

# 1 Benchmark week 10

## 1.1 SC30

### 1.1.1 Free delta

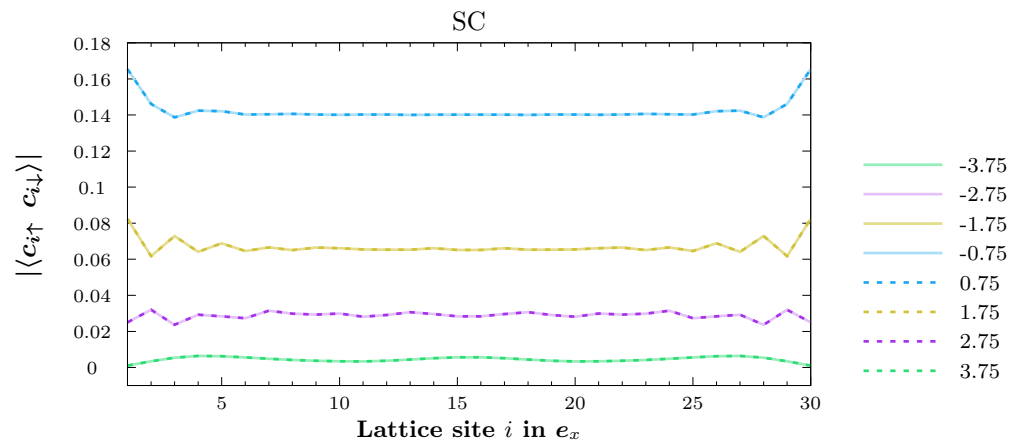


Figure 1: Real guess

### 1.1.2 Fixed phase on sides

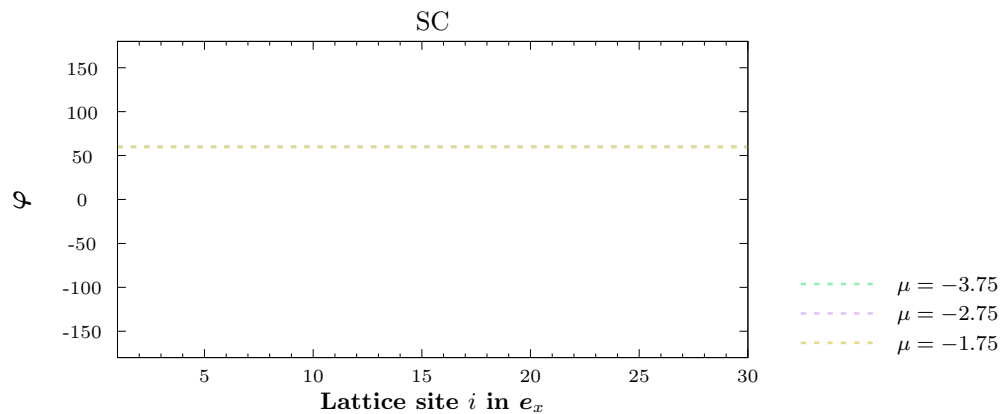
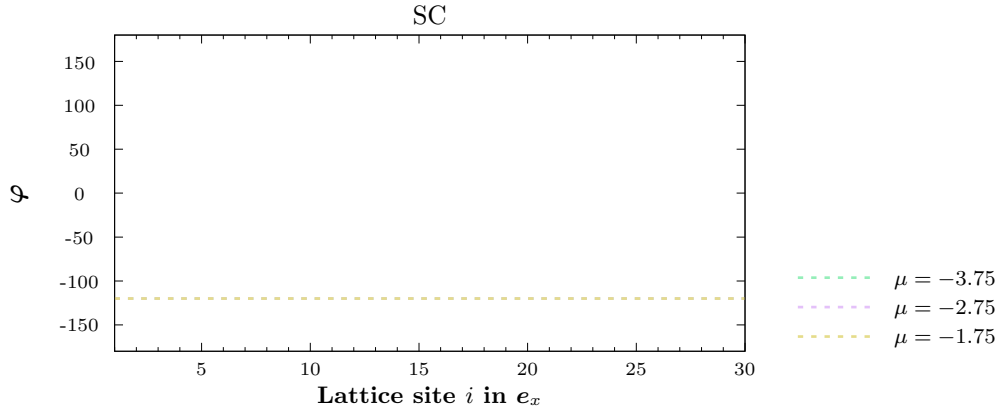
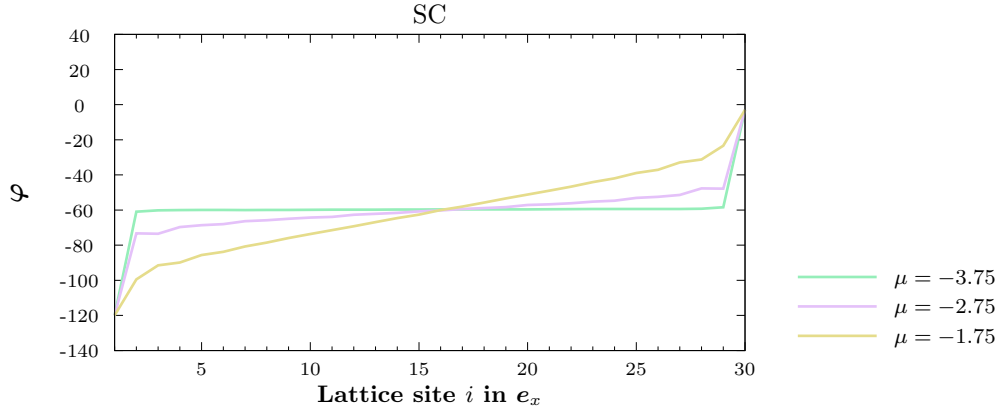


