

**S26a            Discovery of a new high redshift QSO at  $z=5.96$  with the Subaru telescope**

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We report a discovery of a new high redshift quasar at  $z = 5.96$ , observed with the FOCAS long-slit spectrograph on board the Subaru telescope. The spectrum shows strong and broad Ly $\alpha$ +NV emission lines with a sharp discontinuity to the blue side. A Ly $\beta$ +OVI emission line is also detected, providing a consistent redshift measurement with the Ly $\alpha$ +NV emission. This is the 11th highest redshift QSO known to date. The QSO has an absolute magnitude of  $M_{AB,1450} = -26.9$  ( $H_0 = 50\text{km s}^{-1} \text{Mpc}^{-1}$ ,  $q_0 = 0.5$ ).

The spectrum shows significant flux in the region 8000-8300  $\text{\AA}$  and thus does not show a complete Gunn-Peterson trough in the redshift range 5.58 to 5.82, along the line of sight to this  $z = 5.96$  QSO. Therefore the Universe was already highly ionized at  $z = 5.82$ .