

Neutral gas outflows in nearby [U]LIRGs via NaD-IFS

S. Cazzoli^{1,2}, S. Arribas¹, R. Maiolino^{2,3}, and L. Colina¹

¹ CSIC, Departamento de Astrofísica-Centro de Astrobiología (CSIC-INTA), Madrid, Spain

² Cavendish Laboratory, University of Cambridge 19 J. J. Thomson Avenue, Cambridge CB3 0HE, UK

³ Kavli Institute for Cosmology, University of Cambridge, Madingley Road, Cambridge CB3 0HA, UK

Abstract

In order to extend the census of the 2D mapping of neutral winds in local [U]LIRG, we used optical VLT VIMOS-IFU observations of the VIMOS-IFS survey (Arribas et al. 2008, A&A, 479, 687), to obtain the kinematics and the spatial distribution of the absorbing neutral gas via NaD 5890, 5896 Å. In this presentation we describe the results recently obtained for IRAS F11506-3851 (Cazzoli et al. 2014, A&A, 569, 14), for which we have detected the presence for a strong neutral gas outflow. The analysis of the geometry of the outflow and the 2D ongoing SF, indicates a large mass loading factor associated to the nuclear region, and suggests that we are witnessing quenching due to SNe feedback in IRAS F11506-3851. In addition, we present examples of neutral gas kinematics maps and present preliminary results for the whole sample analyzed (38 local [U]LIRGs, Cazzoli et al. in prep.). The spectral maps in general indicate complex velocity fields and velocity dispersion maps associated to the ISM neutral gas, and some of them indicating outflow features.