SUMMARY OF THE 2ND WEEK

- **GROUP2**

YI-PING XU

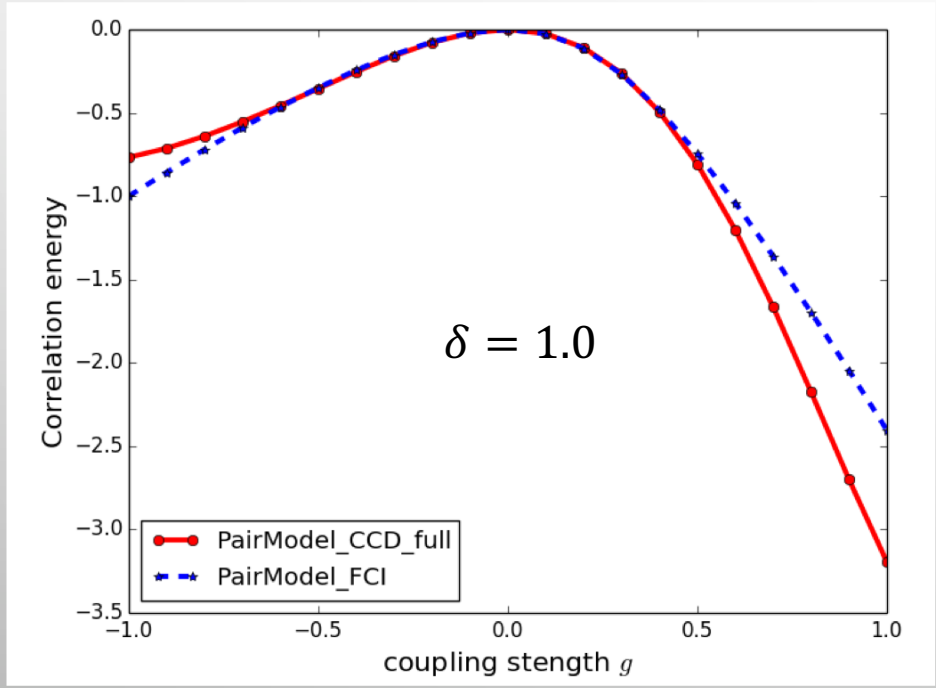
- JAN LUCAS HOPPE
- CHEN-CAN WANG

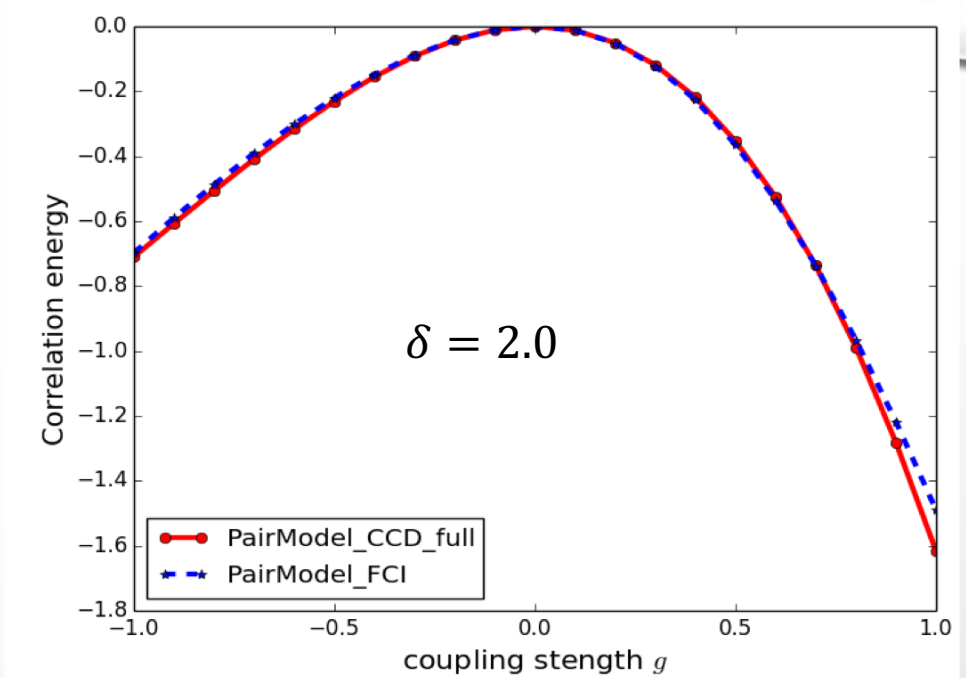
Correlation energy calculated by CCD

