Predictions by Hosotani

July 27, 2021

We show a comparison of the values of m_π and m_η computed with the prediction by Hosotani and by means of lattice simulations. We show two predictions by Hosotani for $L = 64$ and $L_t = 10$, in one we assume that $m_\eta = \sqrt{m_\pi^2 + 2g^2/\pi}$ and in other we set $m_\eta = \sqrt{2g^2/\pi}$ (its value in the chiral limit for two flavors).
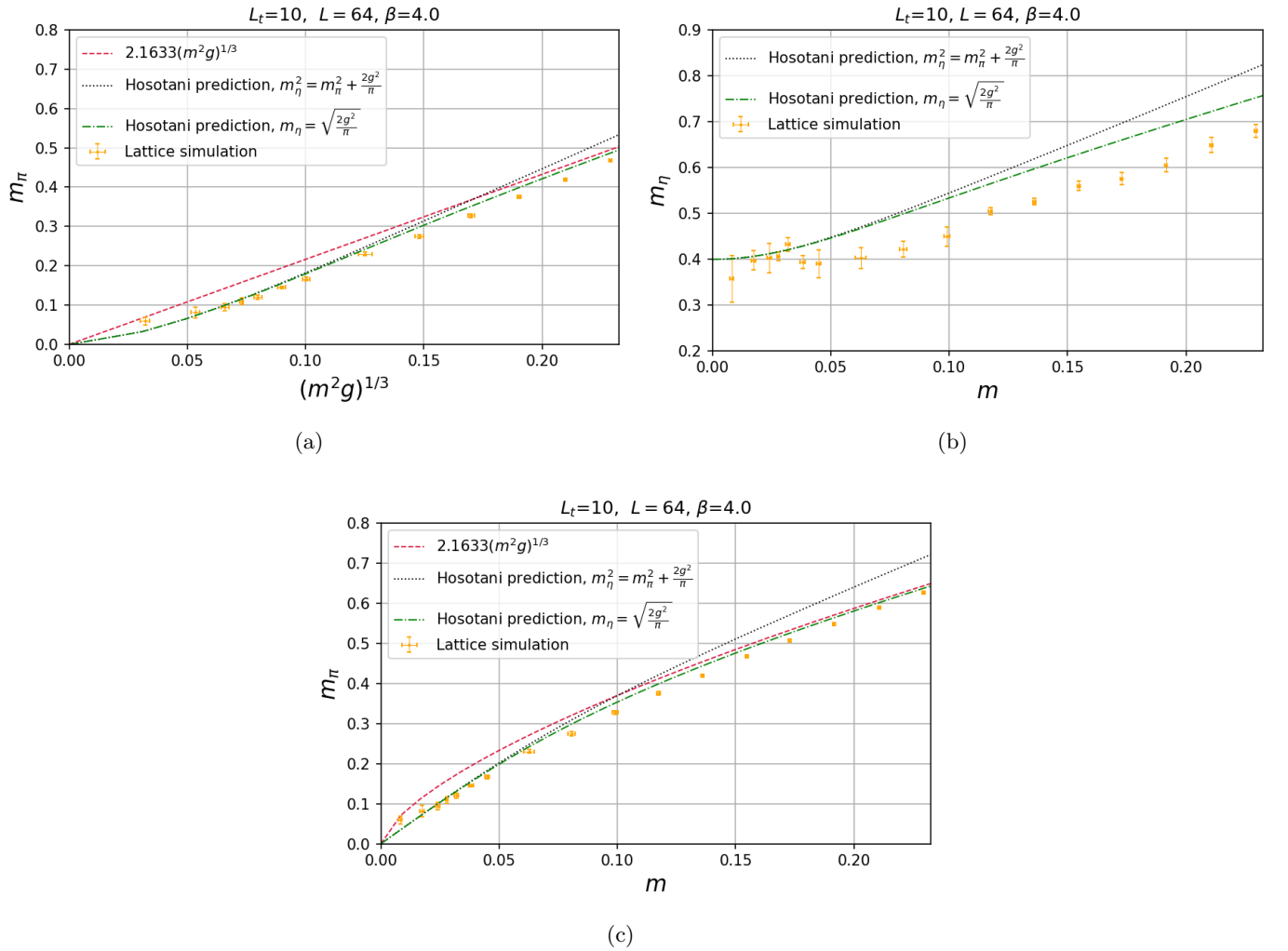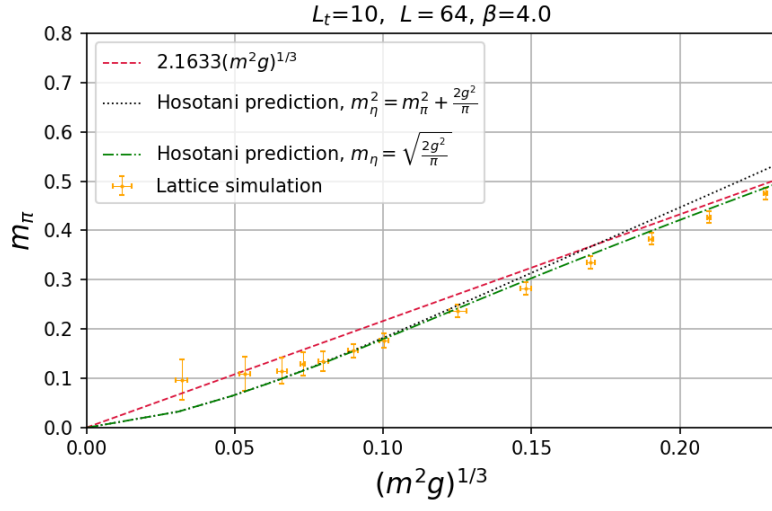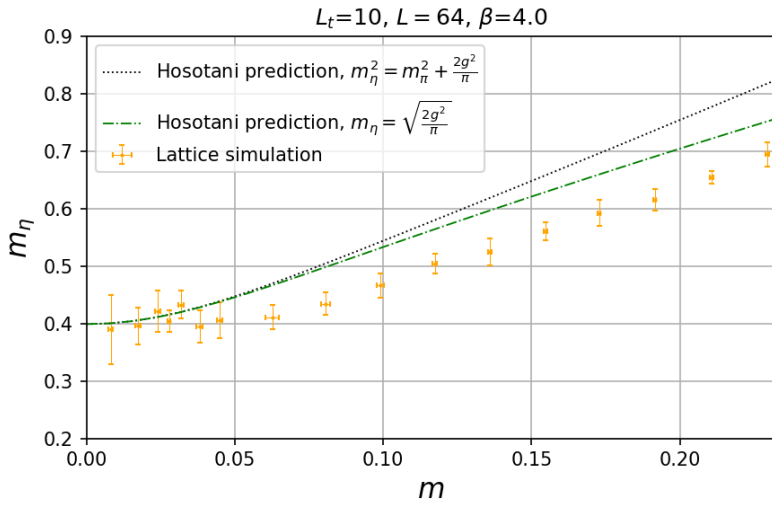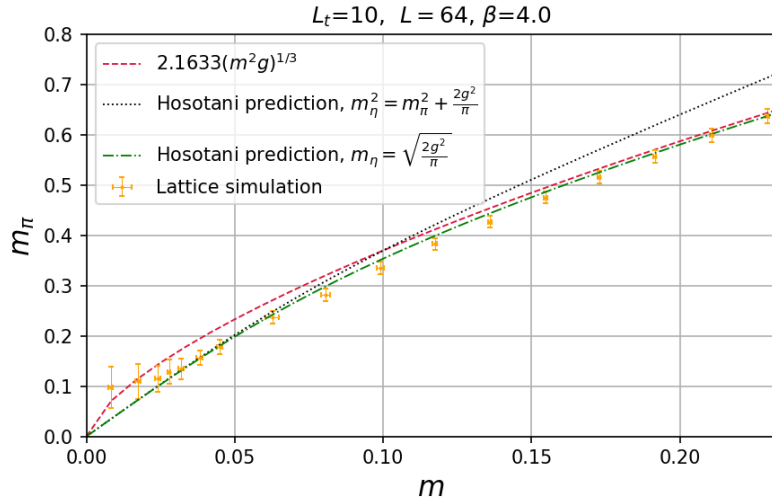
1   64x10

Figure 1: m_η and m_π computed with the prediction by Hosotani and with lattice simulations. Two points were used to fit the mass plateau.

