*Highlights of Spanish Astrophysics VII, Proceedings of the X Scientific Meeting of the Spanish Astronomical Society held on July 9 - 13, 2012, in Valencia, Spain. J. C. Guirado, L.M. Lara, V. Quilis, and J. Gorgas (eds.)*

# Lyman break galaxies in ALHAMBRA, J-PLUS, and J-PAS surveys

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## Abstract

We are carrying out a systematic search for Lyman Break Galaxies (LBGs) in the ALHAMBRA Survey data. With the ALHAMBRA filter set, we can detect the Lyman forest, permitting a LBG identification, for galaxies at redshifts $z > 2$ and up to $z \sim 5$ for the brightest objects. Our LBG candidate selection bases on spectral fitting of template spectra on the very low resolution spectra derived from the 20 intermediate optical band and three infrared broad band ALHAMBRA filters. The spatial coverage of ALHAMBRA survey (4 deg$^2$) is bigger than in any of the previous LBG surveys. The surface density of LBGs decreases with brightness so that we especially expect to contribute on better sampling of the bright end of the LBG luminosity function. Once the shallower, but much more extended (8000 deg$^2$) JPLUS and JPAS survey data are available, we will adopt our LBG search method to these surveys. Thanks to the huge area covered by these new surveys, we expect to achieve significant information on the bright LBGs at $z \sim 2-3$ (JPLUS) and $z \sim 2-4$ (JPAS).