

Joëlle-Marie Bégin

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Education

Princeton University

PhD in Physics

Princeton, New Jersey

Aug. 2022 - Present

McGill University

BSc in Honours Physics

Montreal, Quebec

Sep. 2018 - April. 2022

Research supervised by: Adrian Liu, Jonathan L. Sievers, H. Cynthia Chiang

Publications

- [1] **Begin, J.**, Liu, A., Gorce, A. (2022), *Joint constraints on reionization: a framework for combining the global 21cm signal and the kinetic Sunyaev-Zel'dovich effect*, *Phys. Rev. D* **105**, 083503

Awards and Honors

August 2022 Joseph Henry Merit Award (entrance award)

Princeton University

May 2021, 2019 Summer Undergraduate Research Award

McGill University

Talks

* = invited

- [1] Princeton University Gravity Group, “*Joint constraints on reionization with the 21 cm signal and kSZ*” & “*observing the low frequency sky with ALBATROS*” (2023)
- [2] SAZERAC-GULP 21 cm, *Developments on a new low-noise amplifier and antenna for ALBATROS* (2022) [\(recording\)](#)
- [3] McGill Faculty of Science Advancement Board, *Working as an undergraduate researcher in physics* * (2022)
- [4] McGill University Soup and Science, *Learning about the first stars and galaxies with radio astronomy* * (2022) [\(recording\)](#)
- [5] Global 21 cm Workshop, *Constraining reionization with the 21 cm global signal and kSZ* (2021) [\(recording\)](#)
- [6] SAZERAC Specialist Session, *Constraining reionization with the 21 cm global signal and kSZ* (2021) [\(recording\)](#)
- [7] Canadian Undergraduate Physics Conference, *Non-Gaussianities in the 21 cm brightness temperature field* (2019)

Service and Outreach

McGill Physics Hackathon

- Organizing committee: graphic and web design

McGill University

2019 - April 2021

McGill Society of Physics Students

- President
- Executive Officer of Administration

McGill University

April 2020 - April 2021

Sept. 2019 - April 2020

Teaching Activities

Undergraduate Teaching Assistant

- PHYS 321: Data Science and Observational Astrophysics
- PHYS 260: Modern Physics and Relativity

McGill University

Spring 2021

Fall 2020