

Magnus L'ARGENT

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EDUCATION

AUGUST 2025	Master of Science, Physics , McGill University, Montreal, QC, Canada
JUNE 2023	Bachelor of Science , Oregon State University, Corvallis, OR, USA Majors: Physics, Mechanical Engineering Minor: Aerospace Engineering <i>Summa Cum Laude</i>

RESEARCH

2023 - 2025	Graduate Student Researcher <i>Trottier Space Institute, McGill University</i> Advisor: Prof. Victoria Kaspi Developed an algorithm for the CHIME All-Sky Multi-day Pulsar Stack Search (CHAMPSS) that automatically verifies pulsar candidates by aligning time domain data in phase, aiding in the discovery of 12 new pulsars and counting . Created a project-health monitoring system that compares the estimated versus detected signal-to-noise ratio of known pulsars in the CHAMPSS sky.
2021 - 2023	Undergraduate Student Researcher <i>North American Nanohertz Observatory for Gravitational Waves</i> Advisor: Prof. Xavier Siemens Analyzed and ranked more than 5000 pulsar candidate observations to search for new pulsar sources and identify sources of radio frequency interference. Managed a team of 5 undergraduates and trained team to rank candidate pulsar signals.
SUMMER 2022	Summer Intern <i>Trottier Space Institute, McGill University</i> Visualized over 1000 CHAMPSS pulsar survey test observations using sky maps. Calculated exposure time values for 160,000 sky pointings of the CHIME telescope by applying MongoDB database querying. Connected observation database to a web front-end using the Sanic Application Programming Interface. Created a searchable table of pulsar candidate observations on the front end using a Tailwind and Vue.js JavaScript framework.
2021 - 2022	Undergraduate Student Researcher <i>Micro-Femto Energetics Lab, Oregon State University</i> Advisor: Prof. Matt W. Graham Measured the absorbance and photoluminescence of atomically thin materials using a novel method of hyperspectral imaging. Increased photon input to the camera 10x, drastically sharpening the image and allowing for measurement of 10-20 nm further into the ultraviolet region. Performed spectral analysis to identify peak shifts, confirming layer count measurements.

LEADERSHIP AND OUTREACH

2024 - 2025	Association of Graduate Students Employed at McGill <i>President</i> Chair of the Executive Committee for a 4000+ member labour union, organized assemblies, rallies, and contract negotiations.
2024 - 2025	Astrobites Policy Committee <i>Chair</i> Facilitated monthly meetings, created meeting agendas, maintained publishing schedule.
2023 - 2024	McGill Association of Physics Students <i>Union Delegate for Physics</i> Organized social events for the department, ordered new furniture and equipment for the graduate student lounge, making it a more welcoming space for students to gather, study, and socialize.
2023 - 2024	Trottier Space Institute Outreach <i>Volunteer</i> Designed an eclipse themed outreach activity for elementary schoolers in Montreal that was taught to 60 students, managed activity booth for 100 kids during the TSI Solar Eclipse Fair.
2020 - 2023	Astronomy Club at Oregon State University <i>Treasurer (2021), Vice President (2022), President (2023)</i> Led a team of 7 officers, organized weekly club meetings, maintained and repaired a collection of a dozen telescopes. Events organized: 2023 Field Trip to LIGO and the Hanford B Reactor (30 attendees) 2023 Franklin K-8 Family Science Night, Booth, (150 attendees) 2022 Girl Scouts of Oregon and SW Washington's STEM Day, Booth (250 attendees) 2022 James Webb Space Telescope First Images Event, Host (30 attendees) 2022 Welcome Week Stargazing Event, Host (50 attendees) 2022 Science, Engineering, and Art Day, Booth (250 attendees)
2022 - 2023	American Institute of Aeronautics and Astronautics Branch at Oregon State University <i>Volunteer Coordinator</i> Connected underclassmen with rocketry teams on campus. Events organized: 2022 Discovery Days STEM Fair, Booth (450 attendees)

TEACHING EXPERIENCE

2023 - 2025	Graduate Teaching Assistant <i>McGill University</i> <ul style="list-style-type: none">• Modern Physics and Relativity• Data Science and Observational Astrophysics• Astrophysics (Graduate level)• Milky Way Galaxy
2021 - 2023	Academic Learning Assistant <i>Oregon State University</i> Held workshops on time management and study skills. Assisted students in navigating the university and accessing resources. Acted as a peer mentor and outreached to 5-10 students a week.