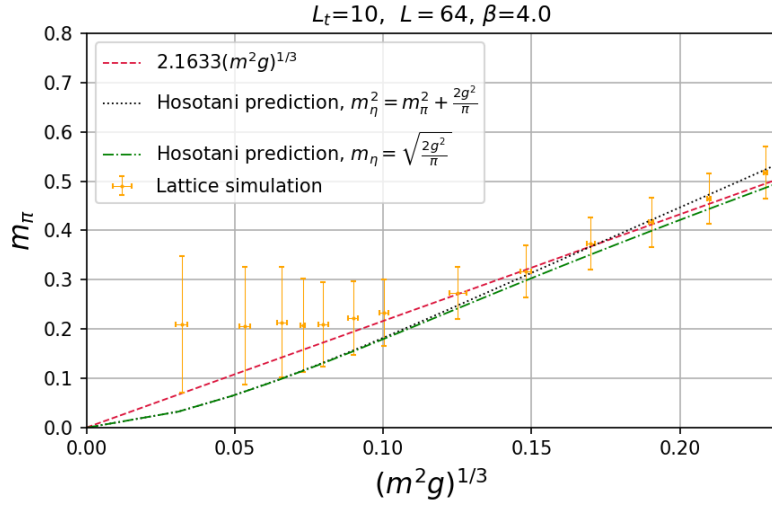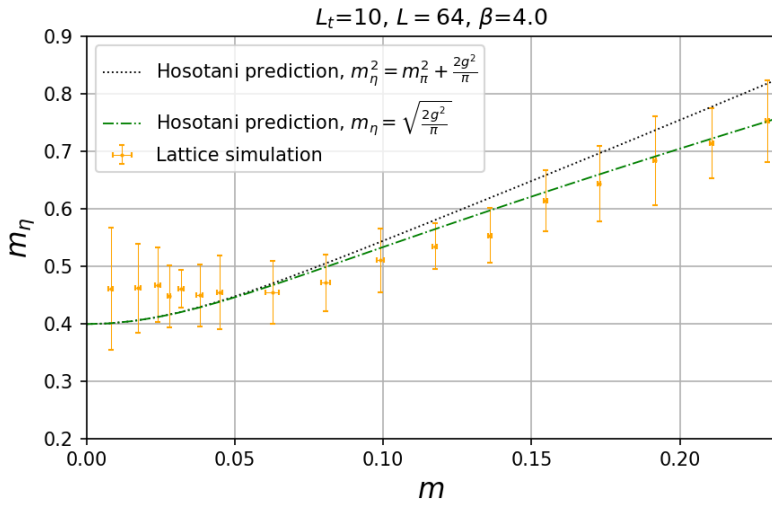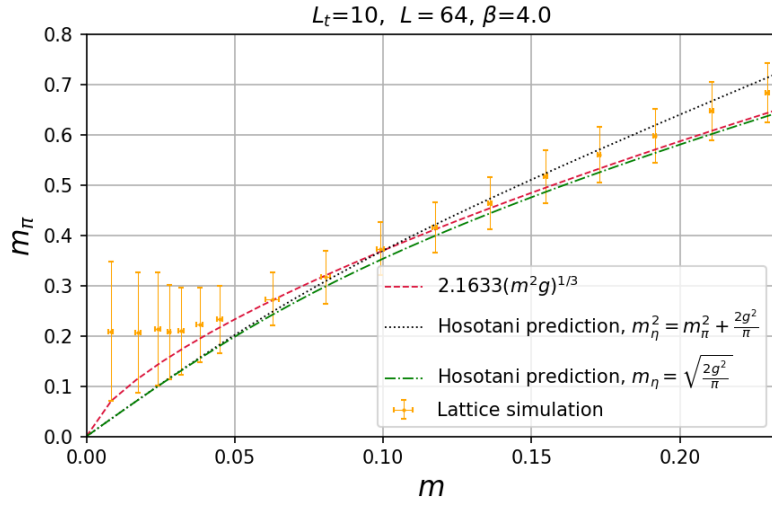Figure 2: m_η and m_π computed with the prediction by Hosotani and with