Figure 2: Phase on side  $\varphi_0 = \pi/3$

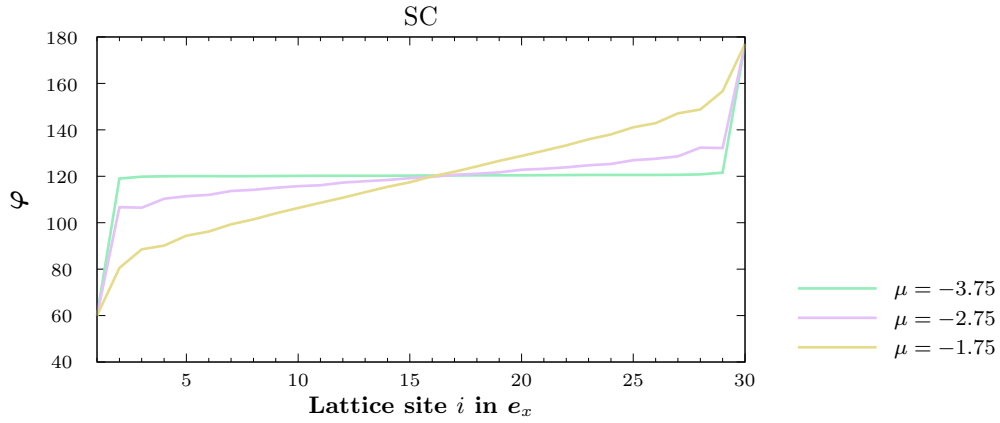


**Figure 3:** Phase on side  $\varphi_0 = -2\pi/3$

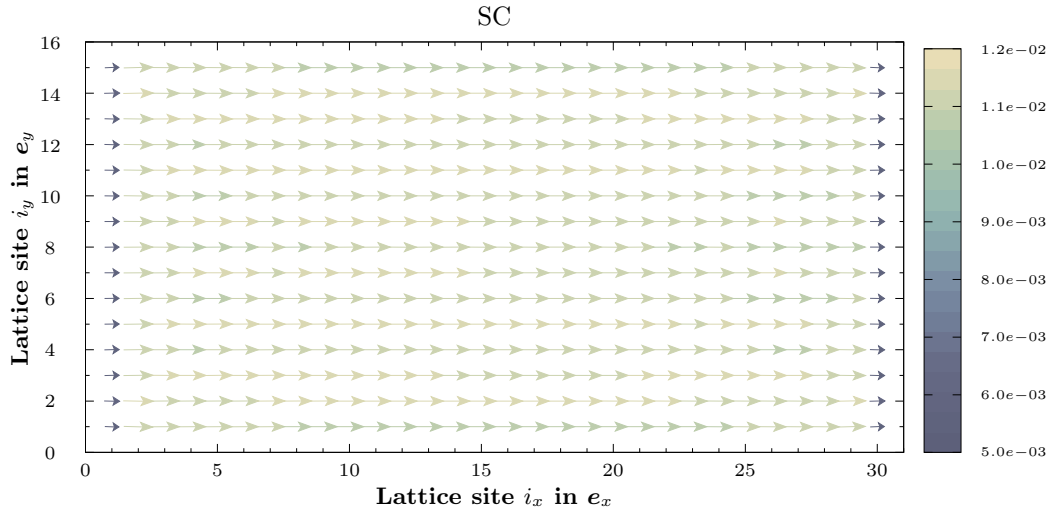
### 1.1.3 Phasegradient of 117 deg



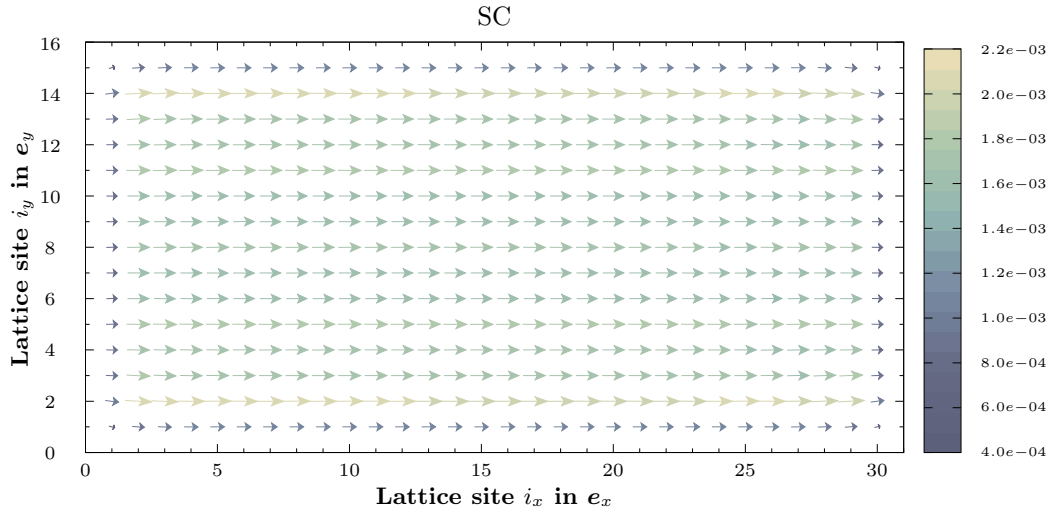
**Figure 4:** Phase on side  $\varphi_0 = -2\pi/3$  and gradient of 117deg



