

## I. VERIFICATION OF THE FCIQMC CODE

Wigner-Seitz radius	$N_{orbitals}$	$N_W$	$E_P$ (Our results)	Error	$E_P$ (Shepherd <i>Et. Al.</i> )	Error
$r_s = 0.5$	114	100e3	-0.07399	$\pm 3e-5$		
		400e3	-0.07386	$\pm 1e-5$		
		800e3	-0.073845	$\pm 6e-6$		
		1600e3	-0.073842	$\pm 4e-6$		
		-			-0.07384	$\pm 1.4e-5$
	186	100e3	-0.07996	$\pm 3e-5$		
		400e3	-0.07990	$\pm 1e-5$		
		800e3	-0.07989	$\pm 1e-5$		
		1600e3	-0.07986	$\pm 1e-5$		
		-			-0.07984	$\pm 1.4e-5$
	358	100e3	-0.08300	$\pm 5e-5$		
		400e3	-0.08290	$\pm 7e-5$		
		800e3	-0.08285	$\pm 2e-5$		
		1600e3	-0.08284	$\pm 1e-5$		
		-			-0.08281	$\pm 5.7e-5$
$r_s = 1.0$	114	200e3	-0.06590	$\pm 4e-5$		
		400e3	-0.06585	$\pm 2e-5$		
		800e3	-0.06582	$\pm 2e-5$		
		1600e3	-0.06583	$\pm 1e-5$		
		-			-0.06587	$\pm 1.3e-5$
	186	400e3	-0.07160	$\pm 3e-5$		
		800e3	-0.07154	$\pm 2e-5$		
		1600e3	-0.07153	$\pm 2e-5$		
		3200e3	-0.07152	$\pm 1e-5$		
		-			-0.07156	$\pm 1.2e-5$
	358	800e3	-0.07419	$\pm 3e-5$		
		1600e3	-0.07420	$\pm 2e-5$		
		3200e3	-0.07413	$\pm 2e-5$		
		6400e3	-0.07413	$\pm 1e-5$		
		-			-0.07412	$\pm 1.4e-5$
$r_s = 2.0$	114	200e3	-0.05471	$\pm 6e-5$		
		600e3	-0.05460	$\pm 3e-5$		
		1200e3	-0.05470	$\pm 3e-5$		
		2400e3	-0.05480	$\pm 2e-5$		
		4800e3	-0.05486	$\pm 1e-5$		
		9600e3	-0.05487	$\pm 1e-5$		
		-			-0.05489	$\pm 3e-5$

TABLE I: FCIQMC results for 3D systems with 14 particles. My simulations are performed with an initiator threshold  $N_I = 3$  and all energies are calculated using the projected estimator. The results are compared to FCIQMC results by Shepherd *Et. Al.* [J. Chem. Phys. 136 (2012)]. All energies are the correlation energy per particle in units of Rydberg.