

HIGH SPATIAL RESOLUTION 2D SPECTROGRAPHY OF ENLR IN SEYFERT GALAXIES

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Three active nuclei environments have been observed with the integral field spectrograph TIGER operating in the visible domain : Mkn 34, NGC 5929 and M 51. These three objects exhibit linear radio-sources evocating expulsion of plasmons from the nucleus. Long-slit or Péroto-Fabry observations showed that the gas of the galaxies is interacting with the radio-emitter, and models of this interaction have been proposed. These new observations combines the two spatial dimensions of integral field spectrography (with 0.7" FWHM) with the rather large spectral domain of classical spectrography.

We present observational results for two of these objects, NGC 5929 and Messier 51. The first one displays a very simple radio structure with two lobes (Ulvestad and Wilson 1984, ApJ 285,439) which are associated with two line emitting gas components kinematically distinct (Whittle *et al.* 1986, MNRAS 222,189). Our data allow us to disentangle the emission arising from each region and to construct maps of their physical parameters (intensity, velocity fields and line ratios). Figure 1 shows some of these maps. M 51 exhibits a much more complicated structure with an extra-nuclear cloud, the XNC (Ford *et al.* 1985, ApJ 293,132). The intensity distribution of the line emission of the main body of the lines is strongly correlated with the radio map as already found by Cecil (1988, ApJ 329,38). We plan to use this large set of data to set physical parameters of existing simple bow-shocks models of Taylor *et al.* (1992, MNRAS 255,351).

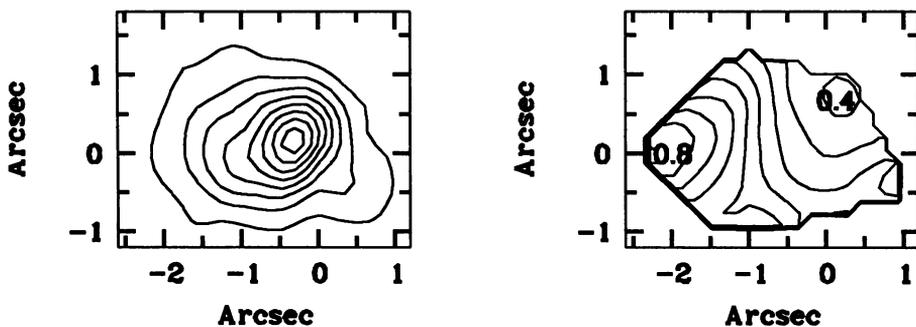


Fig. 1. Left, $H\alpha$ intensity map of the eastern lobe ($25:200:25$; $10^{-19} \text{ W m}^{-2} \text{ arcsec}^{-2}$). Right, $[\text{NII}]6583.4 / H\alpha$ ratio ($0.4:0.8:0.05$; unitless) of the same lobe.