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**Rheology of a nematic liquid crystal between two coaxial cylinders subjected to a pulsatile gradient pressure** DANIEL MARTNEZ, Universidad Autnoma de la Ciudad de Mxico, CARLOS VELZQUEZ, JUAN ADRIN REYES, Instituto de Fsica, Universidad Nacional Autnoma de Mxico — It is considered a nematic liquid crystal (NLC) filling the region between two coaxial cylinders. We study the rheological behavior of a NLC subjected to a pulsatile gradient pressure and an external radial electric field. For the 4-n-pentyl-4-cyanobiphenyl (5CB) NLC, we consider soft anchoring and non-slip boundary conditions to numerically calculate the directors alignment corresponding to the first and second frequency modes and the velocity profile induced by the flow. Finally, we calculate the apparent viscosity of the nematic.

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