

X05b

**The Bright-End of the Galaxy UV Luminosity Function Revealed by the Subaru Hyper Suprime-Cam Survey**

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Galaxy luminosity functions (LFs) are important measurements to understand galaxy formation. Particularly, the bright end of the UV LF is sensitive to feedback in quenching star formation in massive galaxies. It is also predicted that gravitational lensing magnification bias can change the bright end of the UV LF. Contributions of quasars also need to be considered. The Subaru strategic program with Hyper Suprime-Cam wide-field survey will enable us to cover an unprecedentedly large cosmic volume at  $z > 4$  and to investigate very rare bright sources that reside at the bright end of the UV LF. From early survey data products, we identify  $z \sim 5$   $r$ -dropout galaxy candidates in the XMM field. The effective survey area is  $\sim 20 \text{ deg}^2$ , which is more than 5 times larger than previous studies for  $z \sim 4-5$  bright galaxies. We find very rare luminous dropout candidates in the magnitude regime of  $-24 < M_{UV} < -23$  that is poorly explored by previous studies. Our LF measurements in this magnitude regime show an excess above the extrapolation of the best-fit Schechter function determined in  $-23 < M_{UV} < -16.5$ . We will discuss possible reasons for the LF excess.