



All-Reflective Spatial Heterodyne Spectroscopy: Extending High Sensitivity Velocity Resolved Measurements of Solar System Dynamics into the EUV

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Target: High energy processes in boundary regions of planetary environments and the IPM.

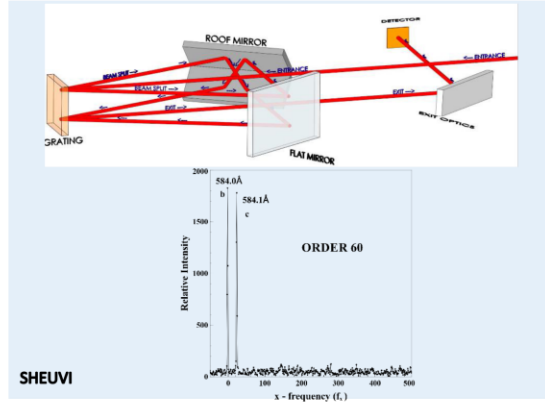
Science:

- Plasma interactions
- Aurorae
- Shock Phenomena
- solar wind interactions
- Ionospheres and Exospheres

Objectives:

- Construct and validate an ARCSHS optimized for use observing the 58.4 nm HeI @ $R \geq 5 \times 10^4$
- Migrate the ARCSHS downward to the 30.4 nm HeII line @ $R \geq 5 \times 10^4$
- Explore high order multiband EUV implementation of the ARCSHS for simultaneous observation of multiple emission features @ $R \geq 5 \times 10^4$

CoIs: Walt Harris and Bill Sandel, University of Arizona - LPL



Key Milestones:

- Conceptual development and modeling of SHEUVI (TRL 2)
- Test and characterization of SHEUVI instrument at 58.4 nm. (TRL 4)
- Test and characterization of SHEUVI instrument at 30.4 nm. (TRL 4)

TRL 2 to 4

Planetary Instrument Concepts for the Advancement of Solar System Operations (PICASSO)