$\mathbf{QNC}_1 \subset$ noisy-**BQP**

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1 Notations.

C_g - good qLDPC, C_{ft} - concatenation code (ft stands for fault tolerance). For a code C_y we use Φ_y, E_y, D_y to denote the maps circuits into the circuits compute in the code space, the encoder, and the decoder.

2 The Noise Model

3 Fault Tolerance (With Resets gates) at Linear Depth.

Claim 3.1. *There is $p_{th} \in (0,1)$ such that if $p < p_{th}$ then any quantum circuit C with depth D and width W can be computed by p-noisy, resets allowed, circuit C', with a depth at most $\max\{D, \log(WD)\}$.*

3.1 Initializing Magic for Teleportation gates and encodes ancillaries.

Claim 3.2. *The gate $D_{ft}\Phi_{ft}[E_g]$ initializes states encoded in C_g subject to p-noise channel.*

1. Initializing Magic for Teleportation gates and encodes ancillaries.
2. Each gate is replaced by gate teleportation.
3.