

GHOST SV Observation Evaluation Form

Title: A White Dwarf with a Disintegrating Asteroid

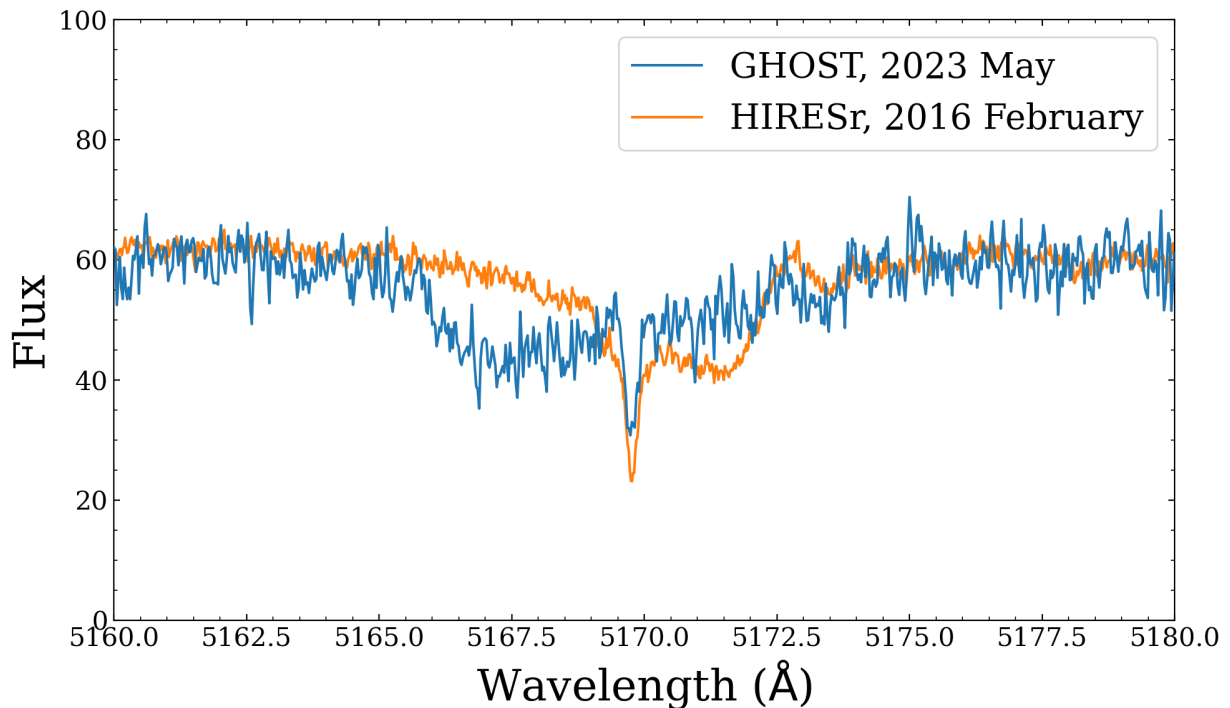
Program ID: 2023A-SV-103

Authors: Siyi Xu

Description of the primary goals and the main findings

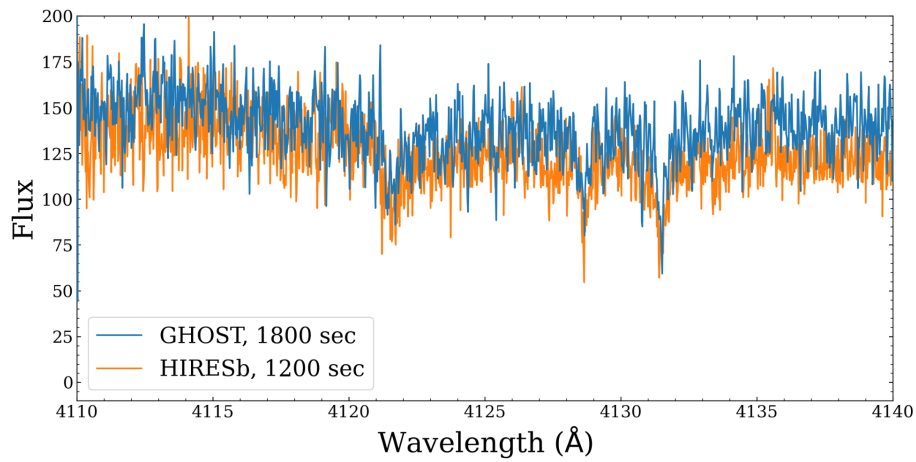
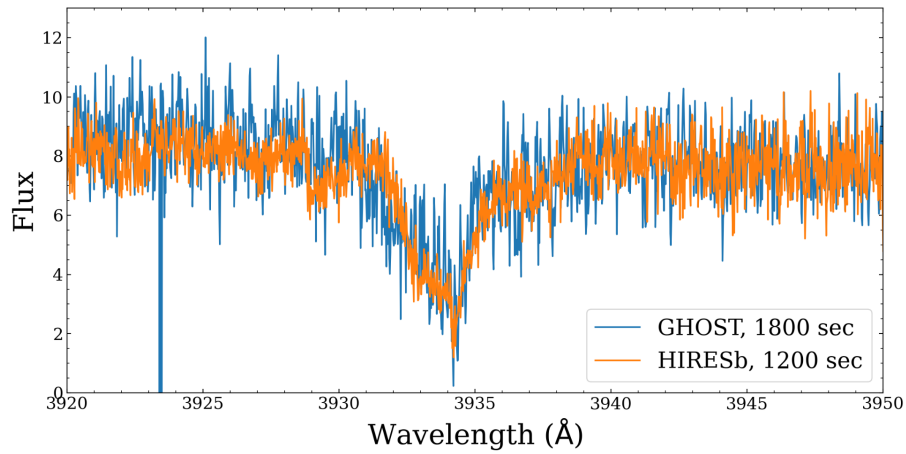
WD 1145+017 is the first white dwarf discovered to show transits from a disintegrating asteroid. The primary goal of the program is to observe the circumstellar gas around WD 1145+017 and understand its long term evolution.

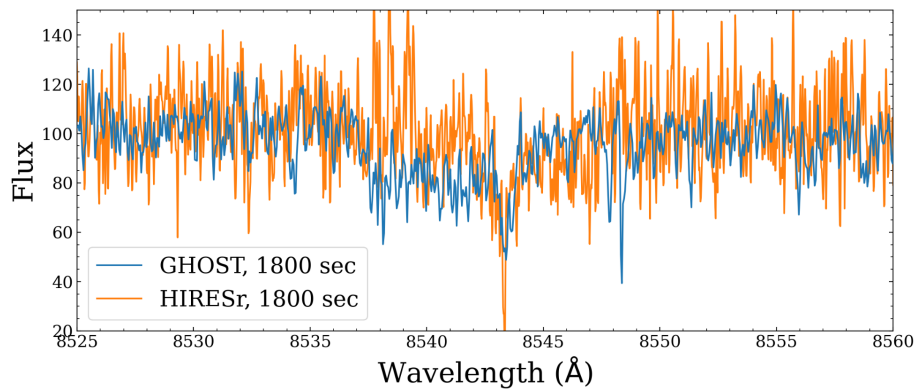
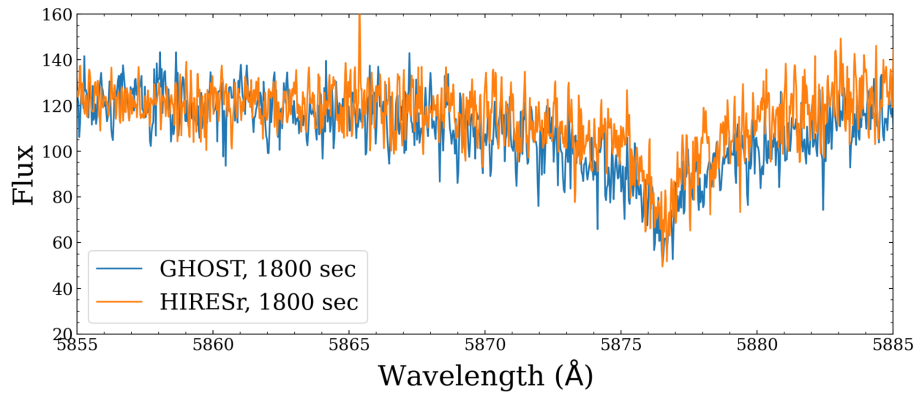
The figure below is focused on the Fe II 5169 Angstrom line. Both the narrow photospheric component and the broad circumstellar component can be seen in the spectra. Compared to the HIRES observation taken in 2016, the photospheric component stays the same while the circumstellar line has changed significantly.



Additional comments on GHOST performance:

Here are some comparisons between GHOST and HIRES observations of WD 1145+017. The HIRES observations used the C5 decker, which has a slit width of 1.148 arcsec and a spectral resolution of 40,000.





Here is a comparison of the flux calibrated spectra with respect to the white dwarf model spectra. The overall shape looks pretty good and there may be some flux missing in the blue end.

