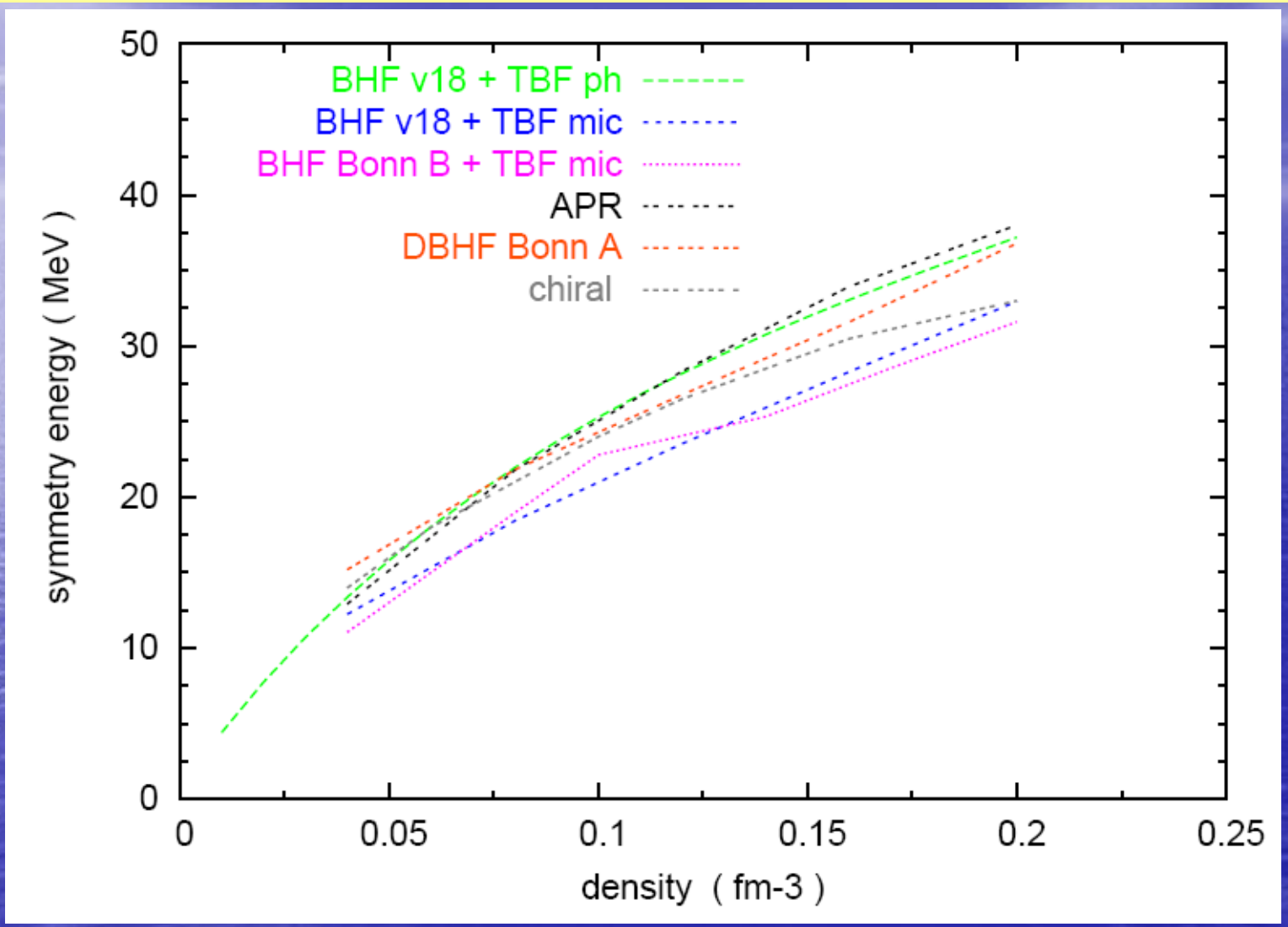
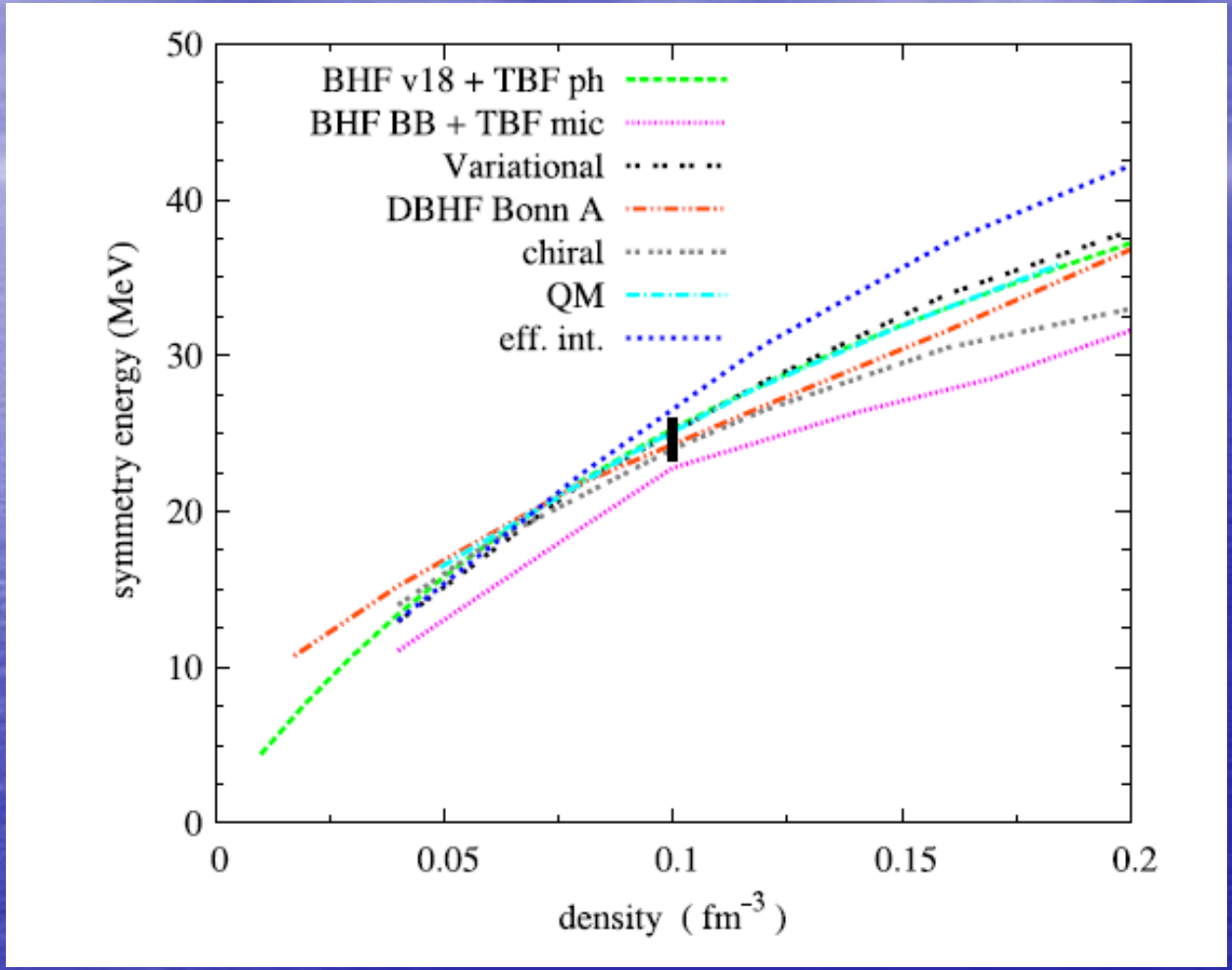
Density dependence of symmetry energy up to saturation