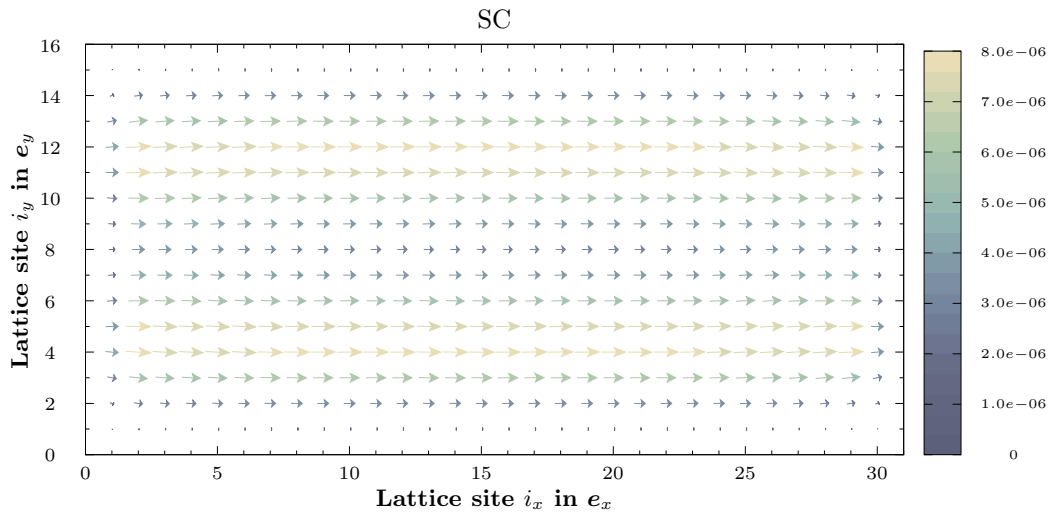
**Figure 5:** Phase on side  $\varphi_0 = \pi/3$  and gradient of 117deg



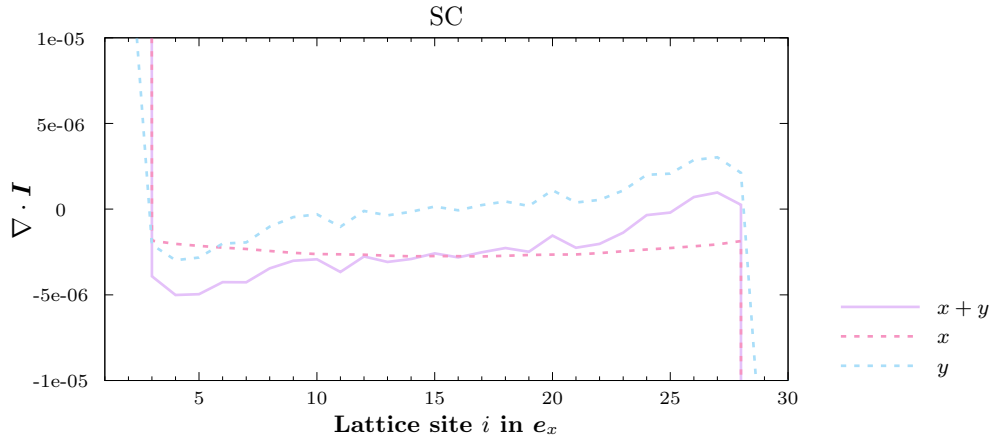
**Figure 6:** Current from a phase gradient of 117deg at  $\mu = -1.75$ .



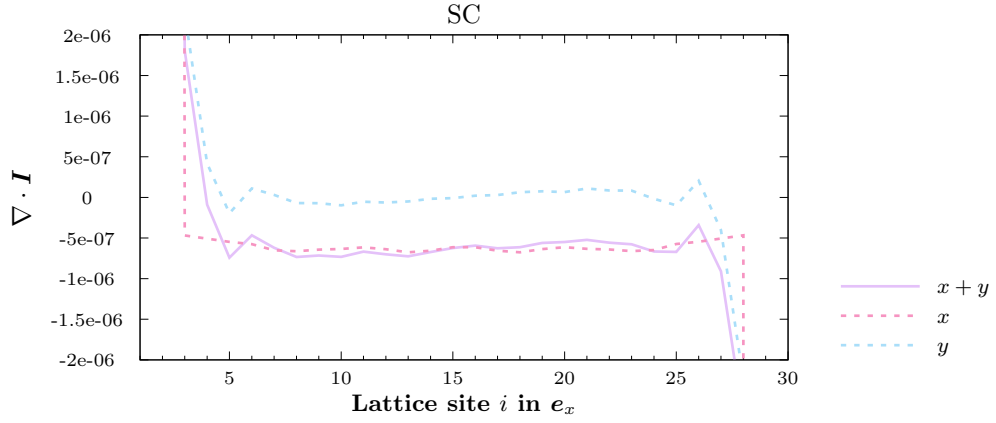
**Figure 7:** Current from a phase gradient of 117deg at  $\mu = -2.75$ .



