Cumulative distributions **QNGOptimizer** AdamOptimizer approx='block-diag', λ =0.5 $\beta_1 = 0.9$, $\beta_2 = 0.99$, $\varepsilon = 10^{-8}$ 1.0 $\eta = 0.01$ n = 0.75 $\eta = 1.25$ $\eta = 0.1$ $\eta = 0.9$ $\eta = 0.2$ $\eta = 1.45$ Probability of occurrence 8.0 $\eta = 0.25$ $\eta = 1$ $\eta = 0.4$ $\eta = 1.7$ $\eta = 0.35$ $\eta = 1.15$ $\eta = 0.6$ $\eta = 1.9$ $\eta = 0.5$ $\eta = 1.25$ $\eta = 0.85$ $\eta = 2.2$ $\eta = 0.6$ $\eta=1.4$ $\eta = 1.05$ $-\eta = 2.6$ 0.6 0.4 0.2 (a) (b) 0.0 MomentumQNGOptimizer MomentumOptimizer ρ =0.9, approx='block-diag', λ =0.5 $\rho = 0.9$ 1.0 n = 0.01 $\eta = 0.6$ n = 0.1n = 0.7 $\eta = 0.1$ $\eta = 0.9$ Probability of occurrence $\eta = 0.2$ $\eta = 0.8$ $\eta = 0.25$ 0.8 $\eta = 1$ $\eta = 0.3$ $\eta = 0.9$ $\eta = 0.35$ $\eta = 1.15$ $\eta = 0.4$ $\eta = 0.5$ $\eta = 1.25$ $\eta = 1$ $\eta = 0.5$ $\eta = 1.1$ $\eta = 0.6$ $\eta = 1.4$ 0.6 0.4 0.2 (c) (d) 0.0 0.00 0.05 0.10 0.15 0.20 0.25 0.00 0.05 0.10 0.15 0.25 0.20 delta energy delta energy