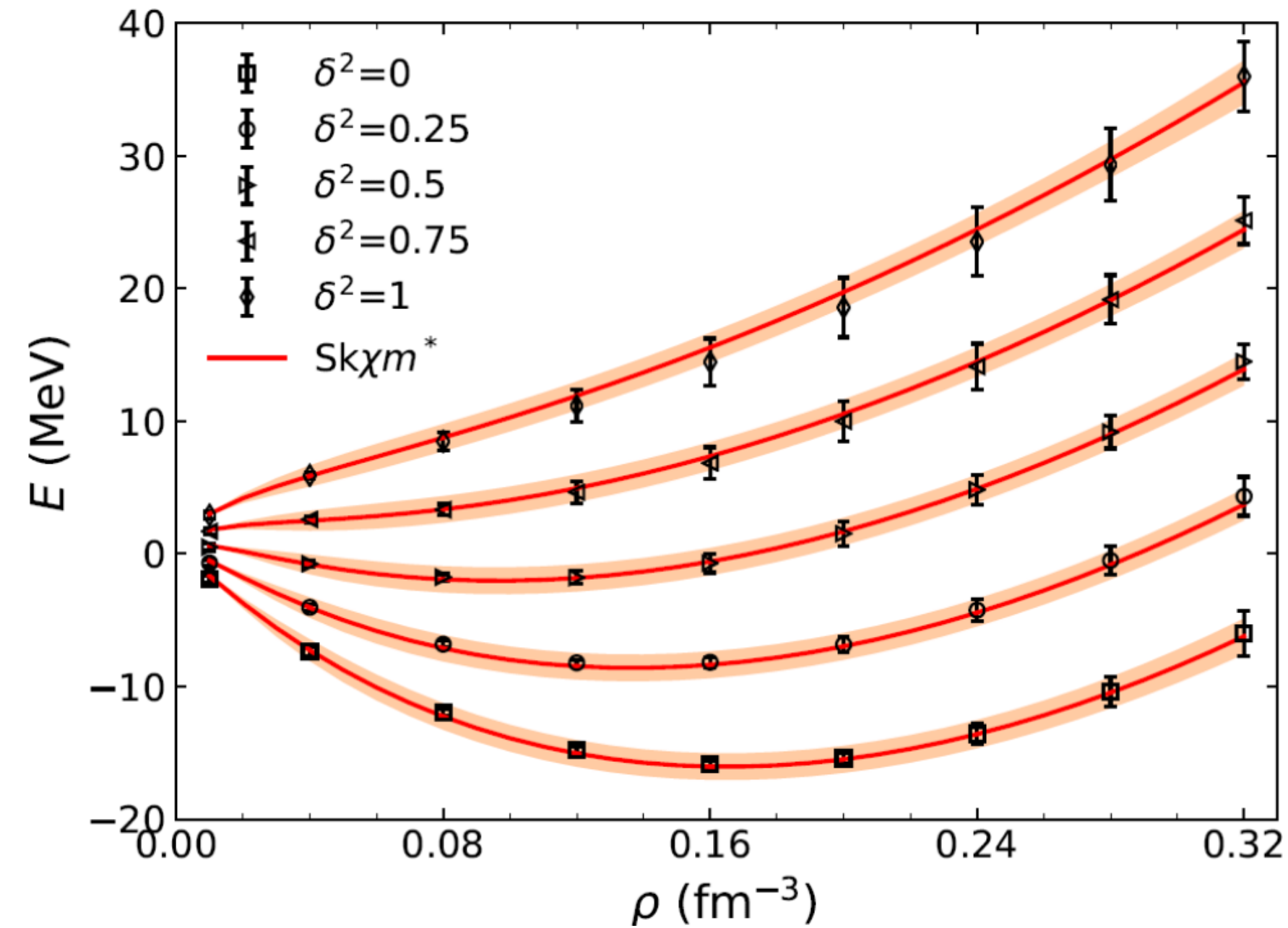
