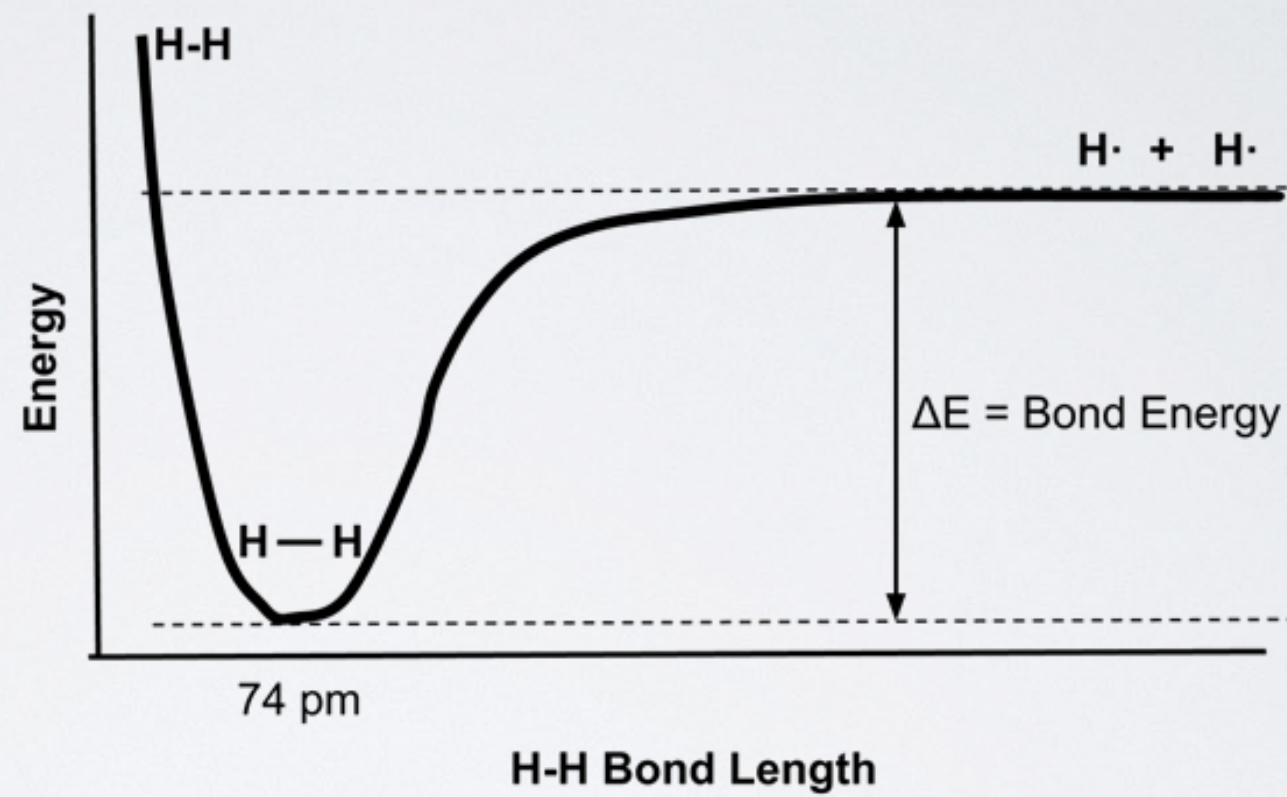


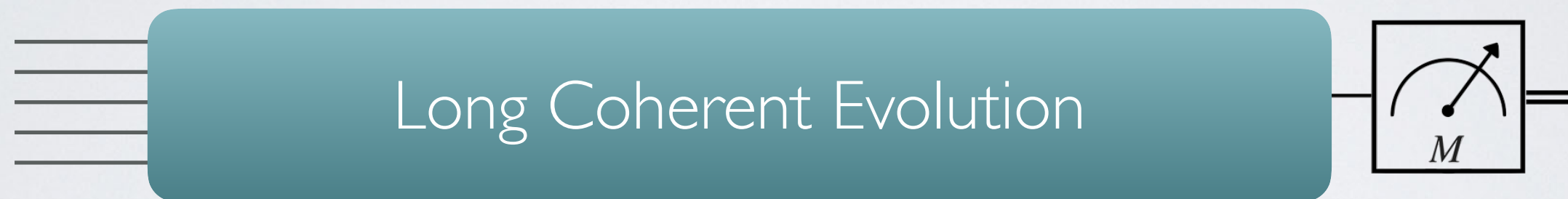


Issue 17: ParallelBond - *License to Optimize*

