

Mass Reweighting

April 25, 2022

We show the pion mass measured through reweighting. We compare the results for 10^3 and 10^4 measurements.

1 m_π

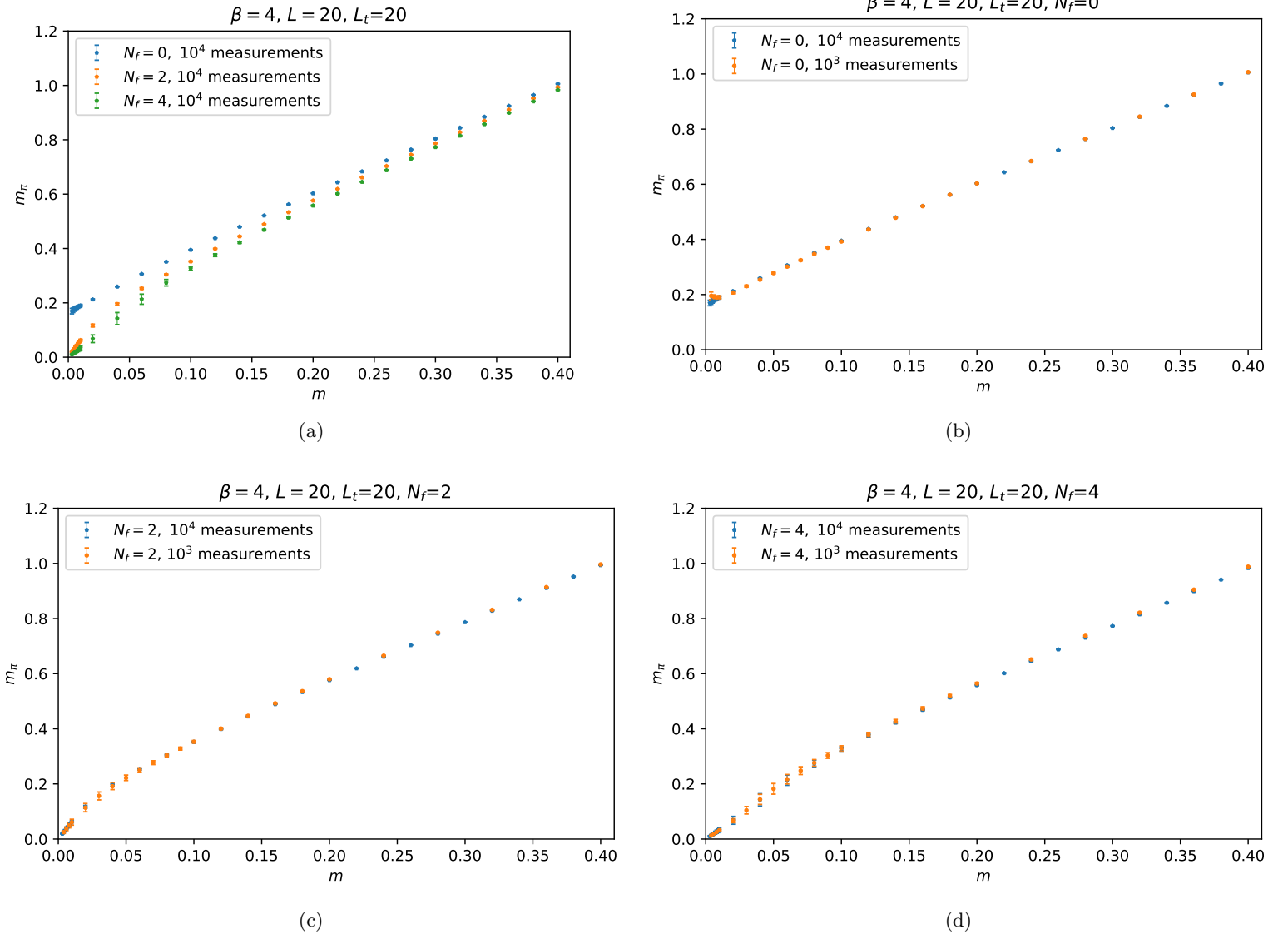
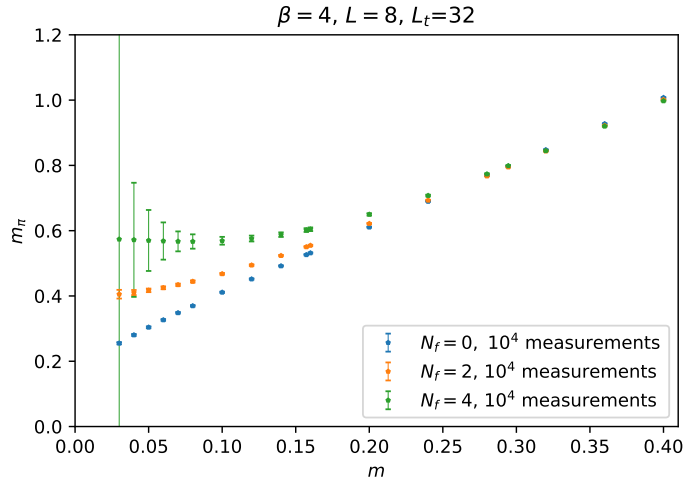
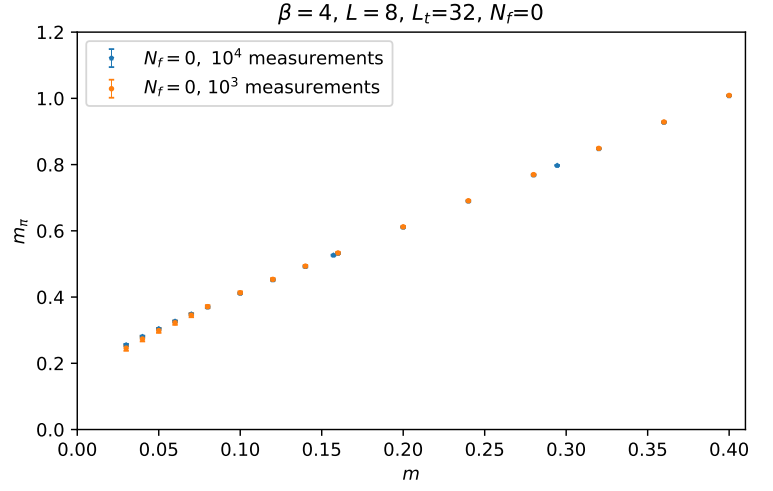


