Radial distribution function of liquid argon in modified hard sphere model[1] MICHAEL KORTH, SAESUN KIM, Univ of Minn - Morris, UMP TEAM — We begin with a geometric model of colliding hard spheres and calculate probability densities in an iterative sequence of calculations that lead to the pair correlation function. The model is based on a kinetic theory approach developed by Shinomoto [Phys. Lett A, 89, 19 (1982)]. We added a weak attractive interatomic potential for argon based on the work of Aziz [J. Chem. Phys. 99, 4518 (1993)] in order to find radial distribution function of liquid argon. Results are in partial agreement with experiment. We are exploring additional modifications to the model.

[1]Morris Academic Partnership

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