

# The Broad Line Region Geometry of AGN

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## Abstract

Profiles of broad emission lines (BELs) in active galactic nuclei (AGN) are very complex indicating a complex Broad Line Region (BLR) geometry. We discuss several specific broad line profiles in order to constrain possible geometries for the BLR. Especially, we discuss the possibility that a disk emission is present in the BEL profiles.

# Total Emissivity from Active Galactic Nuclei

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## Abstract

Line-of-sight integrated spectra of active galactic nucleus consists of AGN continuum originated in the accretion disk, broad emission lines from the broad line region, narrow emission lines from the narrow line region and underlying stellar population (SP) from the host galaxy. With the goal to improve our ability to estimate AGN properties and their relation with the host galaxy, we fitted simultaneously all components that contribute to the composed AGN spectrum. In this way we are able to minimize degeneracy between AGN emission and stellar population characteristics (age and metallicity). We used ULYSS algorithm that we modified for the fit of AGN integrated spectra. More precisely, we incorporated in the model an AGN continuum as power-law function and Gaussian representation for AGN emission lines. With this approach we can obtain information about the contribution of the stellar population to the total observed spectrum, together with the kinematical and physical characteristics of all components in the model. In order to test our method, we simulated spectra with different contributions of PEGASE.HR stellar population spectra added to the real AGN spectra. We found that this method can efficiently reconstruct stellar population fraction, age, metallicity and velocity dispersion of the stellar population, spectral index of the AGN continuum and characteristics of the emission lines.