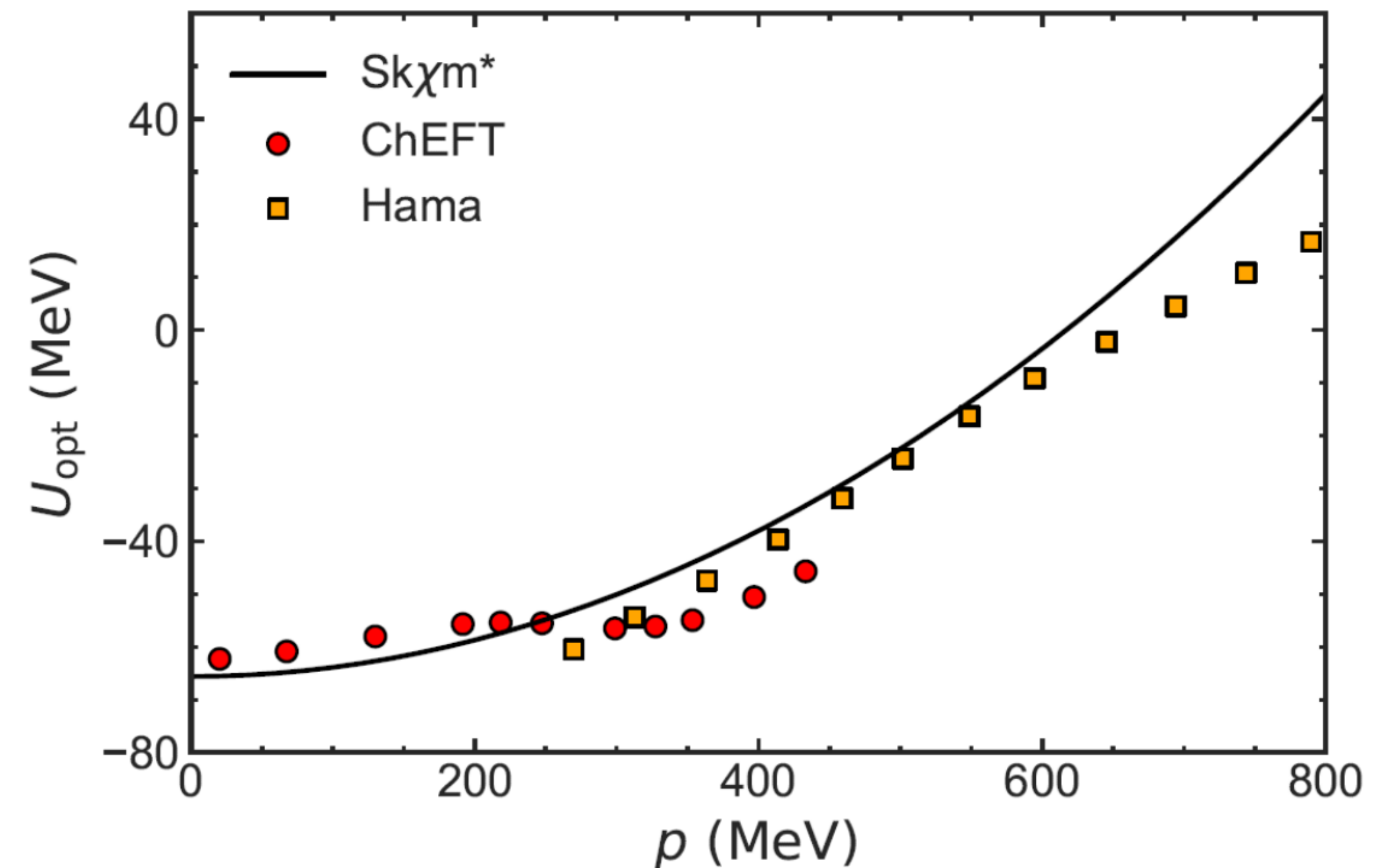