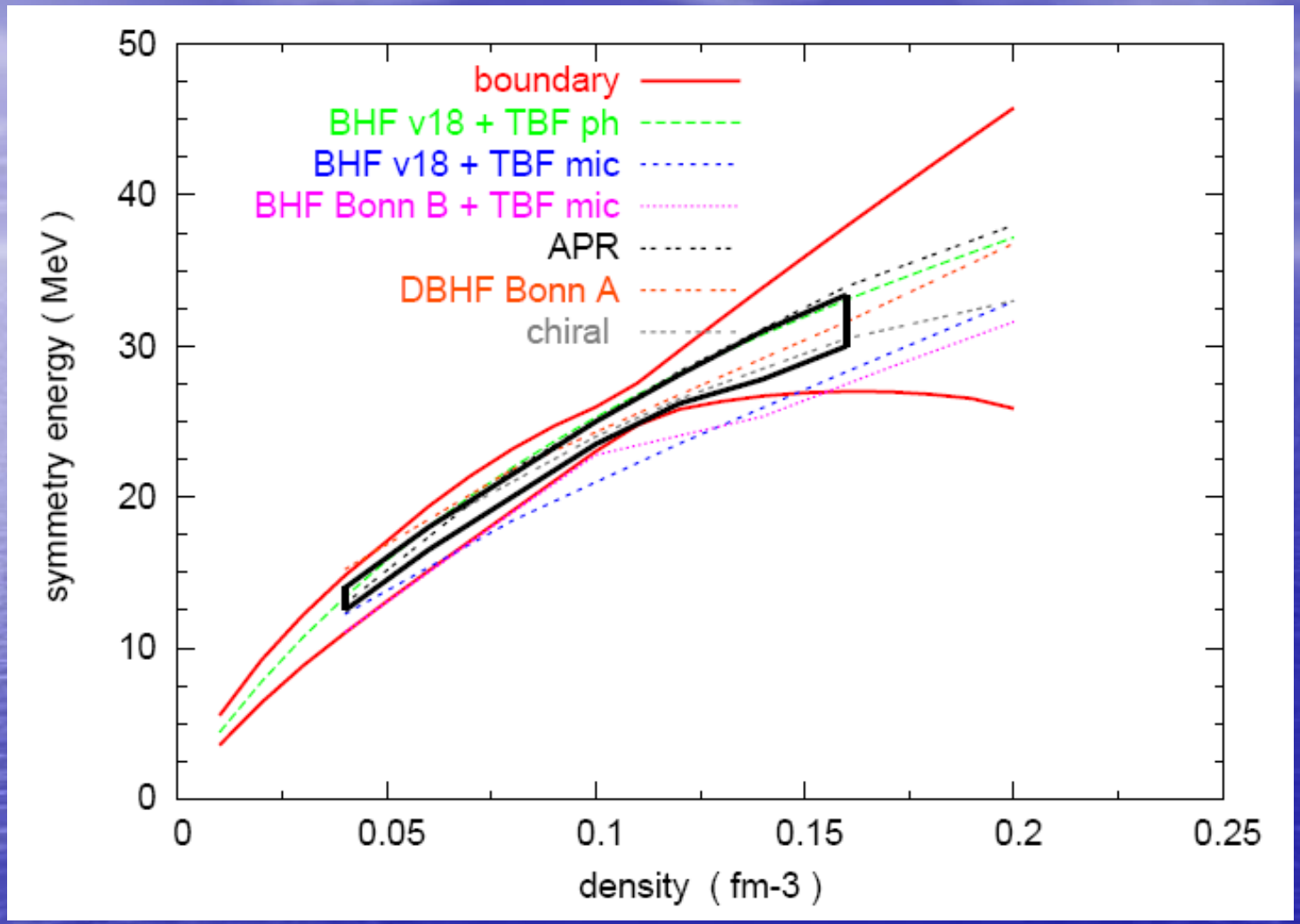
The predictions of the different EOS look restricted to a relatively narrow band