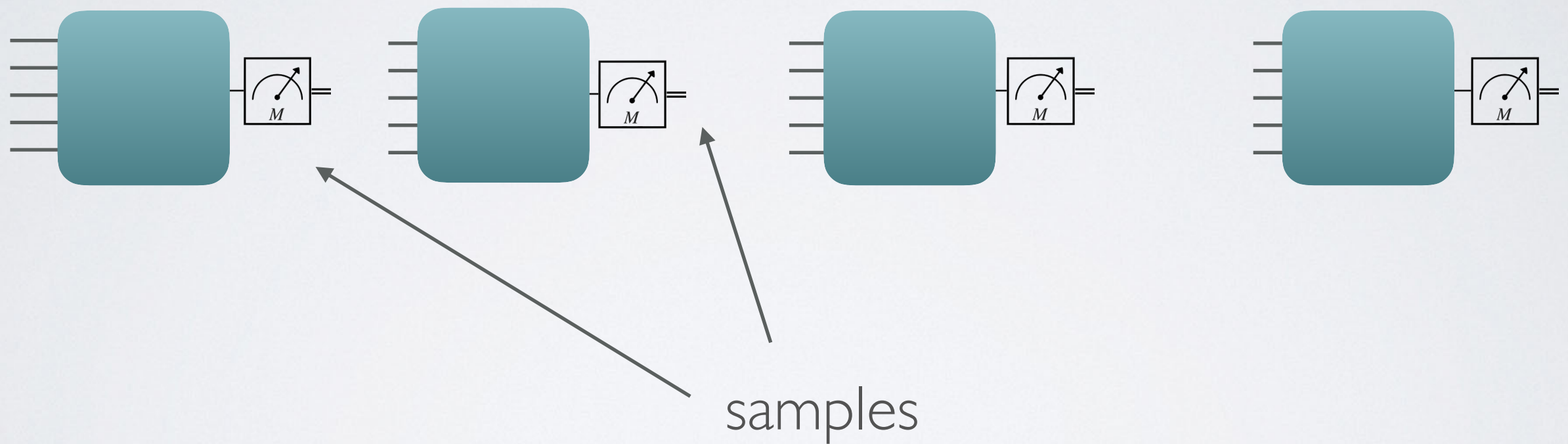
Chemistry =

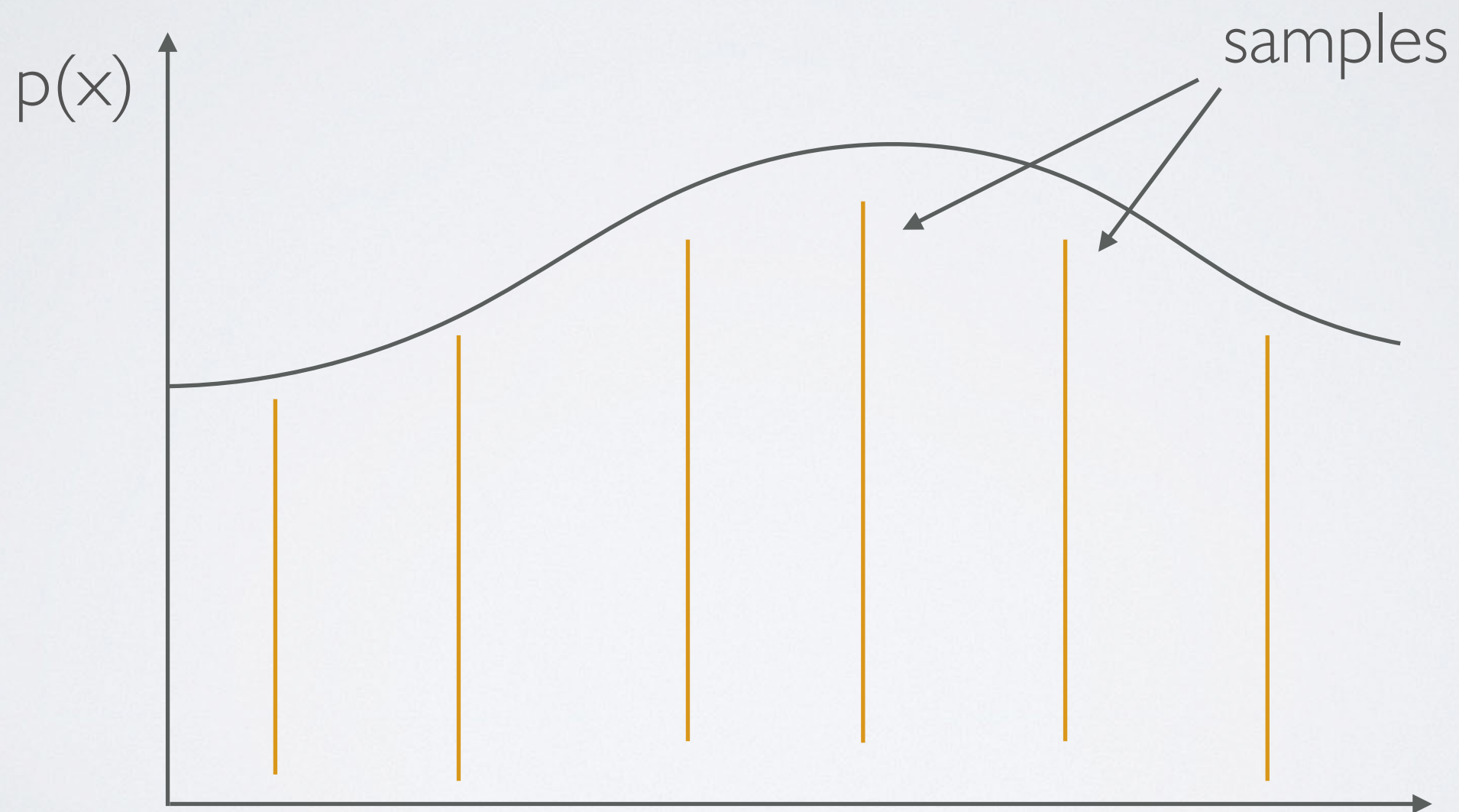


Quantum Phase Estimation:



