

MODIFICATIONS OF XRD AT HOUGHTON COLLEGE

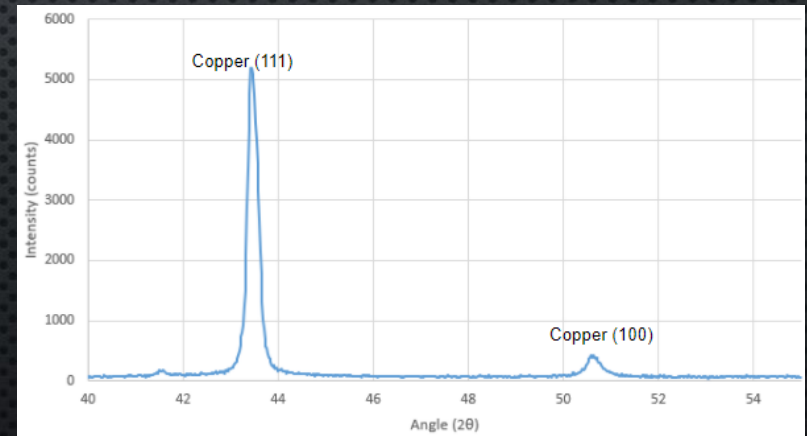
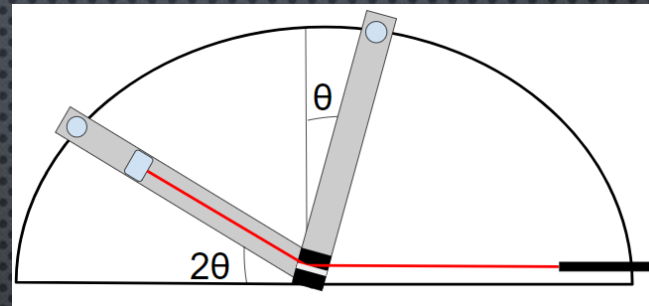
HEATHER PHILLIPS

