Spectral weight transfer in the one particle spectral function.

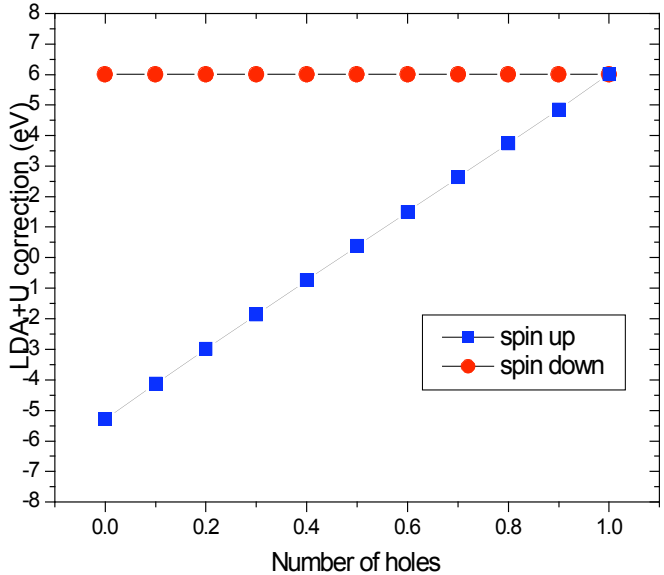