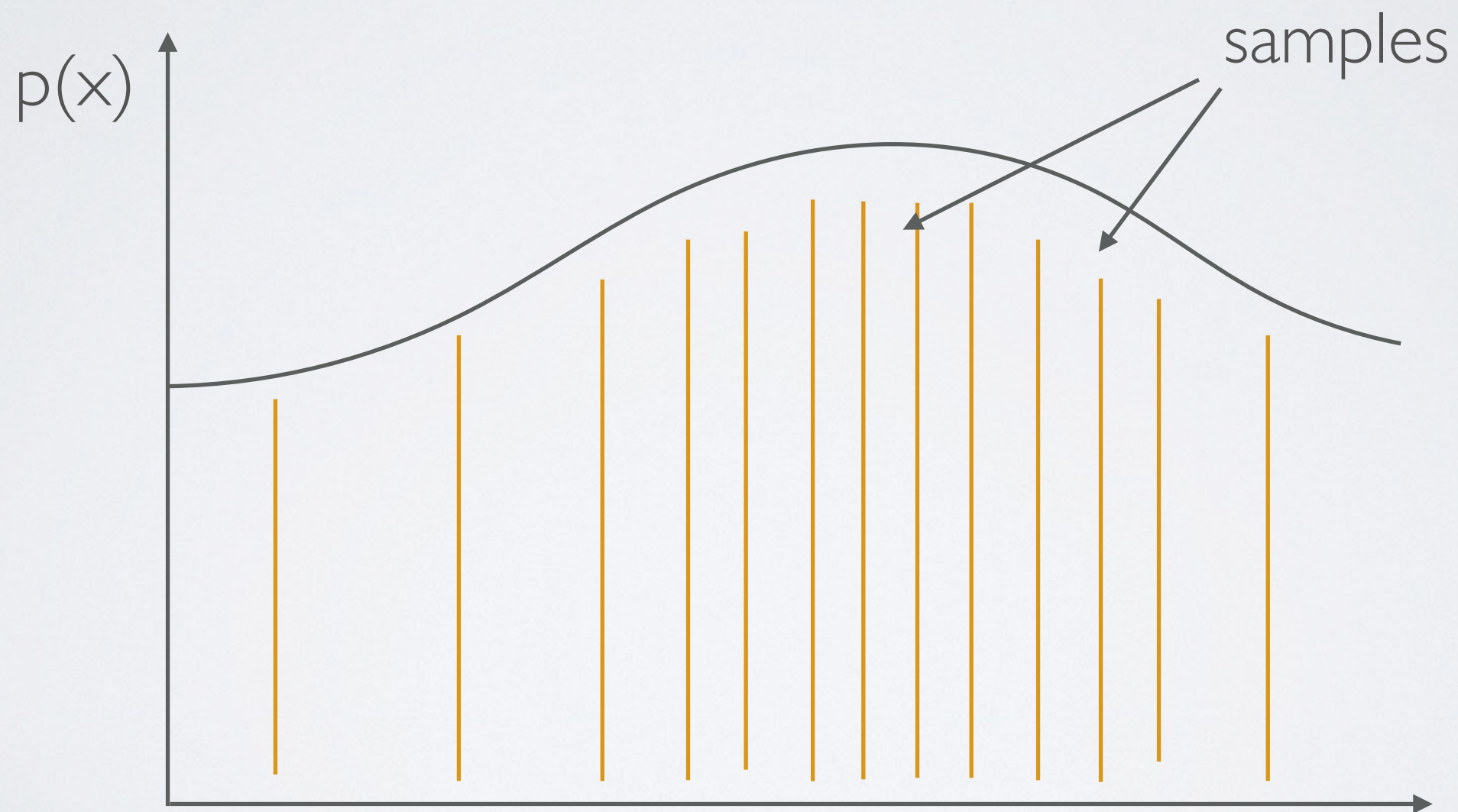
Variational Quantum Eigensolver:

