

Erratum: Low-depth phase oracle using a parallel piecewise circuit
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Zhu Sun , Gregory Boyd, Zhenyu Cai, Hamza Jnane, Bálint Koczor, Richard Meister, Romy Minko, Benjamin Pring, Simon C. Benjamin, and Nikitas Stamatopoulos



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While investigating a related problem, we realized that the cost of linear interpolation via quantum read-only memory (QROM) did not include the cost of computing the flags. This affects the last row of Table I in the original article; the updated table is shown in Table I herein. Since now the expression depends on S , the last sentence in the caption of Table I of the original article is overstated. A fair statement would be that the central part of the QROM method (i.e., except the flags, which is the only part that differs between the methods) is independent of S , which might still be the best choice for sufficiently complex functions. The last paragraph in Sec. VIB is moved to Sec. VIC as the new last paragraph now and the last sentence of that paragraph is thus no longer relevant. All other conclusions should be unaffected.

TABLE I. The T count and measurement depth of the options discussed in the original article with the last row updated to include the cost of flags.

	T count (for r rounds)	Measurement depth (per round)	Pricing	Coulomb	Quantum dots
Gate synthesis	$r(S+1)(n+1)R_T + 8Sr(l-1)$	$R_T + 2\lceil \log_2 l \rceil$	16536/32	3582/27	2214/23
Gate synthesis with injection	$2r(S+1)(n+1)R_T + 8Sr(l-1)$	$\lceil \log_2(2.5(S+1)(n+1)+1.5) \rceil + 2\lceil \log_2 l \rceil$	31633/17	6852/13	4116/12
In-circuit towers	$(S+1)\{[R_T \cdot (n+1)+4n] + (r-1)(R_T+4n) + r \cdot R_T\} + 8Sr(l-1)$	$R_T + 2n + 2\lceil \log_2 l \rceil$	5618/62	1476/45	1191/35
Independent towers	$(S+1)\{[R_T \cdot (2n+3)+8n+4] + (r-1)(2R_T+8n+4)\} + 8Sr(l-1)$	$\lceil \log_2(2.5(S+1)(n+1)+1.5) \rceil + 2\lceil \log_2 l \rceil$	8061/17	2042/13	1583/12
Linear interpolation with QROM	$n \cdot R_T + r(14 \cdot 3^{\lceil \log_2(n) \rceil} + 66n) + 8Sr(l-1)$	$9\lceil \log_2(n) \rceil + 1 + 2\lceil \log_2 l \rceil$	3566/43	2040/41	1086/32