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# Ilana Bromberg

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## EDUCATION

**Stony Brook University, Stony Brook, NY**  
*Bachelor of Science, May 2020*  
*Women in Science and Engineering (WISE) Honors Program*  
*Majors: Physics and Astronomy*  
*Minor: Art History*  
*GPA: 3.55*

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## SKILLS

### **Computational**

- Highly proficient in Java, C++/ROOT, Fortran, MCNP, and Python
- Skilled with Matlab, Microsoft Office, and Github

### **Other**

- Well versed in data and error analysis
- Comfortable working with large data sets
- Experience working with Photoshop and other image editing programs
- Intermediate Mandarin Chinese speaker

## RESEARCH EXPERIENCE

### **Weinacht Group for Ultrafast Spectroscopy & Coherent Control**

*Stony Brook, NY*

*Research Student, September 2018 – Present*

- Laser spectroscopy research under the guidance of Prof. T. Weinacht
- Analysis of isotopes under vacuum ultraviolet (VUV) radiation

### **Columbia REU - Radiological Accelerator Research Facility (RARAF)**

*Nevis Labs, Irvington, NY*

*Research Intern, Summer 2019*

- Designed physical collimation for a neutron spectrum to limit radiation exposure on a mouse sample to the chest cavity - done in MCNP

### **PHENIX Undergraduate Research Group**

*Stony Brook, NY*

*Research Student, September 2016 – August 2018*

- Created macros in C++ using CERN's ROOT framework to track proton paths in a collider and optimize the positions of Roman Pot detectors

### **Computational Astronomy Research Group**

*Stony Brook, NY*

*Student, November 2016 – Present*

- Weekly meetings for the analysis and discussion of computational topics, including black hole mergers and gravitational waves under the guidance of Professor M. Zingale
- Individual work and guidance from Professor A. Caulder for supernova applications and utilization of the FLASH code

### **Stony Brook WISE Research Rotation**

*Stony Brook, NY / Brookhaven National Laboratory*

*Student, January 2017 – May 2017*

- Hands-on analysis of freezing water droplets for cloud formation.
- Modeled the consumption and creation of elements in a white dwarf star.

## LEADERSHIP & ACTIVITIES

### **Fencing Club**

*Stony Brook, NY / Rocky Point, NY*

*Treasurer, May 2017 – May 2018*

- Organized club fundraisers
- Booked trips all over the country for tournaments, including hotels, transportation, admission fees, and other travel expenses
- Managed the club budget and payment records

## AWARDS

### **Presidential Scholarship, 2016**

- Full academic scholarship at Stony Brook University

### **CAS Dean's Excellence Scholarship, 2016**

- \$1000 merit-based scholarship