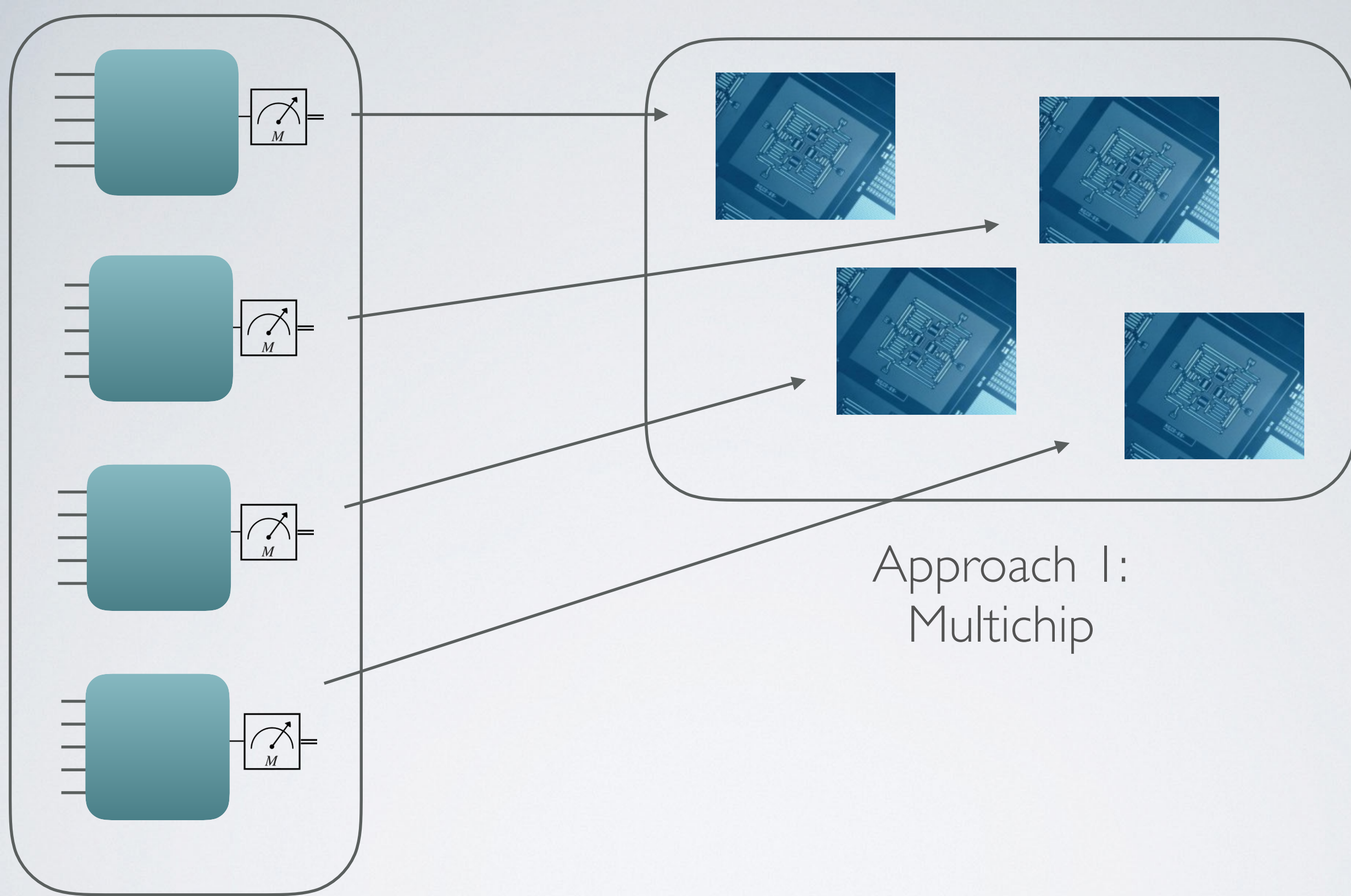