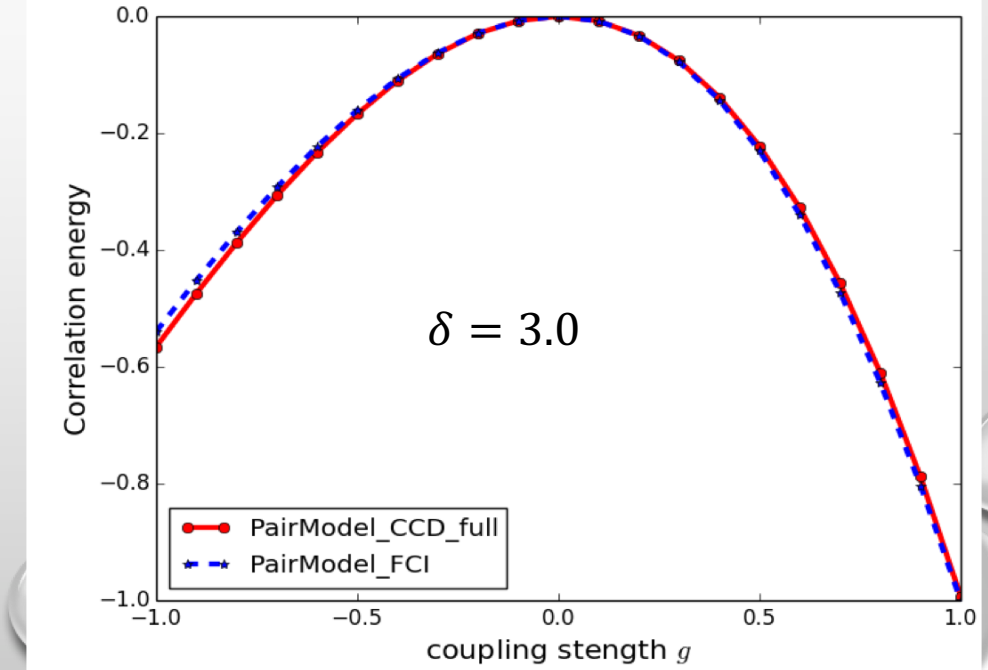
Still the pairing Hamiltonian:

$$H = \sum_{p\sigma} \delta(p-1) a^{\dagger}_{p\sigma} a_{p\sigma} - g \sum_{pq} P^{+}_{p} P^{-}_{q}$$

