

Table 1: Results

Problem Size	Method	MDE	RMSD	Time	Improv time
pdb1ba5 320	Classic	$2.632 \times 10^{-7}$		$5.9799 \times 10^{-4}$	
	Quaternion	$2.632 \times 10^{-7}$	$4.1595 \times 10^{-12}$	$5.3103 \times 10^{-3}$	-88.739
pdb1d1n 594	Classic	$1.990 \times 10^{-6}$		$1.1254 \times 10^{-1}$	
	Quaternion	$1.990 \times 10^{-6}$	$1.3648 \times 10^{-12}$	1.0056	-88.809
pdb1dp3 332	Classic	$3.490 \times 10^{-6}$		$1.8729 \times 10^{-2}$	
	Quaternion	$3.490 \times 10^{-6}$	$2.1817 \times 10^{-12}$	$1.7709 \times 10^{-1}$	-89.424
pdb1du1 122	Classic	$6.874 \times 10^{-6}$		$2.5955 \times 10^{-4}$	
	Quaternion	$6.874 \times 10^{-6}$	$1.3307 \times 10^{-12}$	$2.0830 \times 10^{-3}$	-87.539