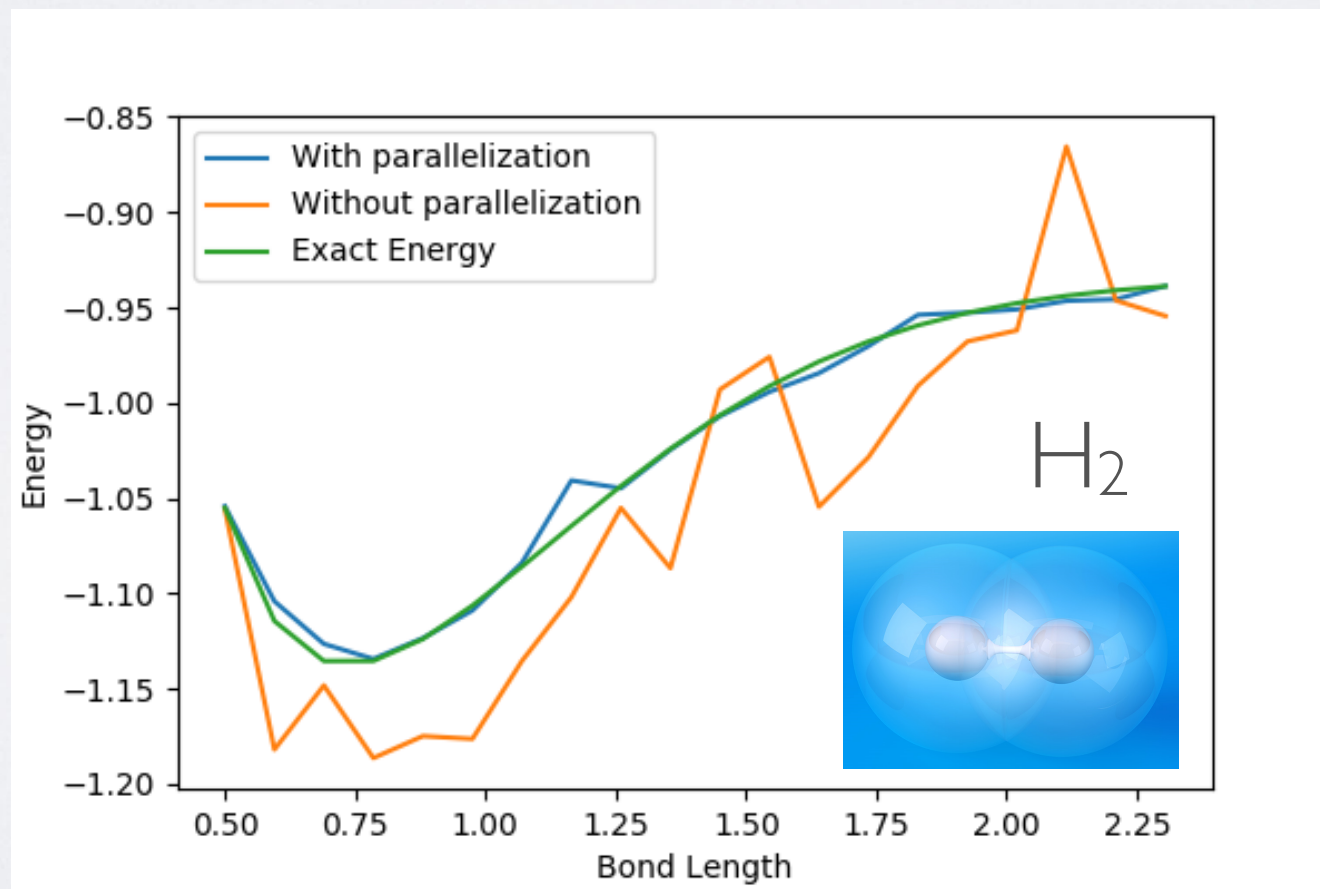
Take samples in parallel !