Microscopic input in to transport model

Sk χ m* energy density functional



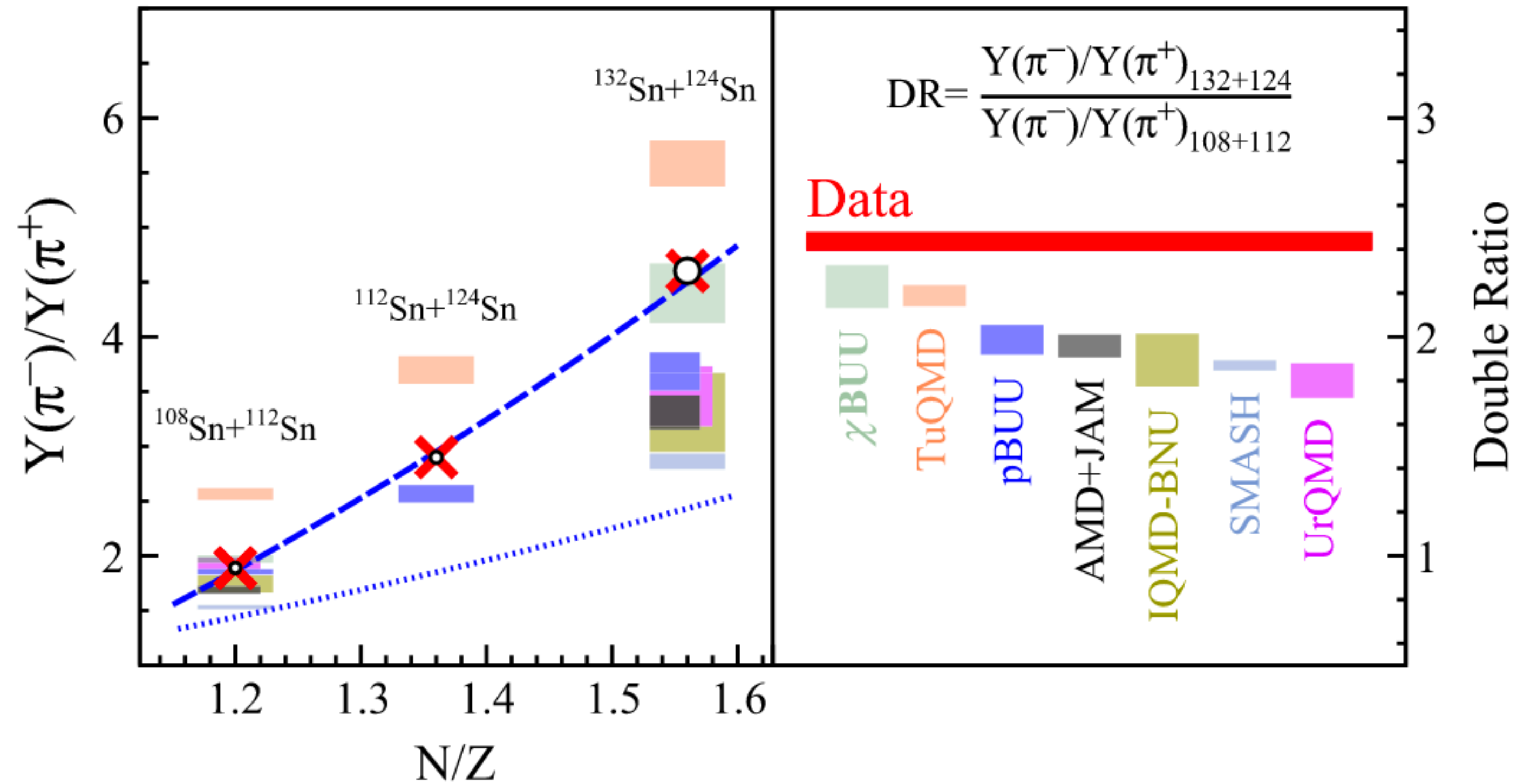
ZZ, Lim, Holt & Ko, PLB 777 (2018) 73



ZZ & Ko, PRC 98, 054614 (2018)

- Fit the EOS and effective mass from χ EFT.

