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Ion kinetic instabilities and turbulence of a parallel shearing flow of a plasma with hot ions[1] VOLODYMYR ST. MYKHAYLENKO, VOLODYMYR MYKHAYLENKO, HAE JUNE LEE, Pusan National University — The results of the analytical and numerical investigations of the shear flow driven ion kinetic instabilities, excited due to the inverse ion Landau damping in the parallel shearing flow of plasmas with comparable ion and electron temperatures, that is the case relevant to a tokamak and space plasma, are presented. The levels of turbulence and the turbulent heating rates of ions and ion turbulent viscosity, resulted from the development of the electrostatic ion-temperature gradient and electromagnetic drift-Alfven turbulence, are determined and their consequences are discussed.

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