

Samuel Fielder

📍 University of Victoria, BC, Canada ✉ samuelfielder@uvic.ca ☎ +1 780 237 0844 🌐 samdf96

Academic History

University of Victoria <i>PhD in Astrophysics</i> ◦ Supervisor: Helen Kirk (NRC-HAA)	2024 to present
University of Victoria <i>MSc in Astrophysics</i> ◦ Supervisor: Helen Kirk (NRC-HAA)	2021 to 2023
University of Alberta <i>BSc in Physics and Astronomy</i> ◦ Supervisor: Erik Rosolowsky [499 Project Requirement]	2013 to 2018

Employed Research Experience

Research Assistant <i>University of Alberta</i> ◦ Coordinate and design new experimental method to determine Henry's Law Constant in the case of general C_xF_{xx} solvents with Radon as solute. Continuation of project into radon purification using new stripping column method, using previously mentioned work as foundation for design work.	Edmonton, AB Sept. 2019 to Dec. 2019
Undergraduate Research Assistant <i>University of Alberta</i> ◦ Computing angular momentum regions in gas cloud simulation space using dynamic clump finding algorithms ◦ Exploring acrylic fluorescence in the DEAP-3600 project, by designing and conducting an experiment involving working with PMT signal data along with a Germanium detector signal.	Edmonton, AB May 2018 to Aug. 2018

Publications

Fielder, S.D., Kirk, H., Dunham, M., Offner, S.S.R. 2024, ApJ, 968, 10
An ALMA Search for Substructure and Fragmentation in Starless Cores in Orion B North ([10.3847/1538-4357/ad3d56](https://doi.org/10.3847/1538-4357/ad3d56) [↗](#))

Funding And Awards

\$1,660 CAD - Boehm-Hesser Graduate Research Excellence in Astronomy Award	University of Victoria 2023
2x \$1,500 CAD - University of Victoria Graduate Award	University of Victoria 2021, 2022

Conference Talks

Canadian Astronomical Society Annual Meeting (CASCA) <i>Contributed Talk (withdrew): An ALMA View of Star Formation in Aquila</i>	Toronto, ON June 2024
Canadian Astronomical Society Annual Meeting (CASCA) <i>Contributed Talk: ALMA Observations of Starless Core Substructure</i>	Penticton, BC June 2023

Conference Posters

ALMA at 10 Years - Past, Present, and Future <i>e-Poster: ALMA Observations of Starless Core Substructure</i> (10.5281/zenodo.10247182 ↗)	Peurto Varas, Chile Dec. 2023
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Public Outreach

Star Party Public Outreach Talk <i>The Complex World of Radio Astronomy - A Deep Dive on How Stars Form</i>	DAO, Victoria, BC May 2023
International Astronomy Day 2023 <i>University of Victoria Site and Lead Manager, Royal Astronomical Society of Canada</i>	University of Victoria Apr. 2023

Teaching Record

Teaching Assistant

Department of Physics and Astronomy

University of Victoria

Sept. 2021 to present

- **Computer Assisted Physics (Phys 248, 49 students)** with Bob Kowalewski (Jan - Apr 2024)
Prepared and led 1.5hr tutorials; marked assignments and exams.
- **Exploring the Cosmos (Astro 102, 24 students)** with Karun Thanjavur (Jan - Apr 2023)
Prepared and led 3hr demonstrations of astronomy lab experiments; marked lab reports.
- **Exploring the Cosmos (Astro 102, 28 students)** with Karun Thanjavur (Sep - Dec 2022)
Prepared and led 3hr demonstrations of astronomy lab experiments; marked lab reports.
- **Computer Assisted Mathematics and Physics (Phys 248, 51 students)** with Falk Herwig (Jan - Apr 2022)
Prepared and led 1.5hr tutorials; marked assignments and exams.
- **Concepts in Modern Astronomy (Astro 150, 20 students)** with Karun Thanjavur (Jan - Apr 2022)
Prepared and led 3hr demonstrations of astronomy lab experiments; marked lab reports.
- **Exploring the Cosmos (Astro 102, 20 students)** with Karun Thanjavur (Sep - Dec 2021)
Prepared and led 3hr demonstrations of astronomy lab experiments; marked lab reports.

Image Description Specialist

Center for Accessible Learning

University of Victoria

Jan. 2023 to Apr. 2023

- Created image descriptions and alternative course materials for students with visual impairments.

Student Advocacy

Director of Finance

Graduate Student Society

University of Victoria

2023-2024, 2024-2025

- Appointed Committee Chair Roles:
 - Graduate Student Society Appeals Committee (2023 - 2025)
 - Graduate Student Society Finance Committee (2023 - 2025)
 - Mandatory Temporary Medical Insurance Opt Out Appeals Committee (2023 - 2025)
- University of Victoria Committee Appointments:
 - Student Life Grant Committee (2024 - 2025)
 - **Appointment Committee for Director of the Astronomy Research Centre (2024)**
 - Graduate Fee Reduction Appeals Committee (2023 - 2025)
 - Senate Committee on Libraries (2023 - 2024)
 - REACH Awards - Andy Farquarson Committee (2023)

Graduate Student Representative for Physics and Astronomy

Graduate Student Society

University of Victoria

2022 to 2023

Executive Board Member (GSS Councillor)

Physics and Astronomy Graduate Student Association

University of Victoria

2022 to 2023