

Overcoming Systematic Errors in the Spectrophotometry of Extragalactic Planetary Nebulae with 3D Spectroscopy

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Abstract. Using H_{α} Fabry-Pérot images of the central 7 arcmin of M31 we demonstrate the amount of filamentary gaseous emission of the ISM in the bulge of this galaxy, which, along with the high surface brightness in the continuum, is known to cause serious problems for the spectrophotometry of PNe in this region. From pioneering work in the Magellanic Clouds and M31 the observational difficulties have been known for some time. We present first observations of PNe in the bulge of M31 obtained with *Integral Field Spectroscopy (3D)*, a method which is shown to be capable of providing superior background subtraction accuracy, compared to conventional slit spectroscopy. Data were secured with MPFS at the Selentchuk 6m telescope, and during a commission run of PMAS at Calar Alto. It is shown how the spatial information obtained from the 3D technique is used to correct for systematic errors in the measurement of emission line intensities which have been reported in the literature.



Silvia Torres-Peimbert and Roberto Mendez at the banquet.