A P5 Synthetic spectra of A supergiants

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Stellar wind of A supergiants can have a significant influence on their spectra. We present here the hydrogen line profiles of the model based on stellar parameters of HD 12953. The radiative transfer is solved in two dimensions in axial symmetry. We don't include the velocity field by the Sobolev approximation, but in detail using the Lorentz transformation of both velocity and intensity. This allows us to include correctly the radiation from the photospheric region, where the gradient of the global velocity is too small for the Sobolev approximation to be valid. The input parameters, temperature, electron density, and velocity, are obtained from hydrodynamic equations. In the hydrodynamic calculations we include the radiative force as well as we take into account the NLTE effects.