HUSIMI REPRESENTATION & WEHRL ENTROPY

Isaías Siliceo Guzmán

WORKSHEET

01

Since the last meeting

1) 2 avoided crossings

1. γ_x = -3.59039

1. γ_x = -5.22239

- Plots of the Wehrl Entropy and the dashed lines of the ESQPT.

2) Husimi Representation

- Husimi representation near the ESQPT (before AC, at the AC & after AC).

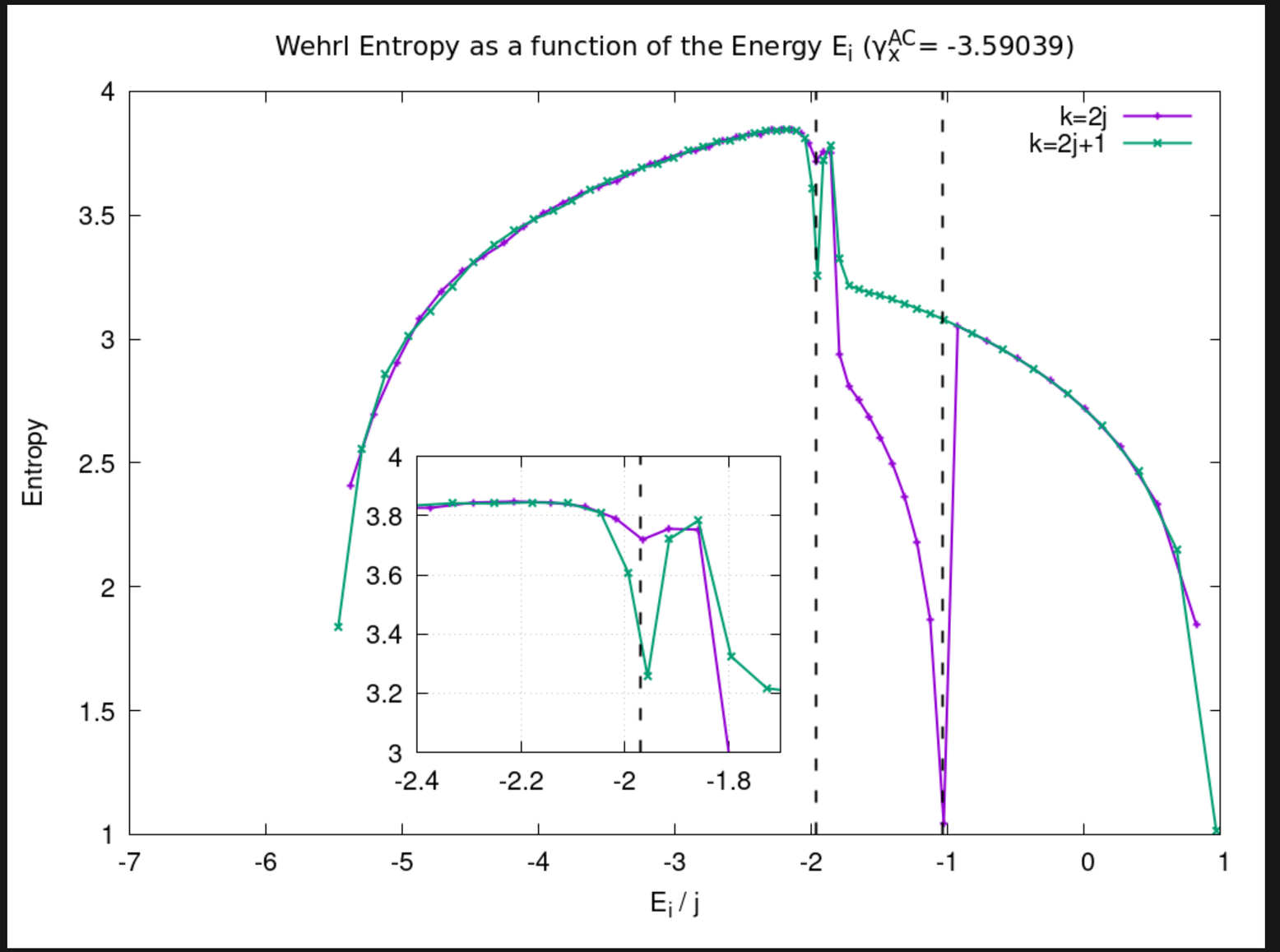
- The QPT occurs betwen k=60-61

3) Heat map of the Entropy

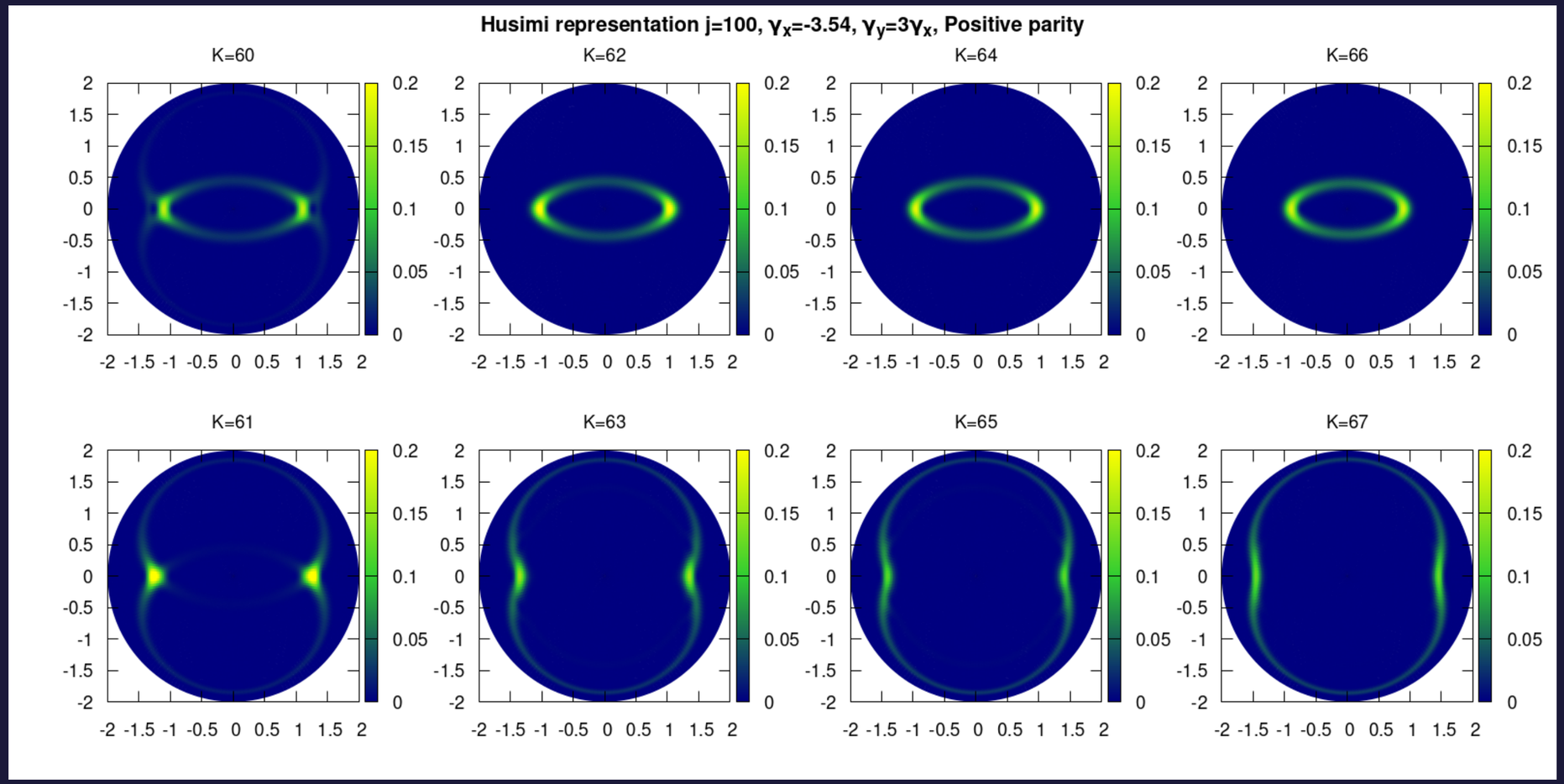
- Map of the entropy at the states k= 60 - 69 and the γ_x range [-4.5,-3.9]

