

# Alex Drlica-Wagner



**Graduate Institution:** Stanford University

**Location:** Stanford, CA

**Graduate Discipline:** Particle Astrophysics

**Hometown:** New York, NY

## Research Interests:

*I am currently involved in attempts to detect dark matter signals from astrophysical sources using the Fermi Gamma-ray Space Telescope. Dark matter comprises ~85% of the mass of the Universe, yet we know very little about its fundamental nature. Should dark matter be composed of a weakly interacting massive particles, it is possible that these particles could decay or annihilate into gamma-rays that are detectable with the Fermi Telescope. As a member of the Fermi LAT Collaboration, I am also heavily involved in improving the telescope's performance through modifications to the event reconstruction software. In the past, I have worked with x-ray emission from clusters of galaxies, simulations of next-generation space-based gamma-ray detectors, and antibiotic resistance in bacteria.*

## About me:

*I am a graduate student member of the Kavli Institute for Particle Astrophysics and Cosmology, a joint endeavor between Stanford University and SLAC National Accelerator Laboratory. My current research interests are in particle astrophysics, specifically addressing the fundamental nature of dark matter. I have long been an amateur astronomer, and as an undergraduate at Washington University in St. Louis, I helped operate Crow Observatory for introductory astronomy classes. At Stanford University, I have enjoyed serving as a teaching assistant for courses on black holes, introductory modern physics, and intermediate electricity and magnetism. I am currently the organizer of the Meeting of Astrophysics Students at Stanford, a group that brings together graduate students in various fields of astrophysics to share knowledge. I am heavily involved in intercollegiate ultimate Frisbee, having played for both Washington University in St. Louis and Stanford. In 2009, I helped Stanford's team reach the semi-finals of the collegiate national championships. I plan to continue my research in astrophysics as a career, ideally in a university setting where I would continue to have the opportunity to influence future generations of astronomers and physicists.*



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