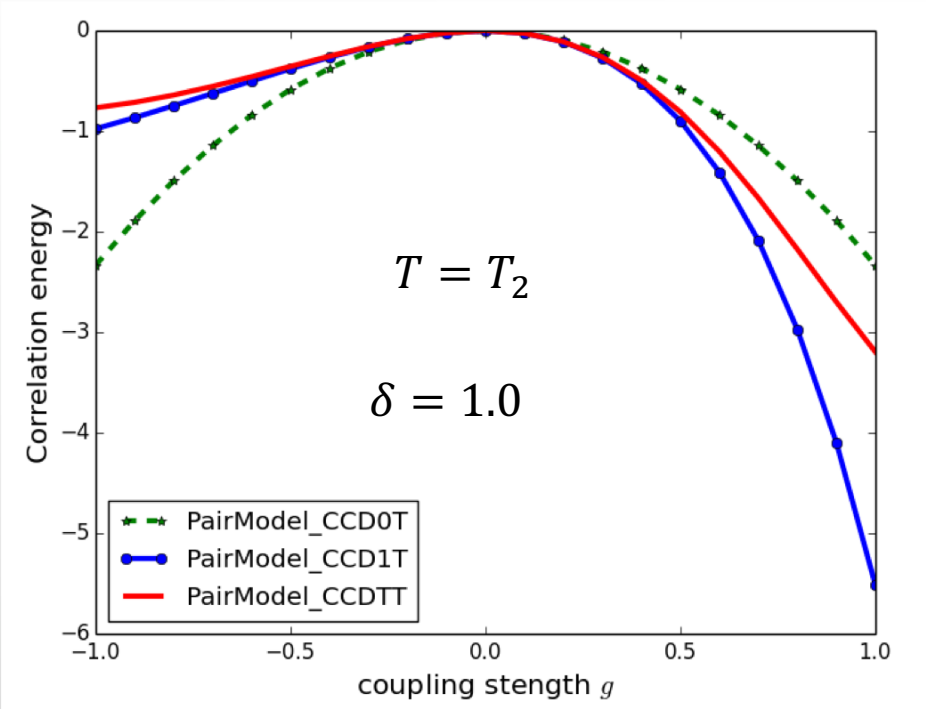
with 4 orbits & 4 particles

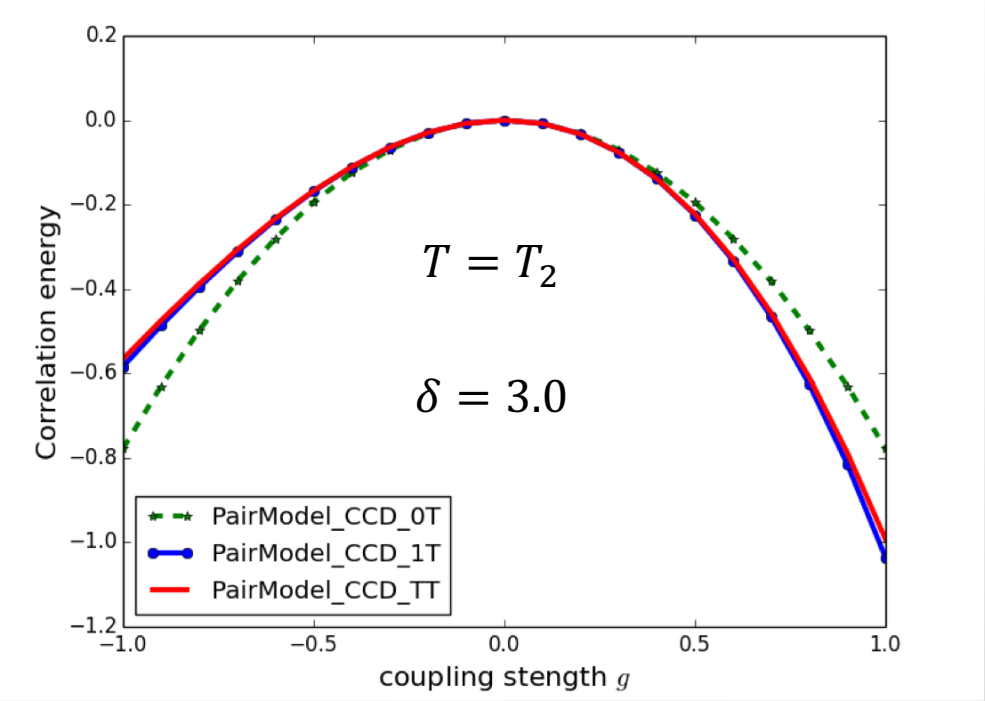






