Fermionic stabilization and density-wave ground state of a polar condensate. OMJYOTI DUTTA, RINA KANAMOTO, PIERRE MEYSTRE, University of Arizona — We examine the stability of a trapped dipolar condensate mixed with a single-component fermion gas at $T = 0$ in a pancake and cigar shaped trap. Whereas the density wave state in dipolar condensates with small $s$-wave interaction are unstable towards collapse, we find that the admixture of fermions can significantly stabilize them, depending on the strength of the boson-fermion interaction.