X02a A new quasar discovered at redshift 6.6 from Pan-STARRS1

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Luminous high-redshift quasars can be used to probe of the intergalactic medium (IGM) in the early universe because their UV light is absorbed by the neutral hydrogen along the line of sight. They help us to measure the neutral hydrogen fraction of the high-z universe, shedding light on the end of reionization epoch. We present a discovery of a new quasar (PSO J006.1240+39.2219) at redshift $z = 6.61 \pm 0.02$ from Panoramic Survey Telescope & Rapid Response System 1. Including this quasar, there are nine quasars above $z > 6.5$ up to date. The estimated continuum brightness is $M_{1450} = -25.96 \pm 0.08$. PSO J006.1240+39.2219 has a strong Ly α emission compared with typical low-redshift quasars, but the measured near-zone region size is $R_{NZ} = 3.2 \pm 1.1$ proper megaparsecs, which is consistent with other quasars at z$\sim$6.