

# Five years of optics research receives rocket ride into space

SCSU professor John Harlander watched as five years of work with SCSU students and collaborators at the University of Wisconsin-Madison was shot 170 miles into space on top of a NASA rocket.

The years of work and minutes of flight paid off in unique data on the interstellar medium, the space between the stars that holds clues to their birth and death.

The project began five years ago when the team asked NASA to send their Spatial Heterodyne Spectrometer (SHS) into space so it could measure ultraviolet light from the interstellar medium.

The SHS is a new class of spectrometer that excels at studying diffuse sources of light. It took five years to modify the SHS so it could analyze ultraviolet light and withstand the rigors of rocket flight. Harlander made several trips to NASA's testing facility where the scientific payload was violently shaken to simulate the rocket launch.

Several SCSU students played active roles in preparing the SHS for its flight. One of these students, Huan Tran, continues to study astronomy at Princeton University, where he is earning a doctorate in astrophysics.

The SHS has more trips into space in its future. The payload that flew in August will be launched twice more over the next three years, if a pending proposal is funded. Another version of the instrument, designed to study the chemistry of the ozone layer, is scheduled to fly on the Space Shuttle.