Contributions order by order

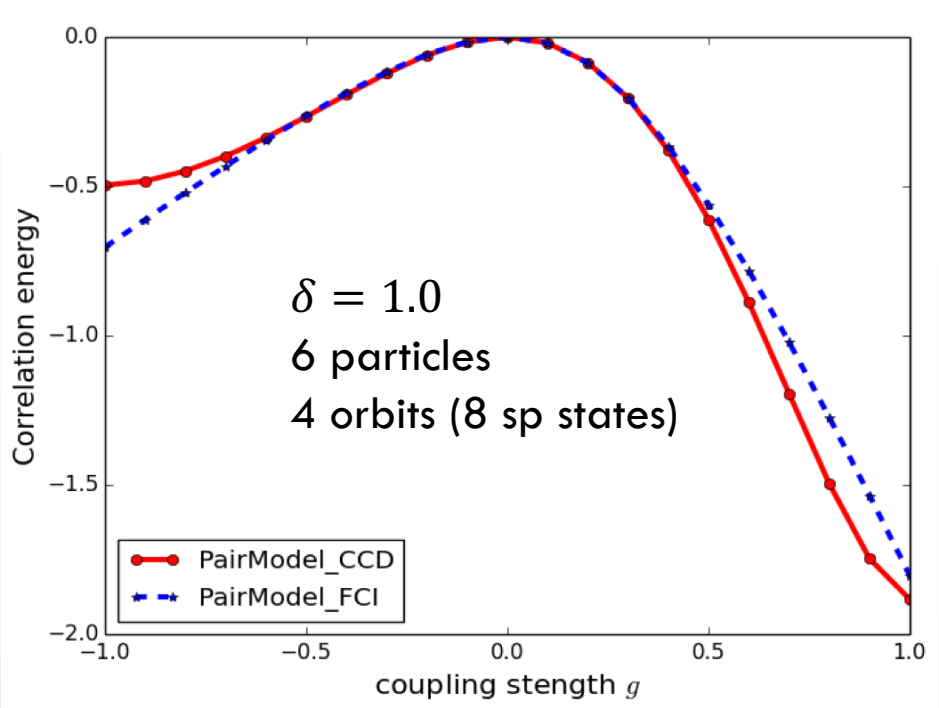


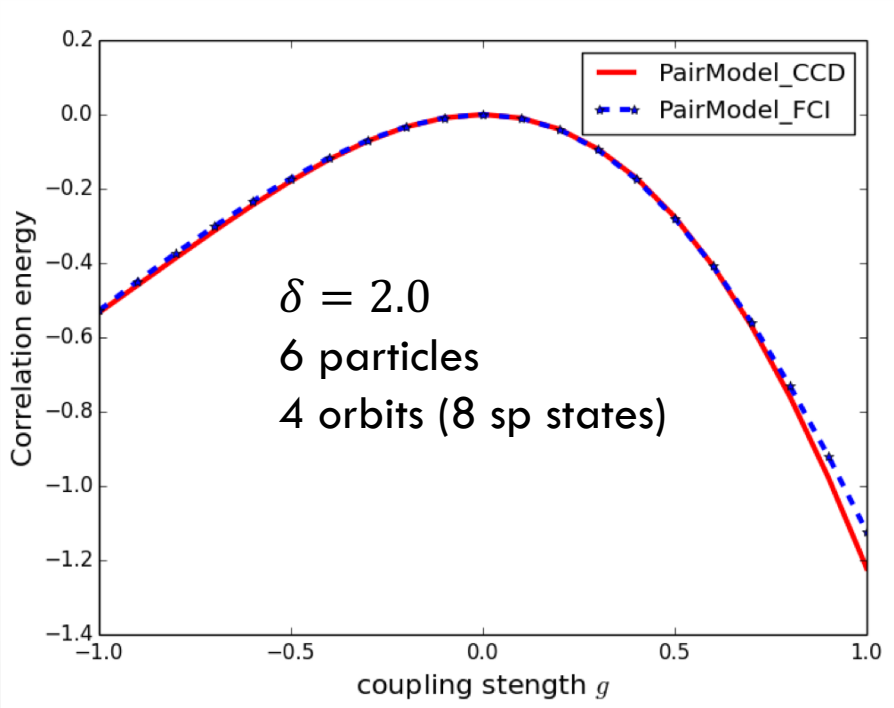


Iteration formula:

