## R50b  Subaru Telescope Observations of Gravitationally Lensed Quasars

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Since the discovery of the first gravitationally lensed quasar (Walsh et al. 1979), these objects, of which ∼120 are known so far, have become a unique astrophysical and cosmological tool. Applications include studying the mass distribution and evolution of early type galaxies acting as lenses, reconstructing the morphology of the quasar host galaxies, especially at high redshift, and setting constraints on the cosmological parameters, such as the Hubble constant.

In this poster we present the results of follow-up observations with the Subaru Telescope of two new lensed quasar candidates (SDSS J1334+3315 and SDSS J1320+1644), discovered in the course of the SDSS Quasar Lens Search (SQLS; Oguri et al. 2006). By employing the new Laser Guide Star Adaptive Optics (LGSAO) technology available on the Subaru Telescope, we demonstrate that SDSS J1334+3315 is a true lensed quasar, with the smallest image separation discovered in the SQLS so far. This marks the first time that the Subaru Telescope LGSAO system has been used to study a gravitationally lensed quasar.

Although we cannot prove based on the available observations that SDSS J1320+1644 is a true lensed quasar, we show that it is a large separation quasar candidate showing a unique configuration, with two lensing galaxies which we believe to be part of a cluster. We present our most likely lens models for this object.