- 2 AC:
  - γ_x = - 4.10331
  - γ_x = -4.41895

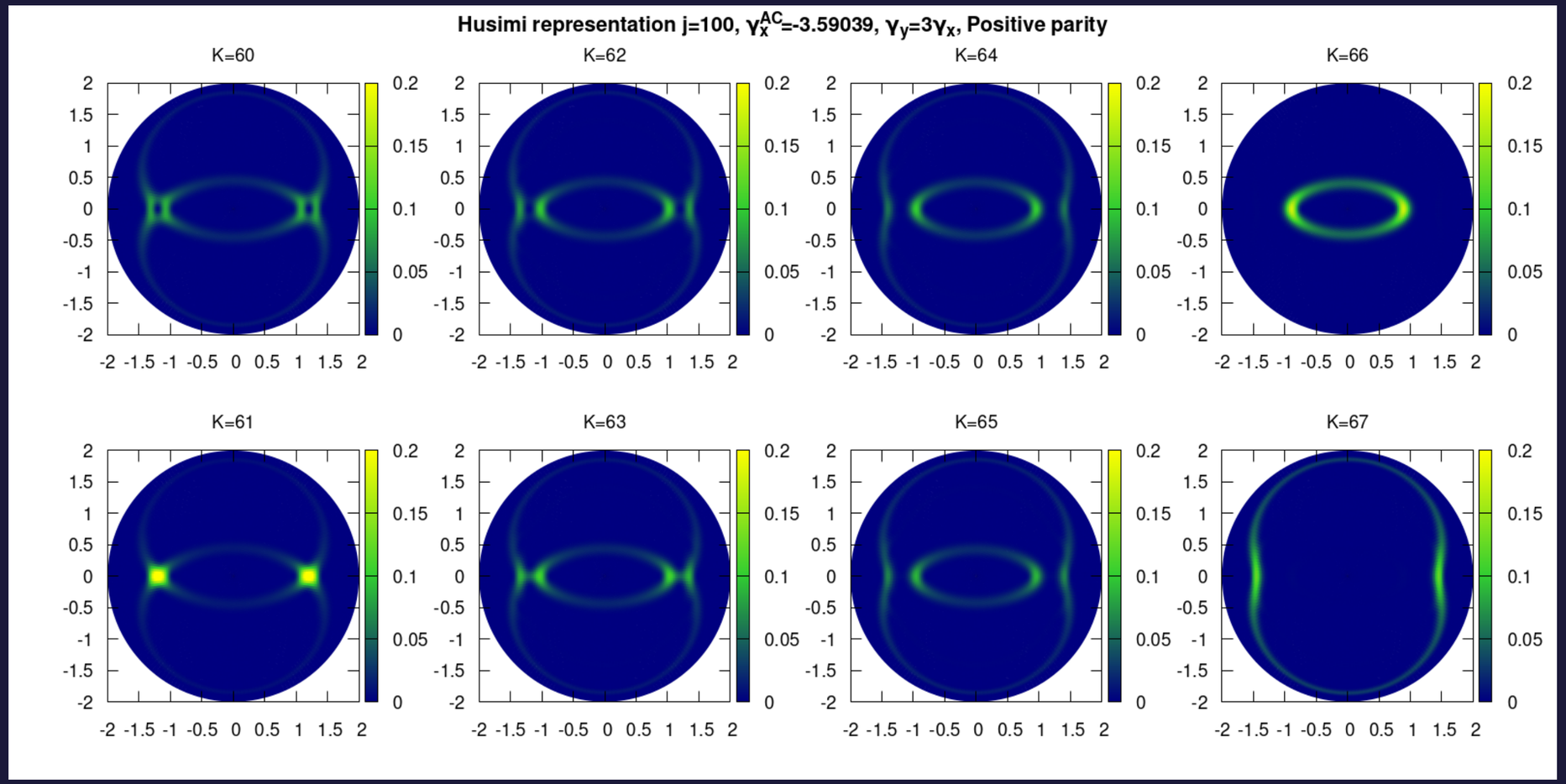
1) 1st AC: -3.59039



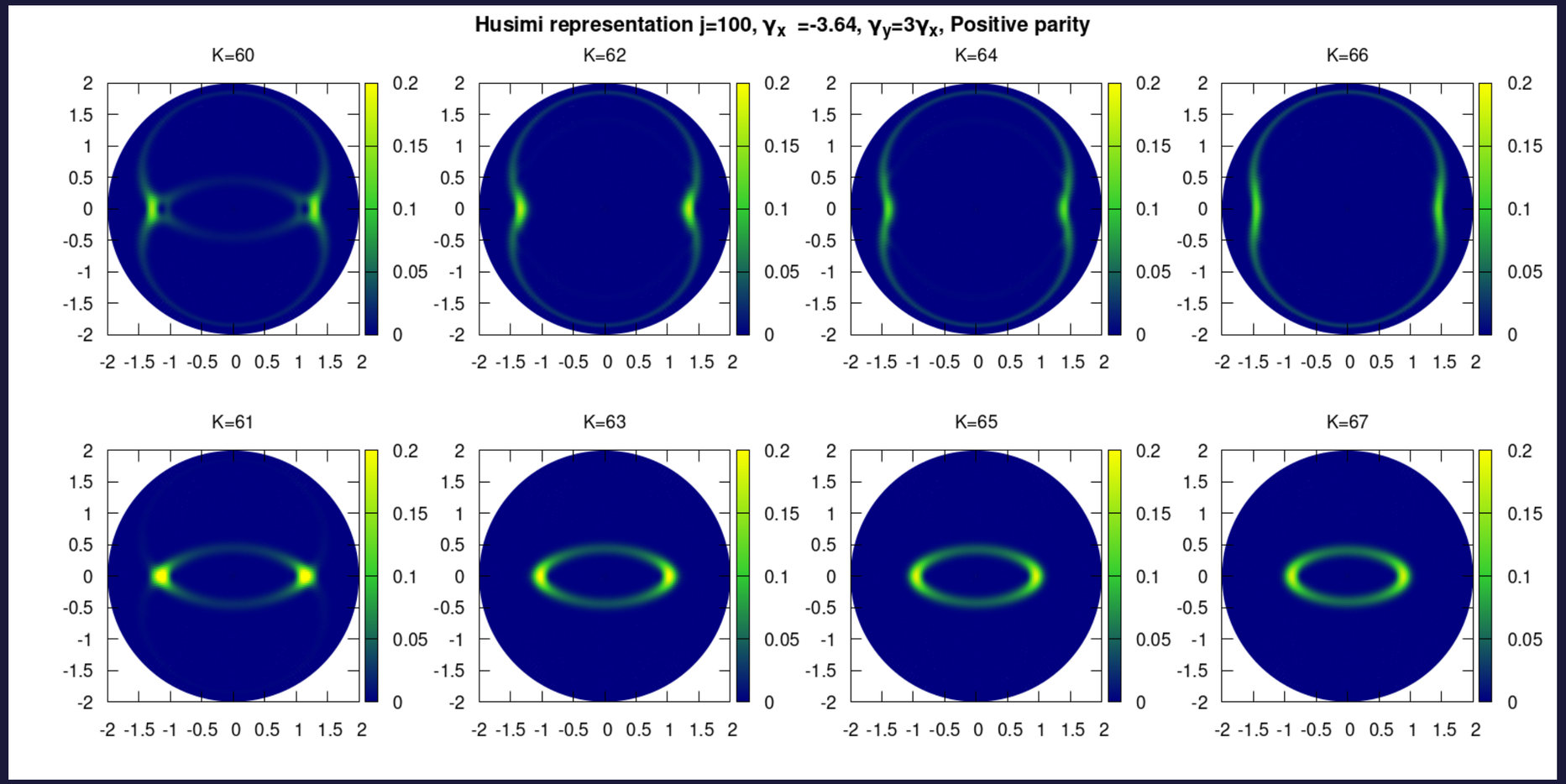
