Testimonial

Delina Levine

Hi - my name is Delina Levine, and I am currently a PhD student in astronomy at Caltech. I had the opportunity to work with Dr. Maria Dainotti for two years as an undergraduate, supported by the ERF and Swift grants. Our work was in population studies of gamma-ray bursts (GRB) in multiple wavelengths, beginning with an investigation of GRB radio afterglows and culminating in work on the most extensive catalog of optically-observed GRBs recorded to date. Over the two years of our collaboration, we have published seven papers together, and I have had the chance to present our work at numerous conferences and connect with peers and colleagues at many career levels and backgrounds. I consider our collaboration an invaluable experience that has positioned me well for success in my future career.

I began work with Maria in the summer of 2021, where we were connected virtually through the U.S. Science Undergraduate Laboratory Internship summer program at SLAC National Accelerator Laboratory. I began work on a project investigating GRB radio afterglow light curves, looking for a particular plateau feature that had been seen in other wavelengths but had not yet been investigated in radio. Though I had some prior research experience, I had never done any formal astrophysics research, and I found Maria to be patient and supportive in guiding me on new skills, programs, and concepts that I had not yet encountered. I was introduced to other students working in similar areas, as well as experts in the field, from the onset of the work. Our work in this area led me to publish my first first-author paper as a third-year undergraduate, a very rare and valuable opportunity.

This initial project opened paths into many related projects in GRB astrophysics, including work on the role of selection biases in GRB population studies, the investigation of "closure relations" in multiple wavelengths to attempt to discern more about the environments surrounding observed GRBs, and a study of the "fundamental plane correlation" between properties of GRB optical afterglows, leading up to collaboration on the massive and ongoing compilation of the GRB optical catalog. In each project, Maria pushed for me to be heavily involved in all aspects of the investigation, providing me a wealth of hands-on experience and allowing me to gain a deep understanding of GRB astrophysics in a broad range of contexts.

Throughout our collaboration, Maria remained an attentive and supportive mentor who consistently granted her students opportunities to learn and grow their skills at any stage of their career. I was given the chance to write up our work and be active in all stages of the publication process, as well as give talks on our work at global conferences and be an active collaborator in drafting proposals. This kind of involvement is not always granted to undergraduates, and Maria's guidance in these areas has allowed me to enter graduate school with a greater understanding of these processes that will be vital in my career as a researcher. Maria was quick to provide support when I lacked the experience necessary to tackle a problem, and worked to open doors for her students when we wanted to gain experience in a particular area or move toward another area of research that had piqued our curiosity. Her passion for mentoring younger students was clear, and her support and encouragement throughout our collaboration gave me confidence in my abilities as a researcher and my ability to succeed in the next stages of my career.

Being a member of Maria's group allowed me to connect with students and professionals from around the world, with diverse backgrounds and experience to bring to our work. Her group remained a safe and supportive space for students and professionals of all identities, and she was passionate about providing opportunities for students from historically underrepresented groups in science. This experience will be vital for me at all stages of my career, and Maria provides a great example of inclusive mentorship for her students.

Maria's enthusiasm for her research came through in all aspects of our work, and her tireless dedication and commitment to her work was a source of inspiration for me, especially as an early-career student. I recommend her group for students seeking to gain experience in astrophysics research.

Best,

Delina Levine