

# MODELS OF VORTICES AND SPIRALS IN WHITE DWARF ACCRETION BINARIES

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The main aim in the current survey is to suggest models of the development of structures, such as vortices and spirals, in accretion white dwarf's binaries. On the base of hydrodynamical analytical considerations, it is applied numerical methods and simulations. It is suggested in the theoretical model the perturbation's parameters of the accretion flow, caused by the influences of mass transfer over the flux of accretion matter around the secondary star. To examine such disturbed flow, the numerical code has involved in the calculations. Our further simulations give the solution, which expresses the formation of structure with spiral shape due to the tidal interaction in the close binaries. Thereafter, it is appeared an effect of formation of vortical configurations in the accretion disc's zone. The evolution of vortices in areas of the flow's interaction is explored using single vortex and composite vortex models. Gas in the disc matter is considered to be compressible and non-ideal. The longevity of all these structures is different and each depends of time period of the rotation, density and velocity of the accretion matter.