

## THE CORONAL LINE REGION OF ACTIVE GALACTIC NUCLEI: A HST VIEW

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Optical STIS/HST spectra of a sample of ten Seyfert galaxies aimed at studying the structure and physical properties of the coronal-line region (CLR) are presented. The high-spatial resolution allowed us to resolve the CLR and obtain key information about the kinematics of the coronal-line gas, measure directly its spatial scale, and study the mechanisms that drive the high-ionisation lines. We find CLR extending from just a few parsecs ( $\sim 10$  pc) up to 230 pc in radius from the nucleus, consistent with the bulk of the coronal lines (CLs) originating between the BLR and NLR. The CL profiles strongly vary with the distance to the nucleus, with line splitting in the core of some of the galaxies. Line peak shifts, both red- and blue-shifts, typically reached  $500 \text{ km s}^{-1}$  and even higher velocities ( $1000 \text{ km s}^{-1}$ ) in some of the galaxies. In general, CLs follow the same pattern of rotation curves as low-ionisation lines like [O III]. From a direct comparison between the radio and the CL emission we find that neither the strength nor the kinematics of the CLs scale in any obvious and strong way with the radio jets. Moreover, the similarity of the flux distributions and kinematics of the CLs and low-ionisation lines, the low temperatures derived for the gas, and the success of photoionisation models to reproduce, within a factor of few, the observed line ratios, point towards photoionisation as the main driving mechanism of CLs.