Eric W. Koch
Curriculum Vitæ

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Education

2016-expected July 2020 *University of Alberta*
PhD. (Physics)
Thesis: "The Molecular and Atomic Interstellar Medium in the Local Group"
Adviser: Prof. Erik Rosolowsky

2014-2016 *University of Alberta*
MSc. (Physics)
Thesis: "The Atomic Interstellar Medium in M33"
Adviser: Prof. Erik Rosolowsky

2010-2014 *University of British Columbia*
Hon. BSc. (Physics)

Employment

2014–present *University of Alberta*
Graduate Research and Teaching Assistant

2013-2014 *University of British Columbia, Okanagan*
Undergraduate Research Assistant with Prof. Jason Loeppky

2012 *University of British Columbia, Okanagan*
Undergraduate Work-Study Program with Prof. Erik Rosolowsky

2011-2014 *University of British Columbia, Okanagan*
Undergraduate Teaching Assistant

Awards

2019 *University of Alberta*
Andrew Stewart Memorial Graduate Prize

2019 *University of Alberta/The Ohio State University*
Natural Sciences and Engineering Research Council of Canada Michael Smith Foreign Study Supplements with Prof. Adam Leroy

2018 *University of Alberta*
Queen Elizabeth II Graduate Scholarship - Doctorate

2017-2019 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Alexander Graham Bell Canada Graduate Scholarship - Doctorate

2016 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship - Doctorate

2015 *University of Alberta*
Queen Elizabeth II Graduate Scholarship - Masters

2010-2014 *University of British Columbia, Okanagan*
Deputy Vice Chancellor Scholarship

2014 *University of British Columbia, Okanagan*
Distinguished Graduate Award - Physics, Math, Statistics & Computer Science

2014 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Alexander Graham Bell Canada Graduate Scholarship - Masters

2013 *University of Alberta*
Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Research Award with Prof. Craig Heinke

2013 *University of British Columbia, Okanagan*
Top Oral Presenter - UBC-O Undergraduate Research Conference

2013 *University of British Columbia, Okanagan*
Upper Year Physics Award

2012 *University of British Columbia, Okanagan*
Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Research Award with Prof. Erik Rosolowsky

2010 *University of British Columbia, Okanagan*
President's Entrance Scholarship

Professional Talks

2019 September *So-Star, Paris, France*
"HI & CO kinematics on molecular cloud scales in the Local Group"

2019 April *Center for Astrophysics, Cambridge, USA*
"Connecting atomic and molecular ISM kinematics on cloud scales in M33"

2019 April *Green Bank Telescope, Green Bank, USA*
"Connecting atomic and molecular ISM kinematics on cloud scales in M33"

2019 March *NRAO, Charlottesville, USA*
"Connecting atomic and molecular ISM kinematics on cloud scales in M33"

2019 March *University of Texas, Austin, USA*
"Connecting atomic and molecular ISM kinematics on cloud scales in M33"

2019 January *Big Apple Magnetic Fields Workshop, New York, USA*
"Turbustat: Python-based turbulence statistics"

2018 August *CHANG-ES Team Meeting, Calgary, Canada*
"De-obfuscating HI & CO Comparisons in M33"

2018 July *PHAT/M33 Team Meeting, Ringberg, Germany*
"Atomic Gas in M31 and M33"

2018 May *Olympian Symposium, Paralia Katerini, Greece*
"Spatially-Varying Turbulent Properties in M33"

2017 June *Canadian Astronomical Society (CASCA) Meeting, Edmonton, Canada*
"Linking the Atomic and Molecular ISM in M33"

2016 August *Lorentz Centre - Apples to Apples Workshop*
"Identifying Tools for Comparing Simulations and Observations of Star-forming Regions"

2016 February *Max Planck Institute for Extraterrestrial Physics*
"Comparing Simulations and Observations of Star Formation using Experimental Design"

2016 February *Max Planck Institute for Radio Astronomy*
"Comparing Simulations and Observations of Star Formation using Experimental Design"

2015 May *Florence Simulations-Observations Workshop (Florence, Italy)*
"Critically Comparing Simulations and Observations of Star Formation"

2014 April *UBC-O Undergraduate Research Conference (Kelowna, Canada)*
"Filament Identification through Mathematical Morphology"

2013 November *UBC-O Brown Bag Series (Kelowna, Canada)*
"A New Low-Mass X-Ray Binary in the Galactic Centre"

2013 April *UBC-O Undergraduate Research Conference (Kelowna, Canada)*
"Converging Flows in Star-Forming Regions"

Poster Presentations

2019 June	*Linking the Milky Way and Nearby Galaxies, Helsinki, Finland* "Connecting atomic and molecular ISM kinematics on cloud scales in M33"
2013 June	*Canadian Astronomical Society Conference (Vancouver, Canada)* "Converging Flows in Star-Forming Regions"

Observing Experience

- Three VLA projects as PI (180 hours awarded; 16B-236, 16B-242, 17B-162); one as co-I (24 hours awarded; 19B-037)
- One ALMA project as PI (8 hours awarded; 2019.1.01039.S); two as co-I (22 hours awarded; 2017.1.00901.S, 2019.1.01182.S)
- One GBT project as PI (41 hours awarded; 19B-221)
- One NOEMA project as co-I (16 hours awarded; W15BR)

Professional Service

2018-Present	Referee for Monthly Notices of the Royal Astronomical Society
2017-Present	Seminar and journal club organizer for UAlberta Astronomy Group
2017-Present	Student Member of Canadian Astronomical Society (CASCA)
2016-2017	UAlberta representative on the Canadian Astronomical Society Graduate Student Committee
2013-2014	UBC-Okanagan Physics representative on Quantitative Sciences Course Union Council

Research Advising

I have acted as a research advisor for three undergraduate students at the University of Alberta, supervised by Prof. Erik Rosolowsky.

Summer 2018	*Interpreting filaments in three dimensions* Dewanshu Haswani MITACS Internship
Fall 2018	*Spiral Arm Propagation in M33 and its Implications on Molecular Cloud Formation* Steffen Senchyna Physics 499 Honours Research Project
Fall 2018	*ISM Properties near Supernova Remnants in M33* Weizhuo Zhang Physics 499 Honours Research Project

Outreach

2019 October	*Edmonton, Canada* "Judge for NASA/CSA Space Apps Challenge"
2019 May	*Pint of Science, Edmonton, Canada* "Frigid Fuel for Star Formation"
2018 December	*Royal Astronomical Society of Canada (Edmonton Centre)* "Unravelling Star Formation"
2018 May	*Northern Alberta Radio Club (Edmonton)* "Viewing the Sky with Radio Interferometry"
2017 February	*University of Alberta Observatory Public Observing Night* "Blowing Bubbles in a Galaxy"
2016 - 2018; 2019-Present	*University of Alberta Observatory* "Public Observing & School Tours"