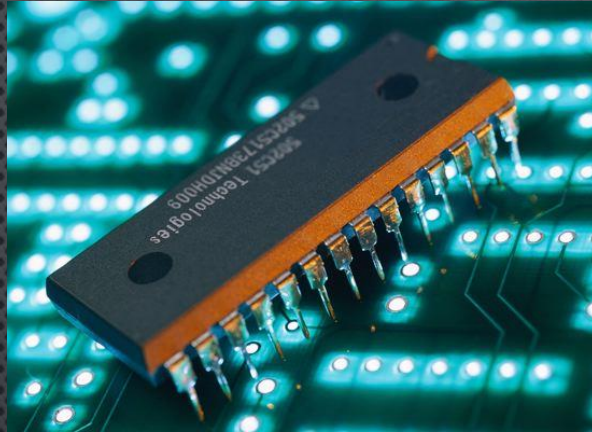
BRANDON HOFFMAN

HOUGHTON COLLEGE

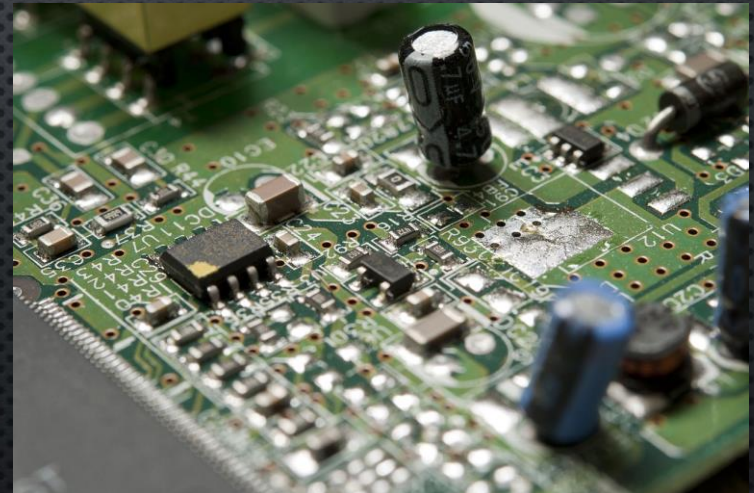
OUTLINE

- THIN METAL FILM
- WHAT IS A XRD
- XRD AT HOUGHTON
- MODIFICATIONS DONE
- FUTURE WORK