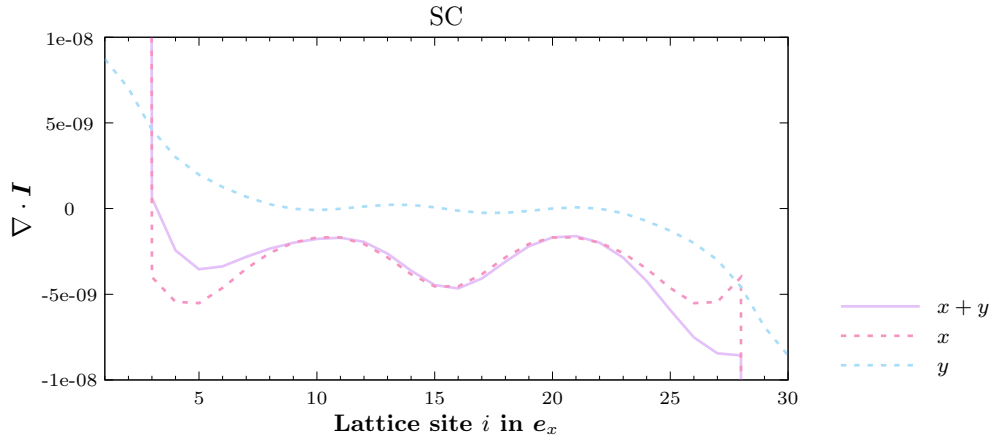
**Figure 8:** Current from a phase gradient of 117deg at  $\mu = -3.75$ .



**Figure 9:** Continuity of the current from a phase gradient of 117deg at  $\mu = -1.75$ . In both x and y direction as well as the total continuity.

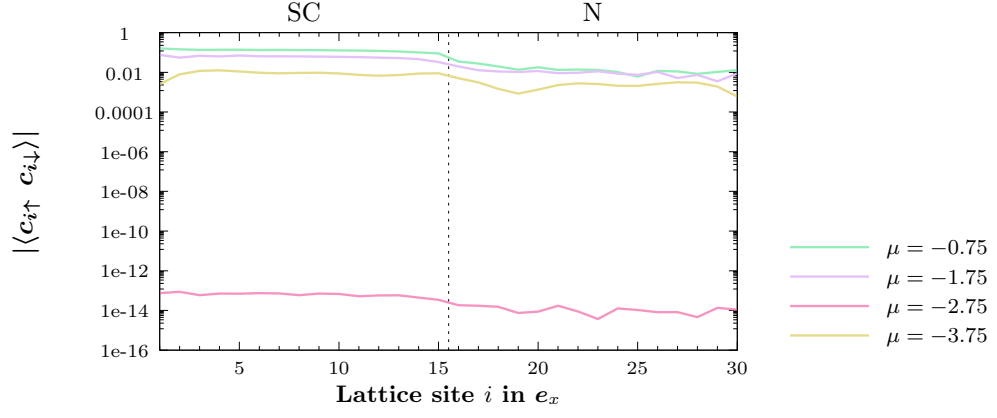


**Figure 10:** Continuity of the current from a phase gradient of 117deg at  $\mu = -2.75$ . In both x and y direction as well as the total continuity.



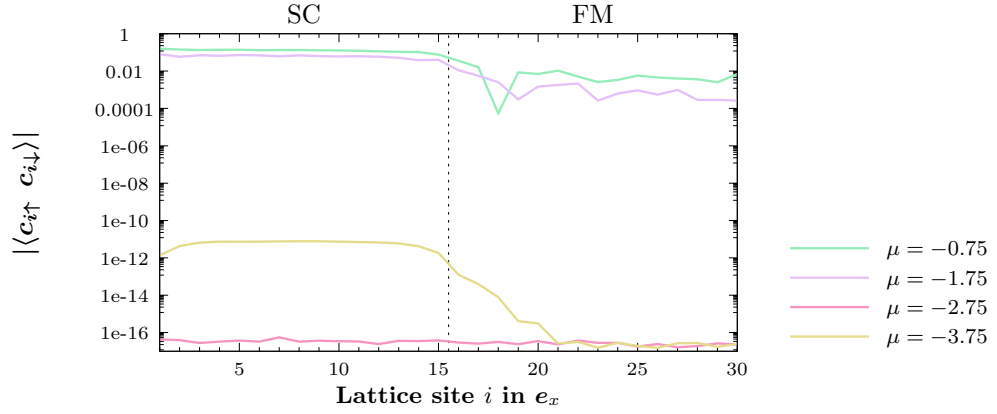
**Figure 11:** Continuity of the current from a phase gradient of 117deg at  $\mu = -3.75$ . In both x and y direction as well as the total continuity.

