Contribution ID: **345** Type: **Contributed e-poster**

Understanding the multi-wavelength emission from astrophysical shocks

Interpreting observations of astrophysical shocks from radio to gamma-rays requires a detailed understanding of how shocks accelerate particles over the course of their evolution. We present a fast, multi-zone model of particle acceleration that self-consistently accounts for magnetic field amplification and shock modification due to the presence of non-thermal particles. By incorporating results from state-of-the-art simulations, we use this model to reproduce key features in the multi-wavelength emission from a variety of sources. These features include the steep radio and gamma-ray spectra observed from supernova remnants, the gamma rays detected from fast black-hole winds, and the GeV and TeV emission from the recent outburst of symbiotic nova RS Ophiuchi.

Primary author: DIESING, Rebecca (University of Chicago)

Co-author: Prof. CAPRIOLI, Damiano (University of Chicago)

Presenter: DIESING, Rebecca (University of Chicago)

Session Classification: Contributed posters