lattice simulations. Three points were used to fit the mass plateau.
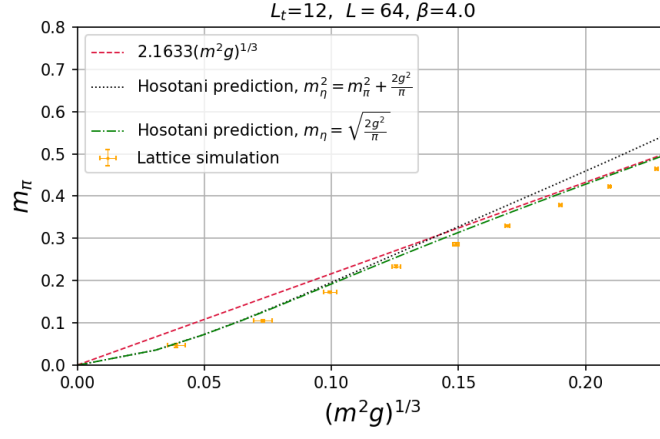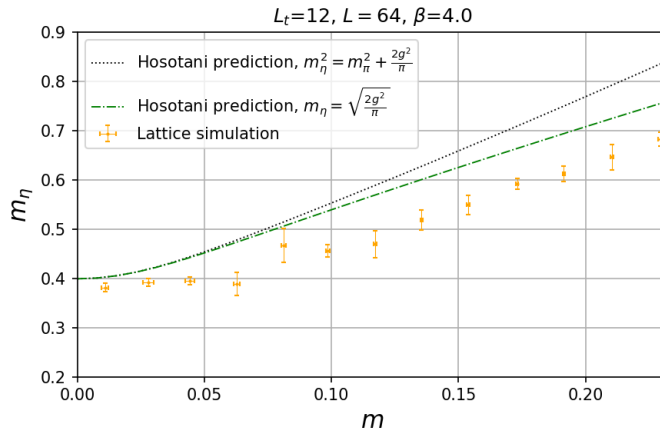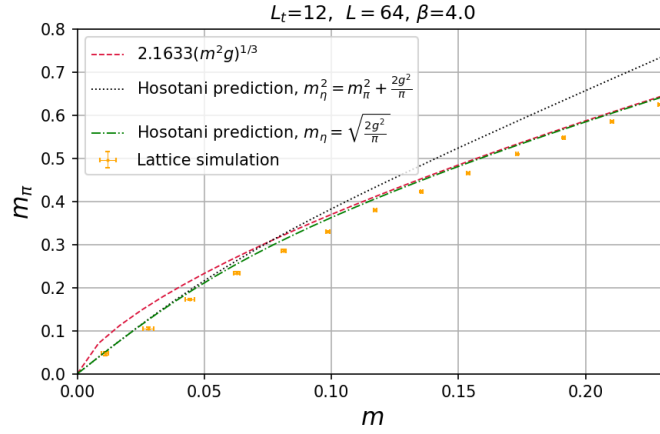
(a)

