Plots for Alpha Formation in Mostly Neutron Matter

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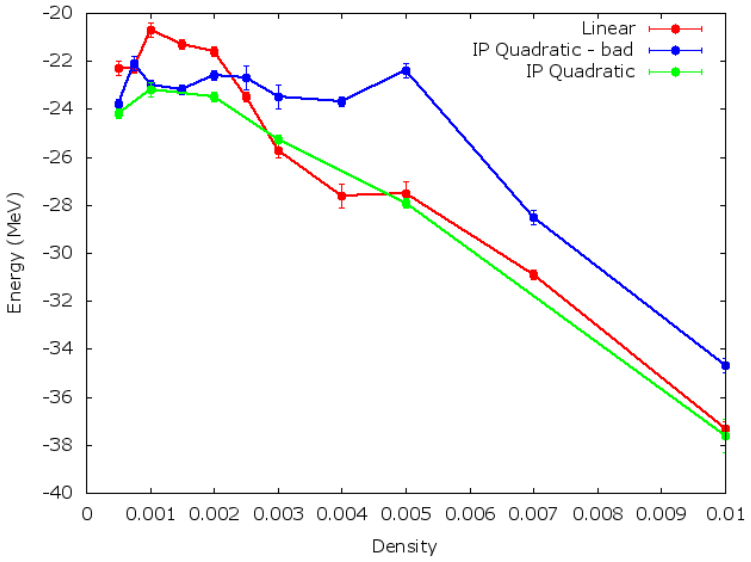
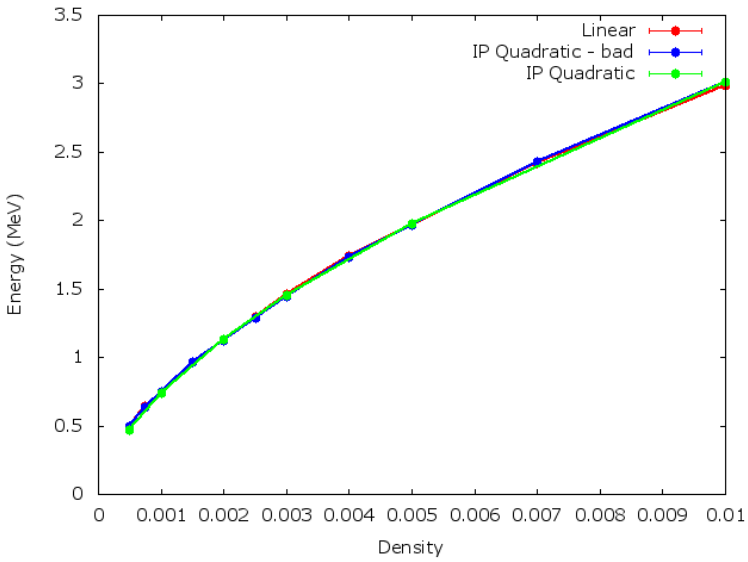
Contents

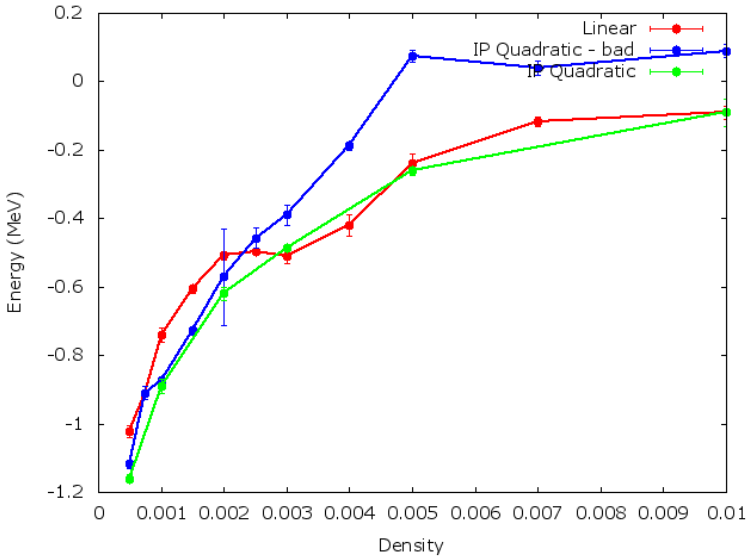
1 Total Energy Plots for Alpha, 14n, and 14n2p



