

U09a **H0LiCOW: H_0 Lenses in COSMOGRAIL's Wellspring – Analysis of the Time-Delay Lensed Quasar HE 0435-1223**

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Strong gravitational lenses with measured time delays between the multiple images allow a direct measurement of the so-called time-delay distance to the lens, and thus a measure of cosmological parameters, particularly the Hubble constant, H_0 . An independent determination of H_0 is key to probing dark energy, neutrino physics, and the spatial curvature of the Universe. Our project, “ H_0 Lenses in COSMOGRAIL's Wellspring” (H0LiCOW), aims to measure H_0 to $< 3.8\%$ accuracy from five lens systems. We have acquired deep *Hubble Space Telescope* imaging to perform a blind analysis of HE 0435-1223, the third system in the H0LiCOW sample. With accurate time delay measurements from the COSmological MONitoring of GRAvitational Lenses (COSMOGRAIL) project, a measurement of the velocity dispersion of the lens galaxy based on Keck/LRIS data, and a characterization of the mass distribution along the line of sight from a photometric and spectroscopic survey of the field, we constrain the time-delay distance to $\sim 8\%$ precision. Future analyses of the full sample of five H0LiCOW lenses will establish time-delay lenses as an independent and competitive probe of cosmology and set the stage for the hundreds of new time-delay lenses expected to be discovered in ongoing and future surveys.