Electron Velocity and Temperature Gradients Driven Electrostatic Flucuations in Nonuniform Magnetized Plasmas[1] P.K. SHUKLA, RUB, Germany, B. COPPI, MIT — We consider the excitation of electrostatic fluctuations in the presence of electron parallel velocity and electron temperature gradients in nonuniform magnetized plasmas. For this purpose, we use the guiding center electron drift approximation, mass conservation and electron momentum conservation equations to derive a linear dispersion relation. The latter is numerically analyzed to study the interplay between the parallel electron velocity and the temperature gradients. The transport resulting from the excitation of these modes is discussed.

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