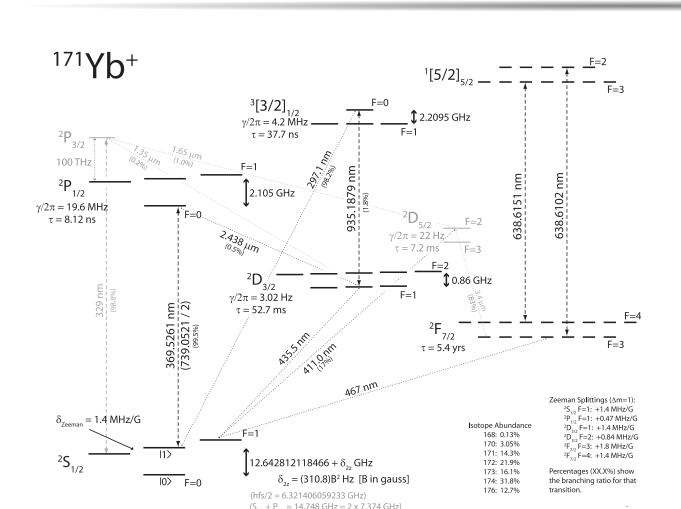
A next-generation trapped ion quantum computing system - a.k.a. "brassboard"

Yichao Yu ¹, Liudmila Zhukas ¹, Lei Feng ^{1,2}, Marko Cetina ^{1,2}, Crystal Noel ^{1,2}, Debopriyo Biswas ^{1,2}, Andrew Risinger ², Alexander Kozhanov ¹, Christopher R Monroe ^{1,2,3}

¹Duke Quantum Center, Duke University ²Joint Quantum Institute, University of Maryland ³lonQ, Inc.

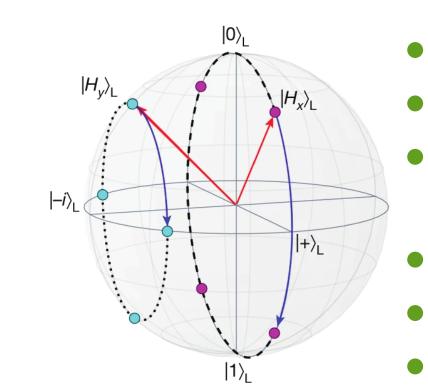
Trapped Ion Quantum Computing



New Vacuum System

Imaging System

Applications



- Universal Quantum Computer
- 20+ qubits and high fidelity
- Quantum simulations of many body physics
- Quantum chemistry
- Quantum gravity
- Nuclear theory
- Quantum Error Correction

