  $N_f = 2 + 1$  QCD calculations at physical quark mass and purely imaginary baryon chemical potential, we locate Lee-Yang edge singularities in the complex chemical potential plane. These singularities have been obtained by the multi-point Padé approach applied to the net baryon number density. We recently used this approach to extract the correct scaling of singularities near the Roberge-Weiss transition. Now we study the universal scaling of these singularities in the vicinity of the QCD critical endpoint. Making use of an appropriate scaling ansatz, we extrapolate these singularities on  $N_\tau = 6$  and  $N_\tau = 8$  lattices towards the real axis to estimate the position of a possible QCD critical point. We find an apparent approach toward the real axis with decreasing temperature. We compare this estimate with a HotQCD estimate obtained from poles of a single-point,  $[4, 4]$ -Padé resummation of the eighth-order Taylor expansion of the QCD pressure.

### Topical area

QCD at Non-zero Density

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