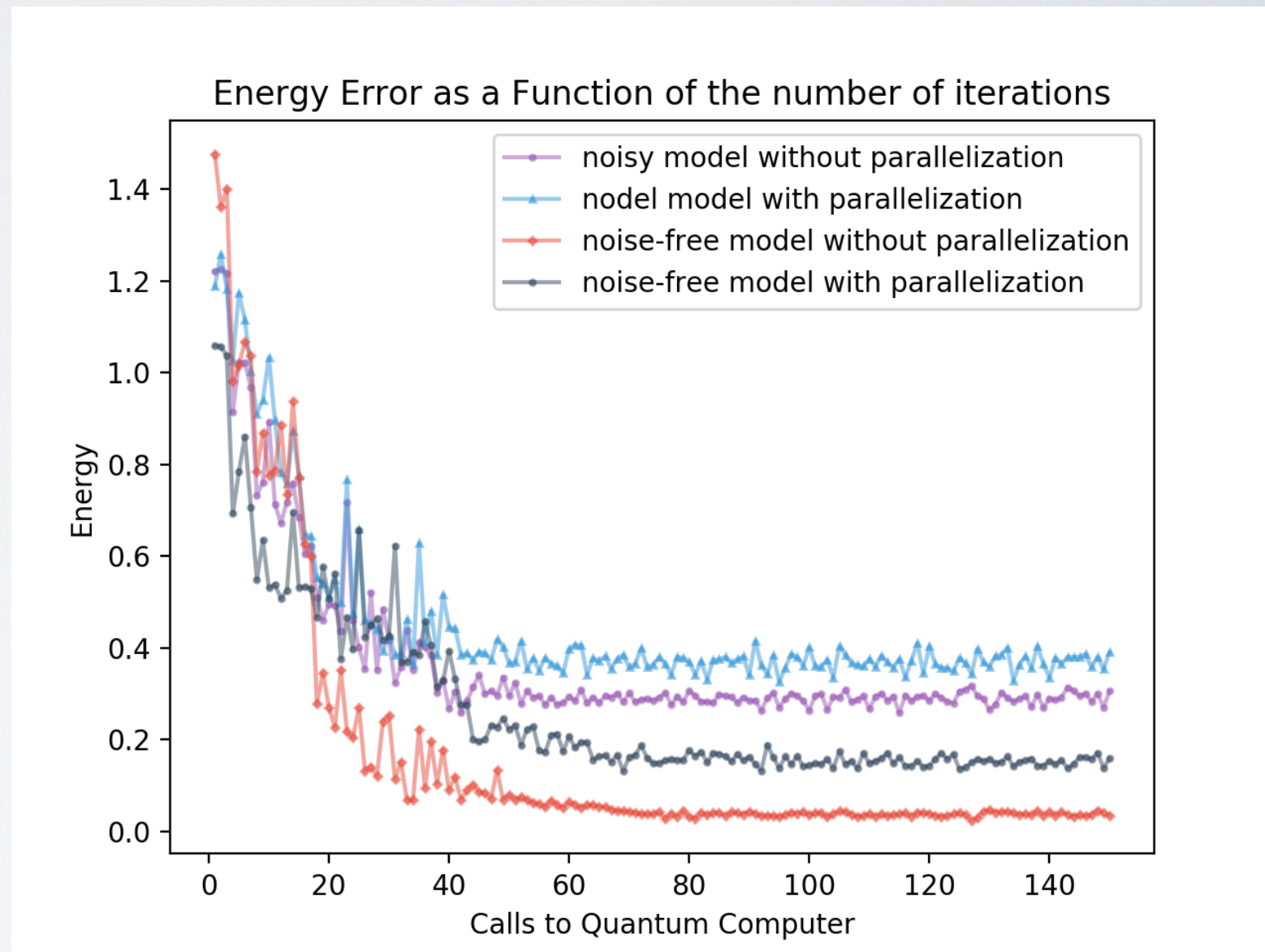
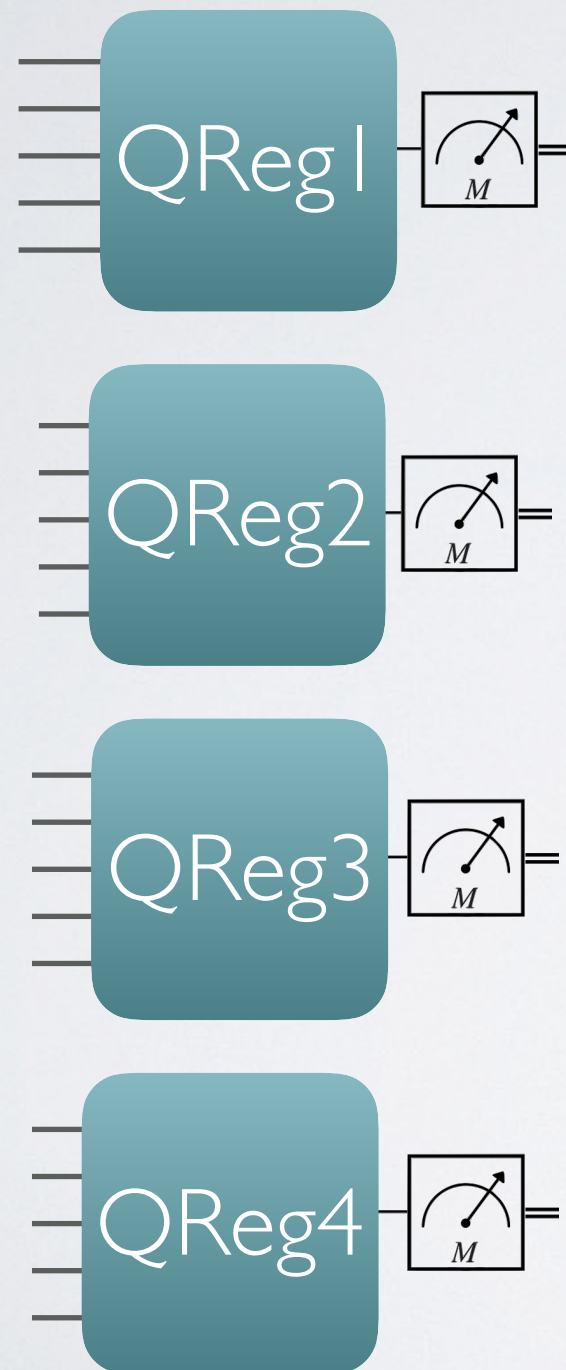