(a) Alpha energy calculated as $16\epsilon_{14n2p} - 12\epsilon_{14n}$ where $\epsilon = E/A$.

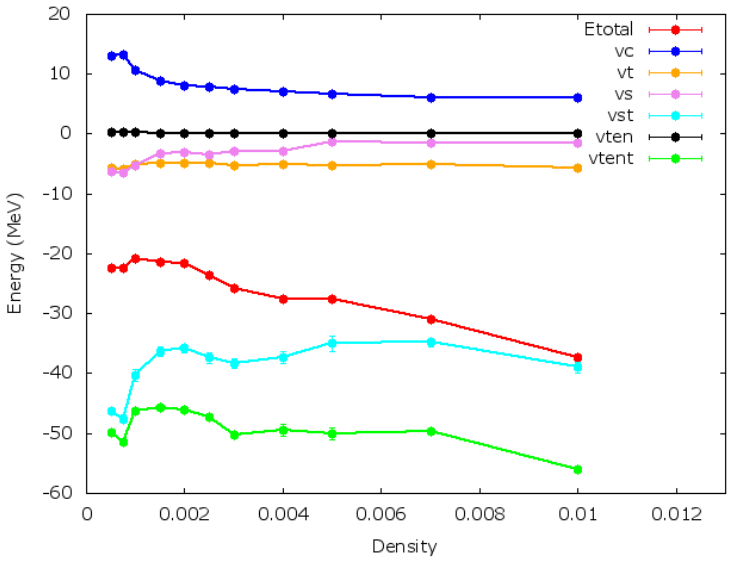


(b) Energy/particle for 14 neutrons.



(c) Energy/particle for 14 neutrons + 2 protons.

