Heather Sky Harrington

E-mail heathh6@uw.edu.edu
Phone (412) 728-4433

Education

Sep. 2019 – Present	**University of Washington** , Seattle, WA Department of Physics and Astronomy PhD, anticipated May 2025 Advisor: Alejandro Garcia
Aug. 2015 – May 2019	**Yale University**, New Haven, CT Bachelor of Science Major: Physics (Intensive) Project Manager for Yale Undergraduate Women in Physics club (Fall 2017 to Spring 2018). Leader of interdepartmental reading group on the Philosophy of Science using Peter Godfrey-Smith's Theory and Reality (Spring 2018).

Research

Aug. 2019 – Present	**[6]He-CRES Experiment – Research Assistant** Center for Experimental Nuclear Physics and Astrophysics (CENPA), Seattle, WA Search for chirality-flipping in the weak interaction via high precision study of nuclear beta decay using the novel technique of Cyclotron Radiation Emission Spectroscopy.
Aug. 2018 – May 2019	**Mu2e Experiment Fermilab - Demers Lab - Yale University** Senior thesis: Charged Lepton Flavor Violation and Developing a High Energy Photon Trigger for the Mu2e Experiment
Summer 2018	**Visiting Scientist at AEgIS Collaboration - CERN** Simulations of nonlinear optics of sum frequency generation in the noncolinear regime.
Jan 2016 – May 2018	**Batista Lab - Yale University** Undergraduate Research Assistant in computational Chemistry Quantum mechanics/molecular mechanics (QM/MM) simulations to investigate the conductivity of Geobacter pili, S-state transitions of the Oxygen Evolving Complex (OEC) in Photosystem II, and herbicide docking in the QB site of Photosystem II.
Spring 2017	**Tropical Field Ecology - Yale University School of Forestry** Graduate research course. Two weeks of field research in Ecuador based primarily at the Yasuni Research Station in the Amazon Basin following study of ecological theory. Community Network analysis of non-vascular epiphytes.

Publications and Conferences

Conference abstracts
Oct. 2021, *Report of First Data from the 6He-CRES Experiment and Future Outlook,* 2021 Fall Meeting of the APS Division of Nuclear Physics
Posters
April 2017, *Designing synthetic acceptor ligands to enhance electron transfer efficiency in Photosystem II,* Eastern Regional Photosynthesis Conference (ERPC) Spring 2017

Awards and Fellowships

Richter Summer Fellowship (Ezra Stiles College, Yale University Summer 2018)
ORLO - The Best Writing of English 120 at Yale (Fall 2017)

Skills

Programming:
MATLAB, C++, Python, R, Bash, Java, OpenCV, Tcl, Mathematica
Bayesian statistics, data analysis, community network analysis, Markov Chain Monte Carlo simulations, Robotics and computer vision, Molecular Dynamics trajectory submission and analysis scripts, and editing human readable text files to build simulations.
Software:
ROOT, Katydid, SNLO, VMD, NAMD, Ambertools, Gaussian, Schrodinger Maestro, PyMOL, LaTeX, EndNote, Solid Works, SketchUp, Adobe Photoshop, InDesign, Illustrator, MS Word, PowerPoint, Excel
Laboratory:
Cryogenics, gas supply systems for radioisotopes, scintillation detectors, photomultiplier tubes, semiconductor detectors, vacuum systems, superconducting magnets, NMR, magnetic field mapping and shimming, data acquisition system design, laser cooling and trapping of neutral atoms, infrared (IR) spectroscopy, mass spectroscopy, non-linear optics, soldering, and use of standard laboratory equipment.
Language:
English, Conversational French