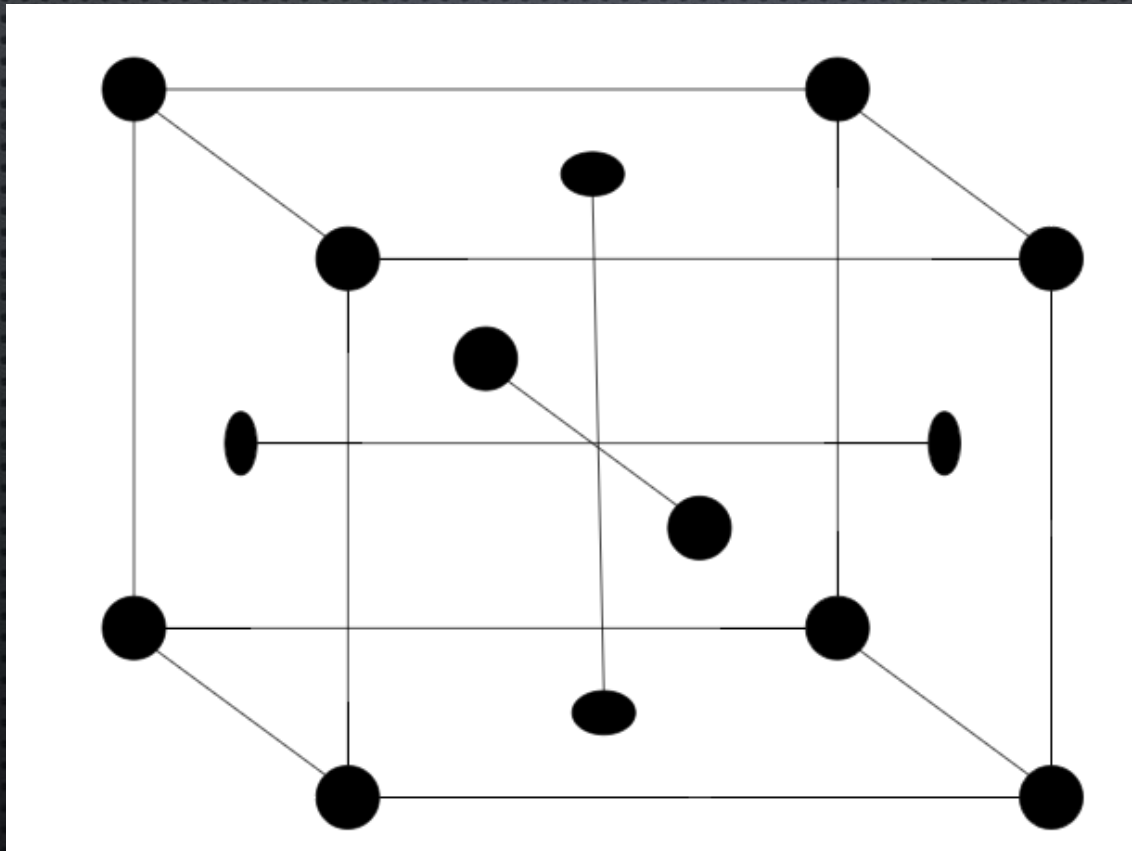




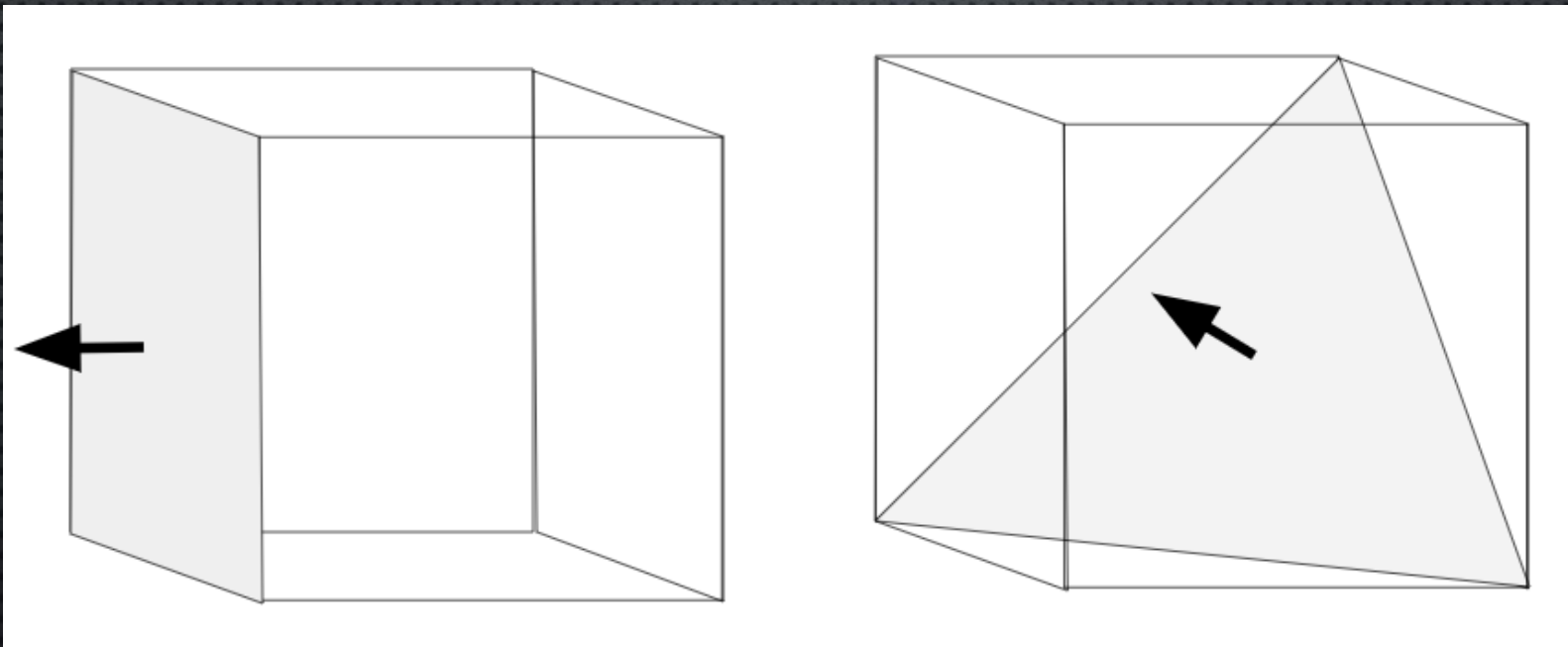
THIN METAL FILM



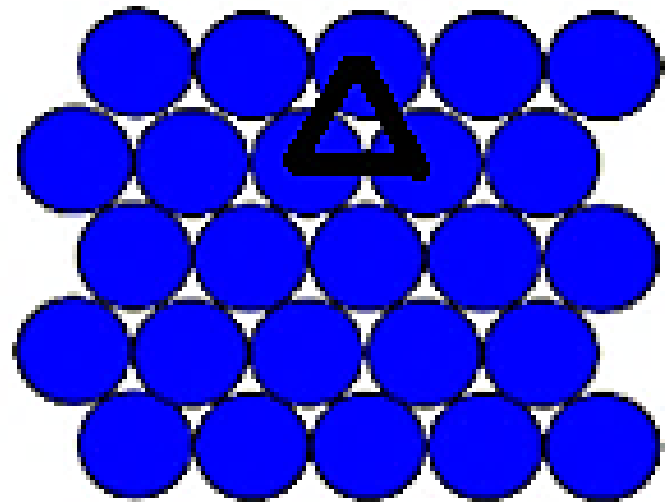
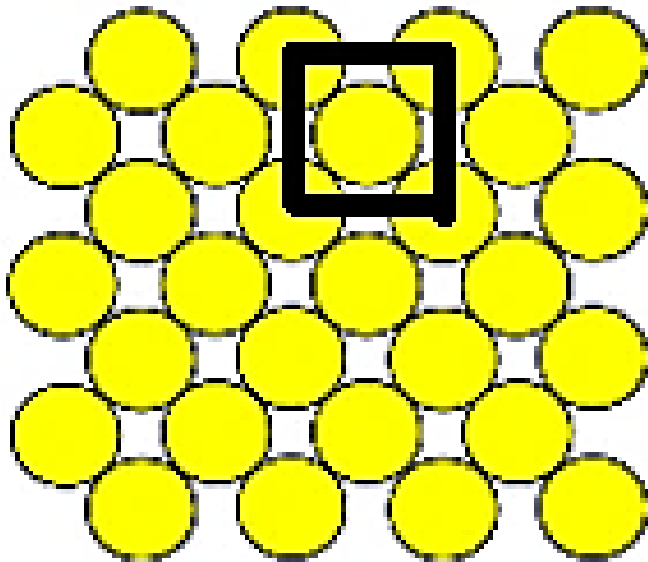
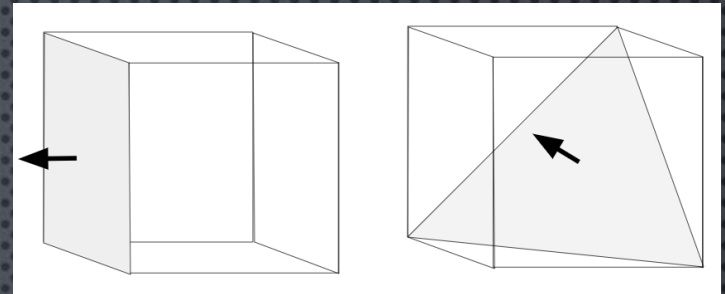
FACE CENTERED CUBIC