2 Breakdown of AV6' Potential Pieces with Linear Correlations



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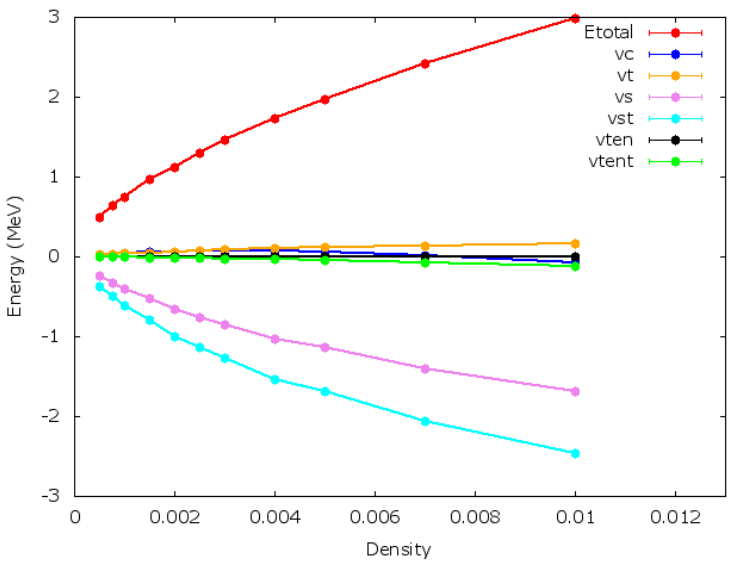
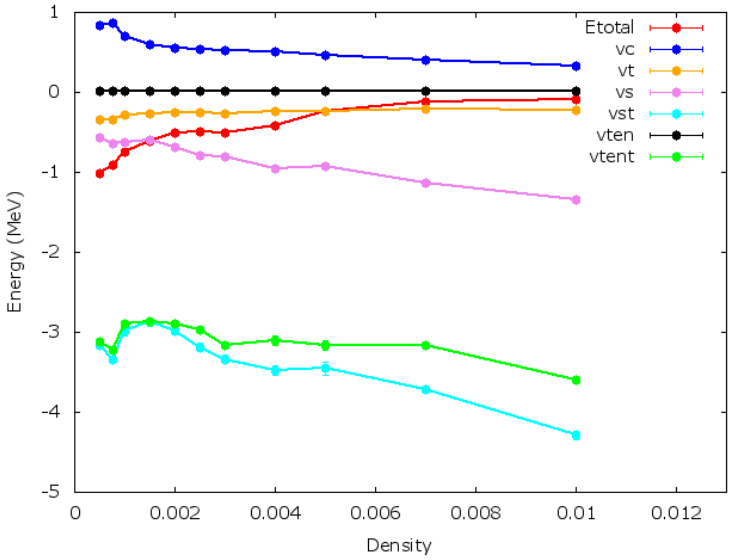
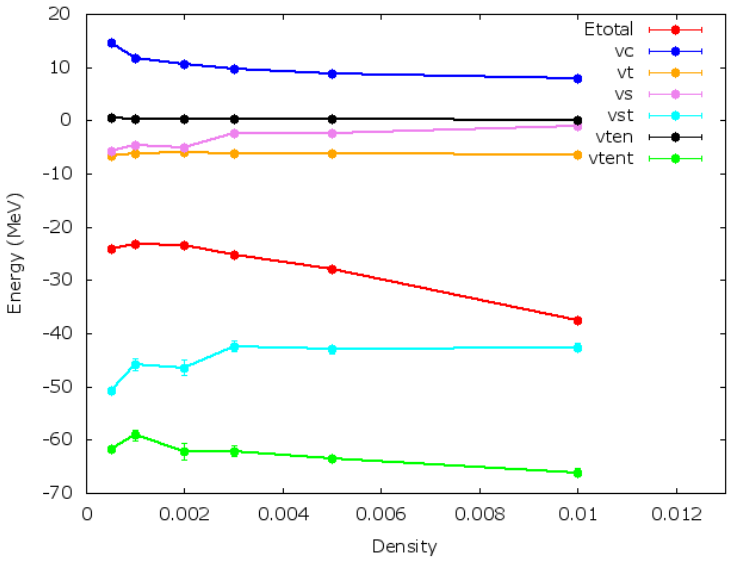


(b) Energy/particle for 14 neutrons.

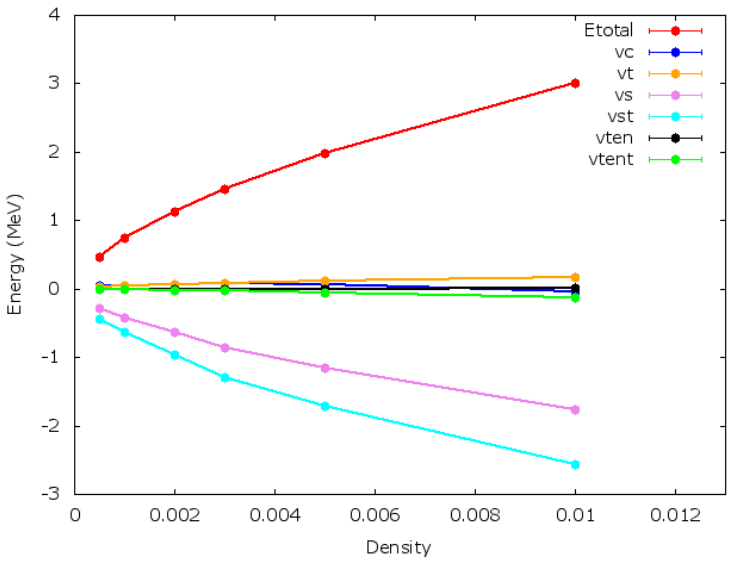


(c) Energy/particle for 14 neutrons + 2 protons.