SKILLS

LANGUAGES:	English (fluent), French (fluent)
SOFTWARE:	Python, Linux, MATLAB, SolidWorks, Github, LaTeX, Jupyter, MongoDB
HARDWARE:	Additive Manufacturing, Mill, Lathe, Drill Press, Wire EDM, CNC
KEY COURSEWORK:	Galaxies and Cosmology, Radiative Processes in Astrophysics, Observational Techniques of Modern Astrophysics, Computational Physics, Statistics for Astrophysics, Fluid Mechanics, Gas Dynamics, Thermodynamics, Electromagnetism, Quantum Mechanics, Special Relativity, Statistical Mechanics

PUBLICATIONS

Andrade et al., [The CHIME All-Sky Multi-day Pulsar Stack Search: System Overview and First Discoveries](#), *ApJ*, 990, 50 (2025)

Contributed to sections Candidate Confirmation and Follow Up, System Performance, Detecting Known Pulsars, and Flux Density Estimations.

RESEARCH PRESENTATIONS

2024	Poster , Canadian Astronomical Society Annual Meeting <i>CHAMPSS: CHIME All-Sky Multi-day Pulsar Stack Search</i>
2024	Talk , Centre de recherche en astrophysique du Québec Annual Meeting <i>CHAMPSS: CHIME All-Sky Multi-day Pulsar Stack Search</i>
2022	Talk , Oregon NASA Space Grant Consortium Fall Symposium <i>Oregon State University High Altitude Liquid Engine Team</i>
2022	Talk , Trottier Space Institute Summer Research Symposium <i>Slow Pulsar Search Data Visualization</i>
2022	Talk , Oregon State University Department of Physics Research Symposium <i>Hyperspectral Imaging of Atomically Thin Materials</i>
2021	Poster , Oregon State University Summer Undergraduate Research Symposium <i>Hyperspectral Imaging of Atomically Thin Materials</i>

DARK AND QUIET SKIES

2024 - Present	Astrobits <i>Author</i> “Nearly 1 in 3 Starlink satellites detected within the SKA-Low frequency band” “United Nations prioritizes discussion of Dark and Quiet Skies” “Astrobites at the IAU 2024 III: Dark and Quiet Skies and Radio Astronomy in an Increasingly Crowded Spectrum”
2025	Center for Space Environmentalism <i>Member</i>
2025	Rutgers Summer Transient Soirée <i>Speaker</i> “Mega Constellation Satellites: Impacts on Transient Radio Astronomy”
2025	International Astronomer’s Union Centre for the Protection of the Dark and Quiet Sky <i>Member</i>
2023 - 2024	Trottier Space Institute Lunch Talks <i>Speaker</i> “Mega-constellation Satellites and Astronomy” (2023) “Who Owns the Moon?: Space law in Low Earth Orbit and Beyond” (2024)
2024	European Space Agency Academy: Introduction to Space Law <i>Student</i> Learned the fundamentals of international law, national space law in the US and EU, licensing and operating requirements for space objects

SCHOLARSHIPS AND AWARDS

2025	President's Prize for Public Engagement Through Media (CAD 5000) <i>McGill University</i> Group Prize
2024	International Research Masters Award (CAD 8700) <i>McGill University</i>
2023	Max Stern Recruitment Fellowship (CAD 10,000) <i>McGill University</i>
2023	Trottier Space Institute Graduate Fellowship (CAD 2,000) <i>McGill University</i>
2022	International Research Experience for Students Award <i>National Science Foundation</i>
2021	Undergraduate Research Award <i>Department of Physics, Oregon State University</i>
2021	Summer Undergraduate Research Experience Award <i>College of Science, Oregon State University</i>
2021	Undergraduate Research and the Arts Award <i>Office of Undergraduate Research, Oregon State University</i>
2020	Undergraduate Research and the Arts Award <i>Office of Undergraduate Research, Oregon State University</i>
2019	Presidential Scholarship (USD 40,000) <i>Oregon State University</i>
2019	International Baccalaureate Scholarship (USD 12,000) <i>Oregon State University</i>
2019	Engineering Dean's Scholarship (USD 2000) <i>Oregon State University</i>

Last updated October, 2025