The Vlasov-Einstein System[1] T. OKABE, P.J. MORRISON, Physics Department and IFS, University of Texas at Austin — It is well-known that the Vlasov-Poisson system describes Newtonian self-gravitating matter, a usage that predates that of plasma physics. For strong interaction, general relativistic effects become important, and thus it is natural to consider the Vlasov-Einstein system, which is of interest because the matter field is more realistic than commonly used dust or perfect fluid models. New results on equilibria, stability, and nonlinear reductions will be discussed for this model in spherical symmetry, both with and without the cosmological constant.

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