## 2 SC15-N15



**Figure 12:** N with  $m = 0.5$  for different  $\mu$

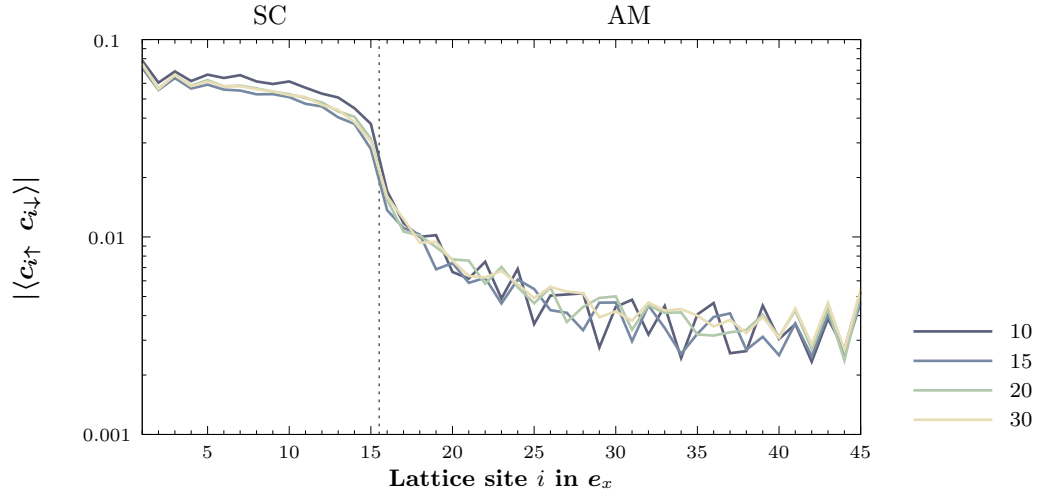
## 3 SC15-FM15



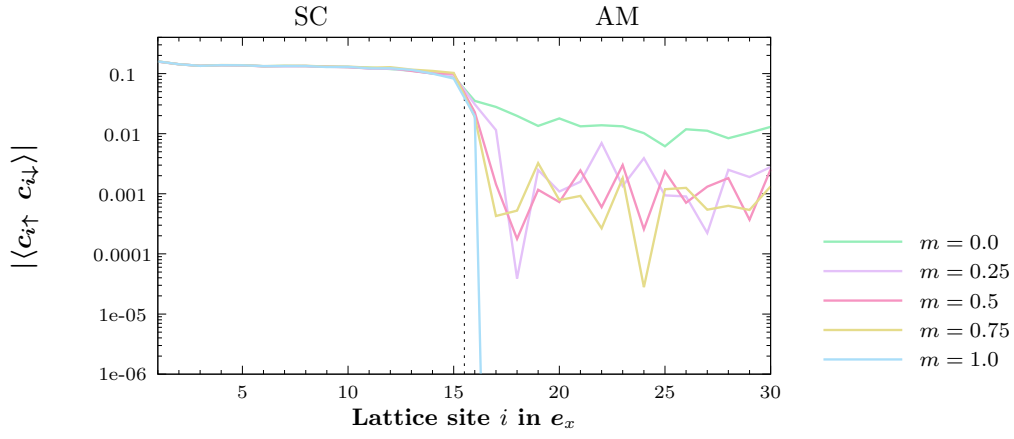
**Figure 13:** FM with  $m = 0.5$  for different  $\mu$

