

SHERELYN ALEJANDRO MERCHAN

Curriculum Vitae

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EDUCATION

THE GRADUATE CENTER, CITY UNIVERSITY OF NEW YORK 2024 – Present
Ph.D. in Physics
Advisors: Dr. Jacqueline Faherty (AMNH), Prof. Kelle Cruz (Hunter College)

HUNTER COLLEGE, CITY UNIVERSITY OF NEW YORK 2020 – 2024
B.A in Physics - Minors: Mathematics and Philosophy
New York, New York, USA

GRANTS & AWARDS

JWST Cycle 4: Program GO 7793, (40.3hrs), Co-I	2025
JWST Cycle 4: Program GO 8441, (174.6hrs), Co-I	2025
Women and Girls in Astronomy Program Grant (\$2000)	2024
JWST Cycle 3 : Program 6084, (4.09hrs) , Co-I	2024
The Joseph A. Gillett Memorial Prize (\$1000)	2024
Hunter Undergraduate STEM Research Conference Award	2023
John P. McNulty Scholars Program (\$12,000)	2022 – present
CUNY AstroCom Fellowship	2021 – present
Athena Honors Scholarship (\$12,000)	2020 – present
Peter V. Fallone Scholarship (\$2,000)	2020 – present
SACNAS NDISTEm Conference 2022 Travel Scholarship	2022

CO-AUTHOR PUBLICATIONS

1. [Diversity of Cold Worlds: A Near Complete Spectral Energy Distribution for 2MASS J04151954-0935066 using JWST](#)
Alejandro Merchan, S., Faherty, J. K., Suárez, G., Cruz, K. L., Burgasser, A. J., Gagné, J., ... & Whiteford, N. (2025). Diversity of Cold Worlds: A Near Complete Spectral Energy Distribution for 2MASS J04151954-0935066 using JWST. arXiv preprint arXiv:2505.24591.
2. [High-Precision Atmospheric Constraints for a Cool T Dwarf from JWST Spectroscopy](#)
Hood, C.E.; Mukherjee, S.; Fortney, J.J.; Line, M.R.; Faherty, J.K.; **Alejandro Merchan, S.** ; Burningham, B.; Suárez, G.; Kiman, R.; Gagné, J.; Beichman, C.A.; Vos, J.M.; Bardalez Gagliuffi, D.; Meisner, A.M. ; Gonzales, E.C., Submitted to Nature Astronomy, DOI: 10.48550/arXiv.2402.05345
3. [Methane Emission from a cool brown dwarf](#)
Jacqueline K. Faherty; Ben Burningham; Jonathan Gagné; Genaro Suárez; Johanna M. Vos; **Sherelyn Alejandro Merchan**; Caroline V. Morley; Melanie Rowland; Brianna Lacy; Rocio Kiman et al. *Nature* 628, 511–514 (2024).

4. [Patchy Forsterite Clouds in the Atmospheres of Two Exoplanet Analogs](#)
Vos, J. M.; Burningham, B.; Faherty, J. K.; **Alejandro, S.**; Gonzales, E. C., Calamari, E.; Bardalez Gagliuffi, D.; Visscher, C.; Tan, X.; Morley, C. V.; Marley, M.; Gemma, M. E.; Whiteford, N.; Gaarn, J.; Park, G. *The Astrophysical Journal*, 944, 138, 2023.
5. [Retrieving Young Cloudy L-Dwarfs: A Nearby Planetary-Mass Companion BD+60 1417B and Its Isolated Red Twin W0047](#)
Phillips, Caprice L.; Faherty, Jacqueline K.; Burningham, Ben; Vos, Johanna M.; Gonzales, Eileen; Griffith, Emily J.; **Merchan, Sherelyn Alejandro**; Calamari, Emily; Visscher, Channon; Morley, Caroline V. et al. Accepted to *The Astrophysical Journal*
6. [CWISE J105512.11+544328.3: A Nearby Y Dwarf Spectroscopically Confirmed with Keck/NIRES](#)
Robbins, G.; Meisner, A.; Schneider, A.; Burgasser, A.; Davy Kirkpatrick, J.; Gagné J., Hsu, C.; Moranta, L.; Casewell, S.; Marocco, F.; Gerasimov, R.; Faherty, J. K.; Kuchner, M. J.; Caselden, D.; Cushing, M.; **Alejandro, S.**; The Backyard Worlds: Planet 9 Collaboration, and The Backyard Worlds: Cool Neighbors Collaboration. Accepted to *The Astrophysical Journal*, accepted

PRESENTATIONS

Hunter College's 2024 Undergraduate STEM Research Conference	2024
ExoNYC, Center for Computational Astrophysics at the Flatiron Institute	2024
American Astronomical Association 243 rd Meeting, iPoster Presentation	2024
The First Year of JWST Science Conference, Space Telescope Science Institute	2023
Maria Mitchell Observatory Science Symposium	2023
Hunter College's 2023 Undergraduate STEM Research Conference	2023
Guest Lecturer, Colorado College	2023
Gotham Fest Poster Presentation, CCA at the Flatiron Institute	2023
American Astronomical Association 241st Meeting, iPoster Presentation	2023
American Museum of Natural History Summer Research Symposium	2022
Gaia DR3 Fête, Center for Computational Astrophysics at the Flatiron Institute	2022
Guest Lecturer, Stanford University	2021