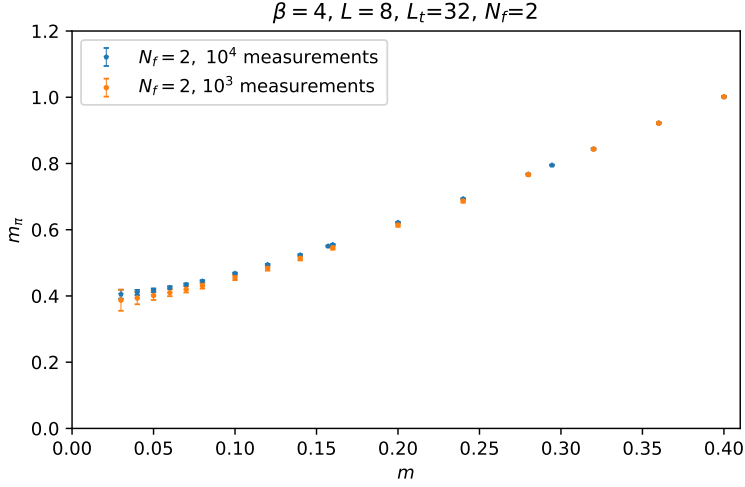
Figure 1: Pion mass as a function of the degenerate fermion mass for different flavors



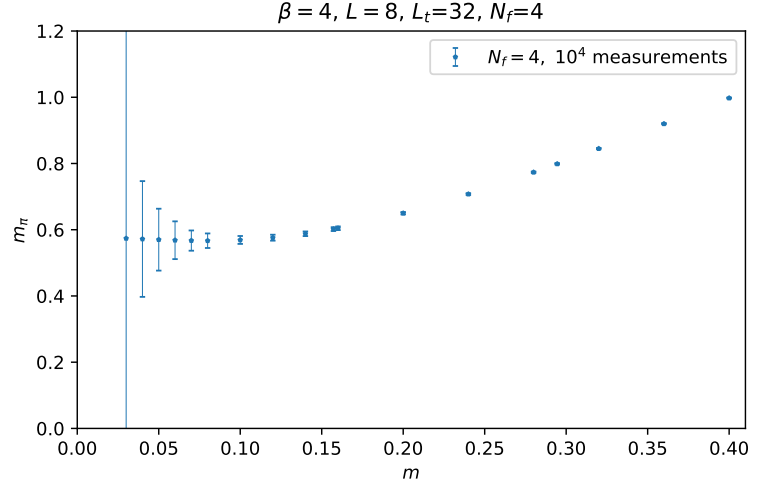
(a)



(b)



(c)

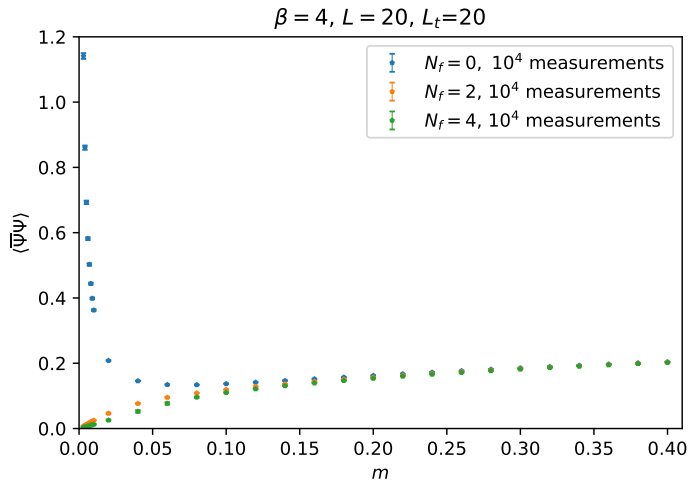


(d)

