

Abstract Submitted  
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**Quasar FeLoBAL Variability Studies from Multi-Year Observations** SEAN MCGRAW, JOSEPH SHIELDS, Ohio University, FREDERICK HAMANN, University of Florida, DANIEL CAPELLUPO, Tel Aviv University, SARAH GALLAGHER, University of Western Ontario, NEIL BRANDT, Pennsylvania State University — Broad Absorption Line (BAL) quasars provide a unique perspective in understanding the connections between galactic centers and their host galaxies. We are analyzing a specific type of quasar outflows called FeLoBALs, which are detected by the presence of low-ionization FeII BALs. FeLoBALs appear to be exceptionally powerful, with large column densities and kinetic energy yields, and they constitute  $\sim 1\%$  of all BAL quasars, making them strong candidates for feedback to galaxy evolution. We conducted variability studies on 12 FeLoBALs within emission redshifts  $0.69 \leq z \leq 1.93$  using up to 5 observation epochs on a given object, spanning both short (down to  $\sim 10.3$  days) and long (up to  $\sim 7.03$  years) timescales in the quasar's rest frame. Our goals are to place new constraints on the physical properties of the gas (e.g., outflow locations, physical structures, and kinetic energies) and understand the underlying mechanisms producing the variability. The sample included spectra obtained using the MDM 2.4m Hiltner telescope at Kitt Peak, AZ, along with data from the 9.2m HET telescope at McDonald Observatory and SDSS data release 7. Results will be presented on the nature and characteristics of observed variability for the sample.

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