2) Husimi Representation



Before the avoided crossing

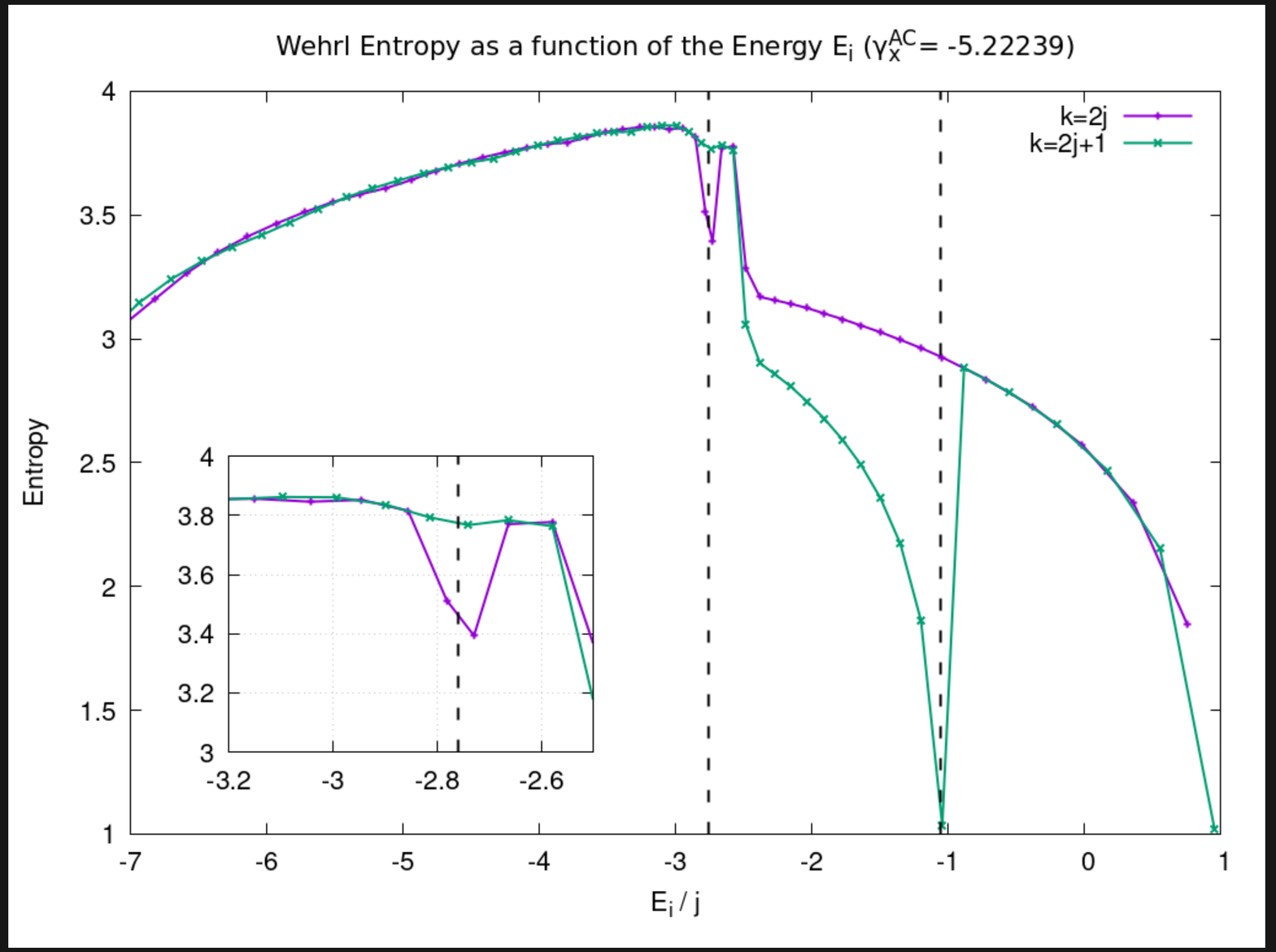


At the avoided crossing

