

## A Dual QSO at Cosmic Noon

*Saturday, 21 January 2023 16:30 (1h 30m)*

We report the discovery of a candidate dual QSO at  $z=1.889$ , a redshift that is in the era known as “cosmic noon” where most of the Universe’s black hole and stellar mass growth occurred. The source was identified in Hubble Space Telescope WFC3/IR images of a dust-reddened quasar that showed two closely-separated point sources at a projected distance of 0.26, or  $\sim 2$  kpc. This red quasar was targeted for imaging to test the hypothesis that red quasars are hosted by merging galaxies. We subsequently obtained a spatially-resolved STIS spectrum of the system, covering the visible spectral range, verifying the presence of two distinct quasar components. The sources have similar black hole masses, bolometric luminosities, and radio loudness parameters. However, their colors and reddenings differ significantly. The redder quasar has a higher Eddington ratio, consistent with previous findings. We continue to test this system as a bona-fide dual QSO, which links dust-reddening to galaxy and black hole mergers, opening up a new population in which to search for samples of dual AGN.

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**Session Classification:** Poster Session + Grad/Career Fair