George sawatzky UBC

Elfimov unpublished

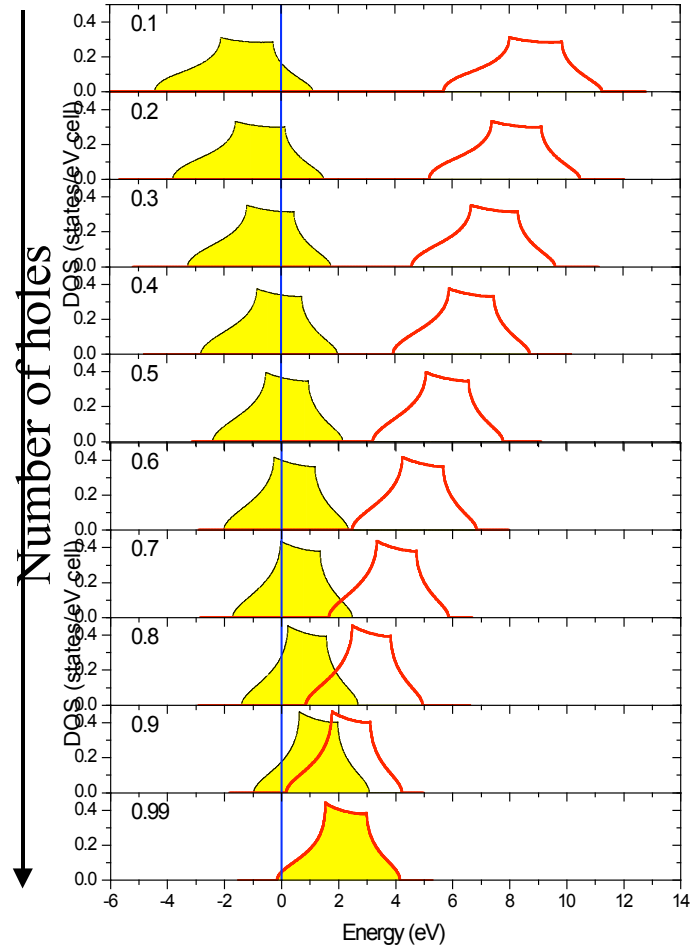
SC Hydrogen

