

University of Rochester
Summer 2016 undergraduate research in Physics, Optics, and Astronomy

Timothy Baker, class of '17 at Rowan University, worked with Prof. Kevin McFarland and the MINERvA testbeam group on electron showering analyses in MINERvA's testbeam detector. He plans on applying to graduate school for either physics or computer science.

Brittany Berry, class of '17 at Xavier University (OH), worked with Prof. Duncan Moore and his group on experimentally determining how an optical flat sample with a wedge of 0.033° located off center in the Sagnac cavity affected the index of refraction measured. She plans to apply to graduate school for optics/physics.

Madison Brown, class of '18 at Baker University, worked with Prof. James McGrath studying human umbilical vein endothelial cell adhesion to silicon substrates on microporous nanomembranes. She plans on applying to graduate school in physics.

Morgan Clark, class of '17 at Union College, worked with Prof. Nicholas P. Bigelow configuring a Digital Micromirror Device and software that will be used to spin atoms in the Bose Einstein Condensate. She plans on applying to graduate school in physics.

Sebastian Fearn, Class of '18 at the University of Rochester, worked with Prof. John Tarduno on the investigation of ALLanite as a possible paleomagnetic recorder. He plans to apply to graduate school for geophysics.

Samuel Fordin, class of '17 at the University of Rochester, studied synthesis and characterization of spin-coated perovskite thin films with Prof. Yongli Gao. He plans to apply to graduate school for physics.

Christian Frey, class of '18 at Michigan State University, worked with Prof. Kevin McFarland and the MINERvA collaboration on studying the interaction of single charged particles with the MINERvA TestBeam detector to better understand the mechanics behind those interactions. He plans to apply to graduate school in physics.

Rachel Gelfand, class of '17 at the University of Rochester worked with Prof. Frank Wolfs on designing the rack layout for the electronics, soldering connectors to cables, and studied using pulse shape discrimination in the LZ data analysis. She plans to apply to graduate school.

Gavriel Kleinwaks, class of '18 at Haverford College, worked with the optics research group of Prof. N. Bigelow building and testing circuits to control a shutter to block a laser beam for optically pumping molecules and testing a diode laser. She plans to apply to graduate school.

Tyler Heintz, class of '18 at Westminster College, recalibrated gyrochronology curves with recent cluster data with Prof. Eric Mamajek. He plans to apply to graduate school for physics.

Alex Johnson, University of Rochester class of '19, tested fiber optic scintillators for possible use in HAWC to increase photomultiplier tube detection volume with Prof. Segev BenZvi.

Andrea Kueter-Young, class of '17 at Siena College, worked with Prof. Alice Quillen on computer simulations of the tidal evolution of Haumea and other homogeneous triaxial ellipsoids.

Jacob Leistico, class of '17 at the University of Minnesota Duluth, worked with Dr. Philip Rodrigues and Prof. Kevin McFarland on an analysis with the MINERvA experiment to isolate the lead data in the MINERvA detector. He plans on applying to graduate school in physics.

Brandon Mehlenbacher, class of '18 at SUNY Geneseo, worked with Prof. Todd Krauss on novel synthetic approaches of CdSe nanorods and CdSe/CdTe nanoballs for hydrogen production. He plans on applying to graduate school for chemistry.

Fiona Nichols-Fleming, class of '19 at the University of Rochester, instructed the Pre-College Experience in Physics (PREP) program: a summer physics program aimed towards high school females and directed by Prof. Steven Manly. She plans on applying to graduate school in astrophysics.

Haejun Oh, class of '18 at the University of Rochester, worked with Prof. Frank Wolfs investigating the cable attenuation of the signal processing system in the LZ Dark Matter Experiment. She plans to apply to graduate school in physics.

John Piotrowski, class of '19 at the University of Rochester, characterized long wavelength infrared detectors designed for studying near earth objects with Prof. Judy Pipher, and Prof. William Forrest. He hopes to stay at the University of Rochester for his masters in Optics.

Ryan Rubenzahl, class of '18 at the University of Rochester, worked with Prof. Segev BenZvi on designing and optimizing new water-Cherenkov detectors for the HAWC Gamma Ray Observatory in Mexico. He plans on applying to graduate school for astrophysics.

Genevieve Schroeder, class of '18 at University of Rochester, worked with Fiona Nichols-Fleming to instruct the Pre-College Experience in Physics (PREP) program: a summer physics program aimed towards high school females, directed by Prof. Steven Manly. She plans on applying to graduate school in astrophysics.

Edmund Witkowski, class of '17 at The College of New Jersey, worked with Prof. Regina Demina and Sergey Korjenevski on the research and development phase of new silicon detectors for use in the Compact Muon Solenoid experiment at the Large Hadron Collider at CERN. He plans to apply to graduate school for physics.

Paul Wrona, class of '17 at University of Rochester, worked with Prof. Lewis Rothberg on simulating the effects of morphology on conjugated polymer photophysics. He plans on applying to graduate school for chemical physics.

Jack Wurzer, class of '19 at the University of Notre Dame, studied the use of dielectrophoresis as an anti-fouling strategy for nanoporous silicon membranes with Prof. Hitomi Mukaibo. He plans to apply to graduate school for chemical engineering.

Cameron Ziegler, class of '18 at SUNY Geneseo, worked with Prof. Segev BenZvi on improving the supernova event significance calculation in IceCube. He plans on applying to graduate school in physics or mathematics.