

TWO-COMPONENT MODEL OF Fe II LINES IN SPECTRA OF ACTIVE GALACTIC NUCLEI

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Abstract. The Fe II lines are among the most intriguing spectral features in the spectra of Active Galactic Nuclei (AGN). The place of their emission in AGN structure, their mechanisms of excitation, and their correlations with the other spectral parameters are still open questions. Here we represent two-component modeling of the Fe II lines, where we assume that iron lines arise from two emission regions: from the very broad line region (VBLR), the part of the BLR closer to the supermassive black hole, and from the intermediate line region (ILR), which is part of the BLR farther away from the black hole. We have constructed a large number of synthetic spectra of AGNs Type 1 using two component Fe II model and we have shown that Fe II VBLR components could form the Fe II pseudocontinuum in some special cases, and consequently affect measured spectral parameters in the optical spectra.