MILLER INDICES

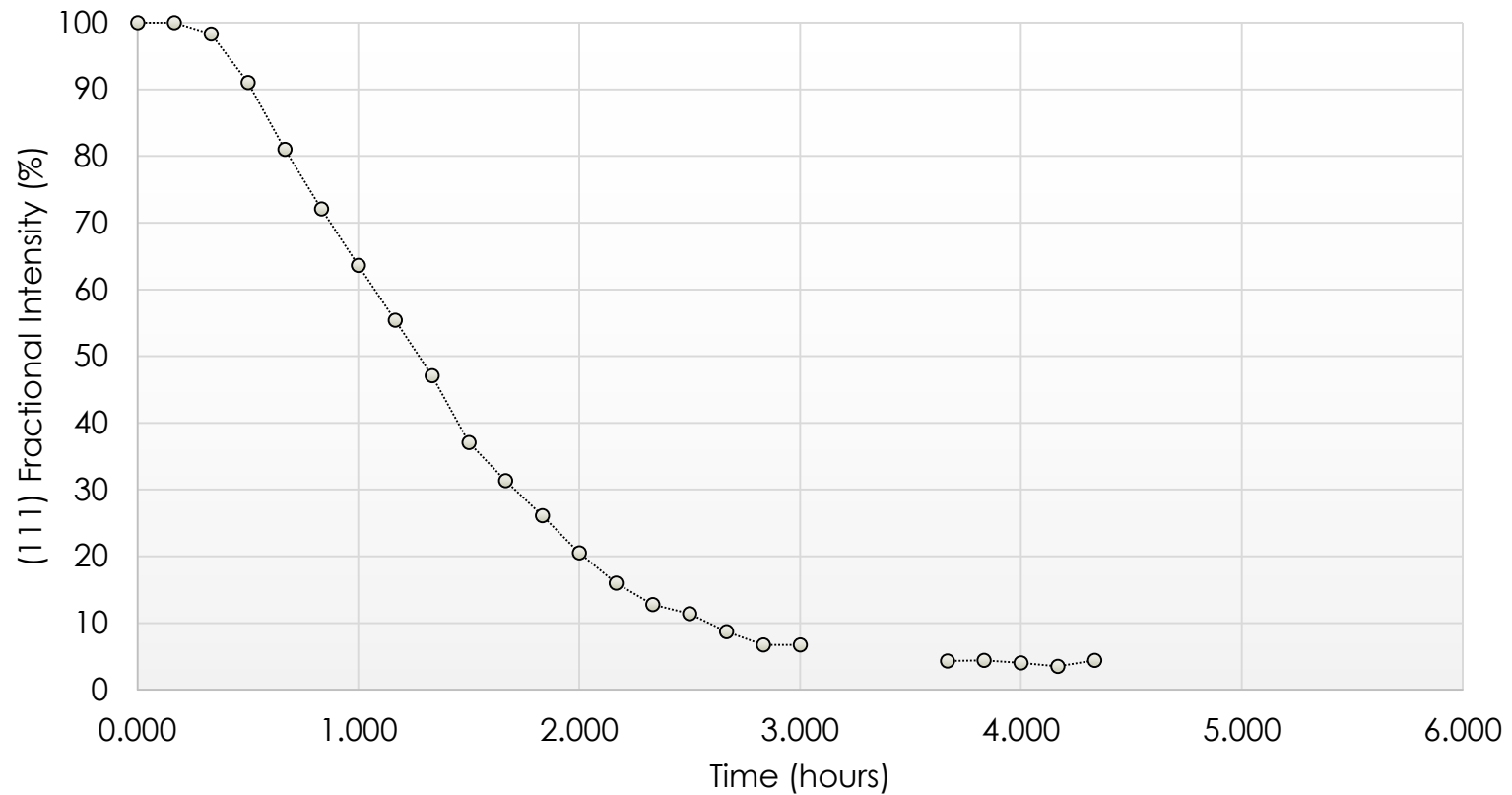


TOP VIEW



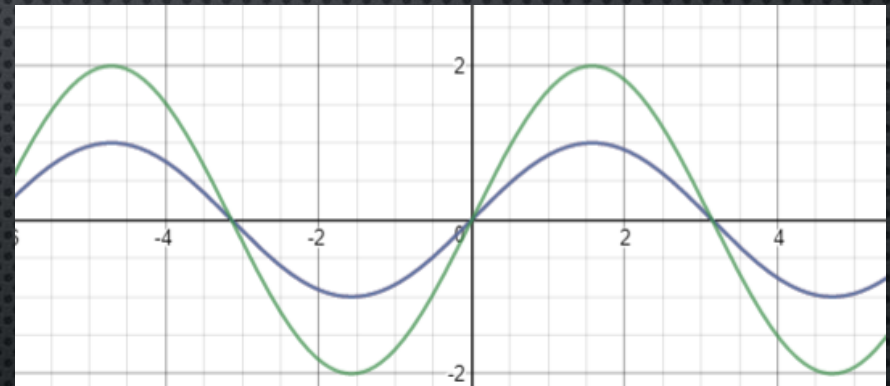
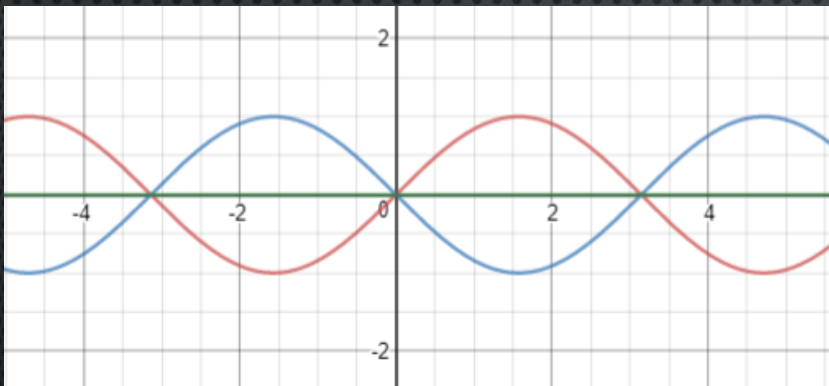


