

Our aim was to add the viscoelasticity into the model for thermal convection by developing our own code in Fortran 90 and to study the role of viscoelasticity in this model. We should have included the viscoelasticity by Maxwell model; however, due to numerical instability we changed it for Oldroyd-B model. We were adding the terms of objective derivative into our code step by step and we were observing how they influence the behaviour of thermal convection. Partial time derivative and advective terms were included in whole complexity, the corrotational terms need more numerical testing. Our work suggest that the influence of viscoelasticity on thermal convection is noticeable.