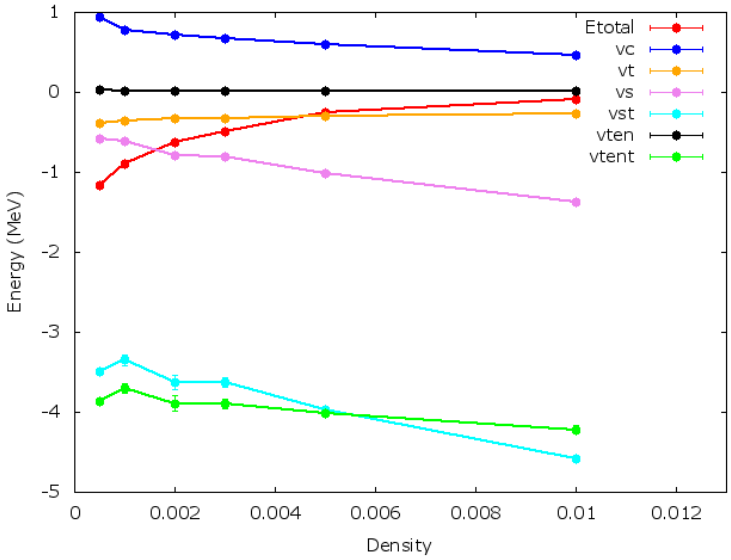
3 Breakdown of AV6' Potential Pieces with IP Correlations



(a) Alpha energy calculated as $16\epsilon_{14n2p} - 12\epsilon_{14n}$ where $\epsilon = E/A$.

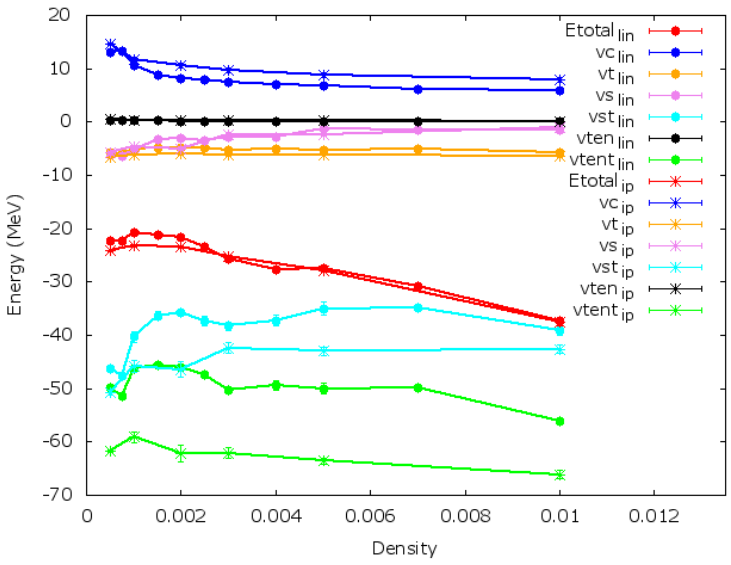


(b) Energy/particle for 14 neutrons.



(c) Energy/particle for 14 neutrons + 2 protons.