TEXTURE TRANSFORMATION

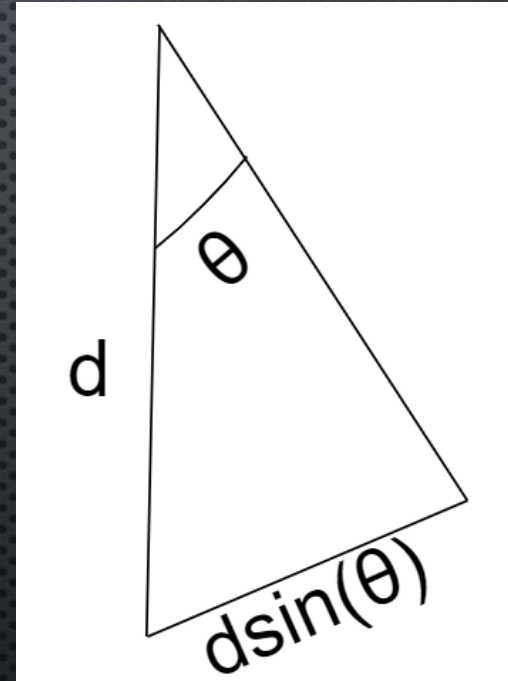
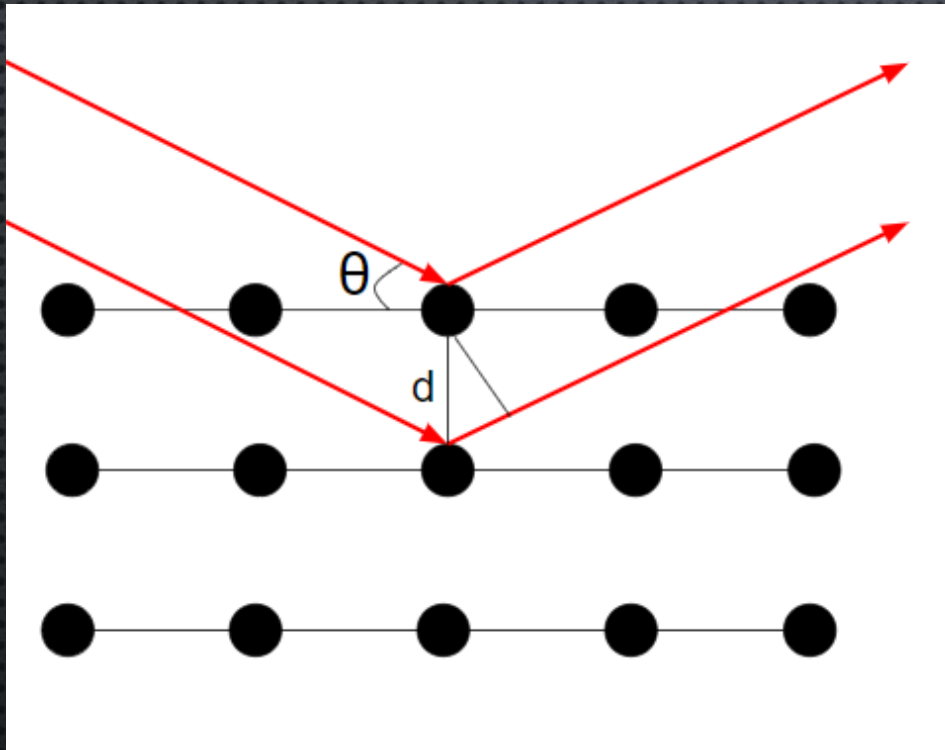


