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Spin dynamics of a Half-Metallic Ferromagnet¹ RAUL CHURA, KEVIN BEDELL, Boston College — We determine the dispersion relations, and therefore, the collective modes of a model for a half-metallic ferromagnet by using two approaches: the particle-hole propagator method and the kinetic equation method. We formulate the latter by using the theory of spin polarized Fermi liquids. In both cases we express the results in terms of Landau interaction parameters and make the corresponding comparisons. We also calculate the velocities of propagation of the modes and study the spin stiffness. We discuss the results in the context of the currently available experimental data.

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