Phenomenology may be compatible with such restricted area or possibly provides further restrictions

Comparison with phenomenology (GDR)

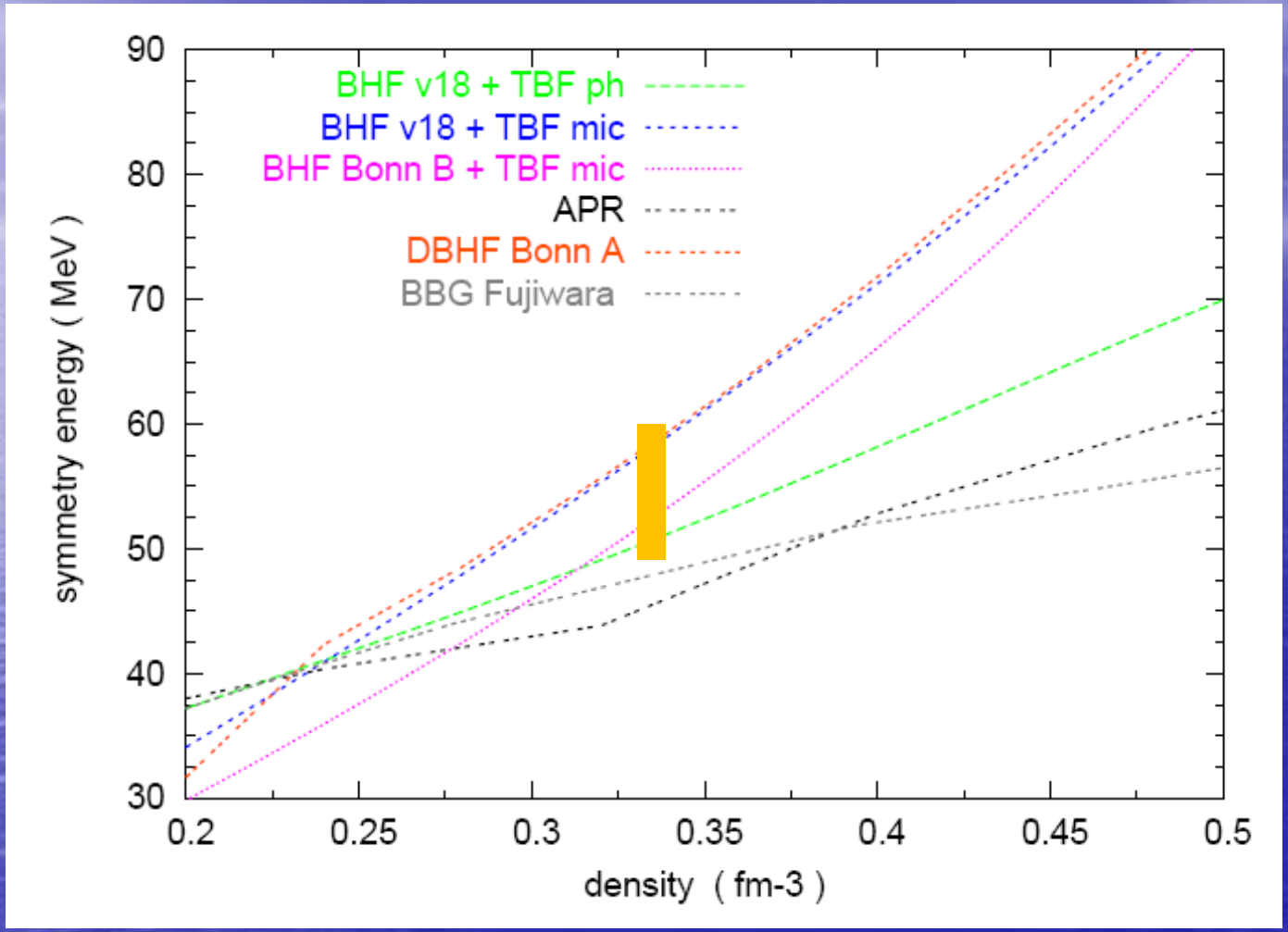


L. Trippa et al. , PRC 77, 061304 (2008)



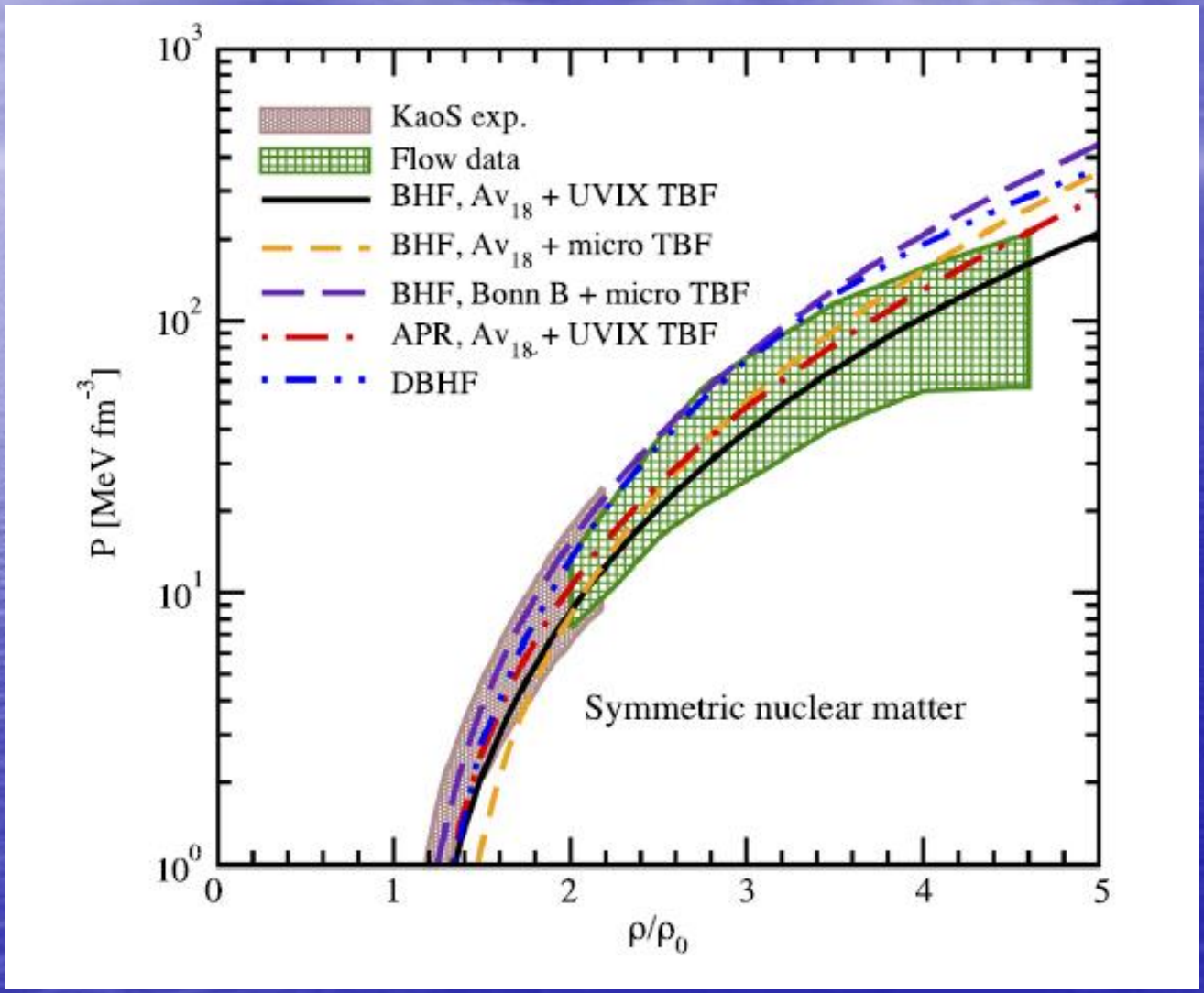
P. Danielewicz and J. Lee, ibidem, adding neutron skin analysis