XRD

WAVE INTERFERENCE

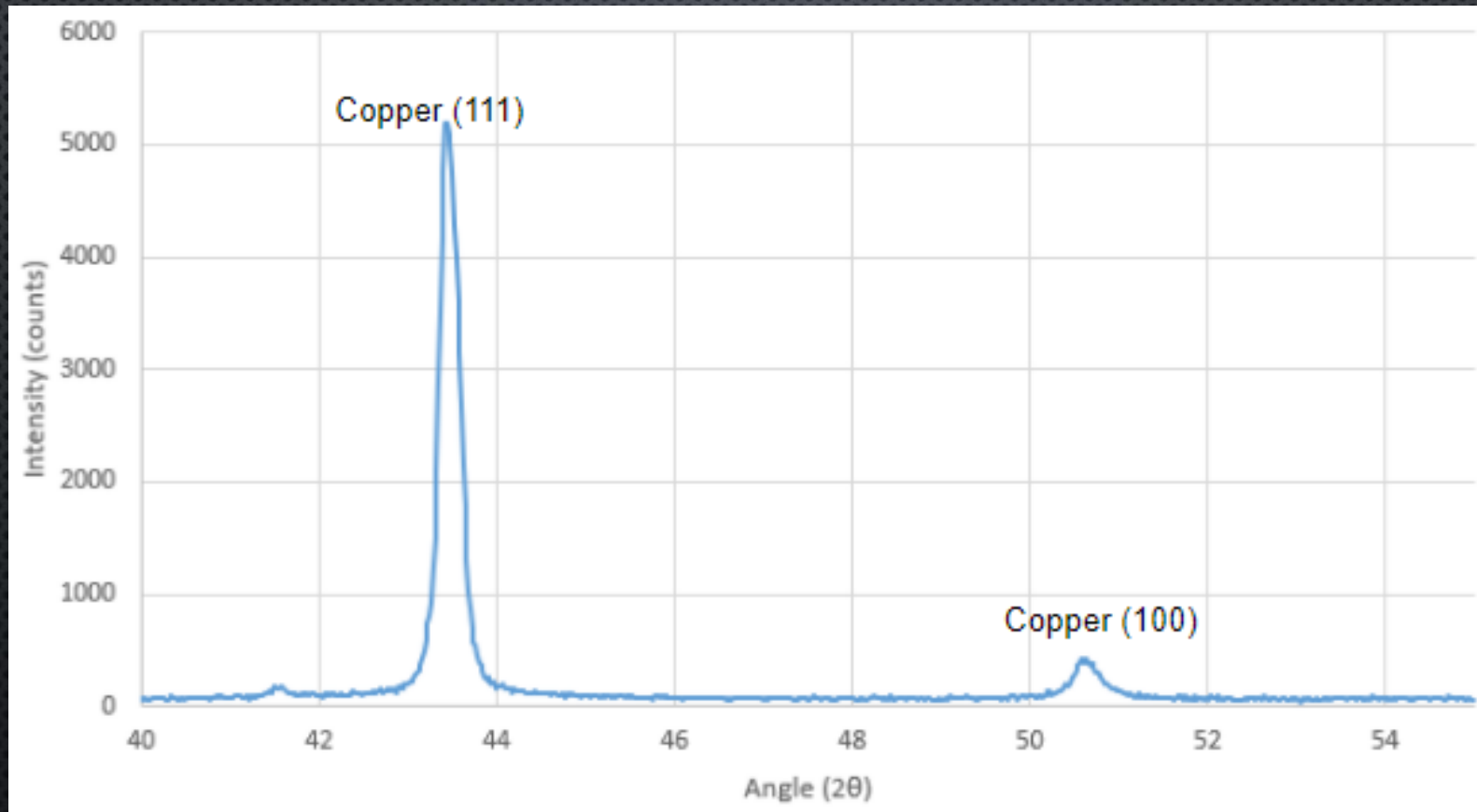


BRAGG'S LAW

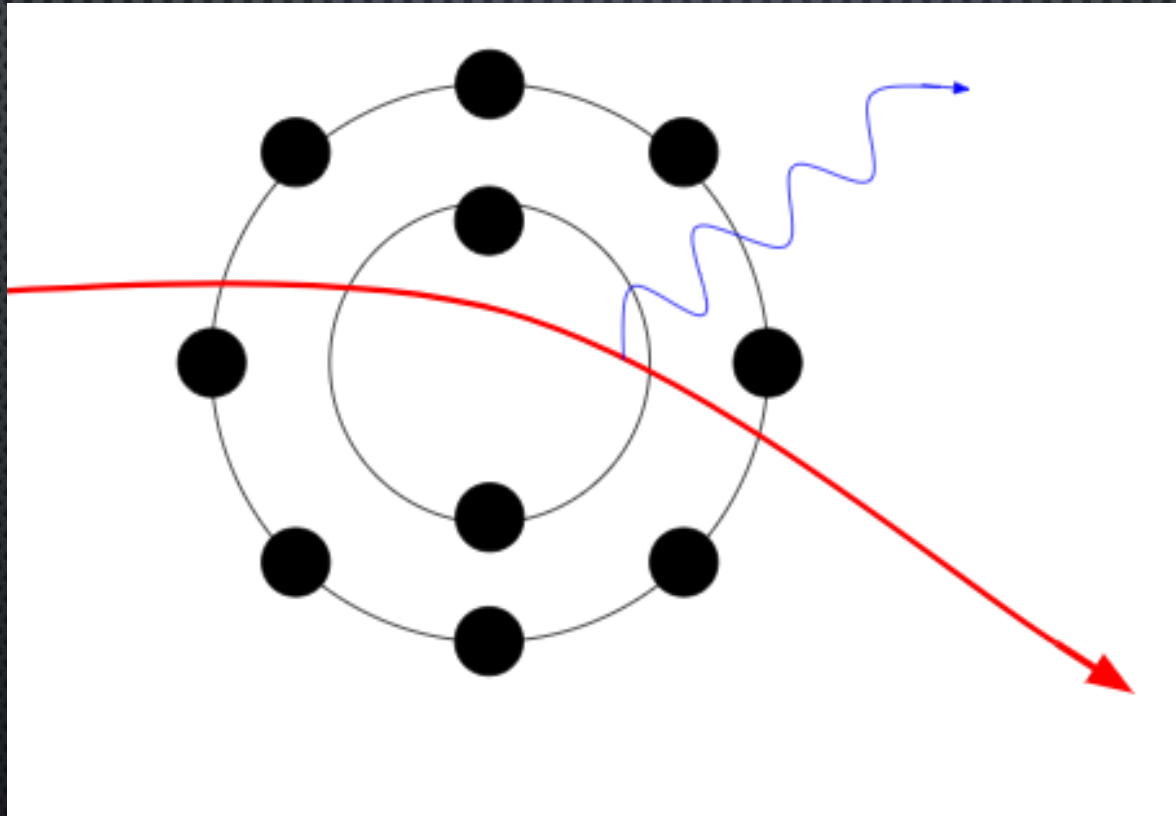


$$2d \sin(\theta) = n\lambda$$

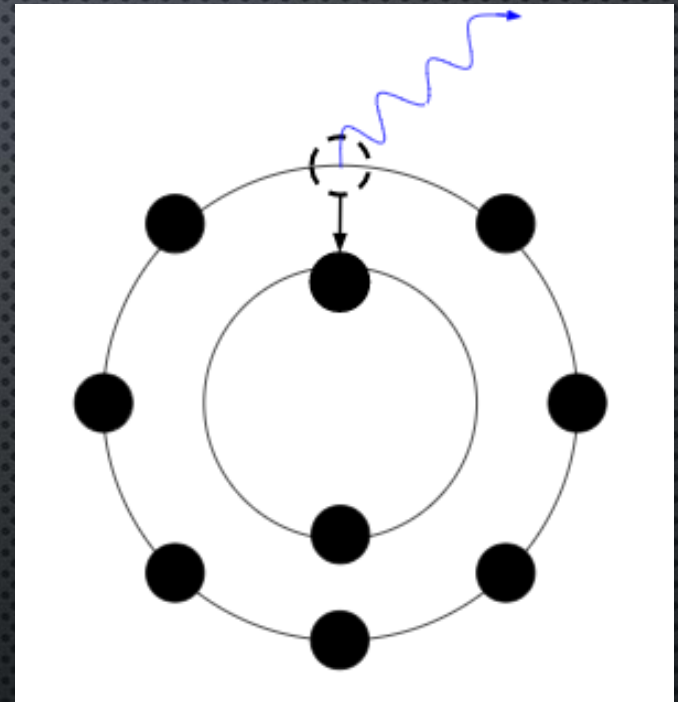
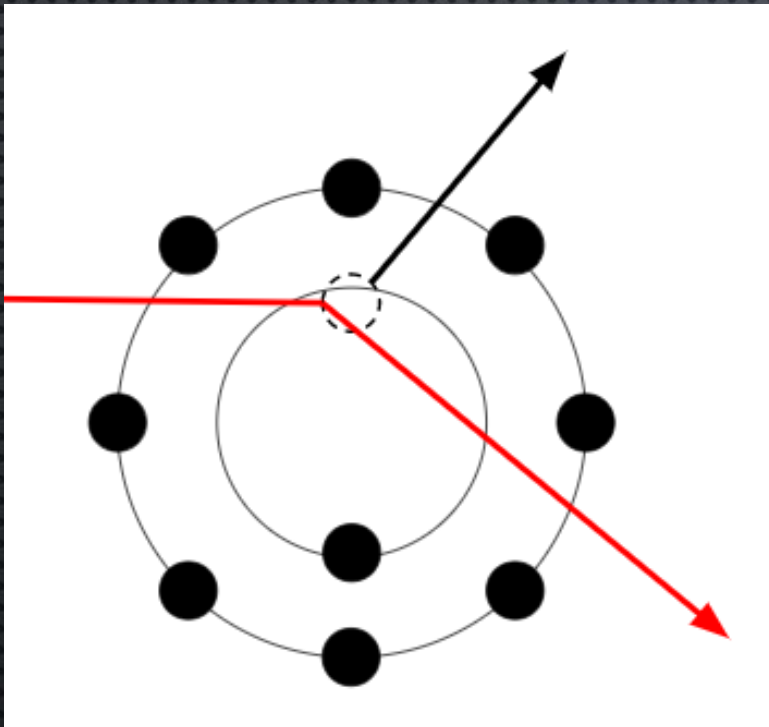
XRD DATA