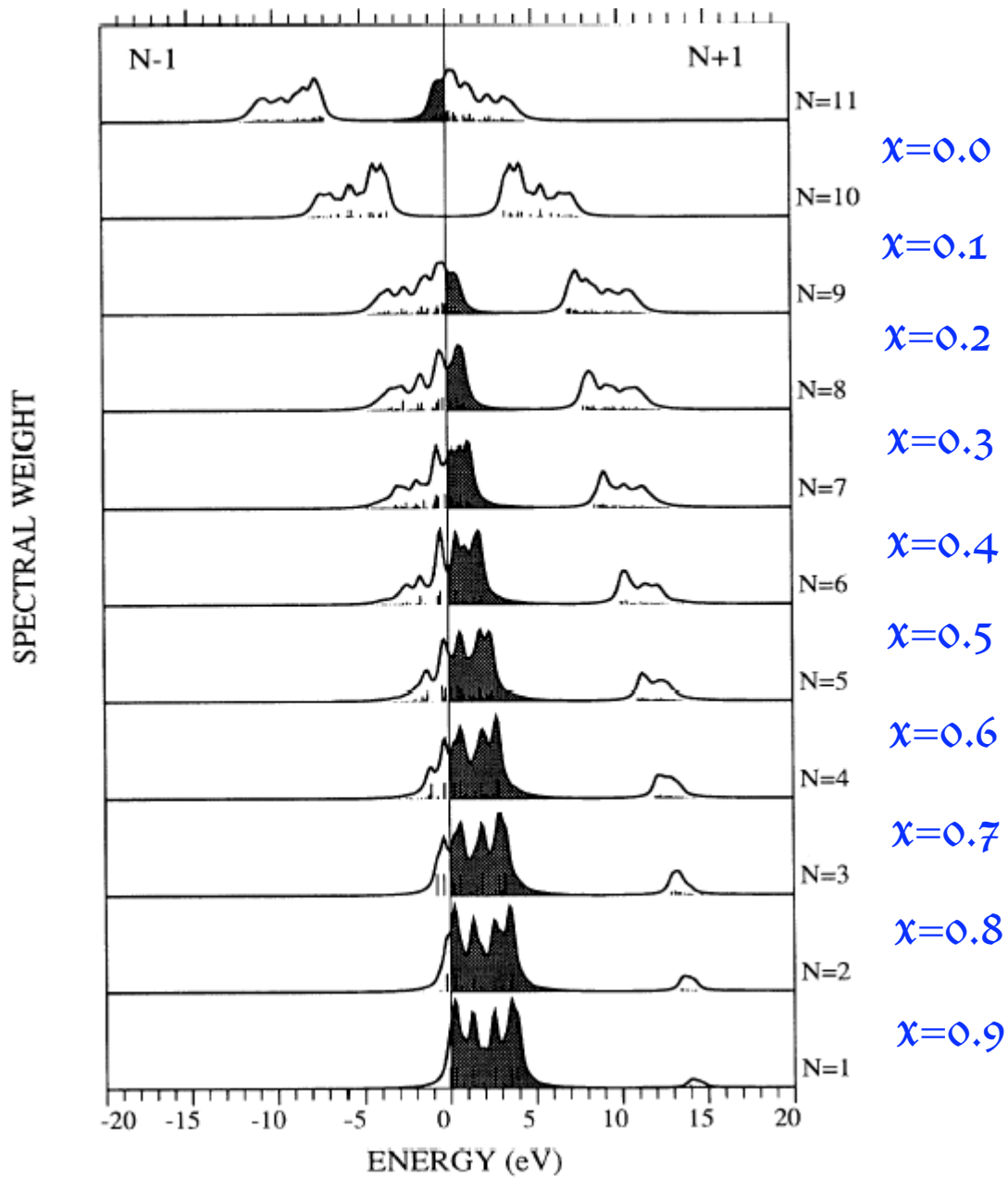
a =2.7 Å
U=12eV

LDA+U potential correction



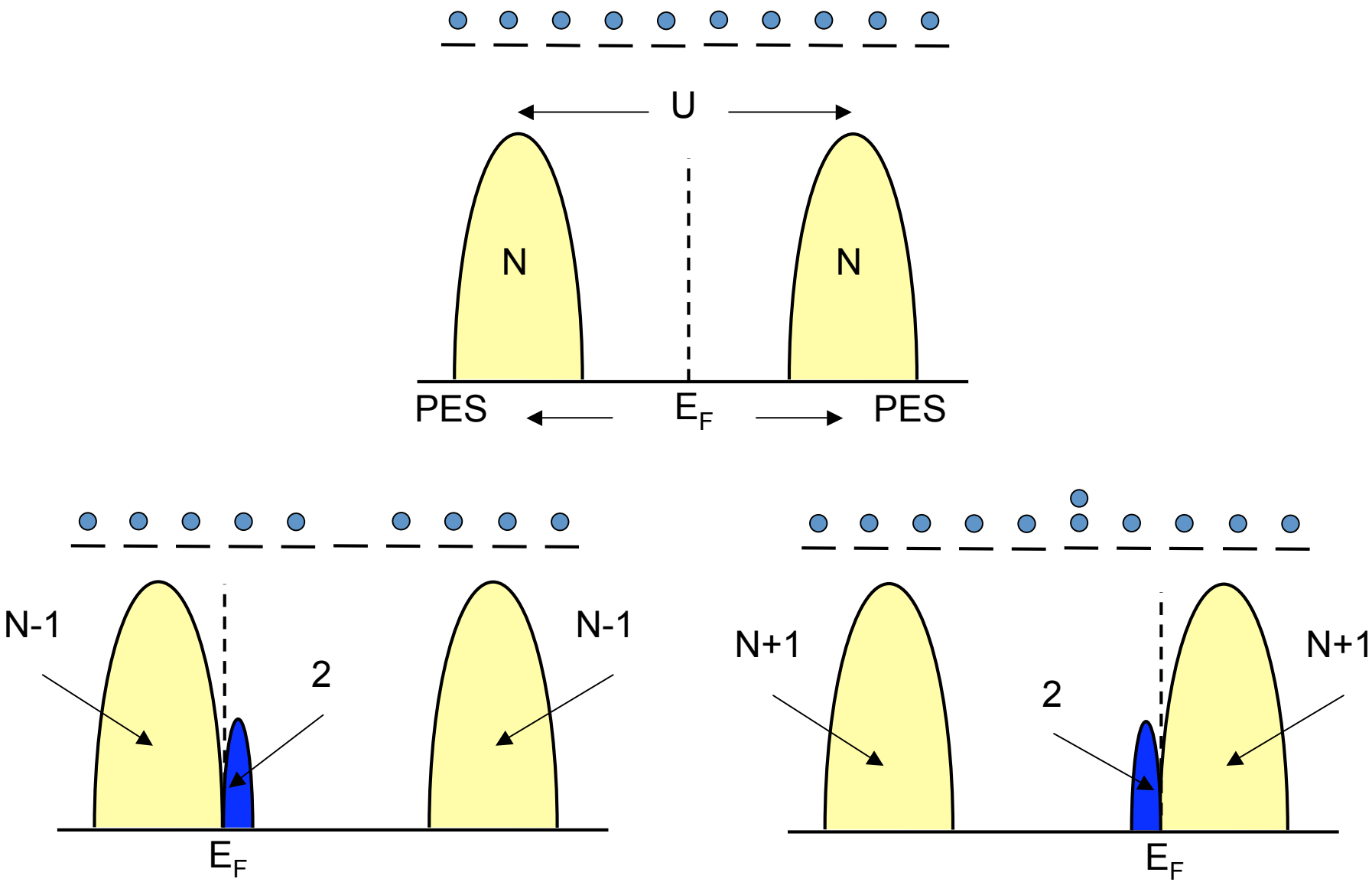
