

Abstract Submitted
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Magnetic Field Effects on Current Instability in a Weakly Modulated 2DEG M. TAHIR, University of Sargodha, Sargodha, Pakistan, K. SABEEH, Quaid-i-Azam University, Islamabad, Pakistan, VASSILIOS FESSATIDIS, Fordham University, Bronx, NY, NORMAN J.M. HORING, Stevens Institute of Technology, Hoboken, NJ, JAY D. MANCINI, Kingsborough Community College, CUNY, Brooklyn, NY — We have examined the collective excitation spectrum of a weakly modulated two dimensional electron magnetoplasma, analyzing the role of a steady current which induces drift instability. The inter- and intra-Landau band plasmon spectrum in quantizing magnetic field is derived within the self-consistent-field approximation with weak density modulation. In this, we determine the conditions on drift speed for the occurrence of magnetoplasmon instability.

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