[구CD-05] A low-luminosity type-1 QSO sample Optical spectroscopic properties and activity classification

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We report on the optical spectroscopic analysis of a Low Luminosity Quasi Stellar Objects (LLQSOs) sample at $z \leq 0.06$ based on the Hamburg/ESO QSO survey (HES). To better relate the low-redshift Active Galactic Nucleus (AGN) to the QSO population it is important to study samples of the latter type at a level of detail similar to that of the low-redshift AGN. Powerful QSOs, however, are absent at low redshifts due to evolutionary effects and their small space density. Our understanding of the (distant) QSO population is, therefore, significantly limited by angular resolution and sensitivity. The LLQSOs presented here offer the possibility to study the faint end of this population at smaller cosmological distances and, therefore, in greater detail. This, in turn, provides information about the key ingredients with respect to fueling and feedback of QSOs, and their relative importance/strength. Here, we present results of the analysis of visible wavelength spectroscopy provided by the HES and the 6 Degree Field Galaxy Survey (6dFGS). Interesting differences in the taxonomy of the sources having both types of spectra have been noticed and will be discussed.

[구CD-06] Topological Analysis of Large Scale Structure Using the Final BOSS Sample

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We present the three-dimensional genus topology of large-scale structure using the CMASS sample of the Final SDSS-III Baryon Oscillation Spectroscopic Survey (BOSS) data. To estimate the uncertainties in the measured genus, we very carefully construct mock CMASS surveys along the past light cone from the Horizon Run 3. We find that the shape of the observed genus curve agrees very well with the prediction of perturbation theory and with the mean topology of the mock surveys. However, comparison with simulations show that the observed genus curve slightly deviates from the theoretical Gaussian expectation. From the deviation, we further quantify the primordial non-Gaussian contribution.