4 Breakdown of AV6' Potential Pieces with Both Linear and IP Correlations



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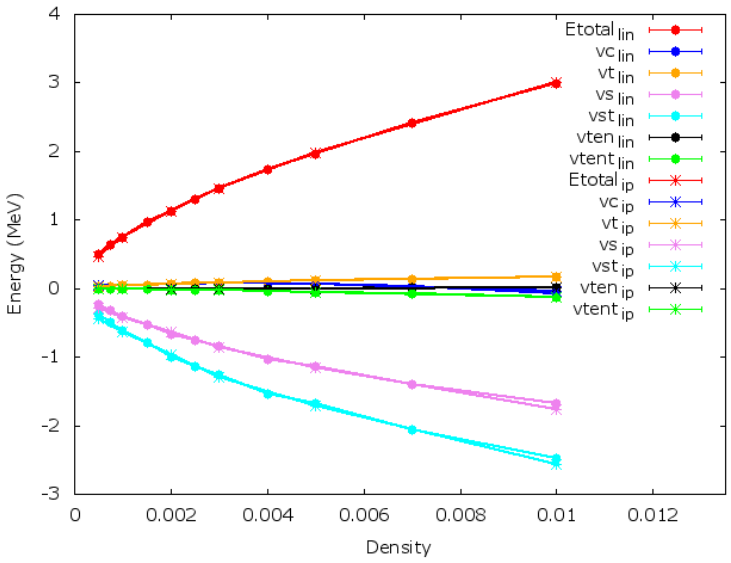
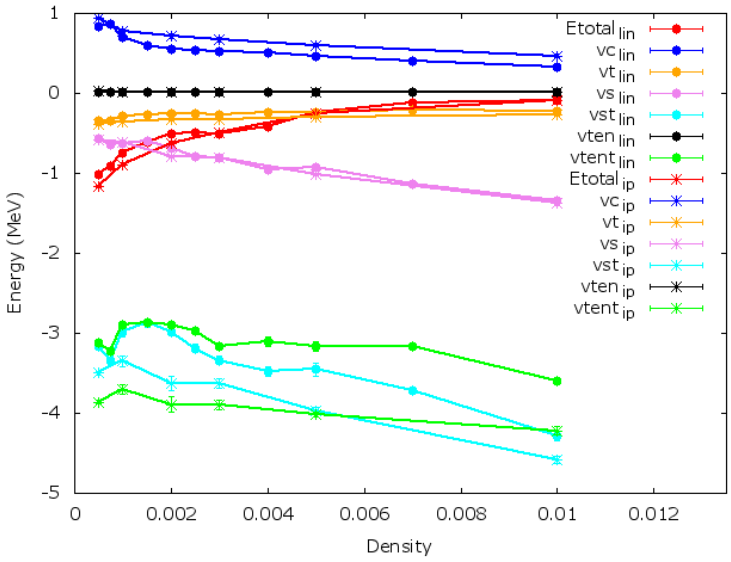


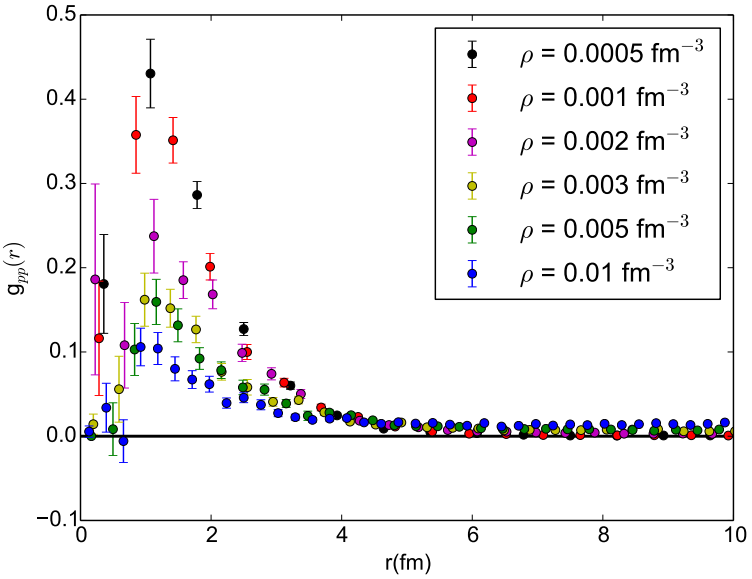
(b) Energy/particle for 14 neutrons.