## 4 SC15-AM15

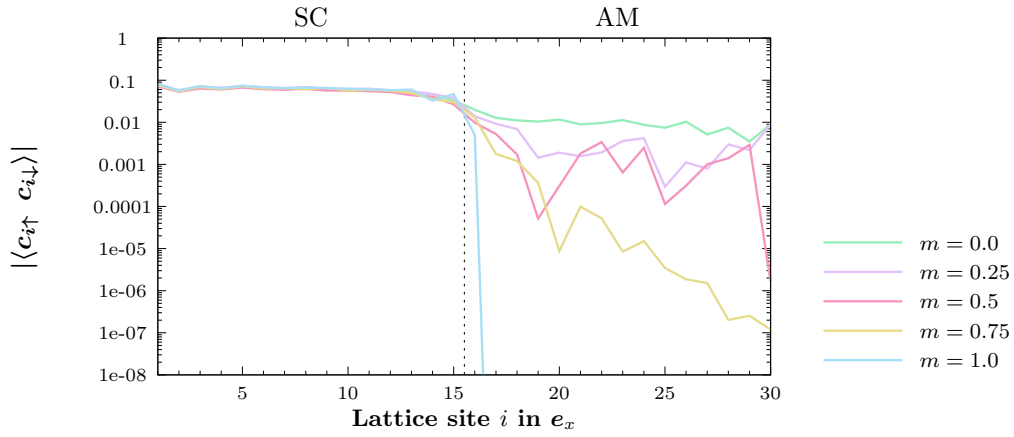
### 4.0.1 Free delta



**Figure 14:** Comparison under different heights  $Ny$  for  $\mu = -1.75$



**Figure 15:**  $\mu = -0.75$



**Figure 16:**  $\mu = -1.75$

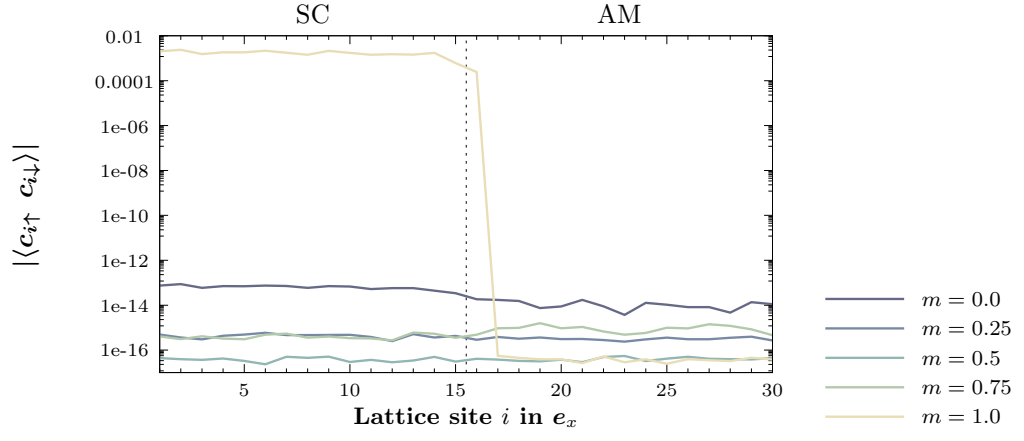


Figure 17:  $\mu = -2.75$

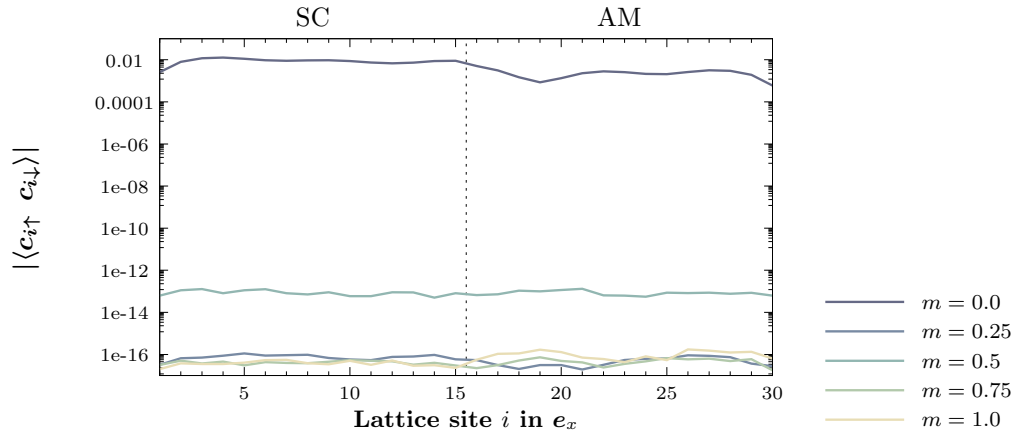


