Line-profile variations in eclipsing binaries

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The Fourier method of spectra disentangling generalized to the case of variable strength of lines (cf. Hadrava 1995, A&AS 114, 393 and 1997, A&AS 122, 581) applied to the spectra obtained during eclipses of a binary proved to be sensitive to the variations of limb-darkening across line-profiles. These variations reflect the vertical structure of the eclipsed atmosphere and, consequently, they yield, in addition to the frequency distribution of the radiative flux usually computed from the model atmospheres, another tool for the observational diagnostics of stellar atmospheres. Here we present the first examples of line-profile variations during an eclipse, which are calculated from the intensity distribution on the surface of model atmospheres (cf. Kubát 2001, A&A 366, 210). Consequences for the correct calculation of rotational broadening are also mentioned.