Modeling Circumplanetary Disks like Protoplanetary Disks: a mistake?

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The numerical code PHYVE is a hydrodynamical code that allows to follow the formation and evolution of protoplanetary disks from the collapse of the molecular cloud to the photoevaporation phase. This code is able to model the surface mass density distribution consistently with the disk radial profile (including the disk composition and geometry). We aim at using this code for modeling circumplanetary disks by considering the protoplanetary disk as the source of infalling material, replacing the molecular cloud that was an initial parameter in the protoplanetary disk simulations. We will simulate the circumplanetary disk radial thermal profile and investigate the question of the crucial parameters differing from protoplanetary disks.