

# An existence result for the 3d repulsive plasma-charge model

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We establish global existence of a solution to the three-dimensional Vlasov-Poisson system in presence of a point charge with repulsive interaction. The present analysis extends the analogous result for the three-dimensional Vlasov-Poisson system without charges in [1]. Moreover, we recover all additional regularity properties on the electric field which have been established in [1].

## REFERENCES

- [1] P. L. Lions , and B. Perthame: *Propagation of moments and regularity for the 3-dimensional Vlasov-Poisson system*, Invent. Math., 105:415-430, 1991.