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Finite ballooning angle effects on ion temperature gradient driven mode in gyrokinetic flux tube simulations RAMESWAR SINGH, Institute For Plasma Research, Bhat, India, STEPHAN BRUNNER, CRPP, EPFL, Switzerland, RAJARAMAN GANESH, Institute For Plasma Research, Bhat, India, FRANK JENKO, Max-Planck-Institut fur Plasmaphysik, EURATOM Association, 85748 Garching, Germany — This paper presents effects of finite ballooning angles on linear ion temperature gradient (ITG) driven mode and associated heat and momentum flux in Gyrokinetic flux tube simulation GENE. It is found that zero ballooning angle is not always the one at which the linear growth rate is maximum. The ITG mode acquires a short wavelength (SW) branch ($k_\perp \rho_i > 1$) when growth rates maximized over all ballooning angles are considered. However the SW branch disppears on reducing temperature gradient showing characteristics of zero ballooning angle SWITG in case of extremley high temperature gradient. Associated heat flux is even with respect to ballooning angle and maximizes at nonzero ballooning angle while the parallel momentum flux is odd with respect to the ballooning angle.

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