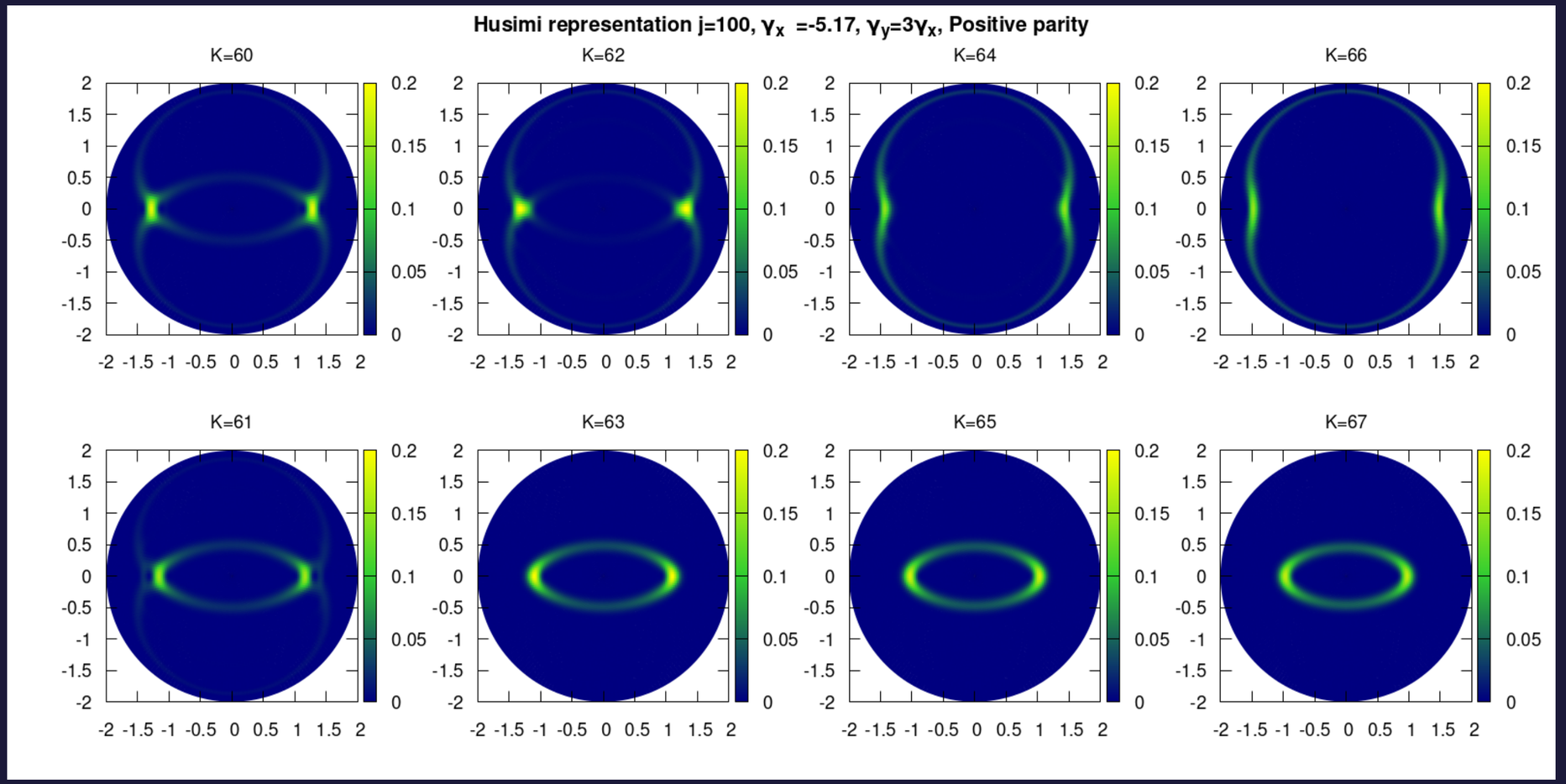


After the avoided crossing

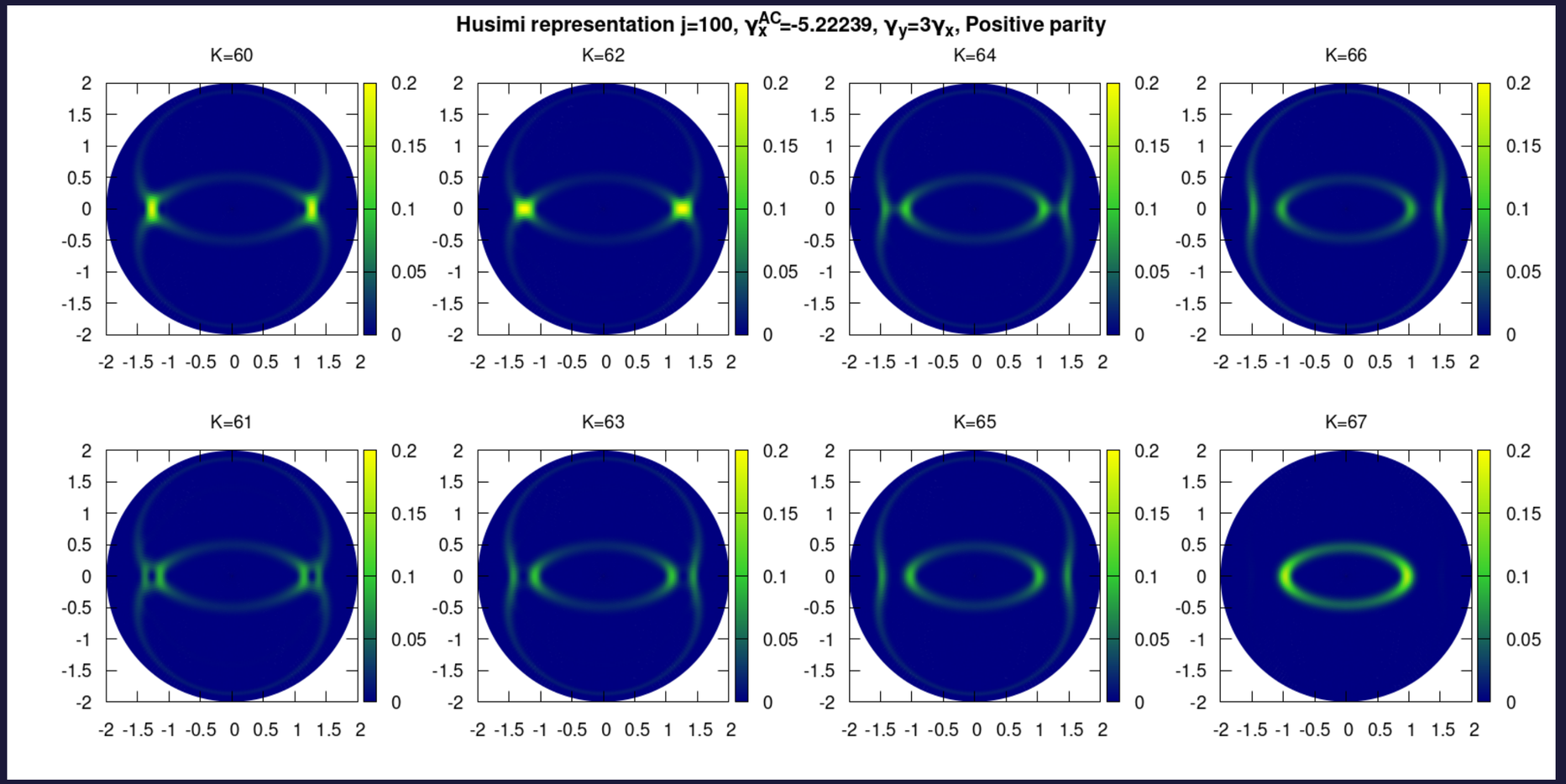
1) 2nd AC: -5.22239