(b)

(c)

Figure 3: m_η and m_π computed with the prediction by Hosotani and with lattice simulations. Four points were used to fit the mass plateau.
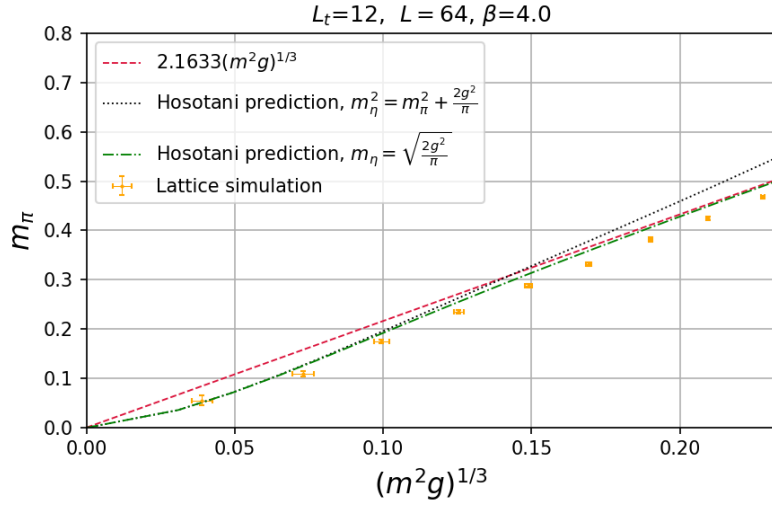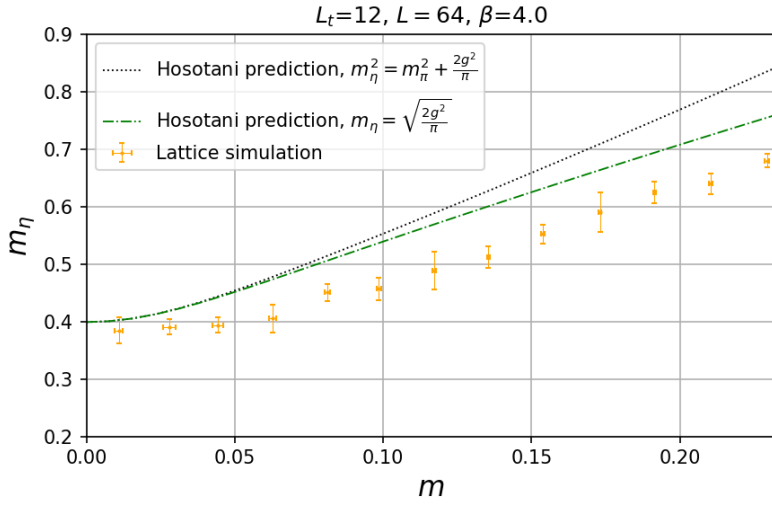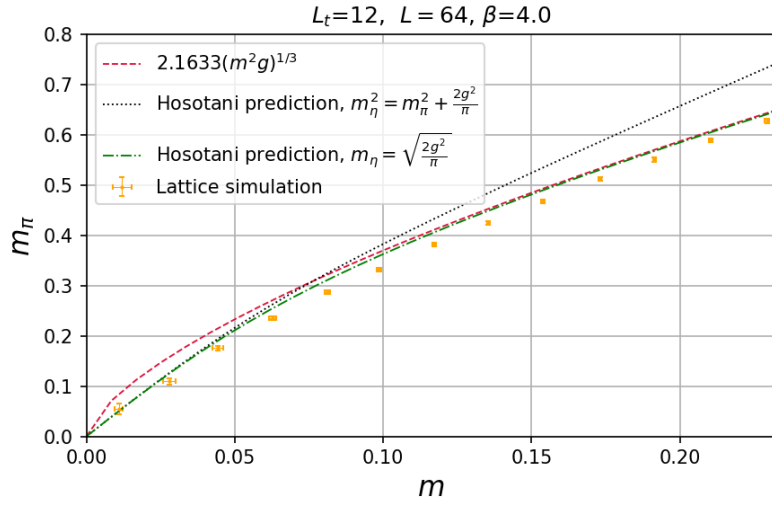
2 64x12

(a)

(b)

(c)