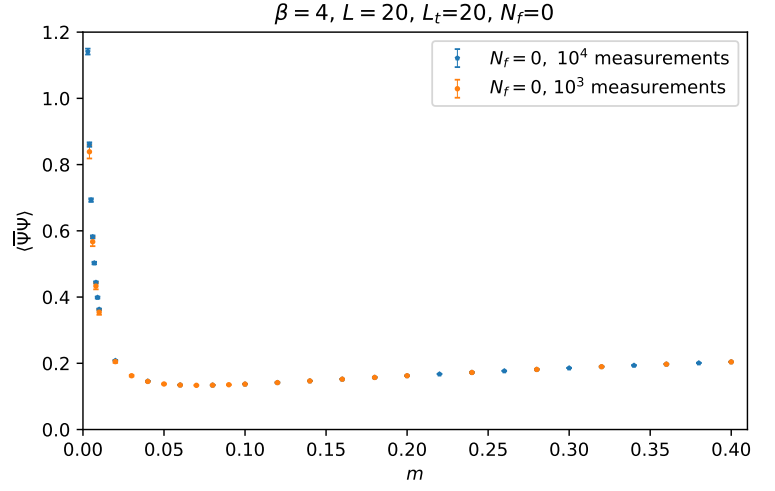
Figure 2: Pion mass as a function of the degenerate fermion mass for different flavors

2 $\langle \bar{\psi}\psi \rangle$

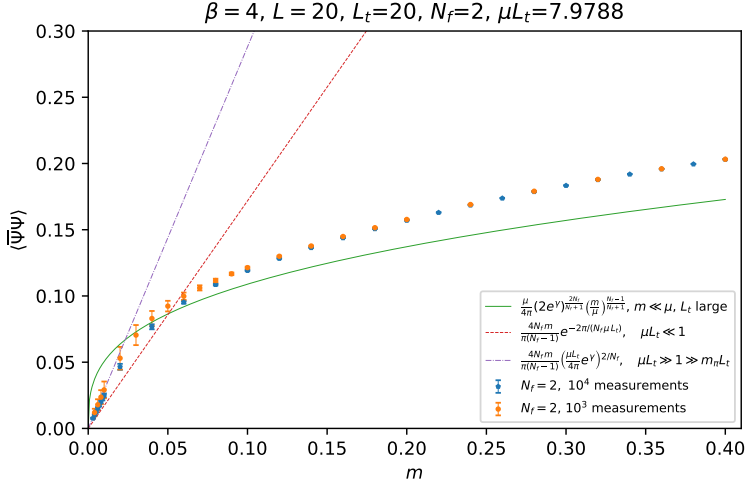
We show the chiral condensate for a 20x20 lattice together with some predictions, valid in different regimes, for N_f flavors that are written in eqs. (13), (15) and (16) of ref. [1].



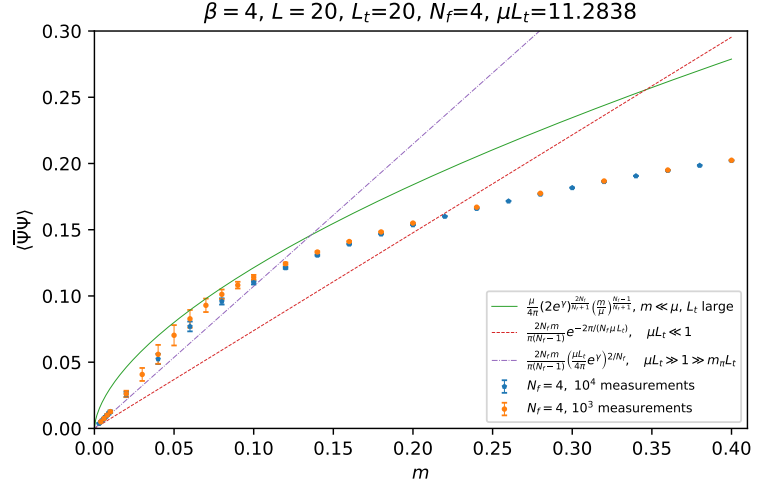
(a)



(b)



(c)



(d)

Figure 3: Chiral condensate as a function of the degenerate fermion mass for different flavors

References

- [1] J. E. Hetrick, Y. Hosotani, and S. Iso. Interplay between mass, volume, vacuum angle and chiral condensate in N avor QED in two-dimensions. *Phys. Rev. D*, **53**, 1996. arXiv:hep-th/9510090.