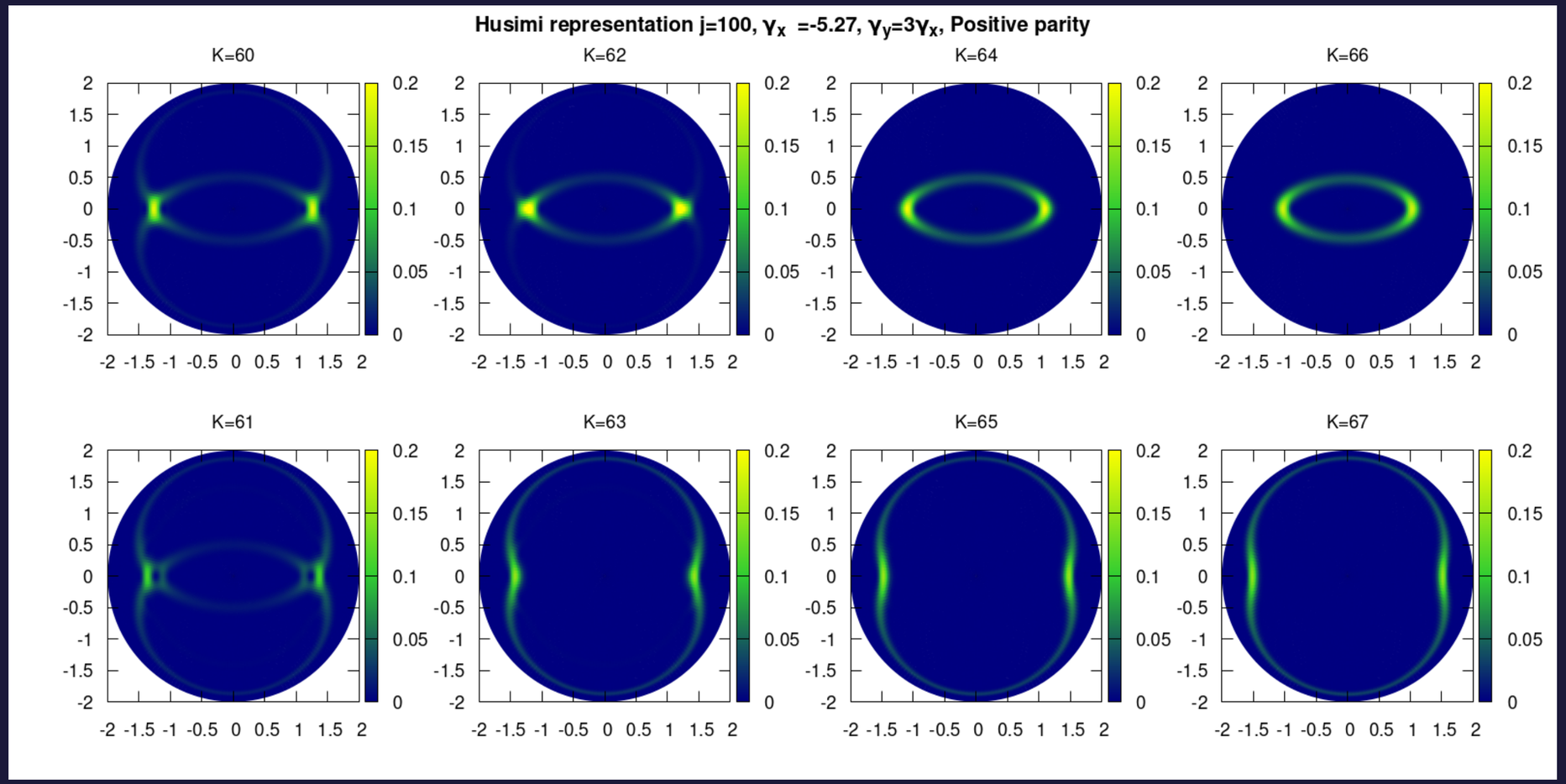
2) Husimi Representation



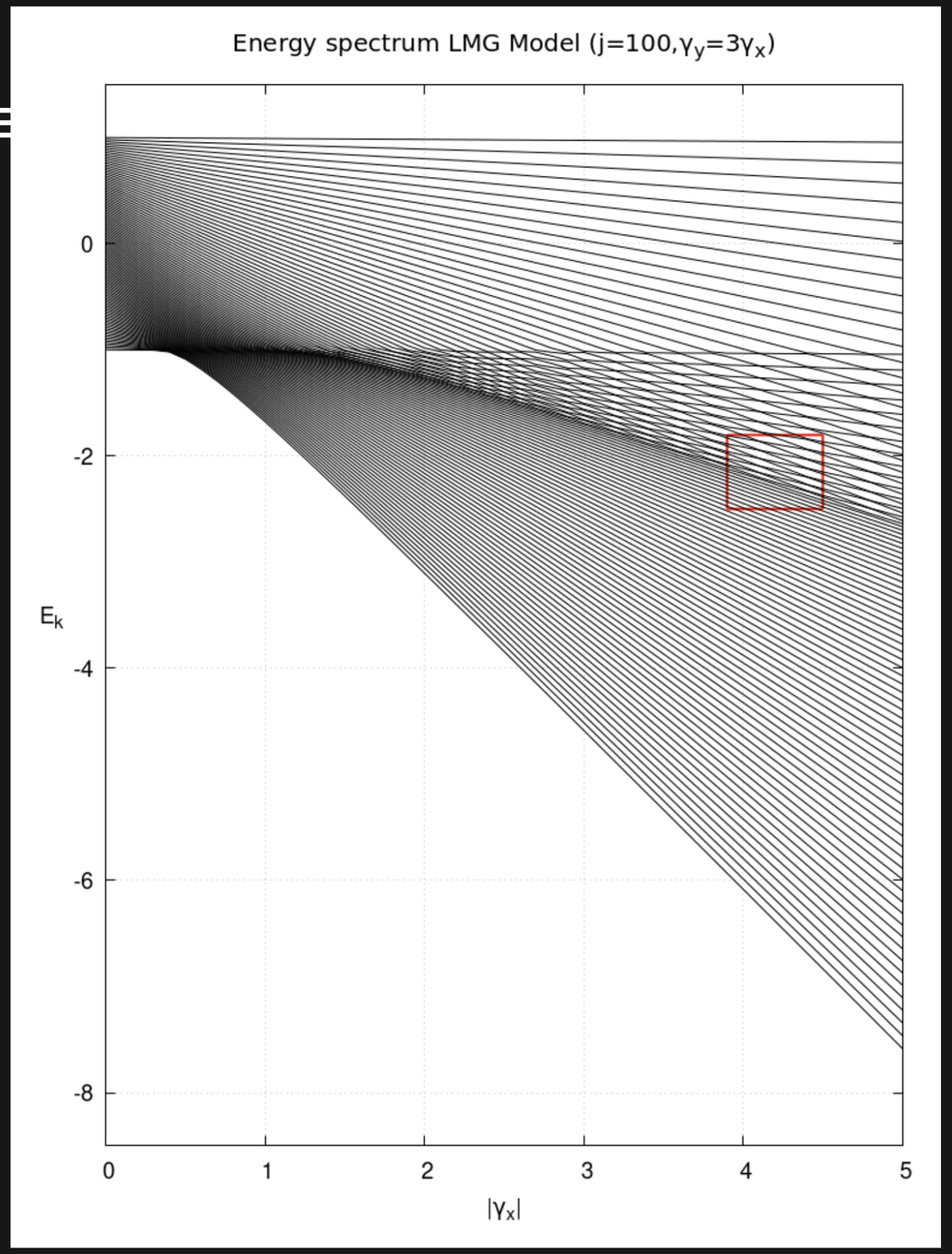
Before the avoided crossing