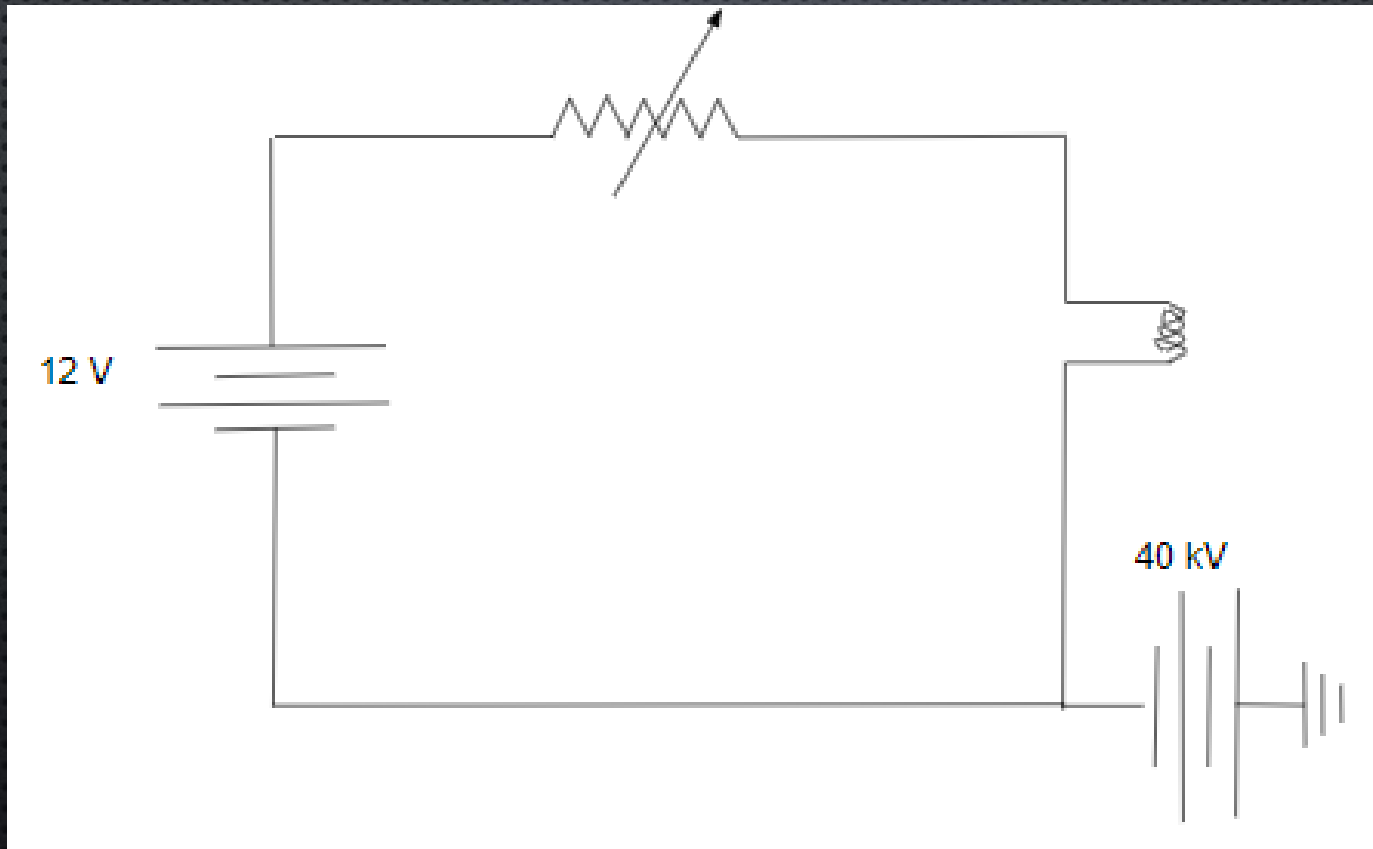
BREMSSTRAHLUNG X-RAYS



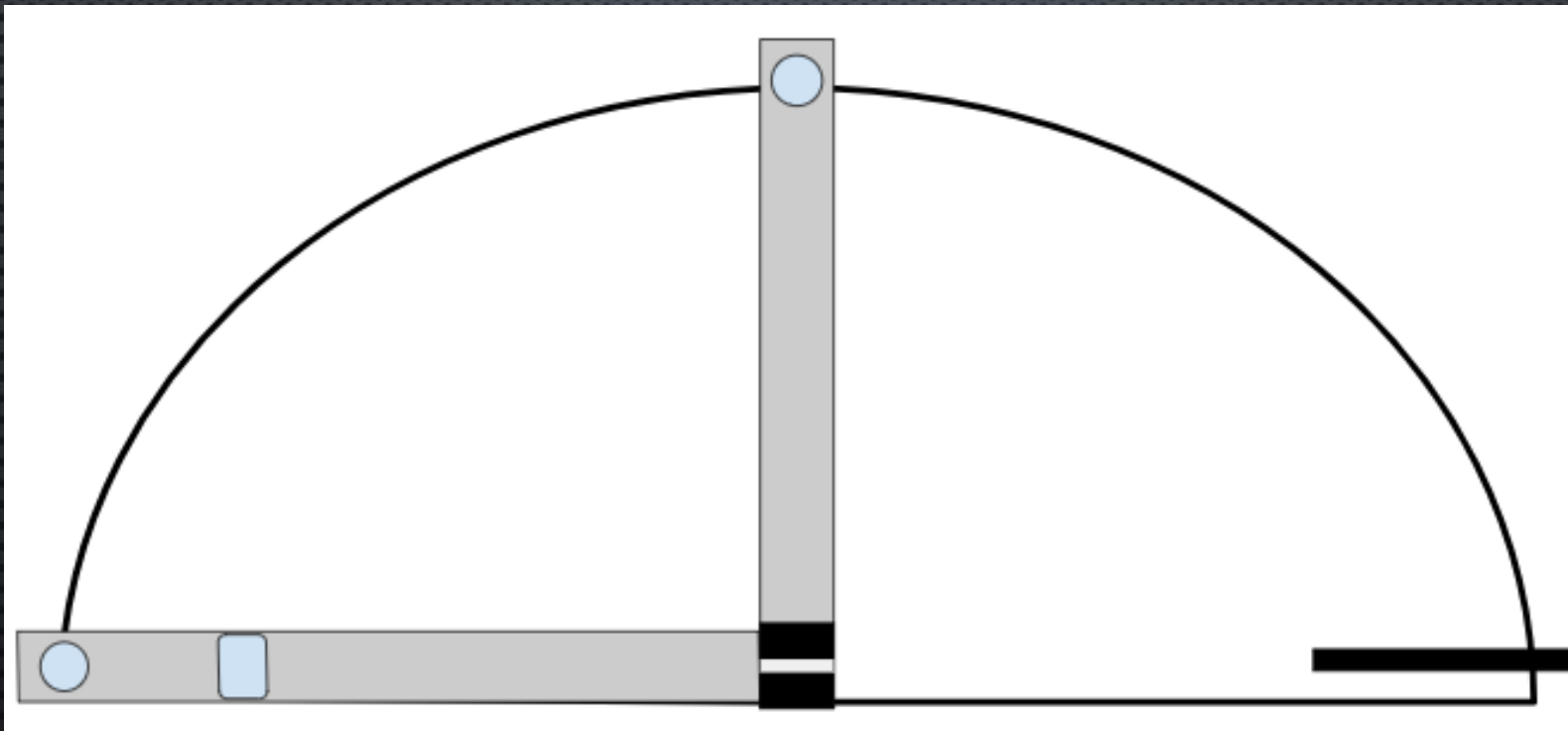
CHARACTERISTIC X-RAYS



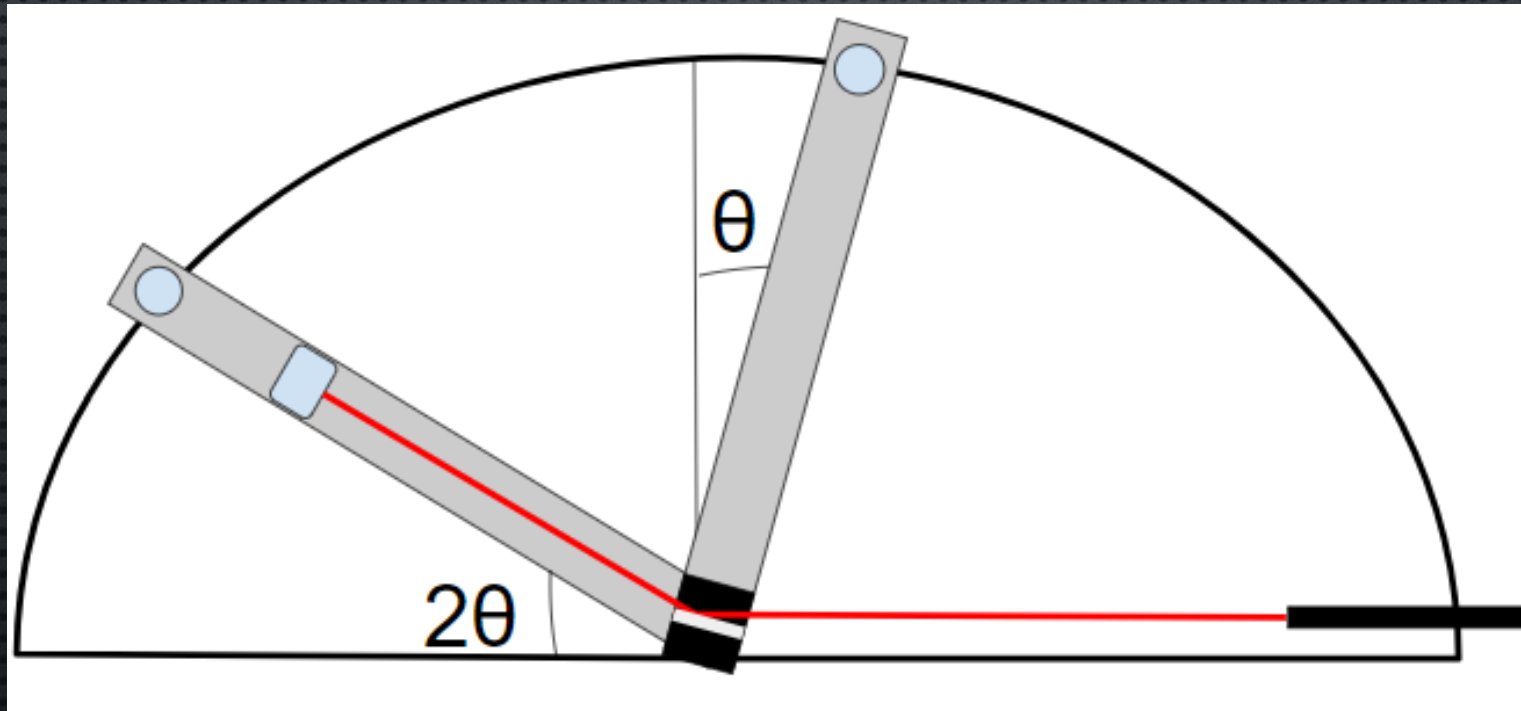
CIRCUIT PRODUCING THE X-RAY



BASIC DESIGN



