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THE DISK EMISSION IN THE BROAD LINE REGION OF ACTIVE GALACTIC NUCLEI

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Abstract. We studied the disc emission component hidden in the single-peaked broad emission lines (BELs) of active galactic nuclei using a two-component model. We assumed that the broad lines are formed in an accretion disc plus a surrounding non-disc region, with isotropic cloud velocities. To compare simulated line profiles with observed ones we measured the full widths (at 10 per cent, 20 per cent and 30 per cent of the maximum intensity). We found that the hidden disc emission may be present in BELs even if the characteristic of two-peaked-line profiles is absent. For available samples of objects (Seyfert 1 galaxies with single-peaked BELs), our study indicates that, in the case of the hidden disc emission in single-peaked broad-line profiles, the disc inclination tends to be small and that the contribution of the disc emission to the total flux should be smaller than the contribution of the surrounding region.