At the avoided crossing

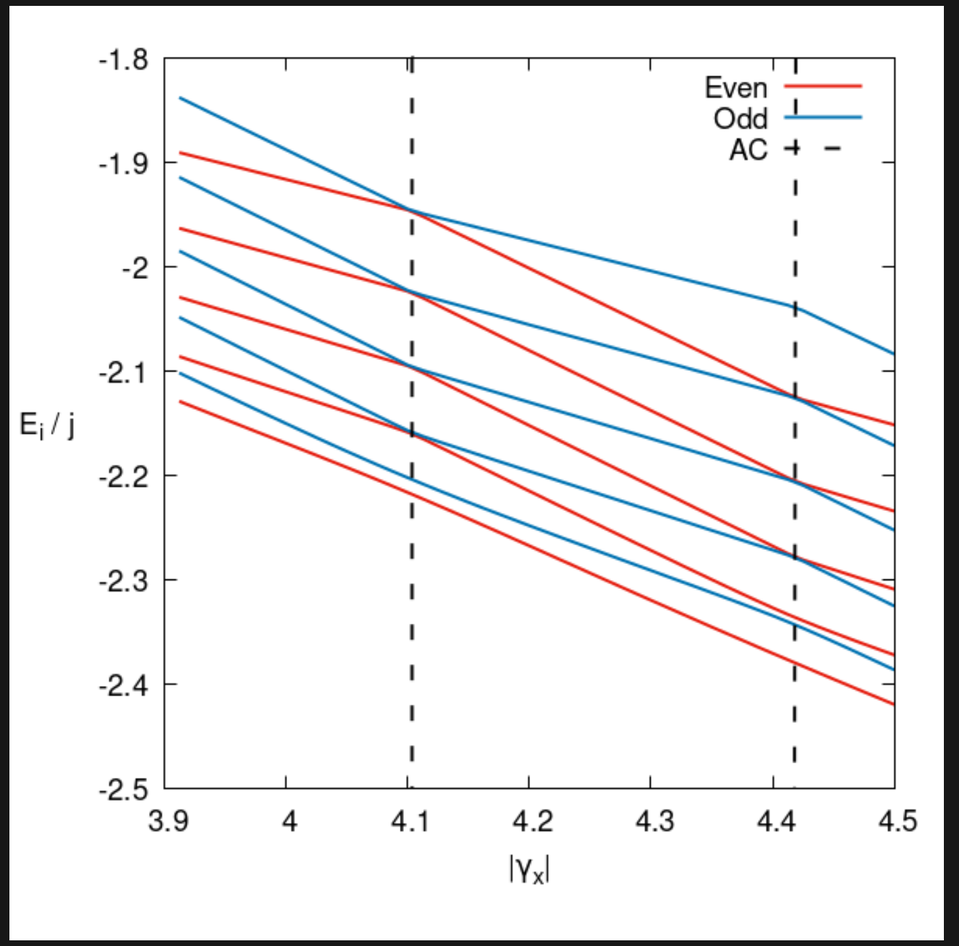


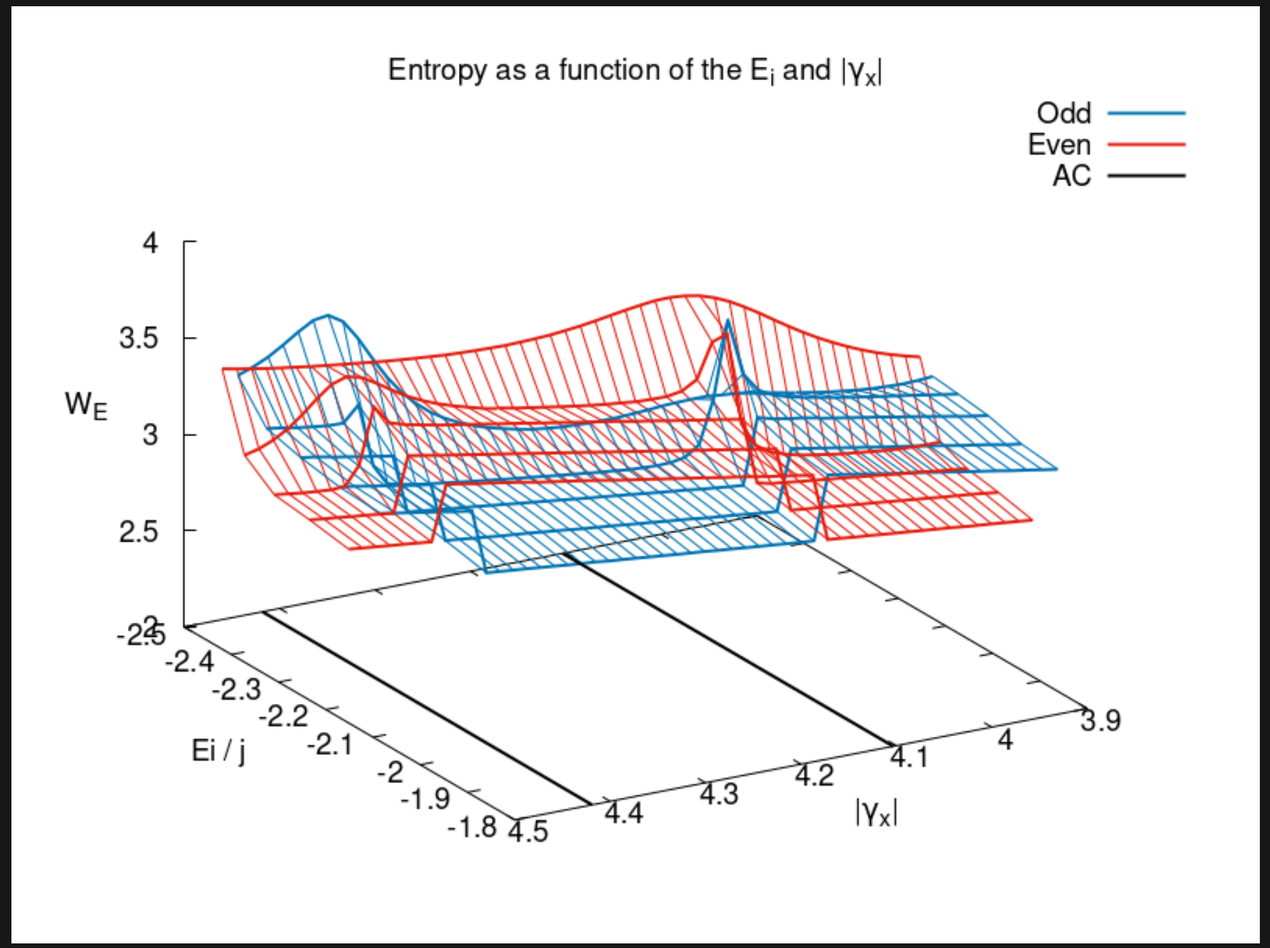
After the avoided crossing



