Analysis Name	Iterations	Time [s]	Fidelity Best	Amplitude Best [a.u.]	Frequency Best [$\times 10^9$ Hz]	β Best
Nelder_Mead	40	2892	0.99731	0.04063	4.95701	-1.53253
init_simplex_1	40	3096	0.99533	0.04069	4.95820	-
init_simplex_2	40	3128	0.99564	0.04131	4.95817	-
init_simplex_3	40	3190	0.99554	0.04058	4.95819	-
SLSQP	15	3873	0.99518	0.04058	4.95822	-0.00115
CMA-ES	30	4536	0.99665	-0.16634	4.95822	0.08802
optuna_30	30	763	0.99583	0.28059	4.95601	2.75519
optuna_100	100	2257	0.99645	0.29026	4.955279	-1.46504
optuna_1000	1000	21811	0.99847	-0.00051	4.961836	0.2222
optuna no β	1000	21820	0.99846	0.04104	4.957374	-