

# Giant Lyman alpha nebulae around the hyper-luminous quasar SDSS-J1538-0855

*Thursday 11 October 2018 10:15 (15 minutes)*

Giant Lyman alpha nebulae (GLAN) are the largest coherent cosmic structures associated to luminous quasars. They fill the quasar circumgalactic medium possibly constituting an important cold gas reservoir playing a role in the feeding and feedback baryonic cycle and bridging the cold gas phase between the intergalactic and the galactic scales.

The advent of the VLA/MUSE integral field spectrograph recently allowed an efficient discovery of GLAN around bright quasars at  $z \sim 3-4$ . So far only  $\sim 15-20$  GLAN have been discovered/studied with MUSE. They exhibit luminosities of  $\sim 10^{43-44}$  erg/s, sizes of hundreds of kpc and a range of morphologies from symmetric to strongly asymmetric/filamentary. The majority of them do not show a coherent kinematic structure and exhibit narrow line profiles (500-700 km/s). Here we report on a 1h MUSE observation of SDSS J1538+0855 ( $z \sim 3.6$ ), one of the most luminous broad absorption line quasars in the Universe. We will present its GLAN detection, report on its properties, compare them with nebulae reported in known sources and discuss its link to the central active nucleus.

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**Session Classification:** SMBH, host galaxy and scaling relations