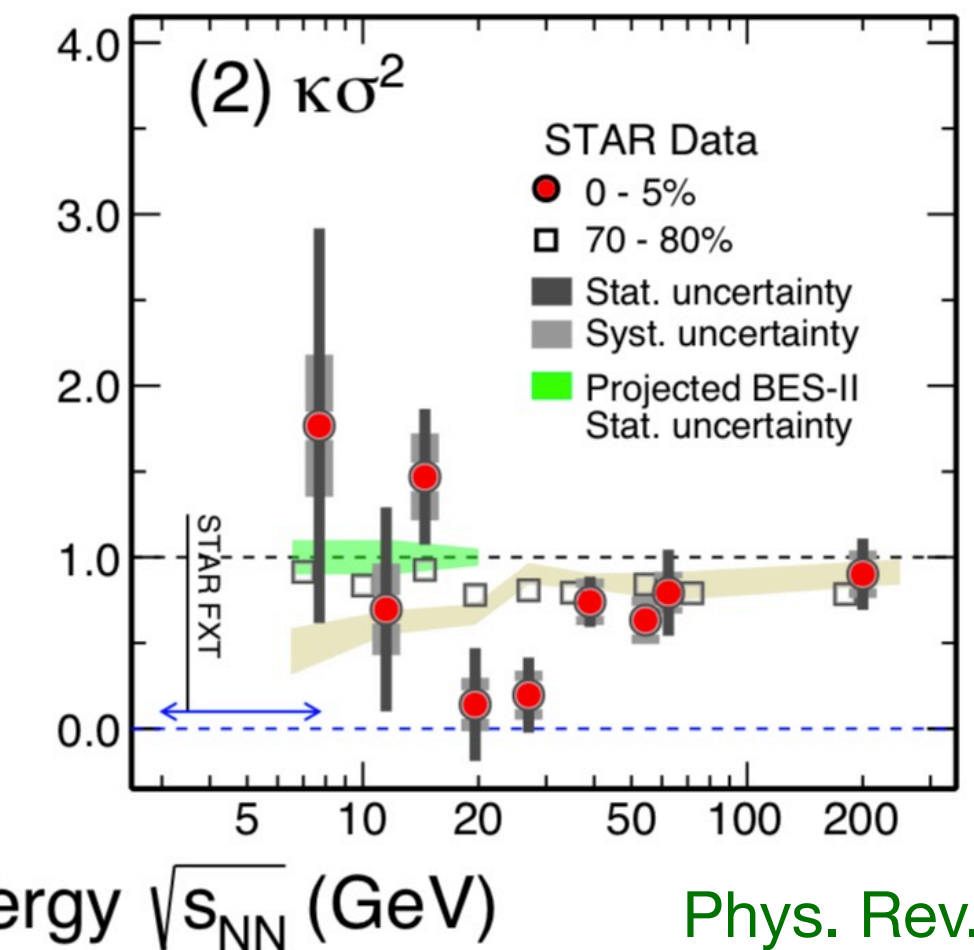
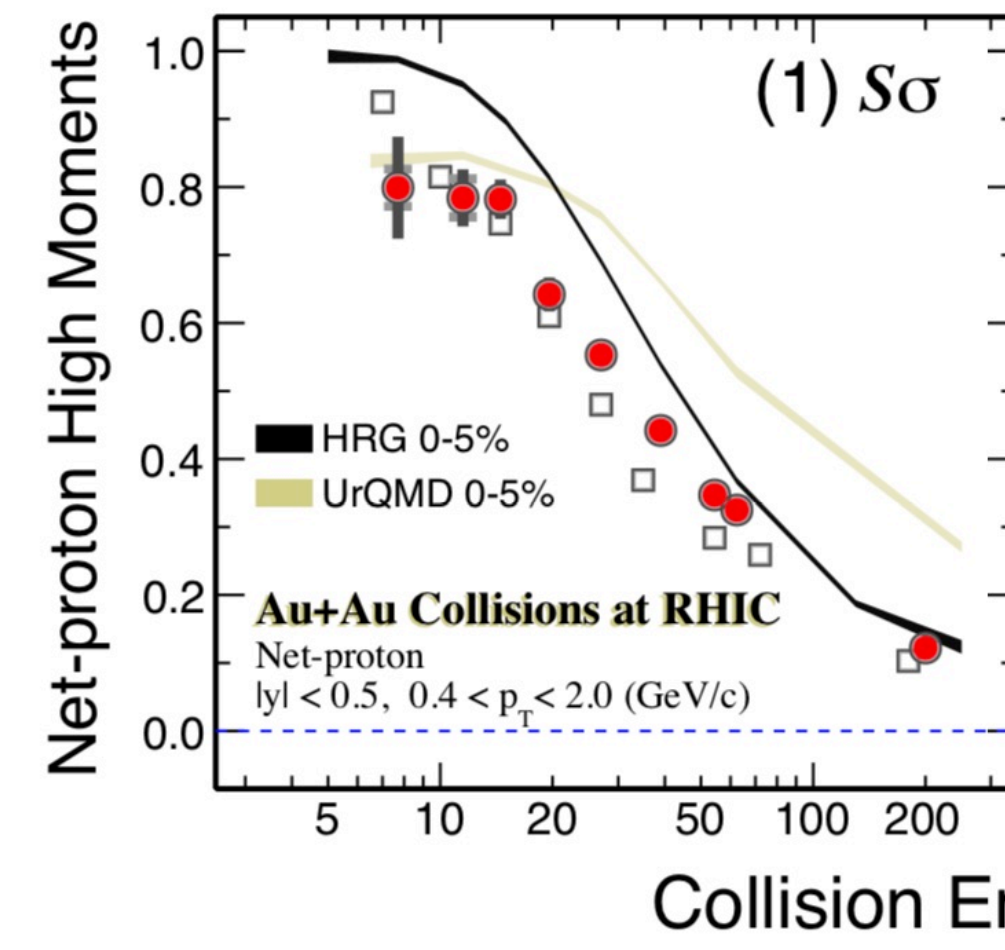