Figure 18:  $\mu = -3.75$

#### 4.1 SC12-AM6-SC12

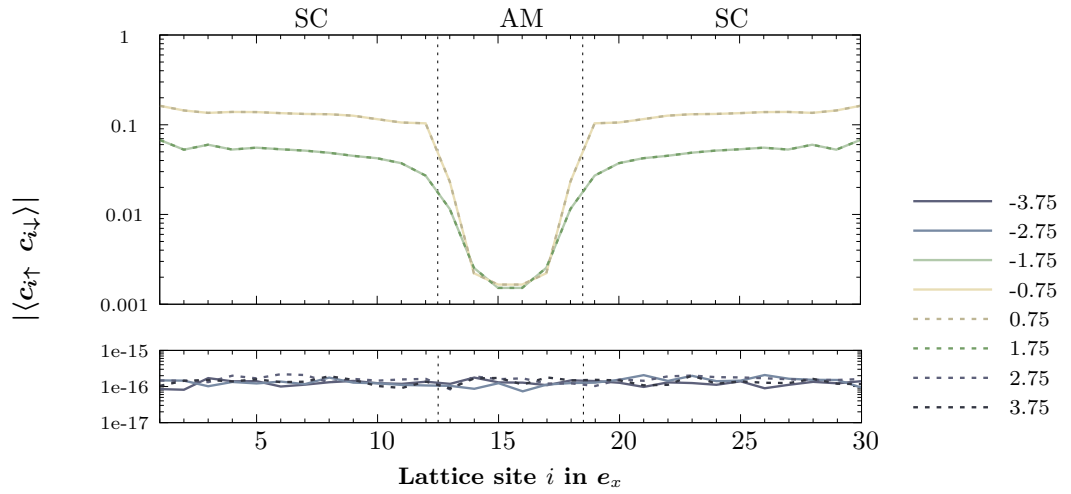


Figure 19:  $\mu = -3.75$

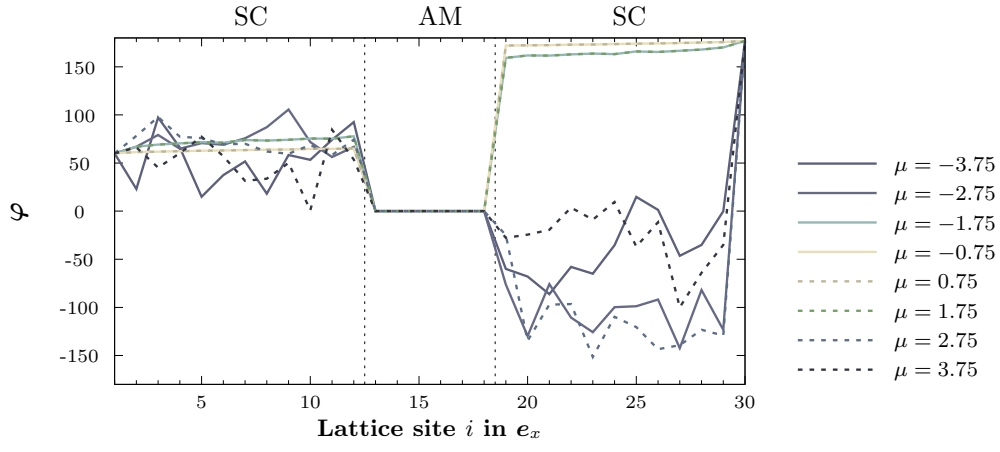


Figure 20:  $\mu = -3.75$

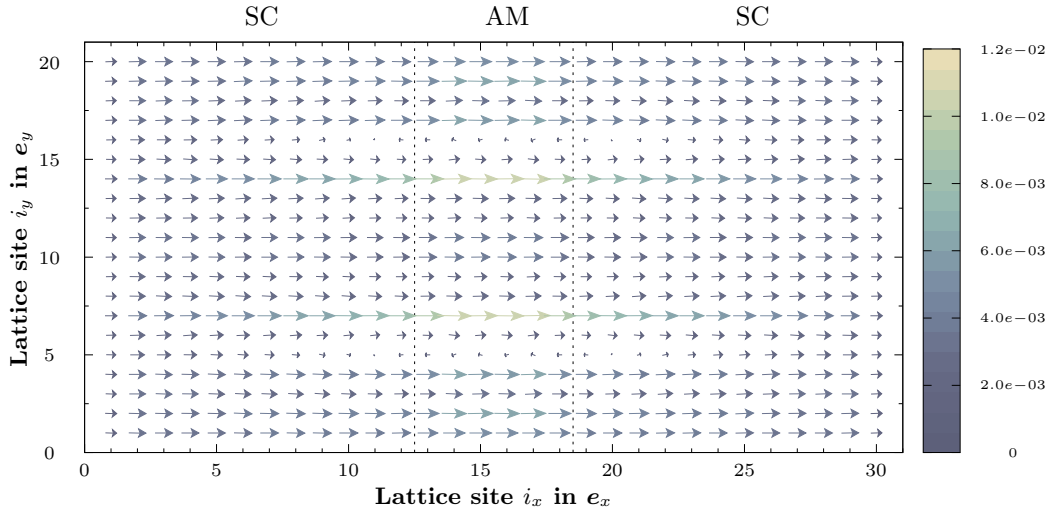


Figure 21:  $\mu = -1.75$

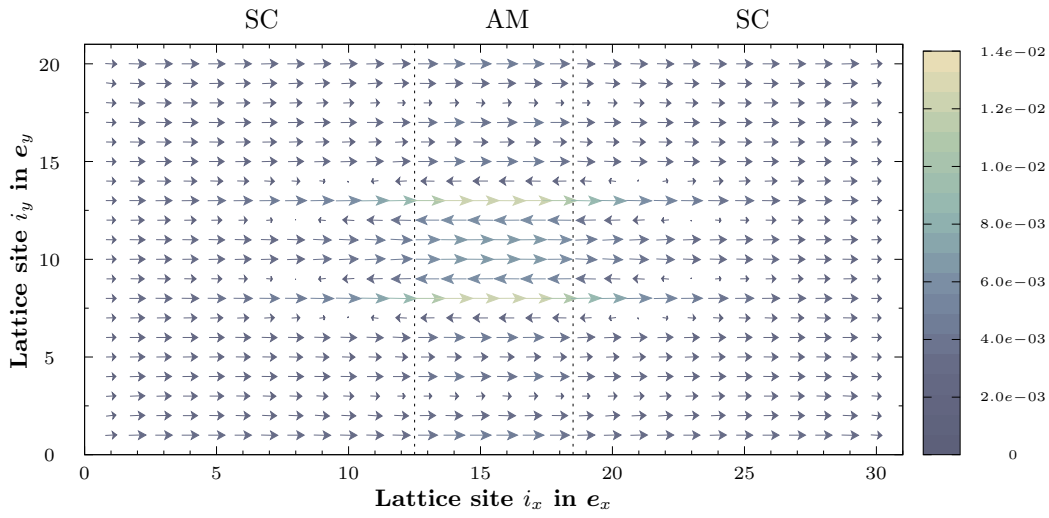


Figure 22:  $\mu = -0.75$