LDA+U DOS



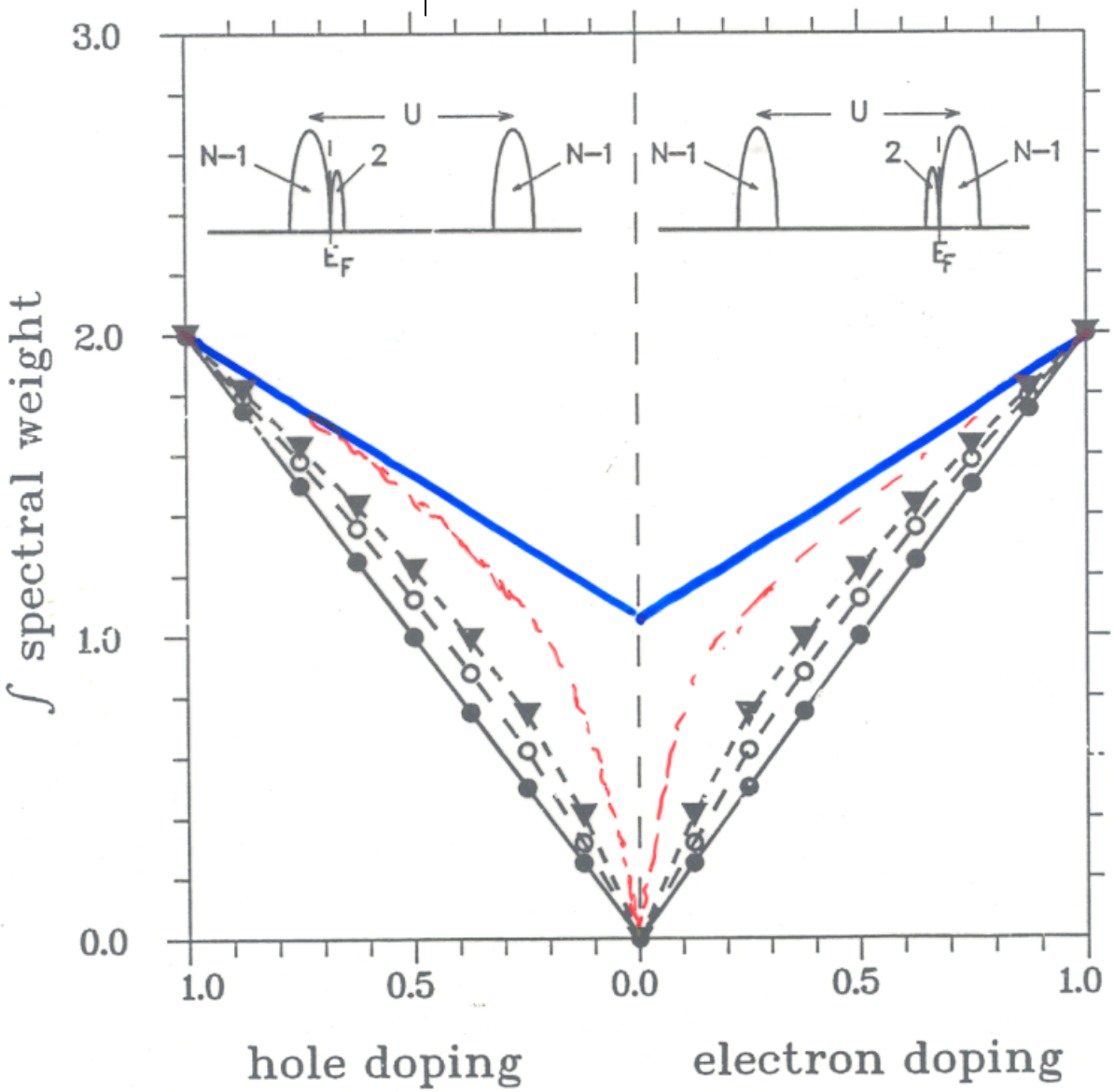


Meinders et al, PRB 48, 3916 (1993)

