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**Stephen Pankavich\*** (pankavic@usna.edu), Department of Mathematics, United States Naval Academy, 572C Holloway Rd, Annapolis, MD 21402. *Regularity for a model of collisionless plasma in low dimension.* Preliminary report.

The fundamental kinetic description of a collisionless plasma is given by the Vlasov-Maxwell (VM) equations. When relativistic velocity effects are not present in the model, the existence and regularity of classical solutions to this system of nonlinear hyperbolic PDE is still unknown, even for the lowest dimensional representation. We consider a “one-and-one-half”-dimensional analogue of (VM) and present recent analytical results concerning the regularity and behavior of solutions. (Received August 30, 2011)