

Quark spectral functions in quark matter

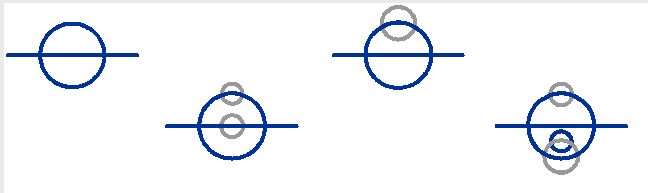
F. Frömel, S. Leupold, U. Mosel,
Phys. Rev. C67 (2003) 015206

Short-range correlations in quark matter?

Extension of model for nucleons



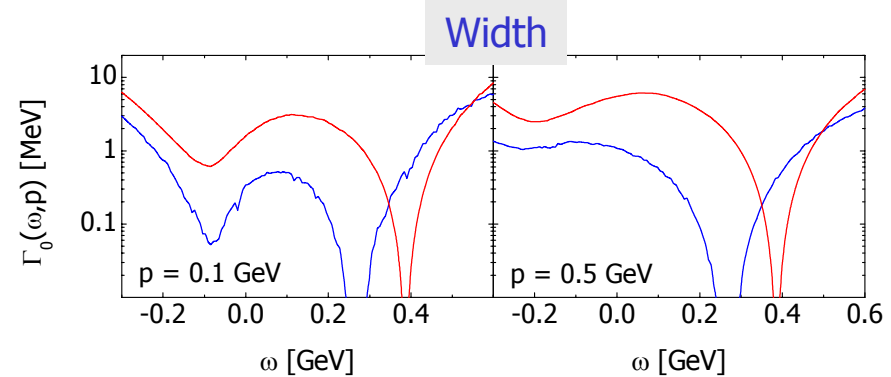
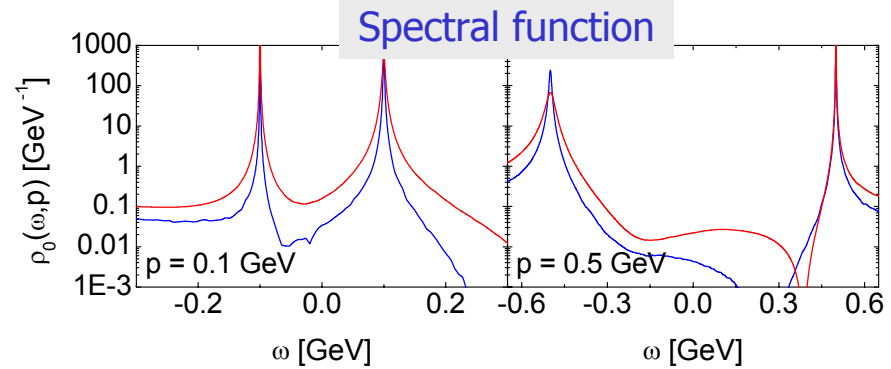
Self-consistent calculation
on **1p2h** and **2p1h** level:



Effective quark-quark interaction:
SU(2) NJL model

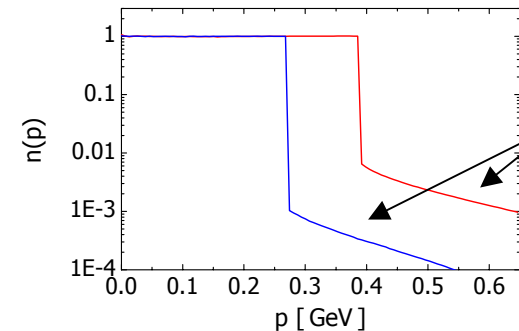
Simplification:

$\Sigma^{mf} = 0$ (chiral symmetry 'by hand')



$\omega_F = 0.387$ GeV
($\rho = 1.53 \text{ fm}^{-3}$)
 $\omega_F = 0.268$ GeV
($\rho = 0.51 \text{ fm}^{-3}$)

Momentum distribution

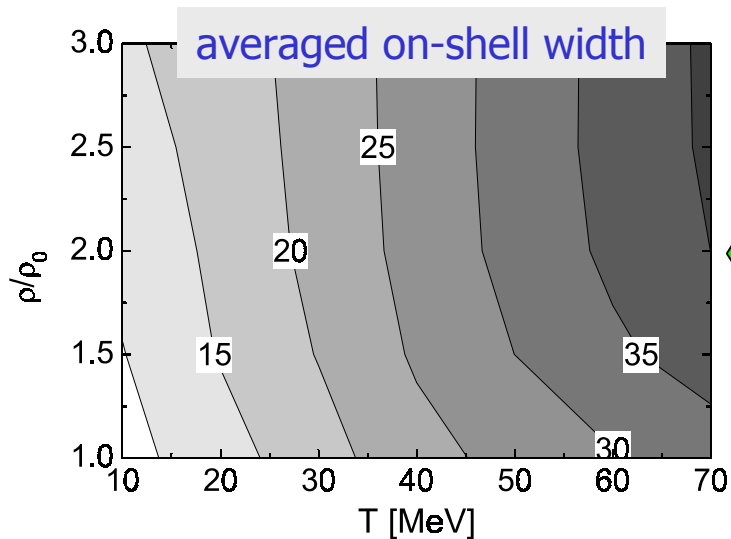


Short-range correlations in nuclear matter

Investigation of T, ρ dependence at CBM conditions

Extension of ' $T=0$ '-model:

- self-consistent model on **1p2h** and **2p1h** level
- effective **pointlike** interaction
- **mean-field** by **Skyrme** type potential



Saturation of correlations at high ρ !

F. Frömel, H. Lenske, U. Mosel,
Nucl. Phys. A, in print (nucl-th/0301038)