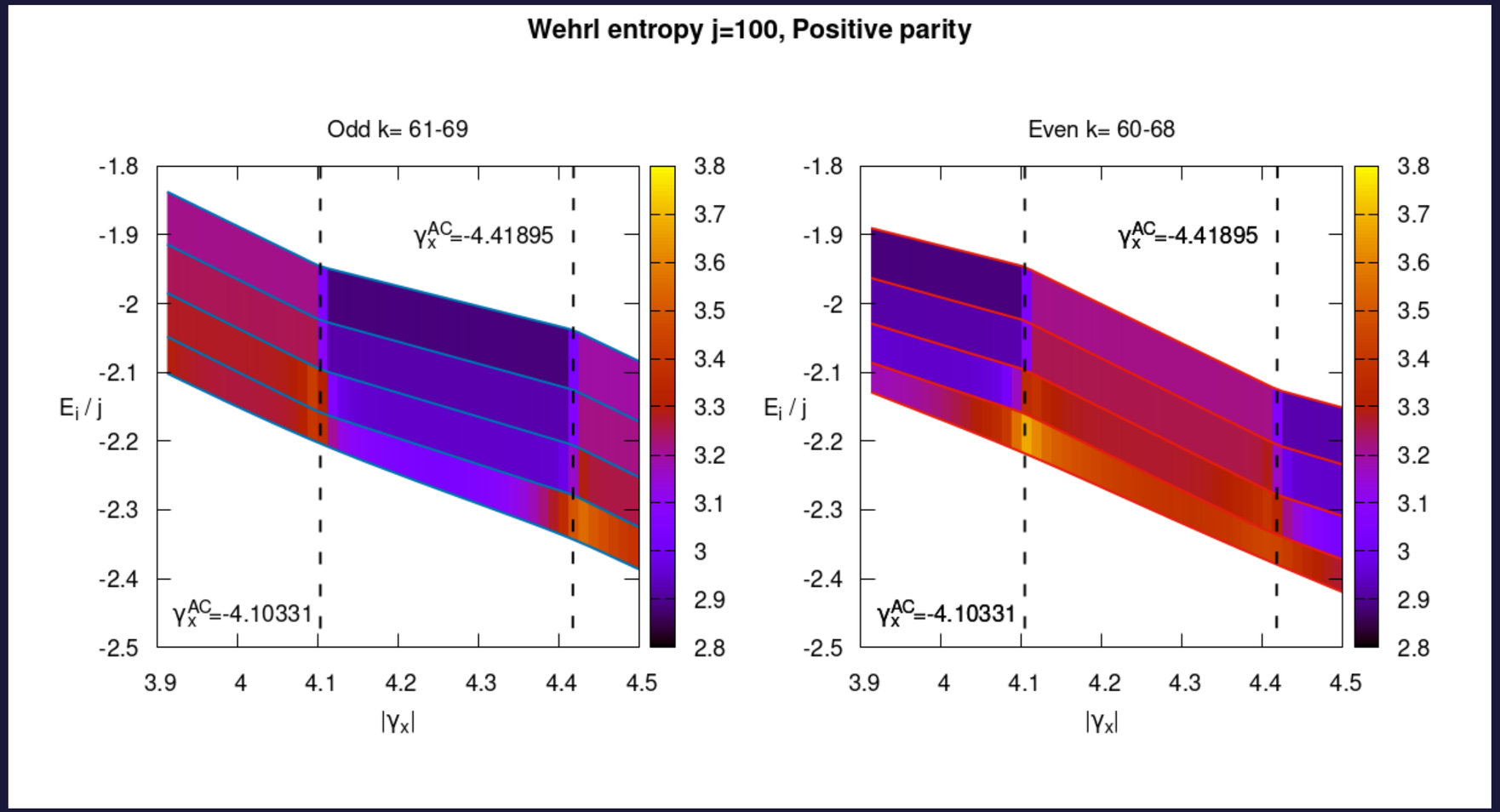
3) Heat map of the Entropy

- Region of the Hamiltonian spectrum where the Wehrl Entropy was calculated





Wehrl Entropy of the odd and even levels of the positive parity at the previous region.



Wehrl entropy between two avoided crossings