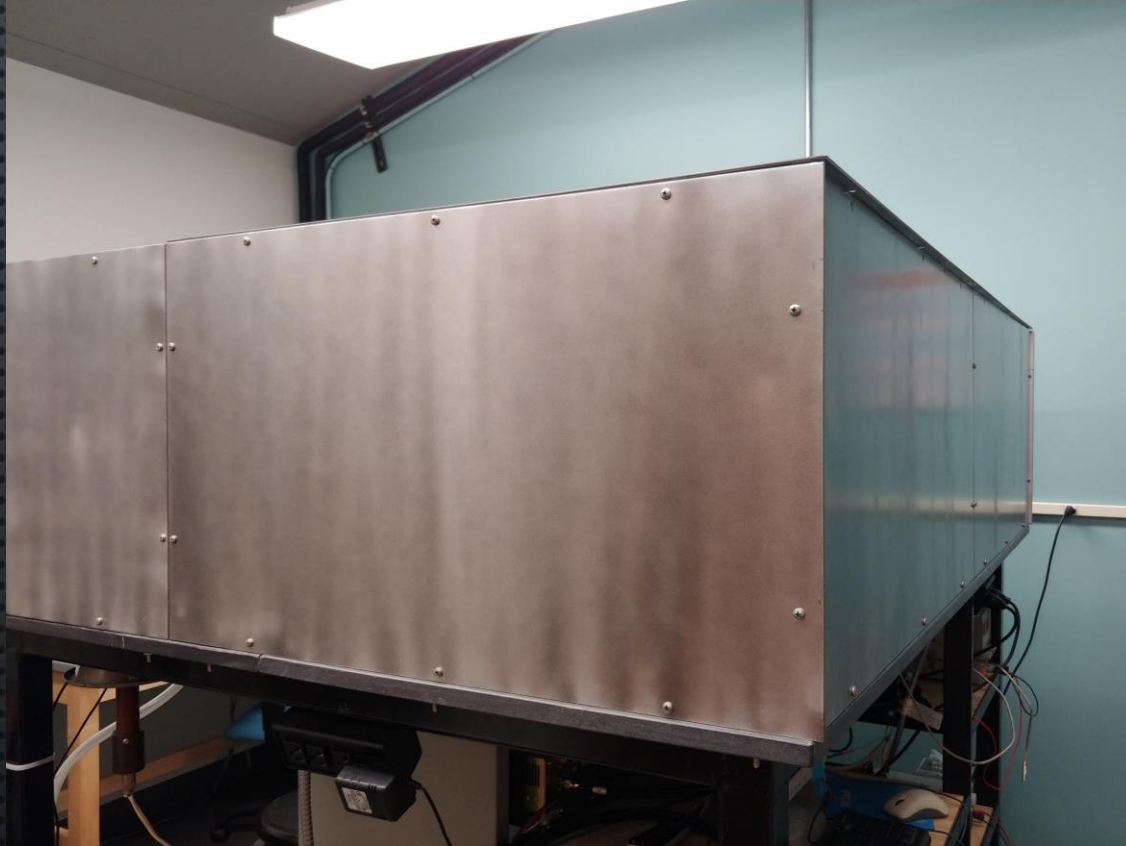
BASIC DESIGN



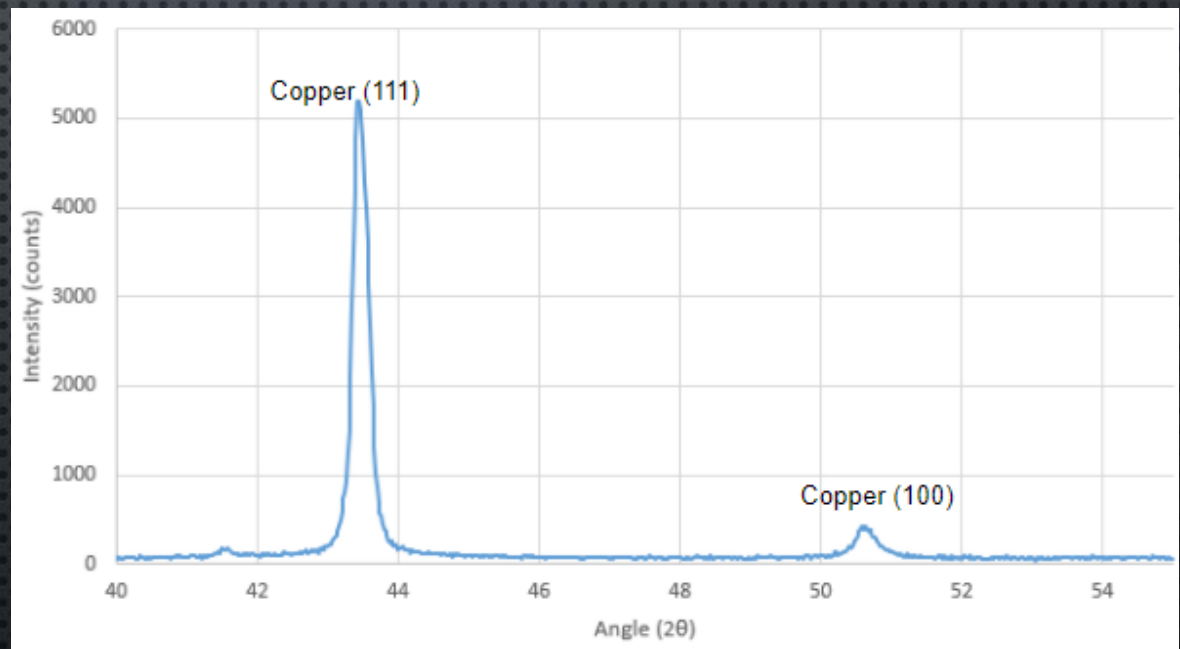
REAL THING



MODIFICATIONS



FUTURE WORK



ACKNOWLEDGEMENTS

- HOUGHTON COLLEGE PHYSICS DEPARTMENT
- BRANDON HOFFMAN
- CORNELL UNIVERSITY
- RSPS

QUESTIONS?