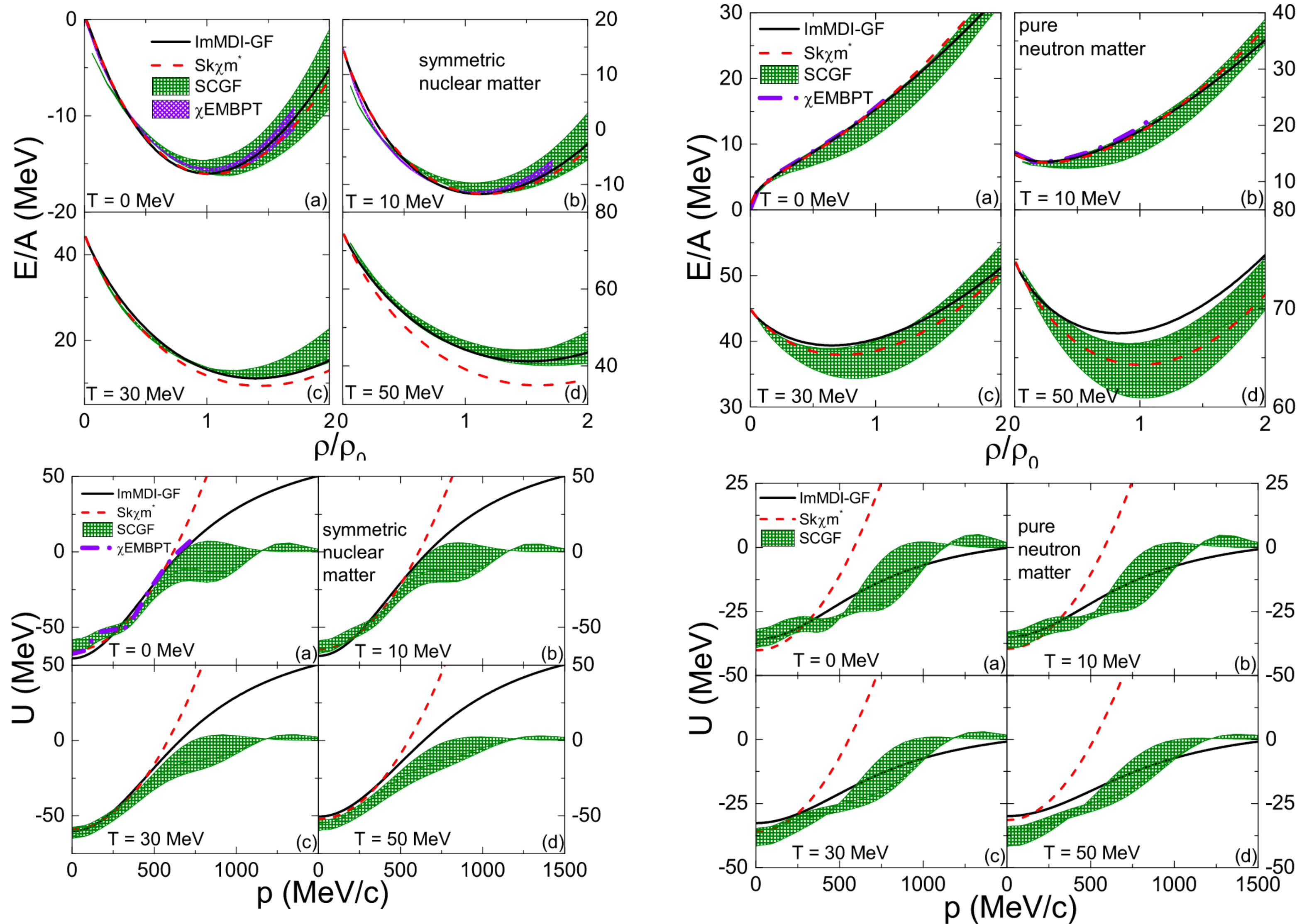
χ BUU model



Jhang et al., PLB 813, 136016 (2021)