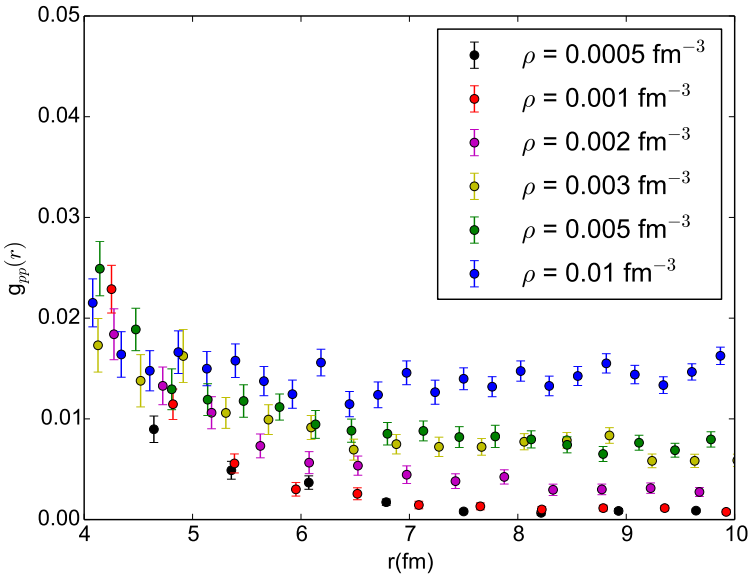
(c) Energy/particle for 14 neutrons + 2 protons.

5 Distribution Functions for Linear and IP Correlations

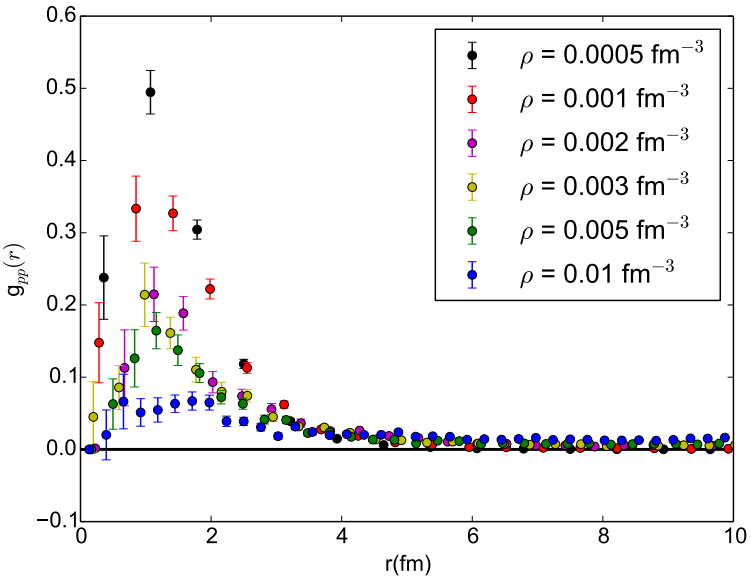
Here we're looking at the *pp* distribution function, like they used in here to look for alpha clusters.



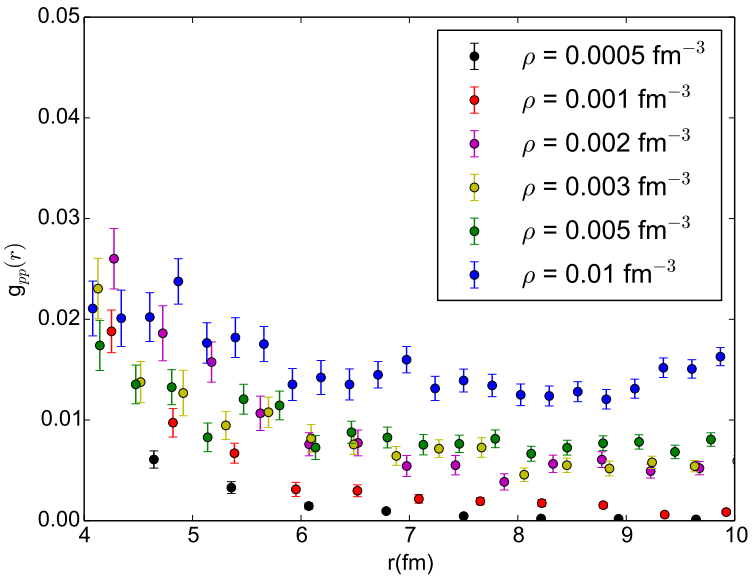
(a) $g_{pp}(r)$ for linear correlations.



