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Resolving the Radio-Loudest Quasar known to date at z~6

Emmanuel Momjian (NRAO)
Chris Carilli (NRAO)
Eduardo Banados (Carnegie)
Fabian Walter (MPIA)
Bram Venemans (MPIA)

We present the discovery and the follow up Very Long Baseline Interferometry (VLBI) imaging of the z=5.84 radio-loud quasar PSO J352-15 at 23.9 x 11.3 mas resolution (139 x 66 pc). This quasar has the highest radio-to-optical flux density ratio (R > 1000) at such a redshift, making it the radio-loudest source known to date near z ~ 6. The VLBI observations at 1.54 GHz resolve this quasar into multiple components with an overall linear extent of 1.62 kpc (0.28") and a total flux density of 6.6 +/- 0.4 mJy, which is about half of the emission measured at a much lower angular resolution. The morphology of the source is compatible with either a radio core with a one sided jet, or a Compact or a Medium-size Symmetric Object (CSO/MSO). If the source is a CSO/MSO, and assuming an advance speed of 0.2c, then the estimated kinematic age is ~ 10^4 yr. We discuss the VLBI results in the context of quasar-mode feedback during the earliest formation of Active Galactic Nuclei (AGN) and the most massive galaxies. We also present the potential of carrying out H 21 cm absorption studies toward this quasar to detect the neutral IGM, as well as studying the apparent proper motion of the jet components at such high redshifts.