Mott – Hubbard

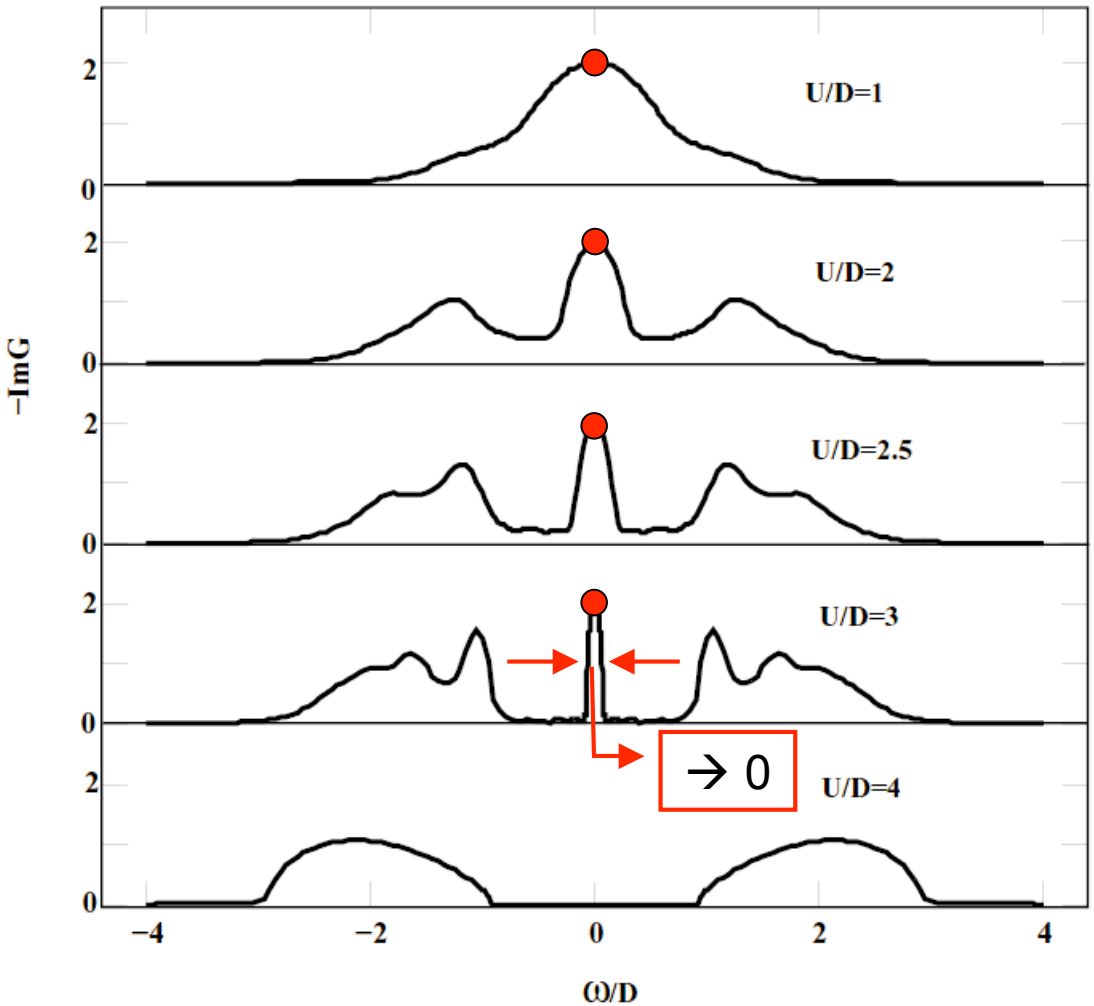


These particles block 2 or more states



Bosons – block 0 states
Fermions – block 1 state

Dynamic Mean Field Theory



D → inf.
Single Impurity
Σ → k independent

½ filled Hubbard model

Local spectral density at T = 0, for several values of U, obtained by the IPT approximat

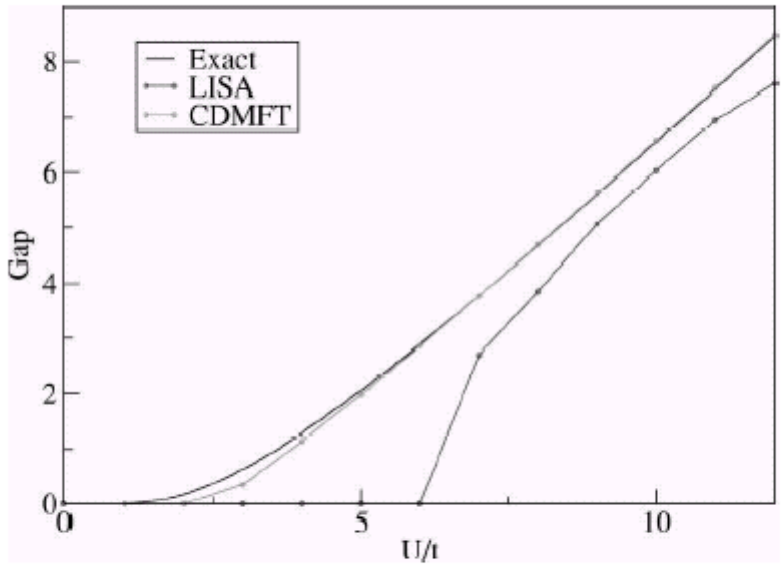


FIG. 1. Spectral gap as a function of U/t for the half-filled Hubbard model.