Figure 4: m_η and m_π computed with the prediction by Hosotani and with lattice simulations. Two points were used to fit the mass plateau.
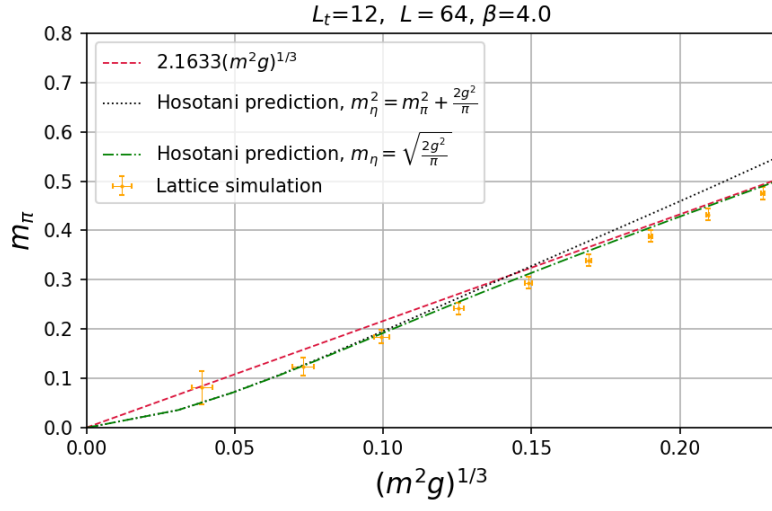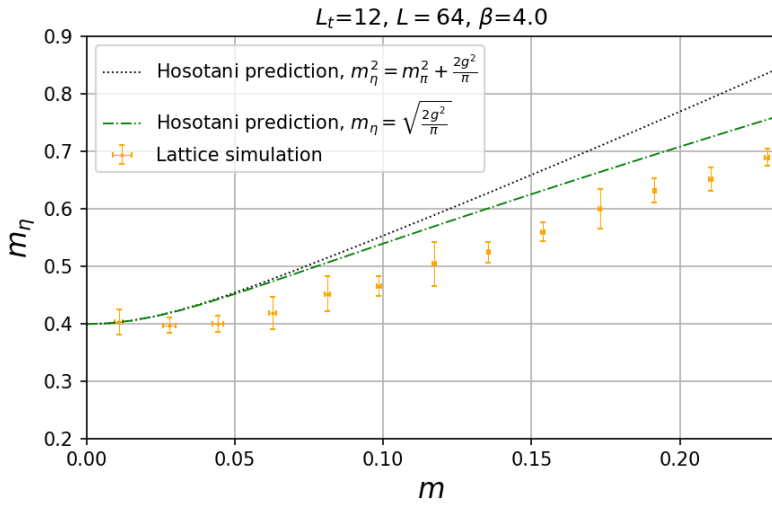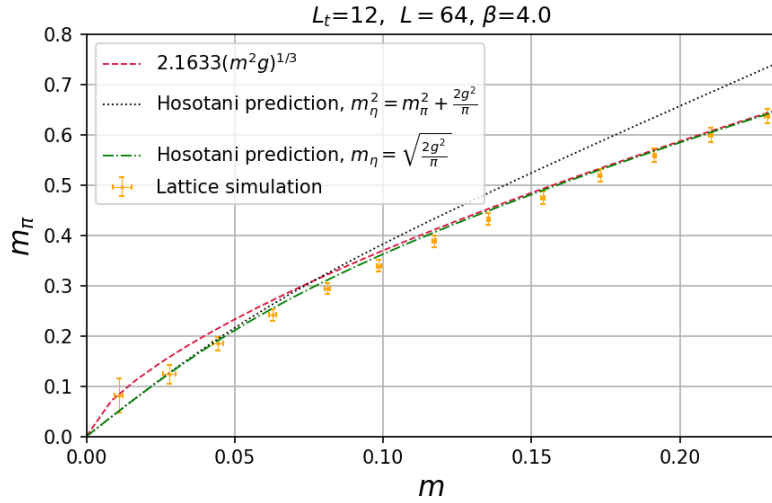
Figure 5: m_η and m_π computed with the prediction by Hosotani and with lattice simulations. Three points were used to fit the mass plateau.

(a)

(b)

(c)

Figure 6: m_η and m_π computed with the prediction by Hosotani and with lattice simulations. Four points were used to fit the mass plateau.