APPROACH I: MULTICHIP

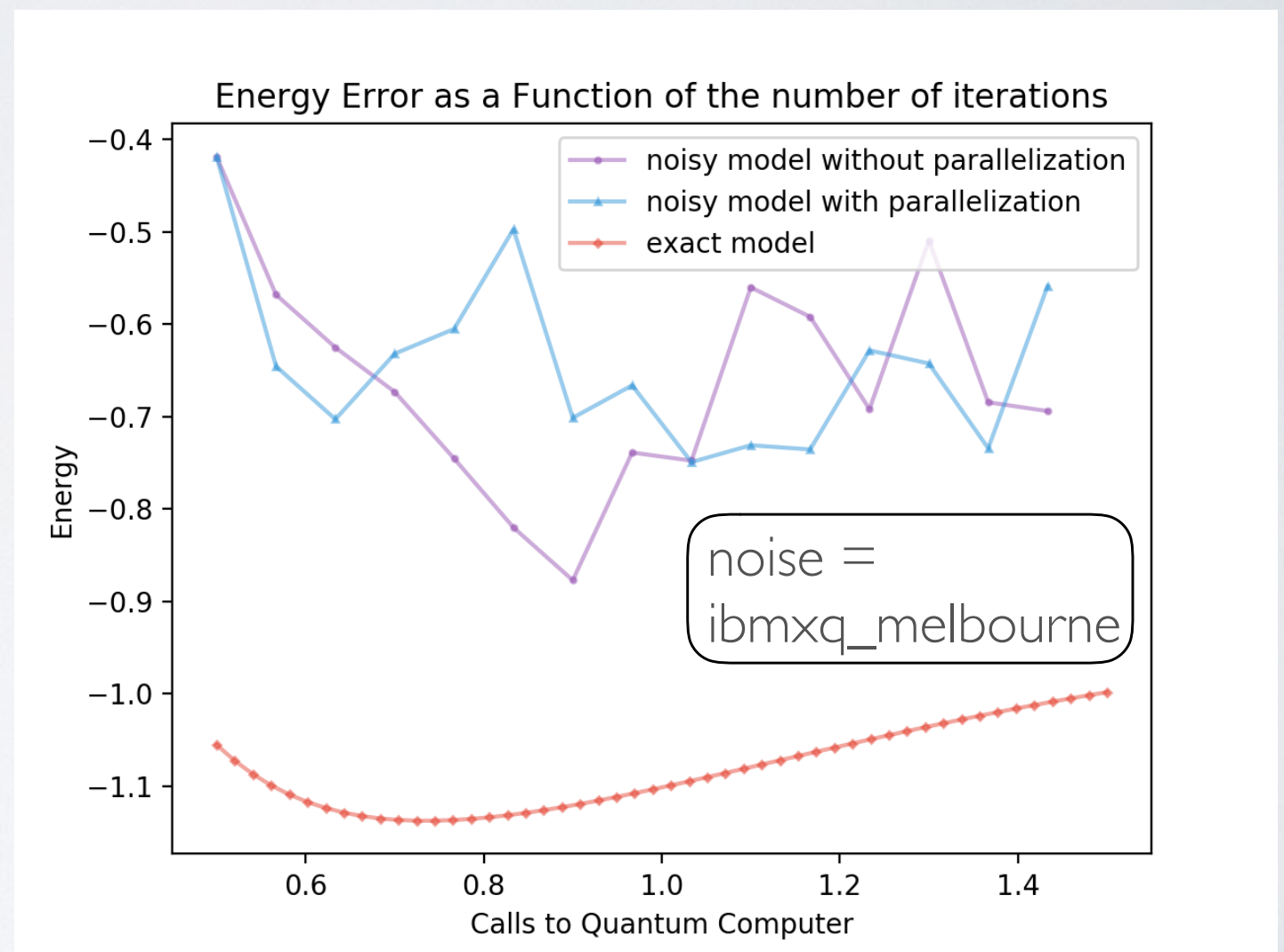
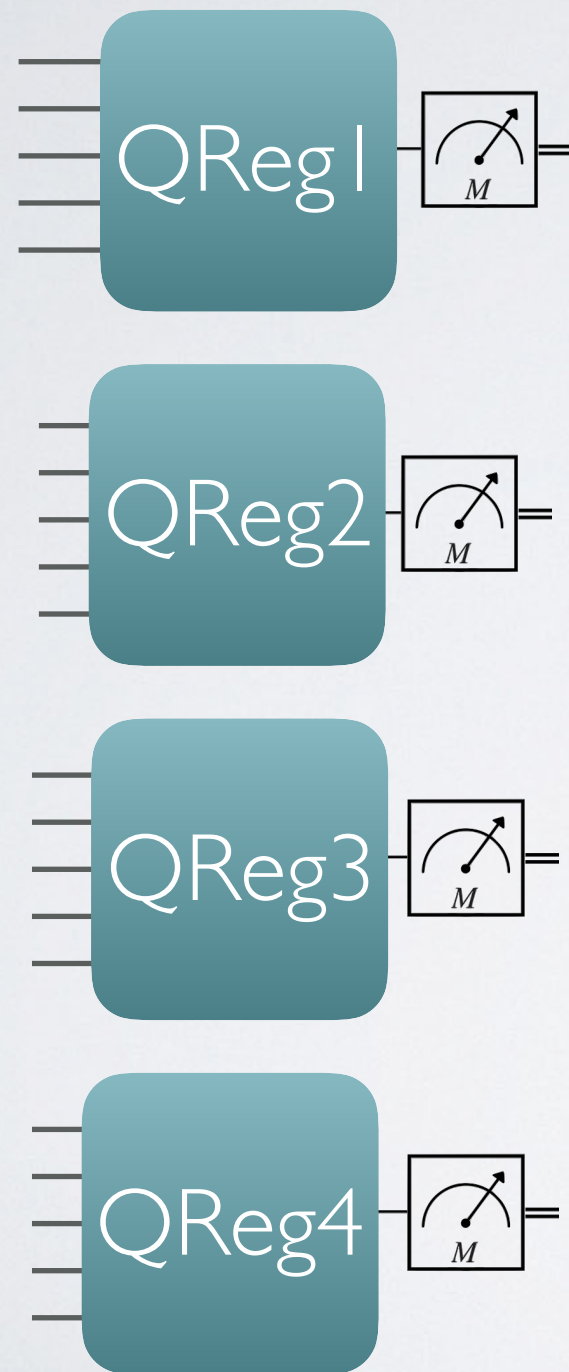
```
In [1]: instances=[]  
for i in range(n_instances):  
    instances.append(QuantumInstance(backend=BasicAer.get_backend("qasm_simulator"), shots=n_shots))  
vqe_instance = VQE(circuit, var form, optimizer=optimizer, threads=len(instances))  
result_n_P = vqe_instance.run(instances)
```