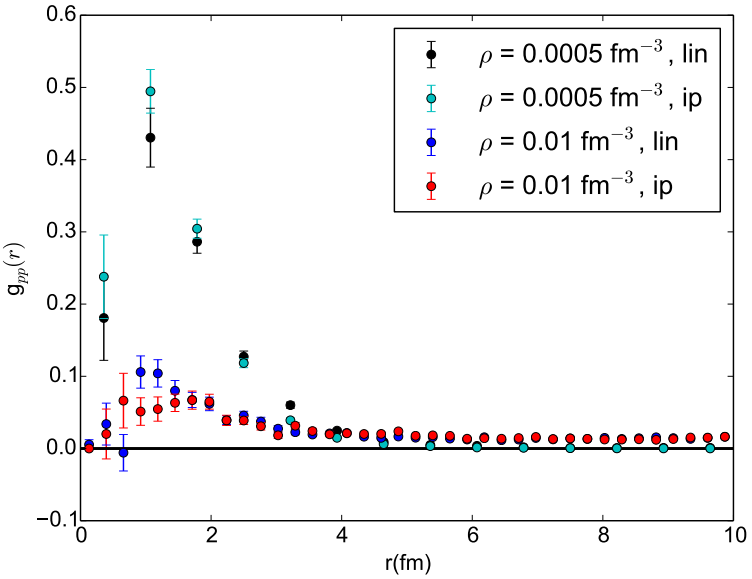
(b) $g_{pp}(r)$ for linear correlations for high r.



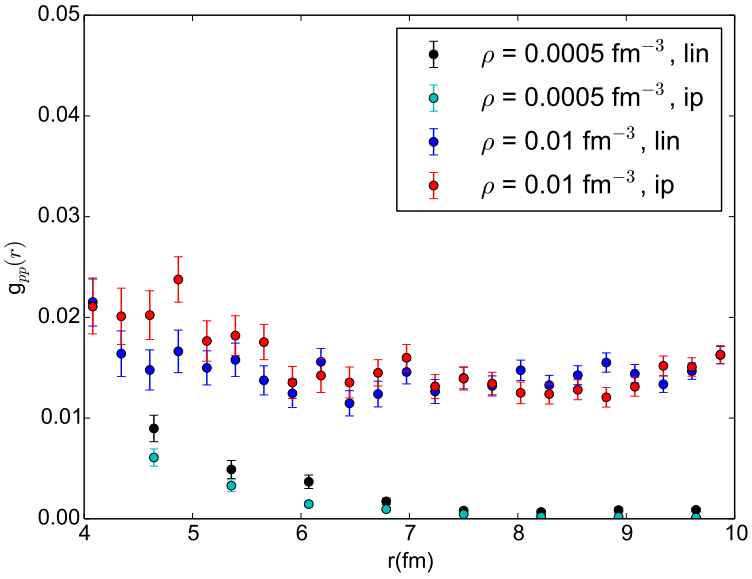
(c) $g_{pp}(r)$ for IP correlations.



(d) $g_{pp}(r)$ for IP correlations for high r.



(e) Comparison of $g_{pp}(r)$ for linear and IP correlations.



(f) Comparison of $g_{pp}(r)$ for linear and IP correlations for high r.