

I am currently pursuing a PhD in Physics at the University of Nevada, Reno. My dissertation research focuses on deciphering the thermodynamic processes that govern the interiors of Earth-like celestial bodies through laboratory astrophysics. Specifically, I aim to measure the thermal conductivity of iron alloys under conditions similar to those found in the cores of large Earth-like planets. Using the powerful OMEGA 60 Laser System at the Laboratory for Laser Energetics, we heat an iron sample to planetary core conditions and capture images of its changing density profile over several nanoseconds. The evolution of this density profile is influenced by thermal conduction, allowing us to extract the material's thermal conductivity.

My career aspiration is to become an astrophysicist and advance our understanding of the universe by studying the formation, evolution, and habitability of Earth-like planets through planetary geology and high energy density physics. Outside of research, I enjoy rock climbing, gardening, and hiking in the mountains.