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The upper right corner of the Columbia plot with staggered fermions

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QCD with heavy dynamical quarks exhibits a first order thermal transition which is driven by the spontaneous breaking of the global Z_3 center symmetry. Decreasing the quark masses weakens the transition until the corresponding latent heat vanishes at the critical mass.
We explore the heavy mass region with three flavors of staggered quarks. We analyze the Polyakov loop and its moments in a finite volume scaling study and monitor the chiral observables at the same time. Thus we calculate the heavy critical mass in the three flavor theory.

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