Hadronic transport is needed for studying the dense nuclear matter EOS

- Hadronic transport has been often used as a baseline for trivial physics (comparisons of experiment with simulations *in the cascade mode*)
- “If it’s described by hadronic transport, the physics must be boring” — **NOT TRUE!**
- At low collision energies ($\sqrt{s}_{NN} \lesssim 7$ GeV) = high n_B mean-fields play an important role

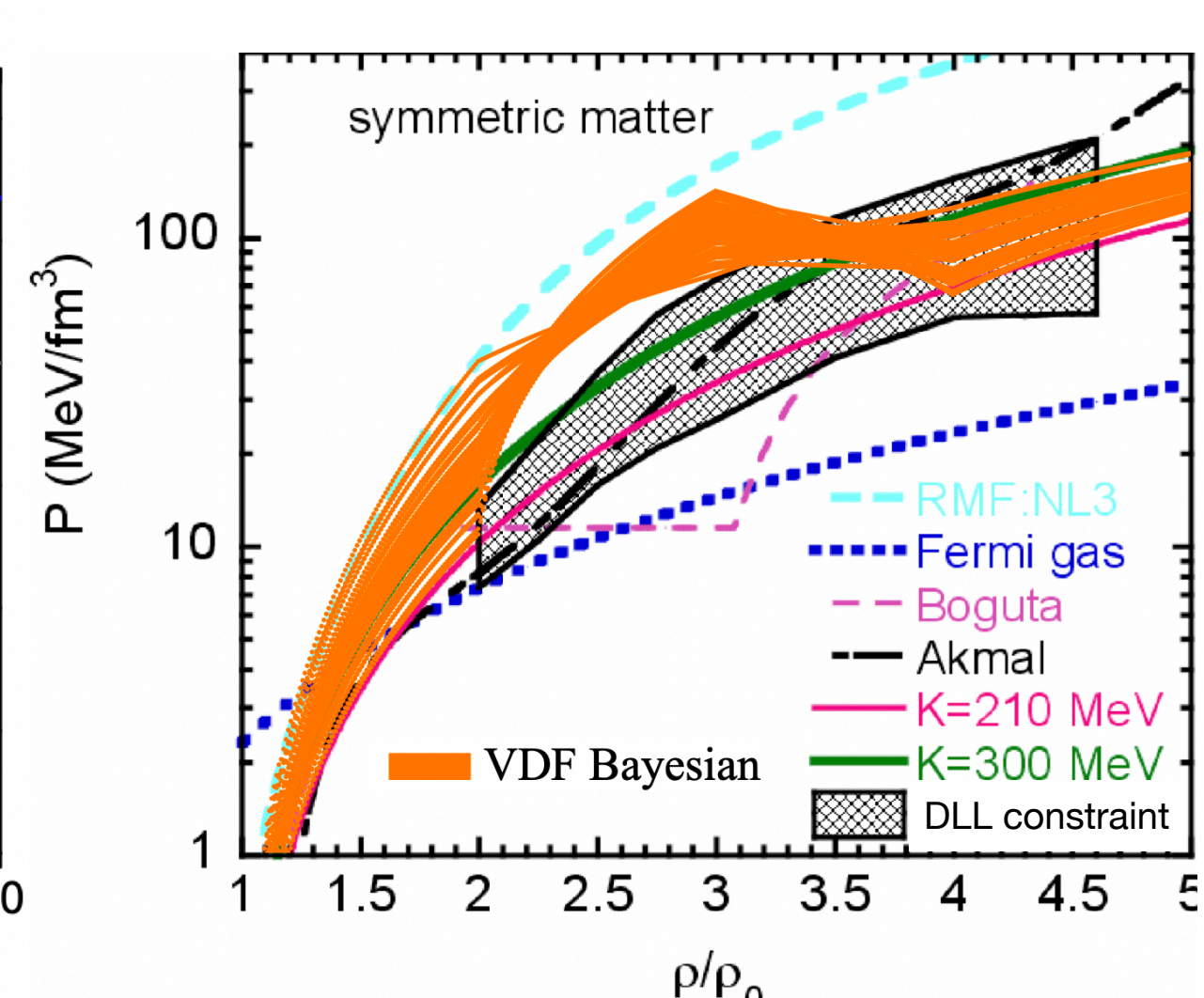
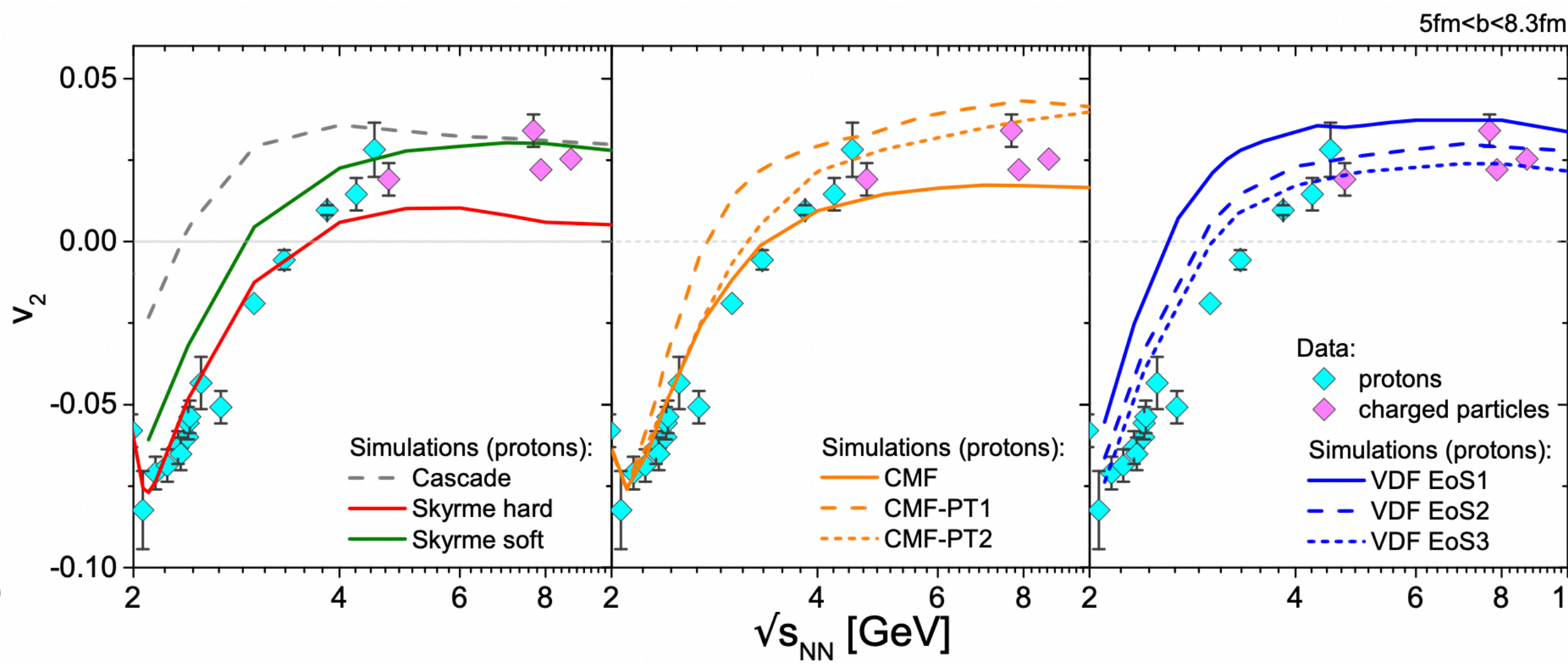
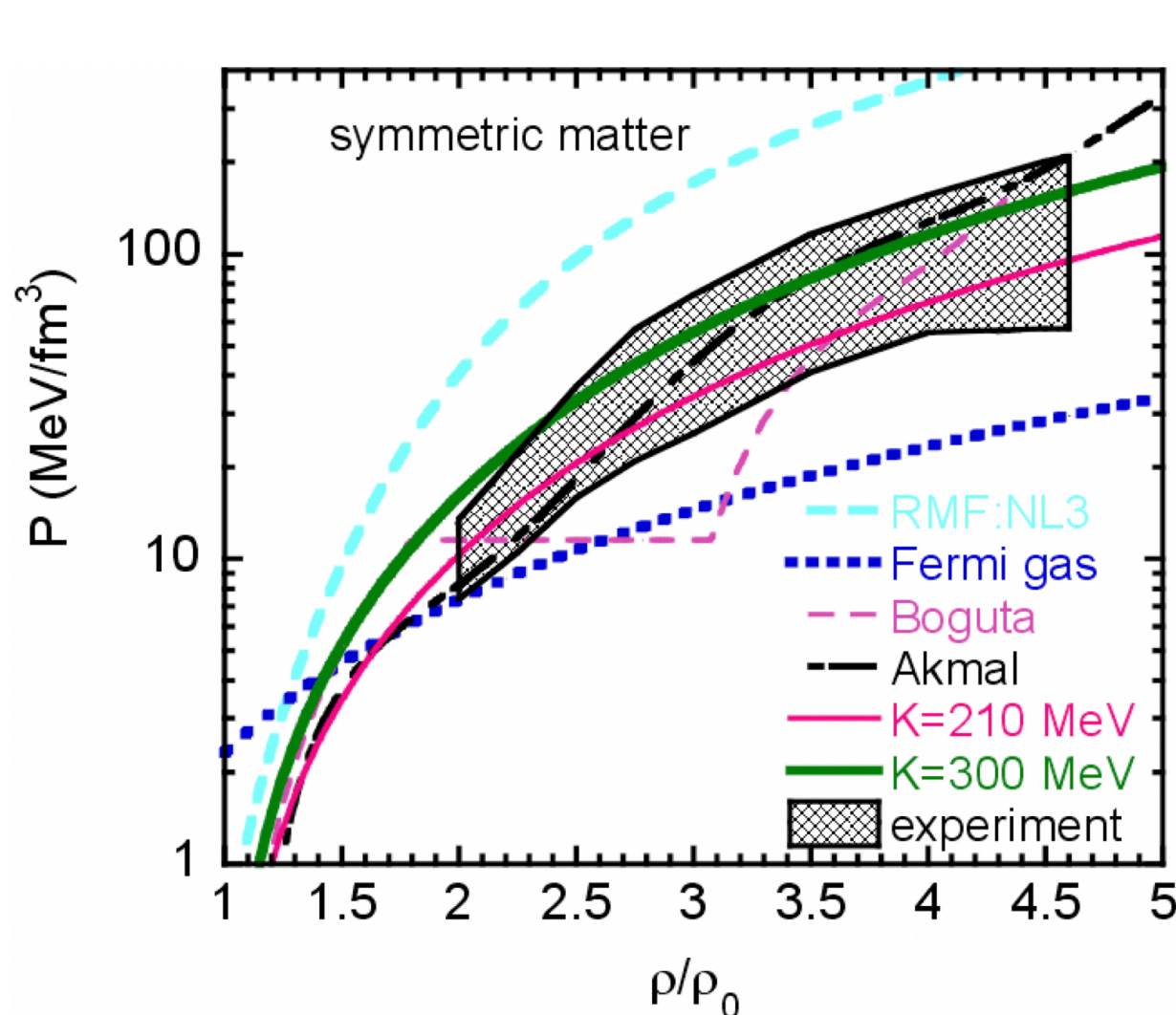


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(here: VDF Bayesian result superimposed on the DLL plot for an easy comparison) **1**

Hadronic transport is needed for studying the dense nuclear matter EOS

- Development is *not complete*: further improvements are needed, e.g., (parametrizable) momentum-dependence of potentials, isospin-dependence, ...
- Hadronic transport is a *very* powerful tool for studying the dense nuclear matter EOS (the only simulation framework for very low energy collisions!)
- US PIs with expertise in hadronic transport research (*to the best of my knowledge*):
 - members of the TMEP collaboration: Paweł Danielewicz, Che Ming Ko, Bao-An Li
 - Volker Koch, Steffen Bass, Zi-Wei Lin
 - (emeritus positions: Jørgen Randrup, George Bertsch)
- **Without support for this research, much of the US hadronic transport expertise will be lost in the near future**
- Continued research in hadronic transport needed to answer many of the questions probed by:
 - FXT BES-II (now)
 - HADES (now)
 - CBM (in ~5-10 yrs)
 - FRIB 400 (in ~10-15 yrs?)

- **A research program for hadronic transport studies of the dense nuclear matter EOS is needed to understand experimental results from low-energy heavy-ion collisions**
- **Support for the hadronic transport community is needed to maintain the expertise between BES-II and FRIB 400**