Structure and Evolution of Magnetic Cataclysmic Variables

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The theoretical models and observational results are reviewed. General picture of structure and evolution of cataclysmic variables (CV) is presented, with a brief discussion of mechanisms of angular momentum loss; mass-radius relations for a Roche lobe – filling secondary and for a white dwarf; classification of CVs; additional mechanisms of intrinsic variability of the components; magnetic activity of secondaries. Special attention is paid to the accretion structures – flow, disk, column – which are affected by the magnetic field of the white dwarf. The mass and angular momentum transfer in asynchronous MCV leads to a "propeller" stage of a rapid synchronization, after which the "idlings" of the white dwarf are altered to "swingings" with a characteristic time of century(ies). The disk- magnetic field interaction leads to a precession of the white dwarf, which causes quasi-periodic changes of the equilibrium rotational period. For non-magnetic cataclysmic variables, the outbursts and positive and negative superhumps are discussed.