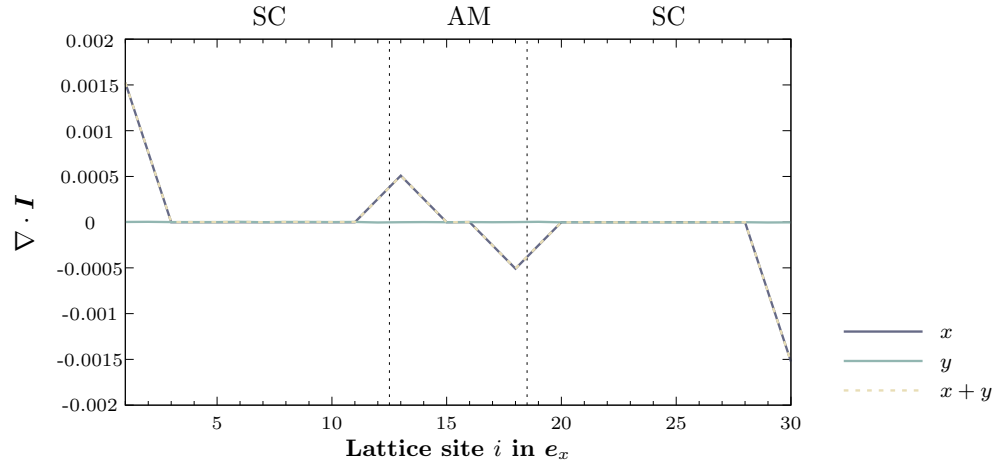


Figure 23:  $\mu = -1.75$

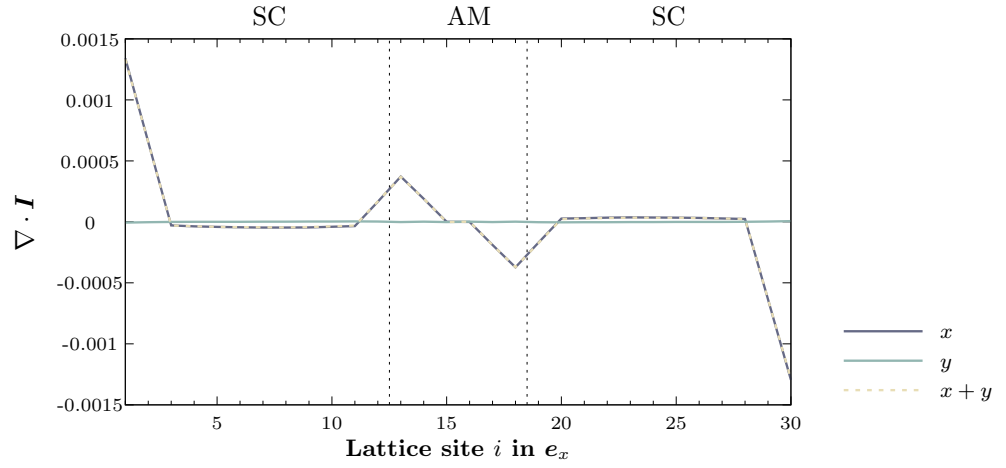
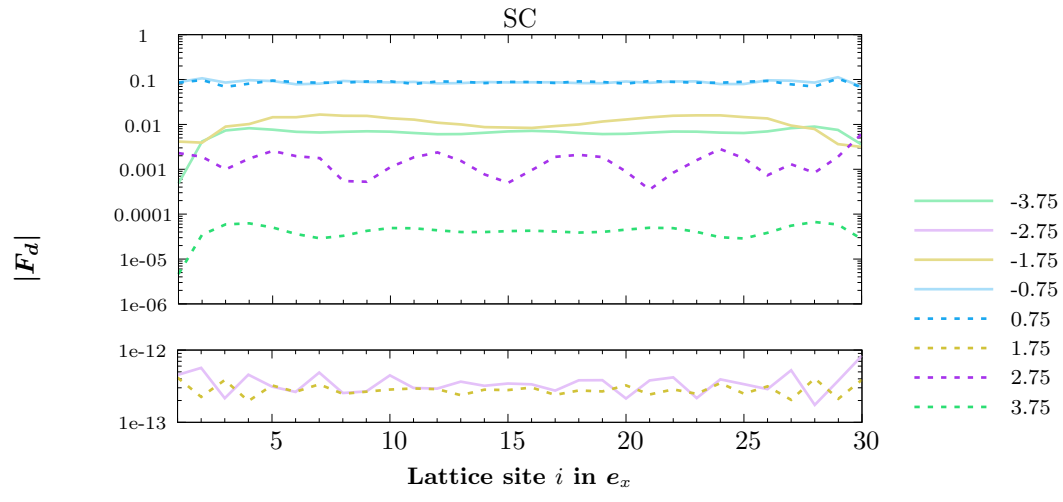


Figure 24:  $\mu = -0.75$

## 5 D WAVE

### 5.1 SC30

We use the vertical periodic boundary condition as well as an high of 15 sites.



**Figure 25:** D wave with free delta and real  $\Delta_d$