

# Samuel Fielder

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## Academic History

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

## Employed Research Experience

<b>Undergraduate Research Assistant</b> <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
<b>Research Assistant</b> <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

## Publications

<b>An ALMA Search for Substructure and Fragmentation in Starless Cores in Orion B North</b> <i>Samuel Fielder</i> , Helen Kirk, Michael Dunham, Stella Offner <a href="https://doi.org/10.3847/1538-4357/ad3d56">10.3847/1538-4357/ad3d56</a> <a href="#">🔗</a> (The Astrophysical Journal)	June 2024
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## Funding And Awards

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

## Conference Talks

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

## Conference Posters

<b>ALMA at 10 Years - Past, Present, and Future</b> <i>e-Poster: ALMA Observations of Starless Core Substructure (<a href="https://doi.org/10.5281/zenodo.10247182">10.5281/zenodo.10247182</a> <a href="#">🔗</a>)</i>	Peurto Varas, Chile Dec. 2023
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## Public Outreach

<b>Star Party Public Outreach Talk</b> <i>The Complex World of Radio Astronomy - A Deep Dive on How Stars Form</i>	DAO, Victoria, BC May 2023
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## International Astronomy Day 2023

University of Victoria Site and Lead Manager, Royal Astronomical Society of Canada

## Telescope Operator and Outreach Educator

Friends of the DAO Volunteer

University of Victoria

Apr. 2023

DAO, Victoria, BC

Sept. 2021 to present

## Teaching Record

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### 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 Tanjavur (Jan - Apr 2023)  
Prepared and led 3hr demonstrations of astronomy lab experiments; marked lab reports.
- **Exploring the Cosmos (Astro 102, 28 students)** with Karun Tanjavur (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 Tanjavur (Jan - Apr 2022)  
Prepared and led 3hr demonstrations of astronomy lab experiments; marked lab reports.
- **Exploring the Cosmos (Astro 102, 20 students)** with Karun Tanjavur (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

## Student Advocacy

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### 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:
  - Senate Committee on Libraries (2023-2024)
  - Graduate Fee Reduction Appeals Committee (2023-2025)
  - REACH Awards - Andy Farquarson Committee (2023)
  - **Appointment Committee for Director of the Astronomy Research Centre (2024)**
  - Student Life Grant Committee (2024-2025)

### 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