non-IID MNIST, 2NN 1.0 0.9 0.8 Test Accuracy 0.7 Error-free FL 0.6 DQ FL,  $\varepsilon = 0.01$ DQ FL,  $\varepsilon = 0.1$ DQ FL,  $\varepsilon = 0.2$ 1-bit FL,  $\varepsilon = 0.01$ 0.4 1-bit FL,  $\varepsilon = 0.1$ 1-bit FL,  $\varepsilon = 0.2$ 200 600 800 400 Communication Round