QUASAR EMISSION LINE VARIABILITY FROM HUBBLE SPACE TELESCOPE ARCHIVE DATA.

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Using the Hubble Space Telescope Archive (HST), flux variations in low-redshift ($z < 1.7$) quasar spectra were measured and analyzed. Flux variations were measured for the Lyα λ1216 broad emission line (BEL), CIV λ1549 BEL, and continuum emission from the central ionizing source. Quasars and active galactic nuclei (AGN) that have spectral data for at least two points in time to obtain flux ratios were used. Custom Python scripts were written to quicken the process of analyzing raw HST spectral data. The results show a strong correlation to the flux variations for the Lyα BEL and the CIV BEL, and less so for the continuum emission and each BEL. By using this statistical approach and continuing to build up a database of flux variability, information can be obtained that will be useful to modeling quasar activity.