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Effect of magnetic field on the plasmons and electron self-energy of gapped graphene ANDRII IUROV, Hunter college, CUNY, GODFREY GUMBS, Hunter college, CUNY and Donostia International Physics Center (DIPC), DANHONG HUANG, Air Force Research Laboratory — The plasmon modes in gapped graphene are calculated in the presence of a uniform perpendicular magnetic field **B**. The gap may be produced by external influences on the Dirac cone and include symmetry-breaking perturbations such as multi-layer epitaxially grown graphene, circularly polarized light and an underlying substrate. While one expects the gap to make graphene behave more like conventional 2DEG, we demonstrate the important differences in the plasma excitations and self-energy brought about through the interplay the presence of magnetic field and the symmetry-breaking perturbation.

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