

Agenda

- Software Side Update
- Hardware Side Update

Summary

- Include the Project title and Team information, including attendance. (Include a reason if there is an absence)
 - sdMay23-24 Quantum Computing
 - Goal: Create a kilo-qubit scale (KQB) **design** for a quantum computer
 - Team Members:
 - Nicholas Greenwood
 - Jacob Frieden
 - Emile Albert Kum Chi (not present due to interview)
 - Colin Gorgen (not present, no listed reason)
 - Arvid Gusatfson (present virtually)
 - Sam Degnan
 - Advisors:
 - Gavin Nop (PhD student)
 - Dr. Jonathan Smith
 - Dr. Durga Paudyal
- Summary of the main points discussed
 - Software side:
 - Will be running with the dev of quantum computation control system
 - Talked about using Qiskit instances of ion traps, interconnections between them
 - Arvid's work in a shell, while impressive, is probably redoing work that has been done for us already on Qiskit
 - Hardware Side:
 - We had measurements off by a factor of 10, which caused a potential size constraints
 - Junction to junction size is solidified, all / most other measurements are ballpark from pictures
 - Working on nailing down those measurements
- List of any decisions made
 - Moving forward with Qiskit ion traps as basis of the software side design
- List of any actions to be taken
 - Software side needs to investigate if Qiskit will be sufficient for basis of design
 - Hardware side may need to ask Dan S (Sandia labs) about certain physical measurements that wouldn't be in our references
- Next steps for the project
 - Hardware side needs to continue gathering measurements and begin working on a rudimentary 3D model
 - Software side needs to investigate ion trap solution(s) and begin coding in connections for ion traps