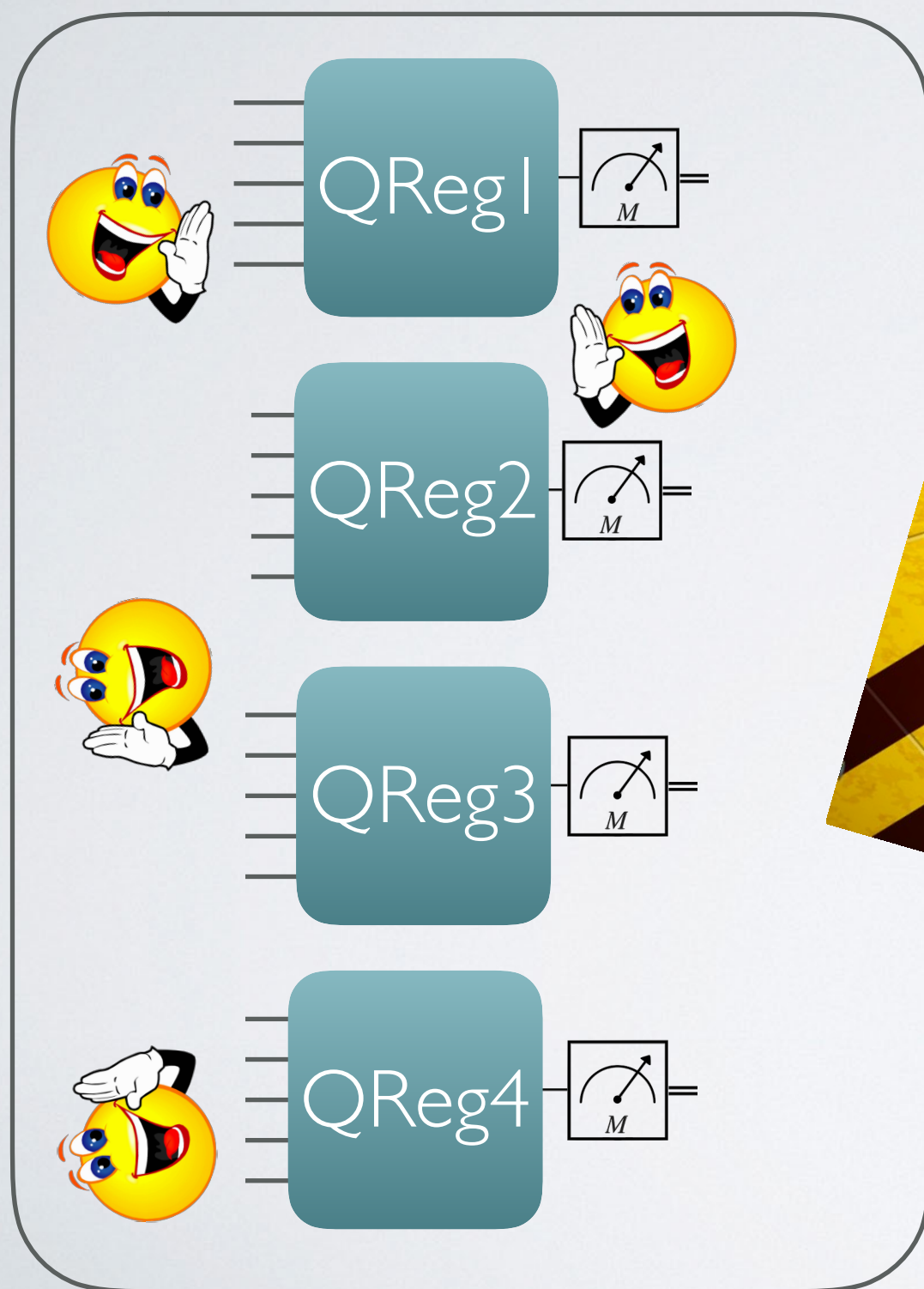
APPROACH 2: SINGLE CHIP



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THE POINT:

Don't build a Quantum Computer

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Don't build a Quantum Computer

Build many!