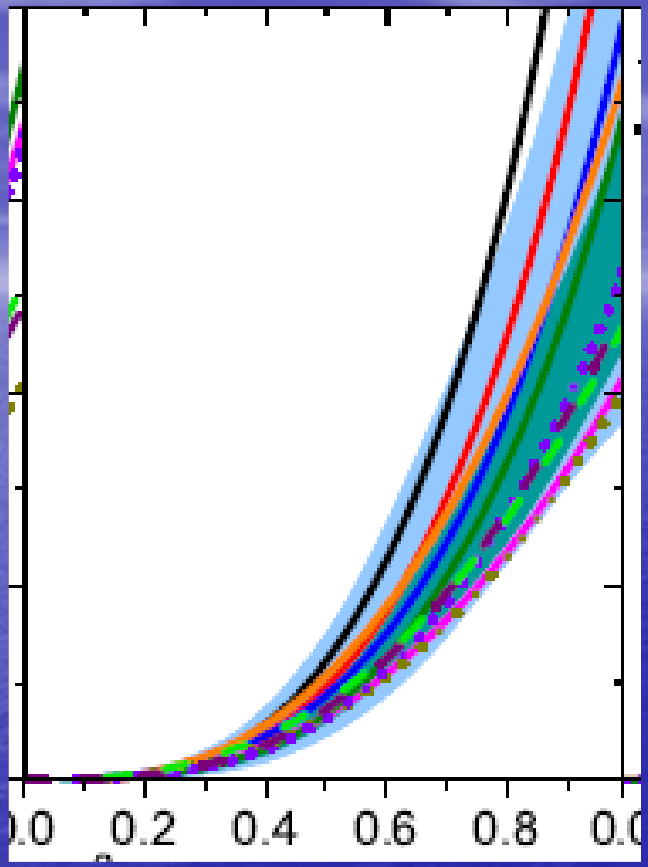
Higher density



It looks that some of the EOS which reproduce the symmetry energy are also compatible with with symmetry energy at twice saturation density.

Constraints on the EOS from heavy ions





LIGO data
Credit : Burgio et al.

Constrains on beta stable EOS from mergers