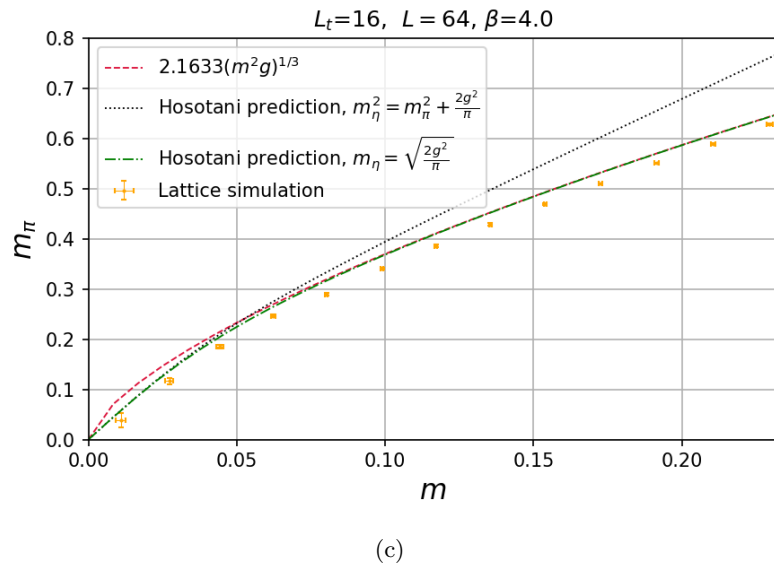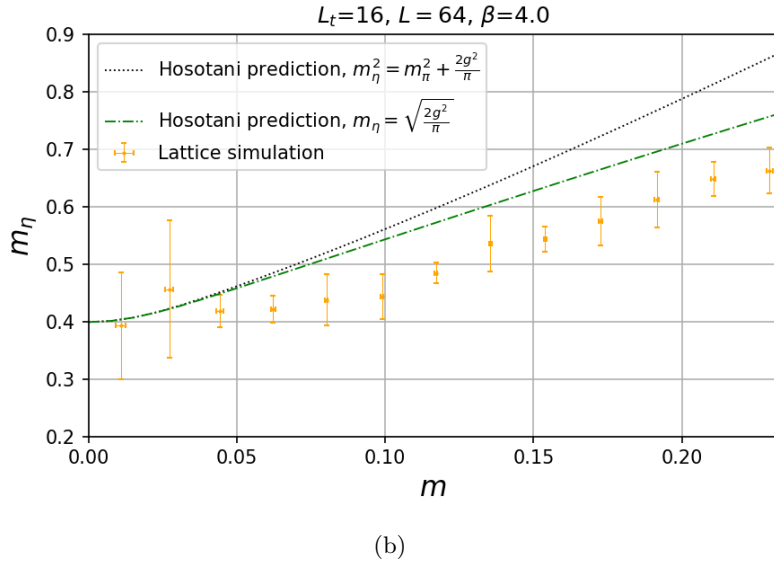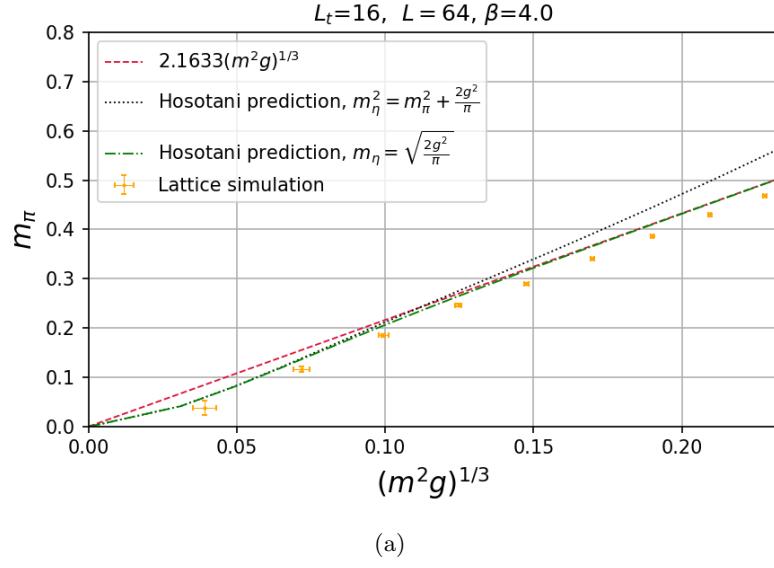# 3   64x16

(a)

(b)

(c)

Figure 7: m_η and m_π computed with the prediction by Hosotani and with lattice simulations. Four points were used to fit the mass plateau.