[S09-5] SNU Bright Quasars Survey in Optical Band(SNUQSO)

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The international project, Sloan Digital Sky Survey(SDSS), has discovered many new quasars. But, SDSS cannot discover very bright quasars ($i < 15$ mag), because of technical difficulties related to the survey design. Bright quasars are rare, and a very important astrophysical tool for investigating the properties of Super Massive Black Hole (SMBH). Since they are bright, we can study their spectra in detail to derive useful physical parameters related to the SMBH. We have selected bright quasar candidates ($i < 15$ mag) using color selection method from SDSS photometric data. Then, we investigated the efficiency of the selection method by observing 25 candidates with BOES longslit spectrograph on $1.8m$ telescope at BOAO. Among these candidates, we discovered a quasar at $z = 0.092$, while other objects turned out to be stars. The mass of the central SMBH of this quasar is about $10^8 M_{\odot}$. The quasar has a low radio flux compared to other bright quasars. So it seems to be a radio-quiet quasar. This marks the first discovery of quasar by Korean astronomers using Korean facilities. The newly discovered quasar ranks 6th in the brightness among $\sim 100,000$ quasars known to date.

[S09-6] Damped Star Formation in AGNs as Deduced from [O II] Emission

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The [O II] 3727 emission line is often used as an indicator of star formation rate in galaxies. In order to investigate the ongoing star formation rate of the host galaxies of active galactic nuclei (AGNs), we measured the strength of [O II] 3727 and other optical emission lines from 2354 Type 2 Seyferts and 8644 quasars provided by the Sloan Digital Sky Survey. We performed a set of photoionization calculations using the code CLOUDY to help separate the contribution of [O II] from the AGN and from star-forming regions. We find that the majority of the observed [O II] emission can be explained entirely by the AGN itself, with little or no additional contribution from star formation. This indicates that star formation in the host galaxies of AGNs is very inefficient, and that strong starburst activity is not coeval with AGN activity. We discuss the implications of these results for the merger scenario for the formation of AGNs.