University of Rochester
Summer 2020 virtual undergraduate research in Physics and Astronomy

Amanda Broadmeadow class of '21 at the University of Rochester, worked with Prof. Dan Watson, on Hubble and Spitzer observations to study newly found deeply embedded HH objects in NGC 1333. She plans to apply to graduate school in astrophysics.

Debra Dunham, class of '21 at the College of Saint Benedict, worked with Prof. Kelly Douglass on examining the effects of various input parameters of the VoidFinder algorithm on the resulting voids.

Joel Elias, class of '21 at the University of Rochester, did research with Prof. Kevin McFarland and studied the transverse kinematic imbalance in neutrino-neutron interactions by analyzing how several variables change as a result of varying final state interactions. He plans to apply to graduate school in physics.

Soren Helhoski class of '21 at the University of Rochester, with Prof. Miki Nakajima, ran simulations of the Imbrium basin formation event and analyzed the resulting pressure distribution of the ejecta. He plans to apply to graduate school in physics.

Dyson Travis Kennedy class of '21 at the University of Rochester, with Prof. Kevin McFarland, designed and built searches for the data from the MINERvA neutrino experiment to find and quantify unexplained sources and patterns of energy signals. He intends to apply to a physics graduate program.

Nicolas Litza class of '21 at the University of New Mexico, with Prof. Miki Nakajima, performed computational simulations of the Sudbury Basin formation to help our understanding of impact formation processes on Earth.

Vashisth Tiwari, Class of '23 at the University of Rochester, worked with Prof. Segev BenZvi on developing data-preprocessing techniques and machine-learning algorithms to identify transients from a catalog of galactic spectra from the DESI Survey.

Amanda Wasserman, class of '21 at the University of Rochester, with Prof. Segev BenZvi, worked to optimize a machine learning algorithm to identify type Ia supernovae out of a catalogue of galactic spectra.

Yifan Zhang, class of '22 at the University of Rochester, studied breaking galaxy mass distribution to three mass components, then running fits on different parameters for the different components with Prof. Kelly Douglass. In the end, we are hoping to use this method to get fitting parameters that work on all MaGNA galaxies.