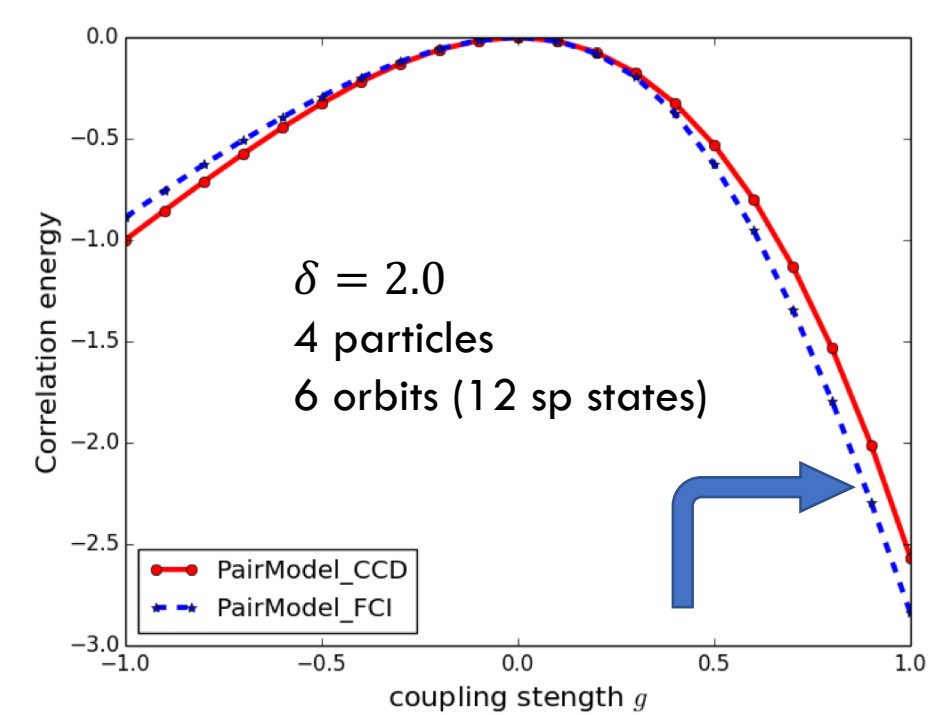
$$t_{ij}^{ab} = t_{ij}^{ab} + \frac{\overline{H_N}_{ij}^{ab}}{f_i + f_j - f_a - f_b}$$

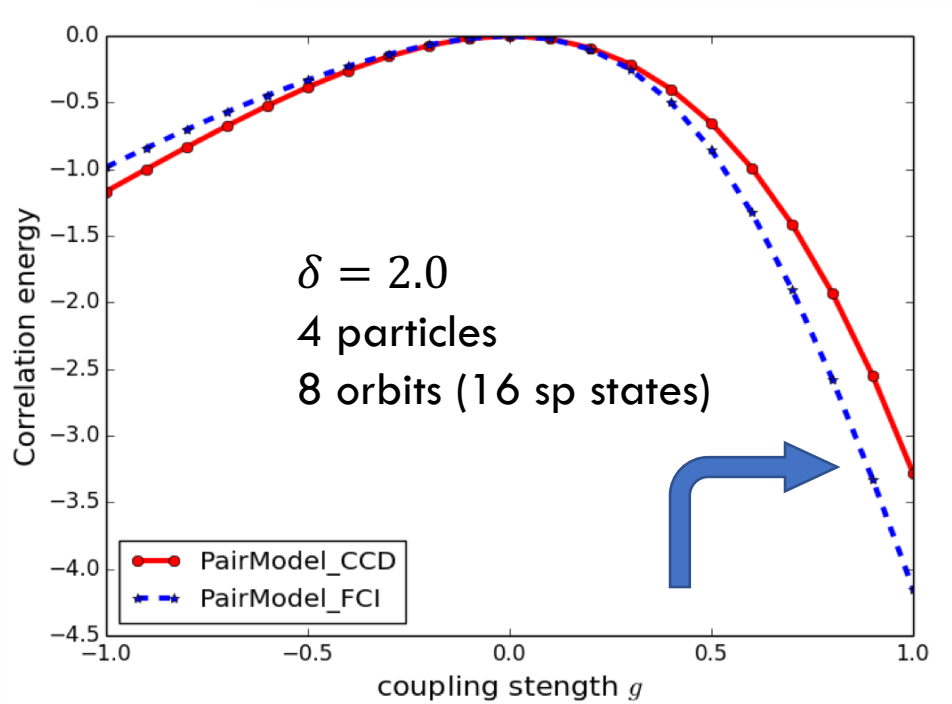
More particles – cross check





More orbits – cross check





Difference goes larger with more orbits (sp states) as expected.

THANK YOU FOR YOUR ATTENTION !