Outline

- Introduction
  - Who am I and what am I doing?
  - Motivate my research
  - Present my research
- Research Statement
  - Introduce the context of research
  - Present outstanding problem(s) of interest
    - Dust attenuation in important source of variation for SNe Ia and is strongly related to host galaxy property estimations. Host properties also correlate with SN Ia properties.
    - Current techniques do not separate color variation due to dust from intrinsic variation.
  - 'Determining the Connection between Dust and the Host Bias'
    - What have I done?
      - Paper 1 – observation and fitting techniques unimportant for mass step
    - What am I going to do?
      - Focus on SFR observables that trace different star formation epochs and vary in sensitivity to dust
      - Determine how dust attenuation corrections change the sSFR and mass step bias before and after standardization using both simple and more robust dust attenuation correction models
  - 'Separating Sources of SN Ia color Variation'
    - What have I done?
      - Preparing first paper with two color laws instead of one. The software foundation for this project is complete.
      - We have measured two different color curves, one that is inconsistent with dust
    - What am I going to do?
      - Add time variation to make it a complete SN Ia generative model
      - Make the model more robust to outliers
      - Develop a SN Ia lightcurve simulator from our model to generate simulated data sets for testing
- Undergraduate mentoring summary
- Note on dissertation progress