(a)

	Number of Expt.		Calibration		Fidelity for F <sub>e</sub> and F <sub>d,c</sub>		
Weight	k	k <sub>w</sub>	t (ms)	F <sub>i</sub>	F <sub>e</sub>	E <sub>d</sub>	F <sub>d,c</sub>
w=1	21	3	2	0.977±0.024	0.782±0.012	18.9%	0.965
w=2	189	22	26	0.915±0.029	0.701±0.047	23.4%	0.915
w=3	945	101	34	0.895±0.039	0.671±0.042	28.3%	0.936
w=4	2835	272	49	0.866±0.025	0.582±0.033	33.2%	0.872
w=5	5103	505	53	0.838±0.041	0.552±0.033	37.6%	0.885
w=6	5103	524	55	0.861±0.030	0.518±0.026	39.5%	0.856
w=7	2187	229	60	0.865±0.031	0.489±0.029	43.1%	0.860
Total	16383	1656	N/A	0.858	0.547	37.4%	0.874

k: number of Pauli operators  $3^{w} \binom{7}{w}$ ;  $k_{w}$ : number of experiments;

F<sub>i</sub>: fidelity of initial states (compared to thermal equilibrium);

F<sub>e</sub>: fidelity of experiments (compared to initial states);

E<sub>d</sub>: signal loss due to decoherence;

 $F_{d,c}$ : fidelity after eliminating decoherence

