X03a Constraining the radio-loud fraction of high-z low-luminosity HSC/Subaru quasars

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In the local universe, ∼10-20% of AGNs are classified as radio-loud ones because of their elevated radio emission. The physical origin of the distinction between the radio-loud and the remaining AGNs is one of the unsolved questions in AGN physics. Studying dependences of the radio-loud fraction (RLF) on the redshift and the optical luminosity allow us to understand the evolution of these two populations. Previous studies showed a dichotomy of dependences of the RLF of quasars due to apparent magnitudes, and high-z ($z > 5.5$) studies are biased to the exceptionally luminous sample, which likely hosts heavy SMBHs. While recently, more than 80 high-z (z≳6) lower luminosity quasars have been discovered by an on-going deep and wide-area optical imaging survey with the Hyper Suprime-Cam on Subaru 8-m telescope (SHELLQs; Matsuoka et al. 2016, 2018ab). Most of these newly uncovered z≳6 quasars have the lower rest-UV luminosity ($M_{1450} > -25$ mag) and thus fall near the break of the quasar luminosity function at z≳6, which means that they are the more representative population of high-z quasars. Toward this valuable new sample, we have conducted radio follow-up observations with JVLA at 1.4 GHz. At this moment, 22 targets have been observed with a typical sensitivity of ∼10-30 μJy (1 σ). In this presentation, constraints on the RLF of such low-luminosity z≳6 quasars will be presented.