

THE HIDDEN BROAD LINE REGION IN SPECTRA OF SEYFERT 2 GALAXIES

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We applied the Spectral Principal Component Analysis (SPCA) decomposition to the large sample of the Seyfert 2 galaxies, taken from Sloan Digital Sky Survey (SDSS) database, with $S/N > 20$. After applying the SPCA, in the case of 48 objects, we found that beside stellar and AGN type 2 spectra, there are also hidden Broad Line AGN spectra, with continuum luminosity of 5-15 % of the total continuum luminosity and with very broad emission lines (average width ~ 13000 km/s). We investigated the possibility that these weak broad emission lines represent the emission from hidden Broad Line Region, observed edge-on through clumpy torus structure.