

## Lyman Alpha Emitter properties at $z \sim 3.1$

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We are undertaking a large galaxy survey centred on distant bright quasars in the form of the VLT LBG Redshift Survey (VLRS) to probe the intergalactic medium (IGM) of  $z \sim 3$  galaxies. At present the VLRS survey consists of 9 fields in total, with spectroscopic observations of Lyman break galaxies (LBGs) taken with VLT VIMOS. We have also made the photometric observations of Lyman-alpha emitters (LAEs) in the deep imaging fields of the VLRS, taken using Subaru Suprime-Cam, aimed at studying the clustering properties of LAE galaxies. The complete data covers 5 independent survey fields, giving the significant advantage of reducing the potential impact of cosmic variance on our results compared to past LAE surveys. We present an analysis of clustering length versus continuum magnitude and find that the measurements for LAEs and LBGs are consistent at faint magnitudes. Our combined data set of LAEs and LBGs allows us to measure, for the first time, the LBG–LAE cross-correlation, finding a clustering length of  $r_0 = 3.29 \pm 0.57 h^{-1}$  Mpc. Overall, we conclude that LAEs inhabit primarily low-mass haloes, but form a relatively small proportion of the galaxy population found in such haloes.