ZZ & Ko, PRC 98, 054614 (2018)

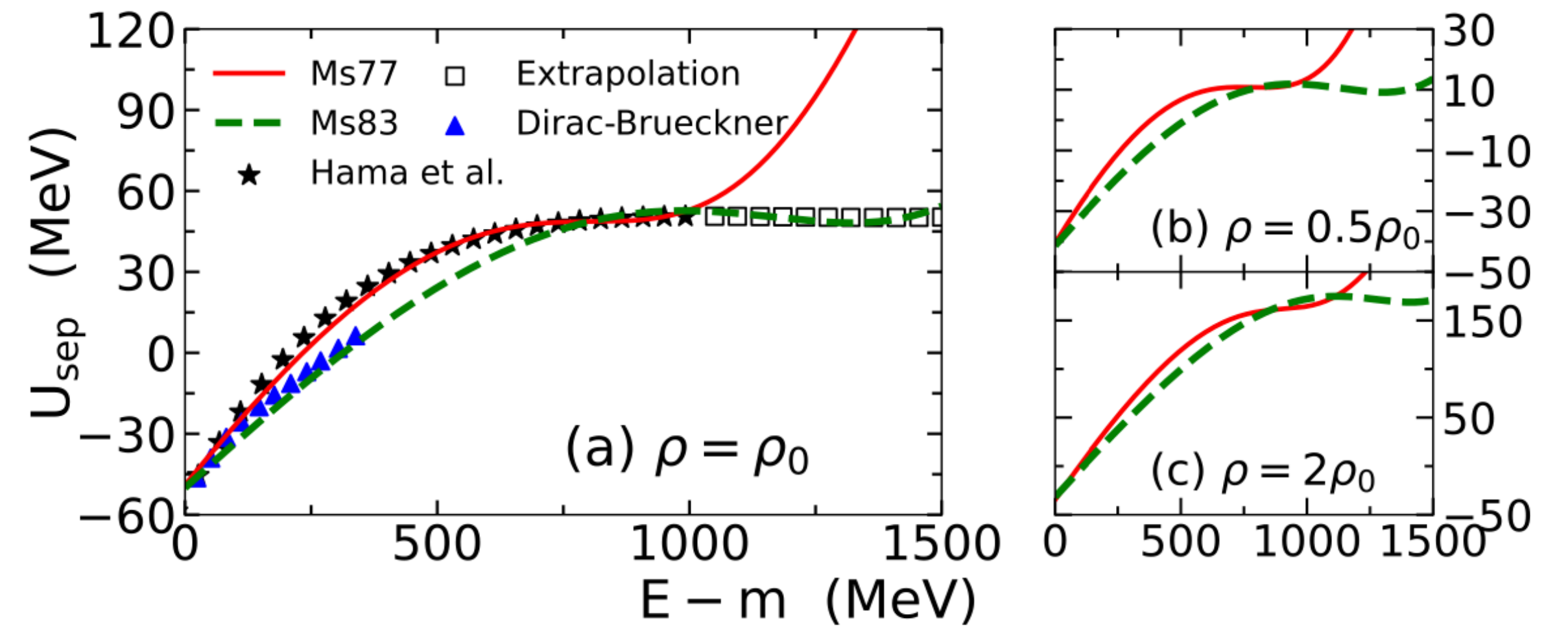
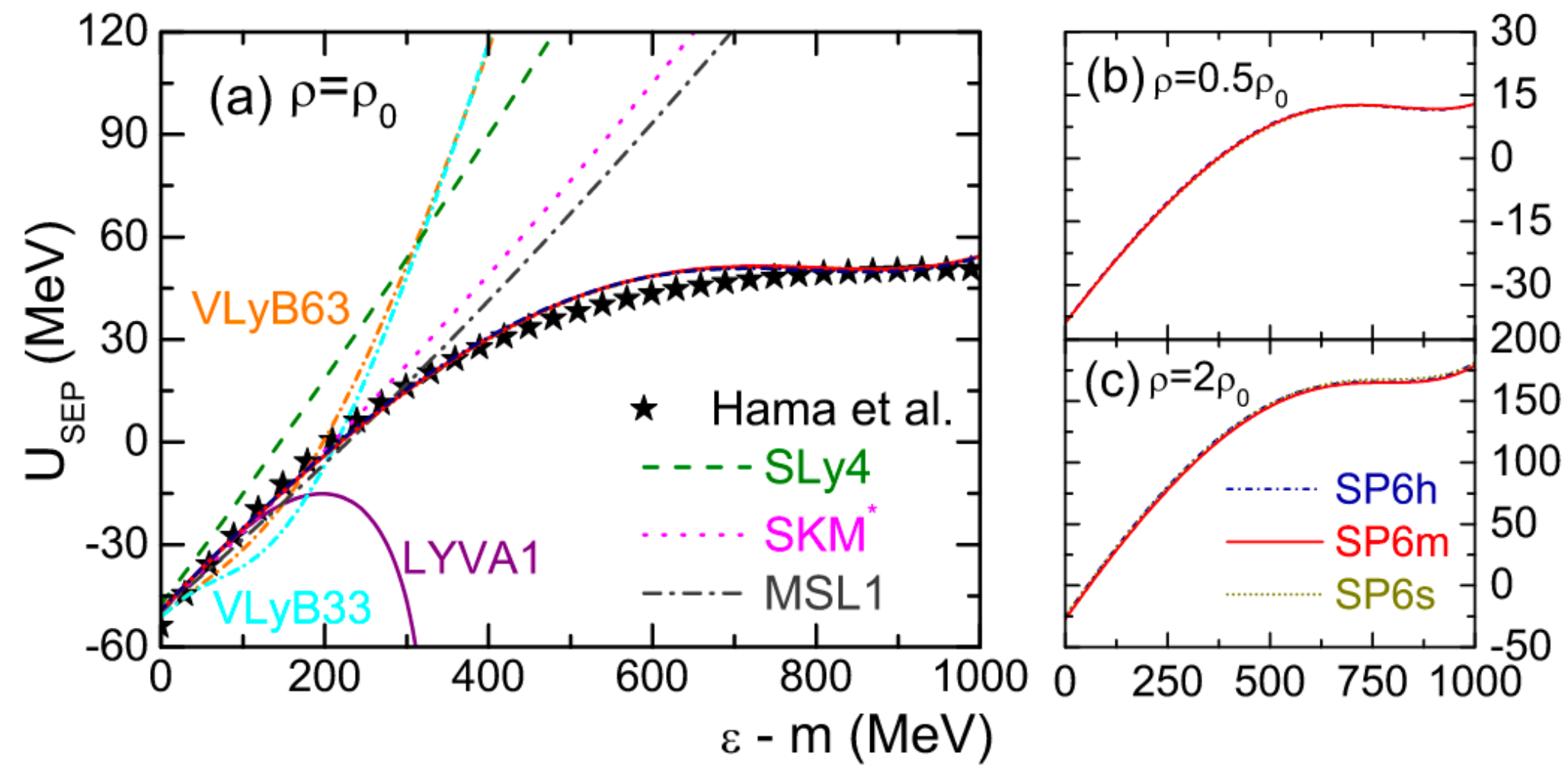
Limitation of Skyrme EDF



Xu, Carbone, ZZ and Ko,
PRC 100, 024618 (2019)

Failed to reproduce microscopic predictions at high momentum/temperature

Extended Skyrme interaction



Wang, Chen and Zhou, PRC98, 054618 (2018)
 Wang, ZZ, Chen and Ma, Front. Phys. 8:330.

Wang, Wang, Ye and Chen, PRC **109**, 054623 (2024)

With higher order momentum dependence, more flexible at higher momentum/temperature.

Microscopic inputs

- Equation of state
- Effective masses/momentum dependence
- In-medium cross sections